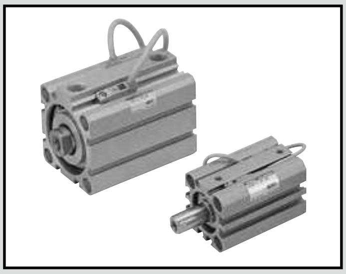
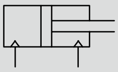


Compact cylinder double acting/single rod

SSD2 Series

● Bore size: ø12/ø16/ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item		SSD2 SSD2-L (with switch)									
Bore size mm		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation		Double acting									
Working fluid		Compressed air									
Max. working pressure MPa		1.0 (≈150 psi, 10 bar)									
Min. working pressure MPa		0.1 (≈15 psi, 1 bar)								0.05 (≈7.3 psi, 0.5 bar)	
Proof pressure MPa		1.6 (≈230 psi, 16 bar)									
Ambient temperature °C		-10 (14°F) to 60 (140°F) (no freezing)									
Port size		M5				Rc1/8 *1		Rc1/4		Rc3/8	
Stroke tolerancemm	With rubber cushion	$^{+2.0}_{0}$									
	Without cushion	$^{+1.0}_{0}$									
Working piston speed mm/s		50 to 500								50 to 300	
Cushion		With or without cushion can be selected									
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)									
Allowable absorbed energy J	With rubber cushion	0.03	0.05	0.10	0.16	0.16	0.44	0.75	0.78	2.51	3.92
	Without cushion	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20 25/30	30	1
ø16			
ø20	5/10/15/20/25 30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

*1 : When using the type with switch, refer to the table of the min. stroke length with switch.
*2 : If the stroke exceeds the max. stroke length, refer to the long stroke length on page 792.
*3 : Refer to pages 763 and 765 for the min. stroke length with mounting bracket LB.

Min. stroke length with switch (2 switches)

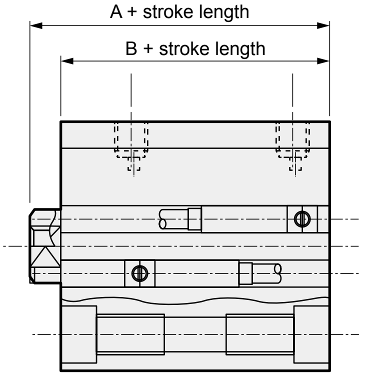
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø12	10(5)	5
ø16		
ø20	5	
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

1 : Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.
*2 : Values in ( ) are for the type with 1 on rod side.

Custom stroke length

● SSD2 Series

Item	Standard products		Optional products	
	Standard stroke length body with spacer		Dedicated unit (-S)	
Model No.	Refer to How to order.		Add "-S" option code to the model No.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.		Dedicated units of the required stroke length are available.	
Stroke range	Bore size	Stroke range	Bore size	Stroke range
	12/16	1 to 29	12, 16	6 to 29
	20 to 25	1 to 49	20, 25	6 to 49
	32 to 100	1 to 99	32 to 100	11 to 99
Example of model No.	Model No.: SSD2-32-38 A +2 mm spacer is added to the SSD2-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 63 mm.		Model No.: SSD2-32-41-S Dedicated units for 41 mm stroke length are available. B + stroke length is 64 mm.	



Switch specifications (F switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1mA or less	10 µA or less	1 mA or less		10 µA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100mA or less		50mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 µA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)

*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.

*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø12	36	86	44	86	53	95	61	103	70	112	72	114	-	-	-	-	-	-	-	-	-	-	-	-
ø16	48	104	59	104	69	114	80	125	91	136	102	147	-	-	-	-	-	-	-	-	-	-	-	-
ø20	63	118	75	150	88	163	101	176	113	188	126	201	139	214	152	227	165	240	203	278	-	-	-	-
ø25	87	178	102	193	118	209	134	225	150	241	165	256	181	272	197	288	213	304	228	319	-	-	-	-
ø32	122	236	144	258	166	280	188	302	209	323	231	345	253	367	275	389	297	411	318	432	494	542	604	652
ø40	183	326	210	353	236	379	263	406	290	433	316	459	342	485	369	512	395	538	472	565	646	695	776	825
ø50	-	-	341	535	383	577	425	619	467	661	510	704	552	746	594	788	636	830	678	872	1025	1082	1235	1292
ø63	-	-	507	786	562	841	617	896	672	951	727	1006	782	1061	838	1117	893	1172	948	1227	1438	1502	1713	1777
ø80	-	-	928	1341	1015	1428	1101	1514	1188	1601	1274	1687	1361	1774	1448	1861	1535	1948	1621	2034	2401	2467	2833	2899
ø100	-	-	1433	2000	1547	2114	1660	2227	1774	2341	1888	2455	2002	2569	2115	2682	2229	2796	2343	2910	3406	3478	3973	4045

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^{2}	1.13×10^{2}
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	-	49.1	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	-	37.8	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	-	80.4	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	-	60.3	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	-	1.26×10^{2}	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.06×10^{2}	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	1.96×10^{2}	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	1.65×10^{2}	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	1.56×10^{2}	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	1.40×10^{2}	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	2.51×10^{2}	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	2.27×10^{2}	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	3.93×10^{2}	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	3.57×10^{2}	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

How to order

Without switch (without magnet for switch)

SSD2 - 12 ◯ ◯ - 5 ———— N - LB - I

With switch (built-in magnet for switch)

SSD2-L - 12 ◯ ◯ - 10 - T0H - R - N - LB - I

Ⓐ Model No.

Ⓑ Bore size

Ⓒ Port thread

Ⓓ Cushion

Ⓔ Stroke length

Ⓕ Switch model No. *1 *2 *3 *8 *9

Ⓖ Switch quantity

Ⓗ Option *4

Ⓘ Mounting bracket *5 *6

Ⓙ Accessory *7

Code	Description
Ⓐ Model No.	
SSD2	Double acting/single rod
SSD2-L	Double acting/single rod/with switch

Ⓑ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

Ⓒ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)

Ⓓ Cushion	
Blank	Without cushion
D	With rubber cushion

Ⓔ Stroke length (mm)

Refer to the stroke length table on the following page.

Ⓕ Switch model No.

Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire	Bore size									
			AC	DC			12	16	20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire			●	●						
-	F3S*			●		3-wire			●	●						
F2H*	F2V*			●		2-wire			●	●						
F3H*	F3V*			●		3-wire			●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire			●	●						
F2YH*	F2YV*			●	2-color display	2-wire			●	●						
F3YH*	F3YV*			●		3-wire			●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display							●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire			●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●					●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●					●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display for AC magnetic field	2-wire			●	●	●	●	●	●	●	●
T2YDT*	-			●					●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire			●	●	●	●	●	●	●	●

*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *11

Ⓖ Switch quantity	
R	1 on rod side
H	1 on head side
D	2

Ⓗ Option

	Bore size (mm)	12	16	20	25	32	40	50	63	80	100
Blank	Rod end female thread	●	●	●	●	●	●	●	●	●	●
N	Rod end male thread	●	●	●	●	●	●	●	●	●	●
P6	Copper and PTFE free specifications	Supported as standard							●	●	●
M *4	Piston rod material (stainless steel)	●	●	●	●	●	●	●	●	●	●
S	Dedicated unit for custom stroke length	●	●	●	●	●	●	●	●	●	●
P4	Specifications for rechargeable battery	●	●	●	●	●	●	●	●	●	●
P40		●	●	●	●	●	●	●	●	●	●

Ⓘ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange

Ⓙ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

1 : The T2YD switch cannot be mounted on the ø12 and ø16 bore sizes.
2 : The T8 switch cannot be mounted on the ø12 to ø32 bore sizes.
*3 : The F type switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.
*4 : Piston rod of ø12 to ø25 is stainless steel as standard. C type snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.
*5 : The mounting bracket is included at shipment.
*6 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 761, 763, 765 and 766. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
*7 : "I" and "Y" cannot be selected together.
*8 : The F type switch with L type lead wire on ø20 models cannot be selected on stroke lengths of 15 mm or under.
*9 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
*10 : Refer to pages 750 and 751 for combinations of variations/options.
*11 : F type switch cannot be selected.

[Example of model No.]

SSD2-L-12-10-T0H-R-N-LB-I

Model: Compact cylinder, standard

Ⓑ Bore size	: ø12 mm
Ⓒ Port thread	: Rc thread
Ⓓ Cushion	: No cushion
Ⓔ Stroke length	: 10mm
Ⓕ Switch model No.	: Reed switch T0H, lead wire length 1 m
Ⓖ Switch quantity	: 1 on rod side
Ⓗ Option	: Rod end male thread
Ⓘ Mounting bracket	: Axial foot
Ⓙ Accessory	: Rod eye

[Stroke length table]

Stroke length (mm)		Applicable bore size									
		12	16	20	25	32	40	50	63	80	100
Standard stroke length	5	●	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●
	100					●	●	●	●	●	●
Min. stroke length (mm) *1		1									
Max. stroke length (mm)		30		50		100					
Custom stroke length *2		In 1 mm increments									

1 : Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available.
Refer to page 752 for the min. stroke length with switch.

*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

*3 : Refer to pages 763 and 765 for the min. stroke length with mounting bracket LB.

How to order switch

SW - **T0H**

Switch model No.
(Item Ⓕ on page 754)

How to order mounting bracket

Bore size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50
Clevis bracket (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50

Bore size (mm) / Mounting bracket	ø63	ø80	ø100
Foot (LB)	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

*1: The foot mounting bracket is provided as 2 pcs./set.

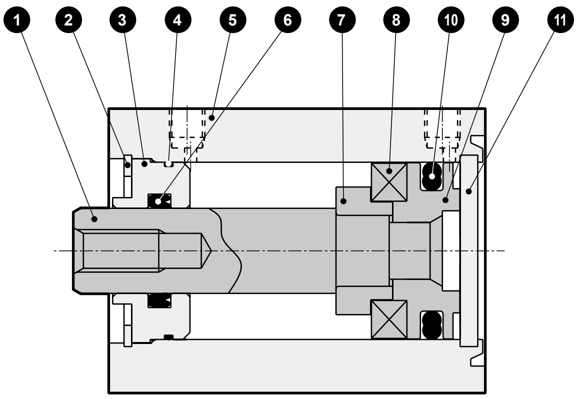
Specifications for rechargeable battery (catalog No. CC-1226A)

- ● Design compatible with rechargeable battery manufacturing process

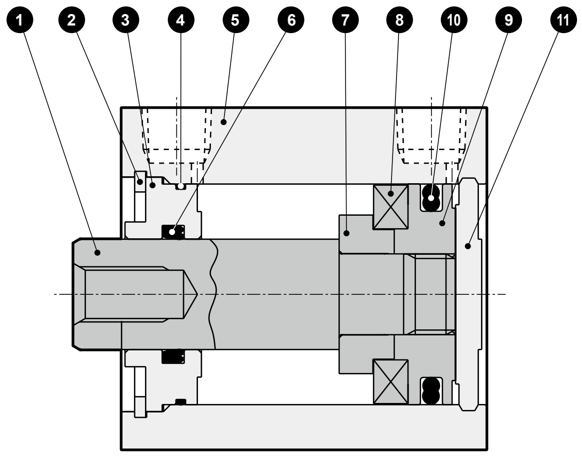
SSD2-·············-**P4***

Internal structure and parts list (ø12 to 50) (no cushion)

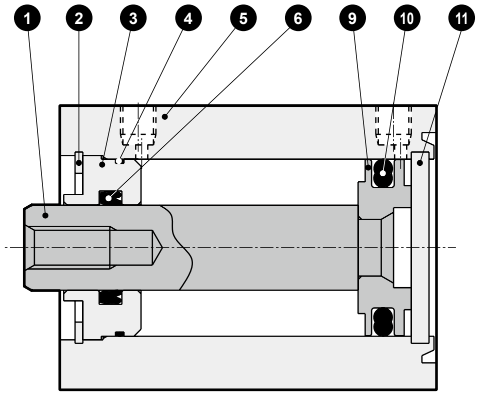
● SSD2-L-12 to 25 (double acting/with switch)



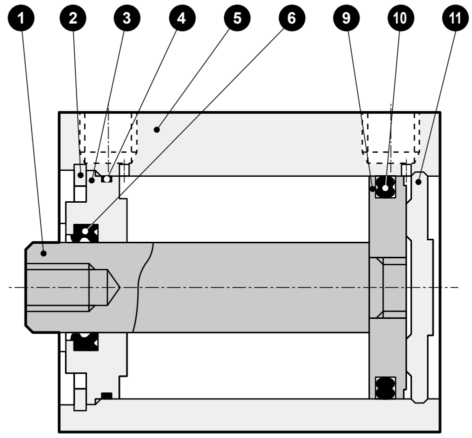
● SSD2-L-32 to 50 (double acting/with switch)



● SSD2-12 to 25 (double acting)



● SSD2-32 to 50 (double acting)



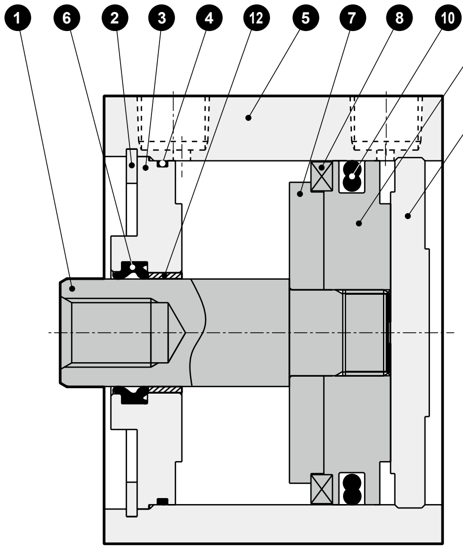
No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
2	C type snap ring	Steel	Zinc phosphate
3	Rod metal	Special aluminum	Alumite
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Nitrile rubber	
7	Spacer	Aluminum alloy	ø12 to ø32: Chromate
8	Magnet	Plastic	
9	Piston	Aluminum alloy	Chromate
10	Piston packing	Nitrile rubber	
11	Cover	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite

Repair parts list

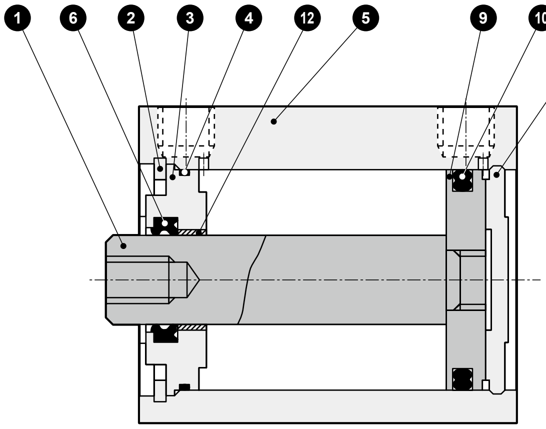
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-12K	❹ ❻ ❿
ø16	SSD2-16K	
ø20	SSD2-20K	
ø25	SSD2-25K	
ø32	SSD2-32K	
ø40	SSD2-40K	
ø50	SSD2-50K	

Internal structure and parts list (ø63 to 100) (no cushion)

- SSD2-L-63 to 100 (double acting/with switch)



- SSD2-63 to 100 (double acting)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	7	Spacer	Aluminum alloy	
2	C type snap ring	Steel	Zinc phosphate	8	Magnet	Plastic	
3	Rod metal	Aluminum alloy	Chromate	9	Piston	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		10	Piston packing	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite	11	Cover	Aluminum alloy	Alumite
6	Rod packing	Nitrile rubber		12	Bush	Oiles drymet	*1

*1: Material is steel for copper and PTFE free specifications.

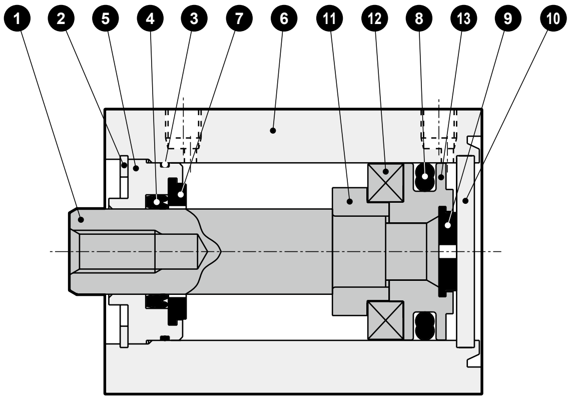
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-63K	❹❻❿
ø80	SSD2-80K	
ø100	SSD2-100K	

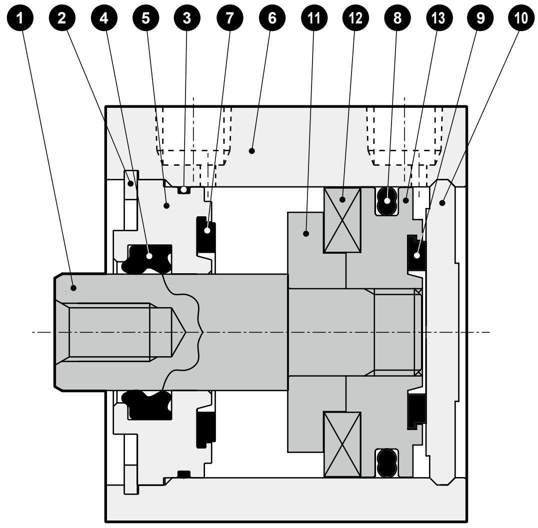
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

Internal structure and parts list (ø12 to 50) (with rubber cushion)

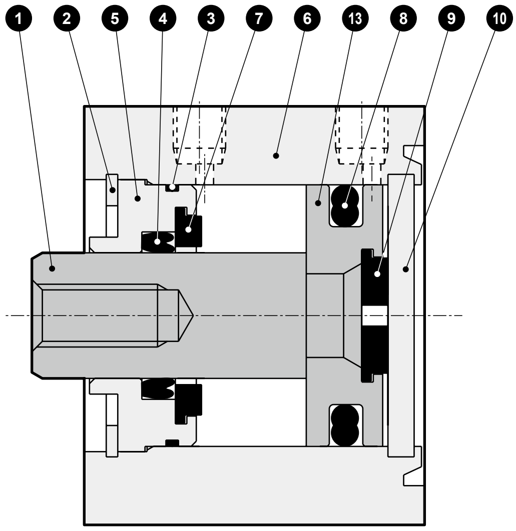
- SSD2-L-12D to 32D (double acting/with switch)



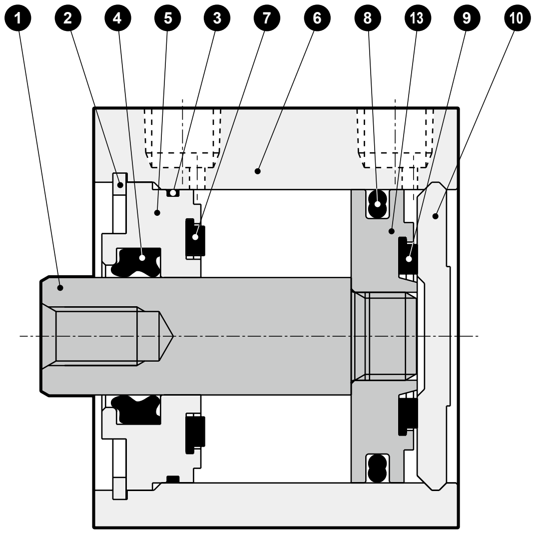
- SSD2-L-40D to 50D (double acting/with switch)



- SSD2-12D to 32D (double acting)



- SSD2-40D, 50D (double acting)



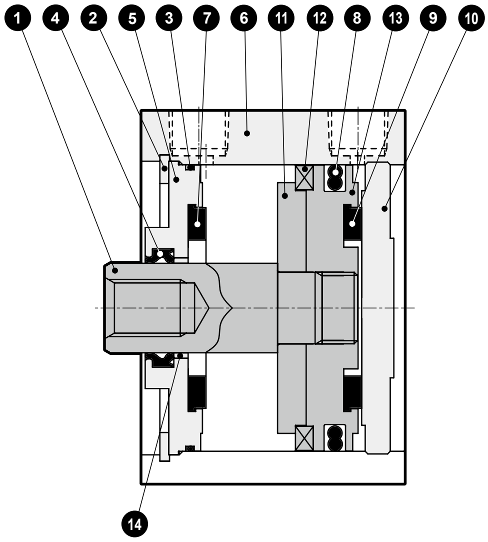
No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
2	C type snap ring	Steel	Zinc phosphate
3	Rod metal gasket	Nitrile rubber	
4	Rod packing	Nitrile rubber	
5	Rod metal	Aluminum alloy	Alumite
6	Body	Aluminum alloy	Hard alumite
7	Cushion rubber (R)	Urethane rubber	
8	Piston packing	Nitrile rubber	
9	Cushion rubber (H)	Urethane rubber	
10	Cover	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
11	Spacer	Aluminum alloy	ø12 to ø32: Chromate
12	Magnet	Plastic	
13	Piston	Aluminum alloy	Chromate

Repair parts list

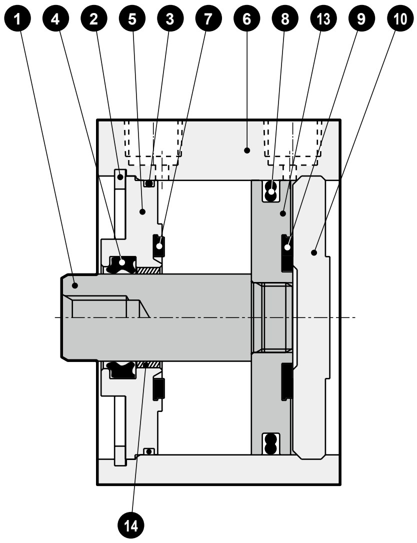
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-12DK	❸ ❹ ❼ ❽ ❾
ø16	SSD2-16DK	
ø20	SSD2-20DK	
ø25	SSD2-25DK	
ø32	SSD2-32DK	
ø40	SSD2-40DK	
ø50	SSD2-50DK	

Internal structure and parts list (ø63 to 100) (with rubber cushion)

● SSD2-L-63D to 100D (double acting/with switch)



● SSD2-63D to 100D (double acting)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	8	Piston packing	Nitrile rubber	
2	C type snap ring	Steel	Zinc phosphate	9	Cushion rubber (H)	Urethane rubber	
3	Rod metal gasket	Nitrile rubber		10	Cover	Aluminum alloy	Alumite
4	Rod packing	Nitrile rubber		11	Spacer	Aluminum alloy	
5	Rod metal	Aluminum alloy	Chromate	12	Magnet	Plastic	
6	Body	Aluminum alloy	Hard alumite	13	Piston	Aluminum alloy	Chromate
7	Cushion rubber (R)	Urethane rubber		14	Bush	Oiles drymet	

Repair parts list

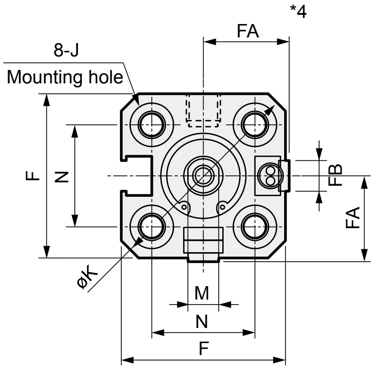
Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-63DK	❸ ❹ ❼ ❽ ❾
ø80	SSD2-80DK	
ø100	SSD2-100DK	

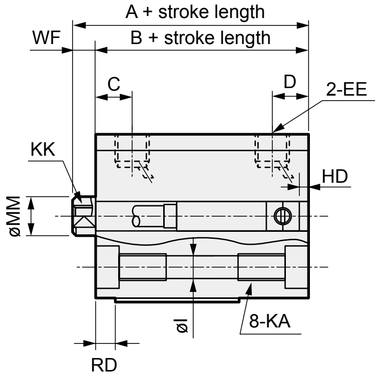
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/
COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/
MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd
Contr
Ending

Dimensions CAD

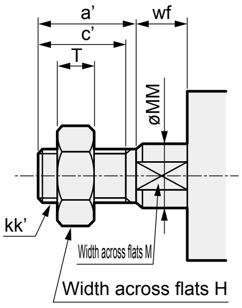
- SSD2-L-12 to 25 (with switch/TOH/V, T5H/V, T2H/V, T3H/V)

ø12/ø16

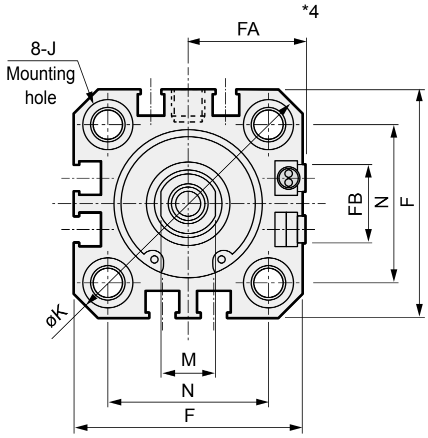


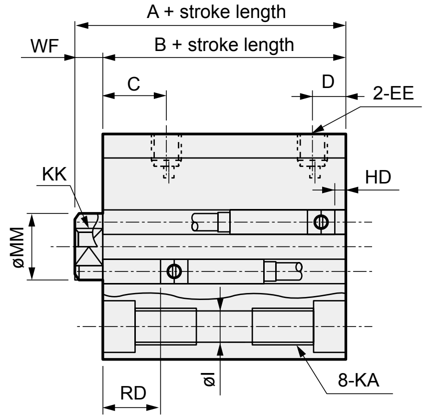


- Rod end male thread



ø20/ø25





Code Bore size (mm)	Common dimensions with switch															
	A *1	B *1	C	D	EE	F	FA *4	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	25.5	22	5.5	5.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	25.5	22	5.5	5.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	34	29.5	8	5.5	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	37.5	32.5	11	6	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimensions Bore size (mm)	Reed T0H/T0V, T5H/T5V *6		Proximity T2H/T2V, T3H/T3V *6		Proximity T2WH/T2WV, T3WH/T3WV *6		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	1.5(0)	1.5(3)	1.5(0)	1.5(3)	3.5(2)	3.5(5)				
ø16	0	4	0	4.5	1	6				
ø20	3	7.5	3	7.5	5	9.5	7.5	12	6.5	11
ø25	4	9.5	4	9.5	6	11.5	8.5	14	7.5	13

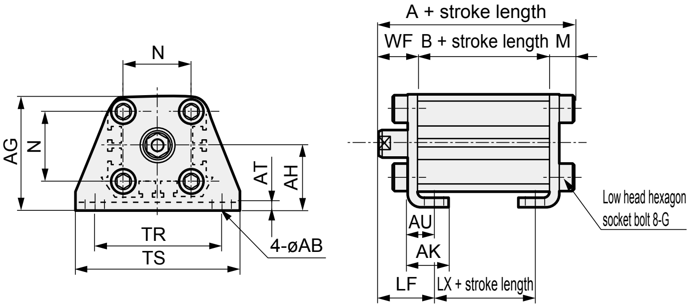
*1 : To calculate A + stroke length or B + stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
· For ø16: A + stroke length = 35.5 B + stroke length = 32
When you have selected "S" (dedicated unit for custom stroke length), apply the custom stroke length of 7 mm.
· For ø16: A + stroke length = 32.5 B + stroke length = 29
*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.
*4 : Dimensions in ( ) of FA are for the radial lead wire.
*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.
*6 : Dimensions in ( ) of codes HD and RD are for the type with rubber cushion.
*7 : Only F switch is available for the ø20 or ø25 piping port surface.

- Rod end male thread

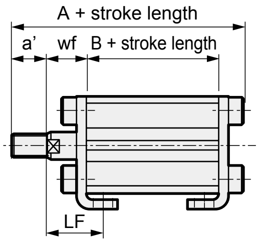
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

Dimensions with mounting bracket

● Axial foot (LB) with switch
SSD2-L-12 to 25 -LB



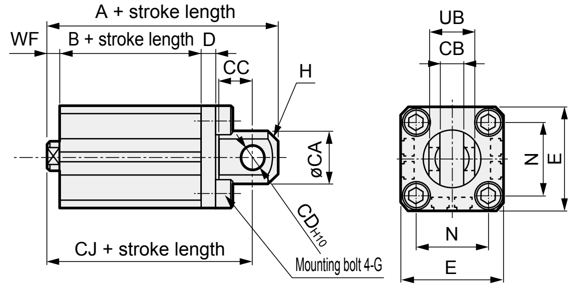
Rod end male thread



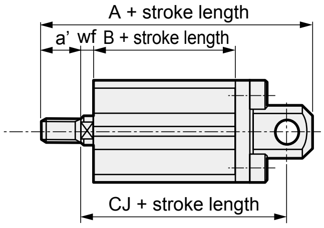
Code Bore size (mm)	Common dimensions						Female thread				
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

Code Bore size (mm)						Male thread					
	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	40.3	22	10	10.5	13.5	19.5	50.8	22	10
ø16	13.5	19.5	40.3	22	10	12	13.5	19.5	52.3	22	10
ø20	14.5	20.5	51.2	29.5	17.5	14	14.5	20.5	65.2	29.5	17.5
ø25	15	22.5	54.7	32.5	17.5	17.5	15	22.5	72.2	32.5	17.5

● Clevis bracket (CB) with switch
SSD2-L-12 to 25 -CB



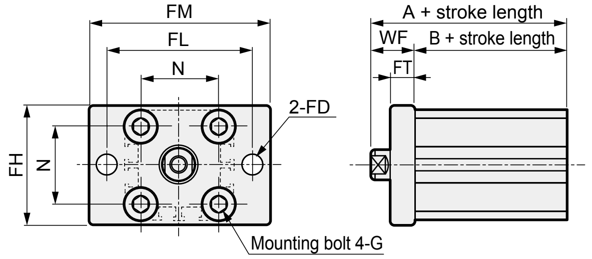
Rod end male thread



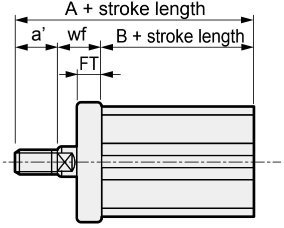
Code Bore size (mm)	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	5.2 $^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	10 $^{-0.1}_{-0.3}$
ø16	15	6.6 $^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	12 $^{-0.1}_{-0.4}$
ø20	20	8.2 $^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	16 $^{-0.1}_{-0.3}$
ø25	24	10.2 $^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	20 $^{-0.1}_{-0.3}$

Code Bore size (mm)	Female thread				Male thread				
	WF	A	B	CJ	a'	wf	A	B	CJ
ø12	3.5	45.5	22	39.5	10.5	3.5	56	22	39.5
ø16	3.5	46.5	22	40.5	12	3.5	58.5	22	40.5
ø20	4.5	61	29.5	52	14	4.5	75	29.5	52
ø25	5	67.5	32.5	57.5	17.5	5	85	32.5	57.5

● Rod side flange (FA) with switch
SSD2-L-12 to 25 -FA



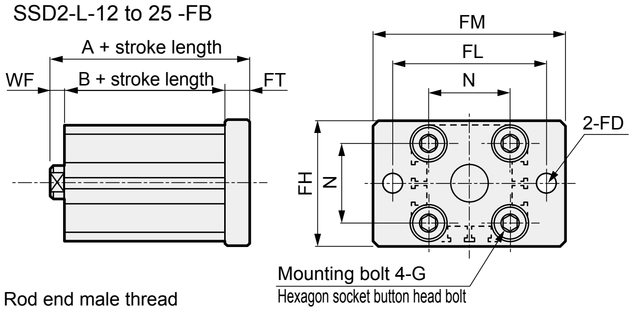
Rod end male thread



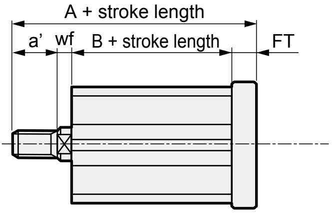
Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	13.5	35.5	22	10.5	13.5	46	22
ø16	13.5	35.5	22	12	13.5	47.5	22
ø20	14.5	44	29.5	14	14.5	58	29.5
ø25	15	47.5	32.5	17.5	15	65	32.5

● Head side flange (FB) with switch
SSD2-L-12 to 25 -FB



Rod end male thread



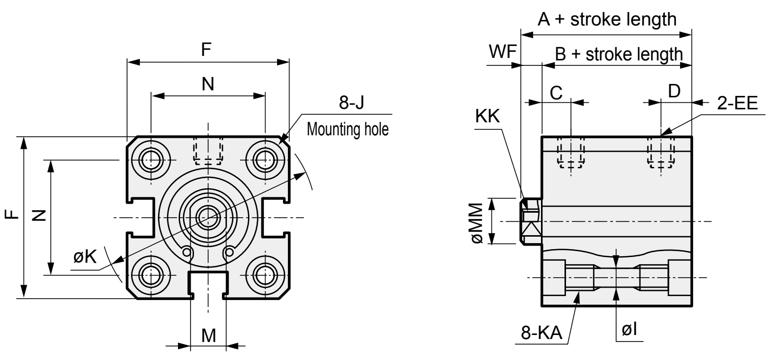
Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	3.5	31	22	10.5	3.5	41.5	22
ø16	3.5	31	22	12	3.5	43	22
ø20	4.5	42	29.5	14	4.5	56	29.5
ø25	5	45.5	32.5	17.5	5	63	32.5

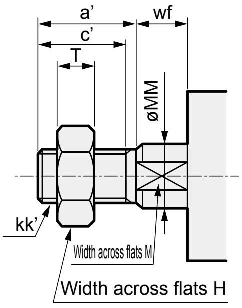
Dimensions

- SSD2-12 to 25 (without switch)

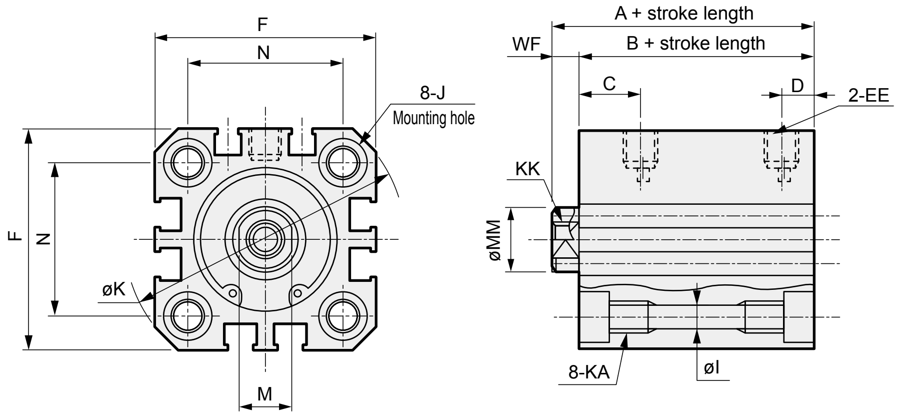
ø12/ø16



- Rod end male thread



ø20/ø25



Code Bore size (mm)	Dimensions without switch and common dimensions													
	A [*1]	B [*1]	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	20.5	17	5.5	5.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	20.5	17	5.5	5.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	24	19.5	8	5.5	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	27.5	22.5	11	6	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

- Rod end male thread

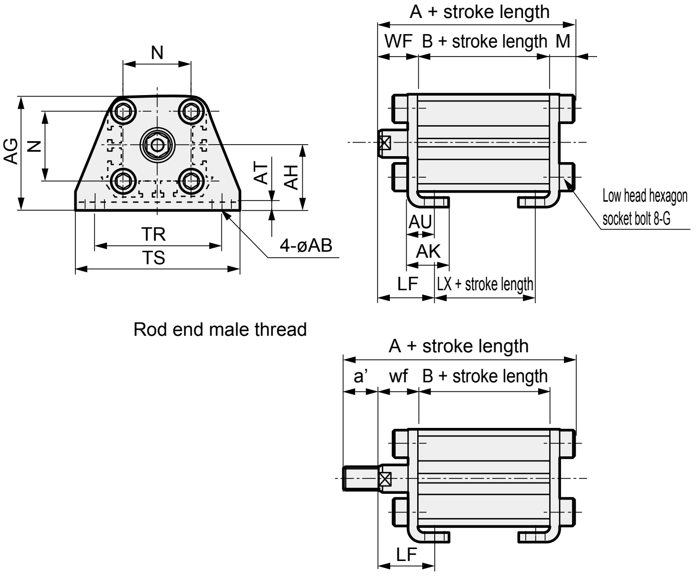
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

*1 : To calculate A + stroke length or B + stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
· For ø16: A + stroke length = 30.5 / B + stroke length = 27
When you have selected "S" (dedicated unit for custom stroke length), apply the custom stroke length of 7 mm.
· For ø16: A + stroke length = 27.5 / B + stroke length = 24

*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

Dimensions with mounting bracket

● Axial foot (LB) without switch
SSD2-12 to 25 -LB

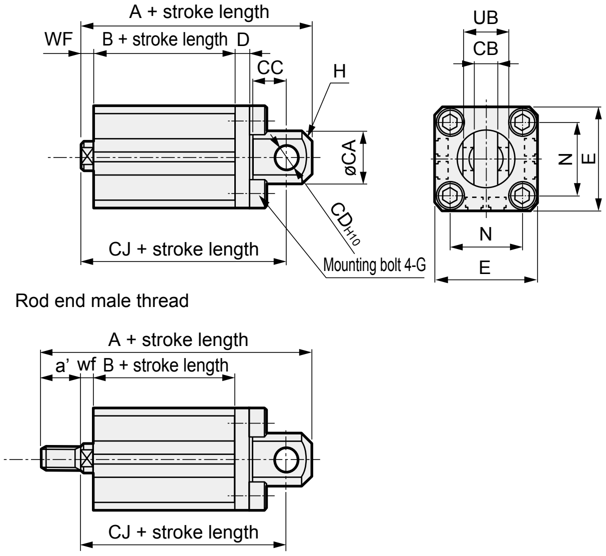


Code Bore size (mm)	Common dimensions				Female thread						
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

Code Bore size (mm)						Male thread					
	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	35.3	17	5	10.5	13.5	19.5	45.8	17	5
ø16	13.5	19.5	35.3	17	5	12	13.5	19.5	47.3	17	5
ø20	14.5	20.5	41.2	19.5	7.5	14	14.5	20.5	55.2	19.5	7.5
ø25	15	22.5	44.7	22.5	7.5	17.5	15	22.5	62.2	22.5	7.5

Note: ø20: LB cannot be selected for 5 mm stroke length.

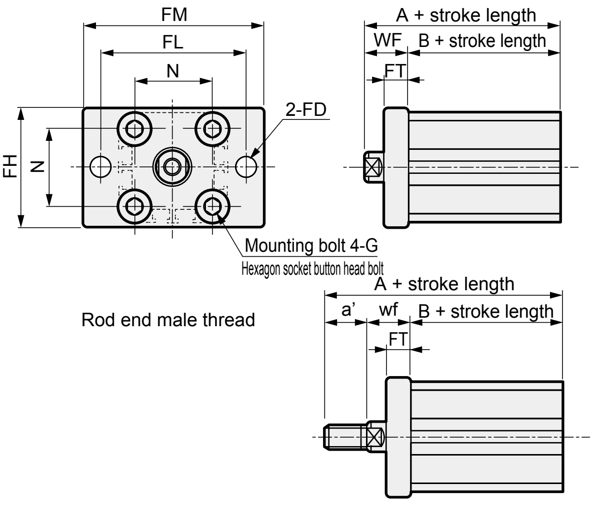
● Clevis bracket (CB) without switch
SSD2-12 to 25 -CB



Code Bore size (mm)	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	$5.2^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	$10^{-0.1}_{-0.3}$
ø16	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	$12^{-0.1}_{-0.4}$
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$

Code Bore size (mm)	Female thread				Male thread				
	WF	A	B	CJ	a'	wf	A	B	CJ
ø12	3.5	40.5	17	34.5	10.5	3.5	51	17	34.5
ø16	3.5	41.5	17	35.5	12	3.5	53.5	17	35.5
ø20	4.5	51	19.5	42	14	4.5	65	19.5	42
ø25	5	57.5	22.5	47.5	17.5	5	75	22.5	47.5

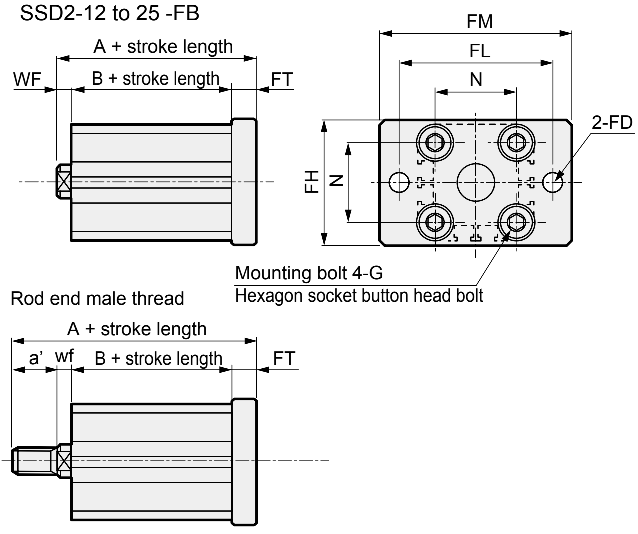
● Rod side flange (FA) without switch
SSD2-12 to 25 -FA



Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	13.5	30.5	17	10.5	13.5	41	17
ø16	13.5	30.5	17	12	13.5	42.5	17
ø20	14.5	34	19.5	14	14.5	48	19.5
ø25	15	37.5	22.5	17.5	15	55	22.5

● Head side flange (FB) without switch
SSD2-12 to 25 -FB



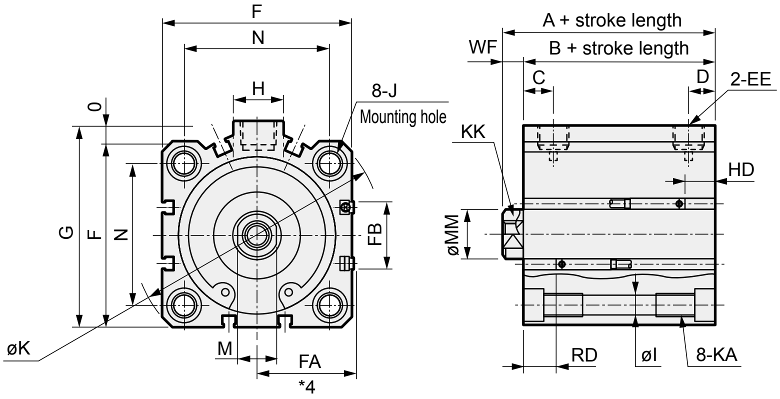
Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	3.5	26	17	10.5	3.5	36.5	17
ø16	3.5	26	17	12	3.5	38	17
ø20	4.5	32	19.5	14	4.5	46	19.5
ø25	5	35.5	22.5	17.5	5	53	22.5

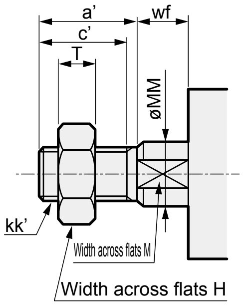
Dimensions

CAD

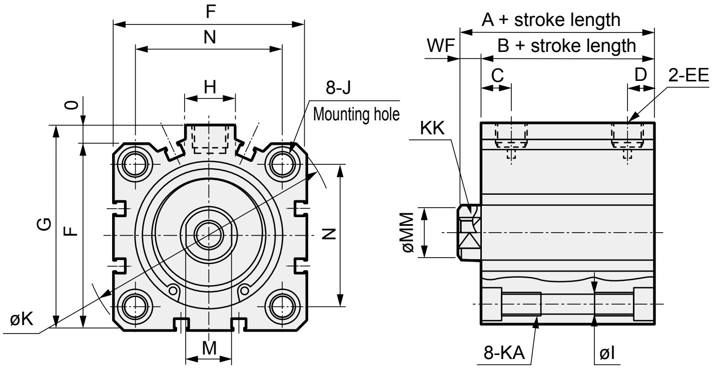
● SSD2-L-32 to 100 (with switch/TOH/V, T5H/V, T2H/V, T3H/V)



● Rod end male thread



● SSD2-32 to 100 (without switch)



Code	Without switch		Common dimensions with switch																		
Bore size (mm)	A *1, *6	B *1, *6	A *1	B *1	C *8	D *8	EE	F	FA *4	FB	G	H	I	J	K	KA	KK	M	MM	N	O	WF
ø32	30(40)	23(33)	40	33	8(10)	8(5.5)	Rc1/8 *7	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face Depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7
ø40	36.5(46.5)	29.5(39.5)	46.5	39.5	12(11.5)	8.5(8)	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face Depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7
ø50	38.5(48.5)	30.5(40.5)	48.5	40.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face Depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8
ø63	44(54)	36(46)	54	46	13	11	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face Depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	8
ø80	53.5(63.5)	43.5(53.5)	63.5	53.5	16	13	Rc3/8	98	49.5(53)	28.5	104	31	10.5	17.5 spot face Depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	10
ø100	65(75)	53(63)	75	63	23	15	Rc3/8	117	59(62.5)	28.5	123.5	38	10.5	17.5 spot face Depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12

Switch dimensions	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size (mm)	HD *2	RD *2	HD *2	RD *2	HD	RD
ø32	4	9.5	4	9.5	6	11.5
ø40	7	12	7	12	8.5	13.5
ø50	7.5	12.5	7.5	12.5	9	14
ø63	12.5	13	12.5	13	14	14.5
ø80	17.5	15.5	17.5	15.5	19	17
ø100	23	19.5	23	19.5	24.5	21

*1 : To calculate A + stroke length or B + stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.

(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

· For ø32: A + stroke length = 40 B + stroke length = 33

When you have selected "S" (dedicated unit for custom stroke length), apply the custom stroke length of 7 mm.

· For ø32: A + stroke length = 37 B + stroke length = 30

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.

*4 : Dimensions in ( ) of FA are for the radial lead wire.

*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.

*6 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

*7 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

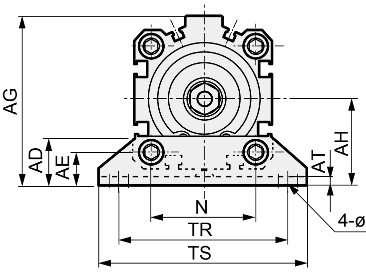
*8 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

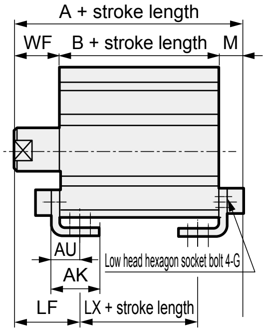
● Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

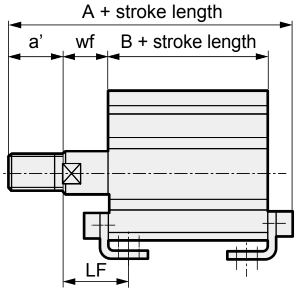
Dimensions

- Axial foot (LB)
SSD2-(L)-32 to 100 -LB





Rod end male thread



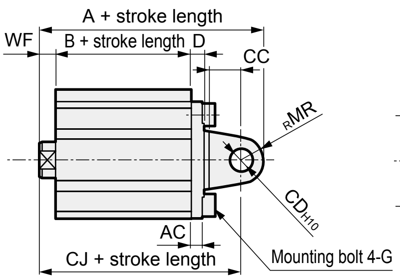
Code Bore size (mm)	Common dimensions						Female thread														
	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	WF	LF	Without switch			With switch		
																A	B	LX	A	B	LX
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71	7.2	17	25	47.2(57.2)	23(33)	7(17)	57.2	33	17
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78	7.2	17	25	53.7(63.7)	29.5(39.5)	13.5(23.5)	63.7	39.5	23.5
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95	8.2	18	29.5	56.7(66.7)	30.5(40.5)	7.5(17.5)	66.7	40.5	17.5
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113	9.2	18	31	63.2(73.2)	36(46)	10(20)	73.2	46	20
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	77	118	140	11.5	20	35	75(85)	43.5(53.5)	13.5(23.5)	85	53.5	23.5
ø100	13	35	24	136	71	35.5	6	23	M12×40	94	137	162	13	22	39	88(98)	53(63)	19(29)	98	63	29

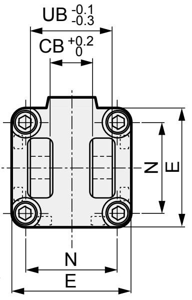
Code Bore size (mm)	Male thread							
	a'	wf	LF	Without switch			With switch		
				A	B	LX	A	B	LX
ø32	23.5	15	23	68.7(78.7)	23(33)	7(17)	78.7	33	17
ø40	23.5	15	23	75.2(85.2)	29.5(39.5)	13.5(23.5)	85.2	39.5	23.5
ø50	28.5	15	26.5	82.2(92.2)	30.5(40.5)	7.5(17.5)	92.2	40.5	17.5
ø63	28.5	15	28	88.7(98.7)	36(46)	10(20)	98.7	46	20
ø80	35.5	18	33	108.5(118.5)	43.5(53.5)	13.5(23.5)	118.5	53.5	23.5
ø100	35.5	18	35	119.5(129.5)	53(63)	19(29)	129.5	63	29

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

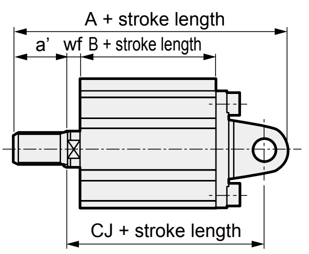
Note: LB cannot be selected when B + stroke length is at or less than the stroke value below.
ø80: 72 or less, ø: 69 or less

- Clevis bracket (CB)
SSD2-(L)-32 to 100 -CB





Rod end male thread

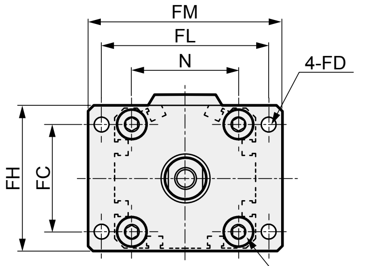


Code Bore size (mm)	Common dimensions										Female thread							Male thread							
	AC	CB	CC	CD	D	E	G	MR	N	UB	WF	Without switch			With switch			a'	wf	Without switch			With switch		
												A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø32	4.5	18.2	14	10	5	45	M6×16	10	34	36	7	60(70)	23(33)	50	70	33	60	23.5	5	81.5(91.5)	23(33)	48	91.5	33	58
ø40	5	18.2	14	10	6	52	M6×16	10	40	36	7	68.5(78.5)	29.5(39.5)	58.5	78.5	39.5	68.5	23.5	5	90(100)	29.5(39.5)	56.5	100	39.5	66.5
ø50	6	22.2	20	14	7	64	M8×20	14	50	44	8	80.5(90.5)	30.5(40.5)	66.5	90.5	40.5	76.5	28.5	5	106(116)	30.5(40.5)	63.5	116	40.5	73.5
ø63	7	22.2	20	14	8	77	M10×25	14	60	44	8	88(98)	36(46)	74	98	46	84	28.5	5	113.5(123.5)	36(46)	71	123.5	46	81
ø80	9	28.2	27	18	10	98	M12×40	18	77	56	10	109.5(119.5)	43.5(53.5)	91.5	119.5	53.5	101.5	35.5	8	143(153)	43.5(53.5)	89.5	153	53.5	99.5
ø100	12	32.2	31	22	13	117	M12×40	22	94	64	12	132(142)	53(63)	110	142	63	120	35.5	8	163.5(173.5)	53(63)	106	173.5	63	116

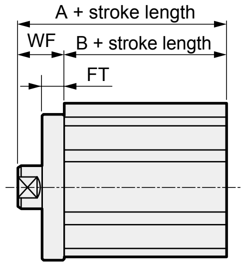
* Dimensions in ( ) are for stroke lengths of more than 50 mm.

Dimensions CAD

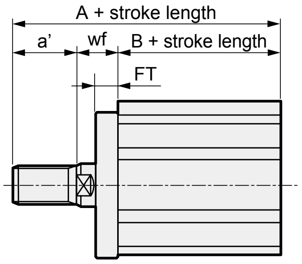
● Rod side flange (FA)
SSD2-(L)-32 to 100 -FA



Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt



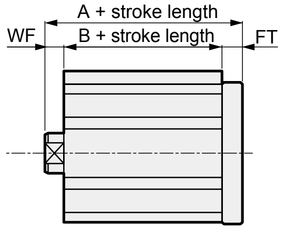
Rod end male thread

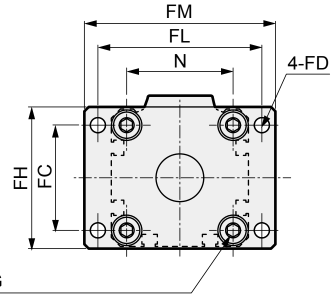


Code	Common dimensions								Female thread					Male thread					
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø32	34	5.5	48	56	65	8	34	M6×16	17	40(50)	23(33)	50	33	23.5	15	61.5(71.5)	23(33)	71.5	33
ø40	40	5.5	54	62	72	8	40	M6×16	17	46.5(56.5)	29.5(39.5)	56.5	39.5	23.5	15	68(78)	29.5(39.5)	78	39.5
ø50	50	6.6	67	76	89	9	50	M8×20	18	48.5(58.5)	30.5(40.5)	58.5	40.5	28.5	15	74(84)	30.5(40.5)	84	40.5
ø63	60	9	80	92	108	9	60	M10×25	18	54(64)	36(46)	64	46	28.5	15	79.5(89.5)	36(46)	89.5	46
ø80	77	11	99	116	134	11	77	M12×40	20	63.5(73.5)	43.5(53.5)	73.5	53.5	35.5	18	97(107)	43.5(53.5)	107	53.5
ø100	94	11	117	136	154	11	94	M12×40	22	75(85)	53(63)	85	63	35.5	18	106.5(116.5)	53(63)	116.5	63

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

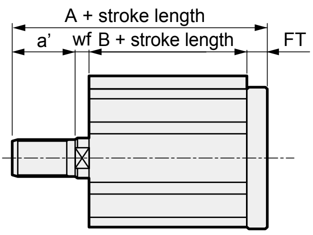
● Head side flange (FB)
SSD2-(L)-32 to 100 -FB





Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt

Rod end male thread



Code	Common dimensions								Female thread					Male thread					
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø32	34	5.5	48	56	65	8	34	M6×16	7	38(48)	23(33)	48	33	23.5	5	59.5(69.5)	23(33)	69.5	33
ø40	40	5.5	54	62	72	8	40	M6×16	7	44.5(54.5)	29.5(39.5)	54.5	39.5	23.5	5	66(76)	29.5(39.5)	76	39.5
ø50	50	6.6	67	76	89	9	50	M8×20	8	47.5(57.5)	30.5(40.5)	57.5	40.5	28.5	5	73(83)	30.5(40.5)	83	40.5
ø63	60	9	80	92	108	9	60	M10×25	8	53(63)	36(46)	63	46	28.5	5	78.5(88.5)	36(46)	88.5	46
ø80	77	11	99	116	134	11	77	M12×40	10	64.5(74.5)	43.5(53.5)	74.5	53.5	35.5	8	98(108)	43.5(53.5)	108	53.5
ø100	94	11	117	136	154	11	94	M12×40	12	76(86)	53(63)	86	63	35.5	8	107.5(117.5)	53(63)	117.5	63

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

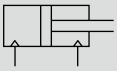
MEMO

Compact cylinder double acting/single rod (large bore size)

SSD2 Series

● Bore size: ø125/ø140/ø160/ø180/ø200

JIS symbol



Specifications

Item	SSD2 SSD2-L (with switch)				
Bore size mm	ø125	ø140	ø160	ø180	ø200
Actuation	Double acting				
Working fluid	Compressed air				
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)			0.7 (≈100 psi, 7 bar)	
Min. working pressure MPa	0.05 (≈7.3 psi, 0.5 bar)				
Proof pressure MPa	1.6 (≈230 psi, 16 bar)			1.05 (≈150 psi, 10.5 bar)	
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)				
Port size	Rc3/8			Rc1/2	
Stroke tolerance mm	$^{+2.0}_{0}$				
Working piston speed mm/s	50 to 300			20 to 300	
Cushion	With rubber cushion (standard)				
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)				
Allowable absorbed energy J — With rubber cushion	6.52	6.52	7.78	12.4	
Allowable absorbed energy J — Without cushion	-				

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø125	10, 20, 30, 40, 50 75, 100, 125, 150 175, 200, 250, 300	300	1
ø140			
ø160			
ø180			
ø200			

*1: For the type with switch, refer to the table of switch mounting quantity and minimum stroke length.

Number of installed switches and min. stroke length (mm)

Switch quantity	1	2	3	4	5
Switch model No. / Bore size (mm)	T*	T*	T*	T*	T*
ø125	5	5	40	55	70
ø140	5	5	40	55	70
ø160	5	5	40	55	70
ø180	5	5	40	55	70
ø200	5	5	40	55	70

Note: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1* or T8* switch is not available.

Switch specifications

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: kg)

Stroke length (mm)	10		20		30		40		50		75		100	
Bore size (mm)	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø125	4.58	4.68	4.85	4.95	5.11	5.21	5.38	5.48	5.64	5.74	6.30	6.40	6.97	7.07
ø140	6.36	6.47	6.66	6.77	6.97	7.08	7.27	7.38	7.58	7.69	8.34	8.45	9.10	9.21
ø160	8.64	8.76	9.02	9.14	9.40	9.52	9.78	9.90	10.16	10.28	11.11	11.23	12.06	12.18
ø180	12.98	13.06	13.38	13.46	13.78	13.86	14.18	14.26	14.58	14.66	15.59	15.67	16.59	16.67
ø200	17.23	17.31	17.69	17.77	18.16	18.24	18.62	18.70	19.08	19.16	20.23	20.31	21.39	21.47

Stroke length (mm)	125		150		175		200		250		300	
Bore size (mm)	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø125	7.63	7.73	8.30	8.40	8.96	9.06	9.62	9.72	10.95	11.05	12.27	12.37
ø140	9.86	9.97	10.63	10.74	11.39	11.50	12.15	12.26	13.68	13.79	15.20	15.31
ø160	13.01	13.13	13.96	14.08	14.91	15.03	15.86	15.98	17.76	17.88	19.66	19.78
ø180	17.59	17.67	18.59	18.67	19.60	19.68	20.60	20.68	22.60	22.68	24.61	24.69
ø200	22.54	22.62	23.70	23.78	24.85	24.93	26.01	26.09	28.32	28.40	30.63	30.71

Theoretical thrust table

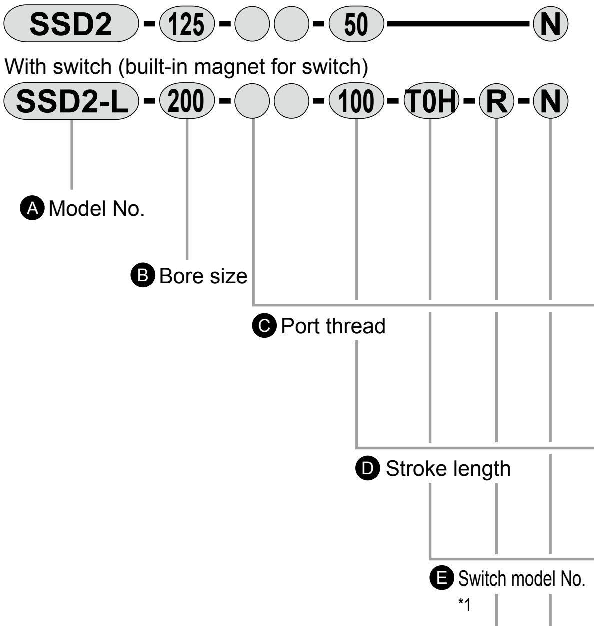
(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø125	Push	1.23×10^3	1.84×10^3	2.45×10^3	3.68×10^3	4.91×10^3	6.14×10^3	7.36×10^3	8.59×10^3	9.82×10^3	1.10×10^4	1.23×10^4
	Pull	1.13×10^3	1.70×10^3	2.26×10^3	3.39×10^3	4.52×10^3	5.65×10^3	6.79×10^3	7.92×10^3	9.05×10^3	1.02×10^4	1.13×10^4
ø140	Push	1.54×10^3	2.31×10^3	3.08×10^3	4.62×10^3	6.16×10^3	7.70×10^3	9.24×10^3	1.08×10^4	1.23×10^4	1.39×10^4	1.54×10^4
	Pull	1.44×10^3	2.16×10^3	2.89×10^3	4.33×10^3	5.77×10^3	7.22×10^3	8.66×10^3	1.01×10^4	1.15×10^4	1.30×10^4	1.44×10^4
ø160	Push	2.01×10^3	3.02×10^3	4.02×10^3	6.03×10^3	8.04×10^3	1.01×10^4	1.21×10^4	1.41×10^4	1.61×10^4	1.81×10^4	2.01×10^4
	Pull	1.88×10^3	2.83×10^3	3.77×10^3	5.65×10^3	7.54×10^3	9.42×10^3	1.13×10^4	1.32×10^4	1.51×10^4	1.70×10^4	1.88×10^4
ø180	Push	2.54×10^3	3.82×10^3	5.09×10^3	7.63×10^3	1.02×10^4	1.27×10^4	1.53×10^4	1.78×10^4	-	-	-
	Pull	2.39×10^3	3.58×10^3	4.77×10^3	7.16×10^3	9.54×10^3	1.19×10^4	1.43×10^4	1.67×10^4	-	-	-
ø200	Push	3.14×10^3	4.71×10^3	6.28×10^3	9.43×10^3	1.26×10^4	1.57×10^4	1.89×10^4	2.20×10^4	-	-	-
	Pull	3.02×10^3	4.52×10^3	6.03×10^3	9.05×10^3	1.21×10^4	1.51×10^4	1.81×10^4	2.11×10^4	-	-	-

How to order

Without switch (without magnet for switch)

With switch (built-in magnet for switch)



Code	Description
Ⓐ Model No.	
SSD2	Double acting/single rod
SSD2-L	Double acting/single rod/with switch
Ⓑ Bore size (mm)	
125	ø125
140	ø140
160	ø160
180	ø180
200	ø200
Ⓒ Port thread	
Blank	Rc thread
NN	NPT thread (ø125 to ø160) (made-to-order product)
GN	G thread (ø125 to ø160) (made-to-order product)
Ⓓ Stroke length (mm)	
	Refer to the stroke length table on the following page.

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead Line
T0H*	T0V*	Reed	●	●	1-color display	2-wire
T5H*	T5V*		●	●	Without indicator lamp	
T8H*	T8V*		●	●	1-color display	
T1H*	T1V*	Proximity	●		1-color display	2-wire
T2H*	T2V*			●		
T3H*	T3V*			●		3-wire
T3PH*	T3PV*			●	1-color display	
T2WH*	T2WV*			●	2-color display	2-wire
T2YH*	T2YV*			●		
T3WH*	T3WV*			●		3-wire
T3YH*	T3YV*			●		
T2JH*	T2JV*			●	1-color display off-delay	2-wire
T2YD*	-			●	2-color display for AC magnetic field	2-wire
T2YDT*	-			●		

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

Ⓕ Switch quantity	
R	1 on rod side
H	1 on head side
D	2

Ⓖ Option	
Blank	Rod end female thread
N	Rod end male thread
P4	Specifications for rechargeable battery
P40	

⚠ Precautions for model No. selection

*1: Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

SSD2-L-125-50-T0H-R-N

Model: Compact cylinder, standard

Ⓑ Bore size	: 125 mm
Ⓒ Port thread	: Rc thread
Ⓓ Stroke length	: 50mm
Ⓔ Switch model No.	: Reed T0H switch · Lead wire length 1 m
Ⓕ Switch quantity	: 1 on rod side
Ⓖ Option	: Rod end male thread

[Stroke length table]

Stroke length (mm)		Applicable bore size				
		ø125	**ø140**	**ø160**	**ø180**	**ø200**
Standard stroke length	10	●	●	●	●	●
	20	●	●	●	●	●
	30	●	●	●	●	●
	40	●	●	●	●	●
	50	●	●	●	●	●
	75	●	●	●	●	●
	100	●	●	●	●	●
	125	●	●	●	●	●
	150	●	●	●	●	●
	175	●	●	●	●	●
	200	●	●	●	●	●
	250	●	●	●	●	●
	300	●	●	●	●	●
Min. stroke length (mm) *1		1				
Max. stroke length (mm)		300				
Custom stroke length *2		In 1 mm increments				

1 : Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available. Refer to page 768 for the number of installed switches and the min. stroke length.

*2 : Total length dimension with custom stroke length is handled as custom stroke dedicated length.

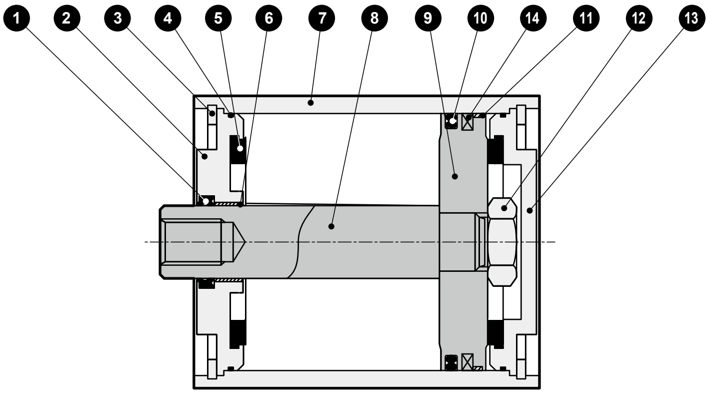
How to order switch

SW - **T0H**

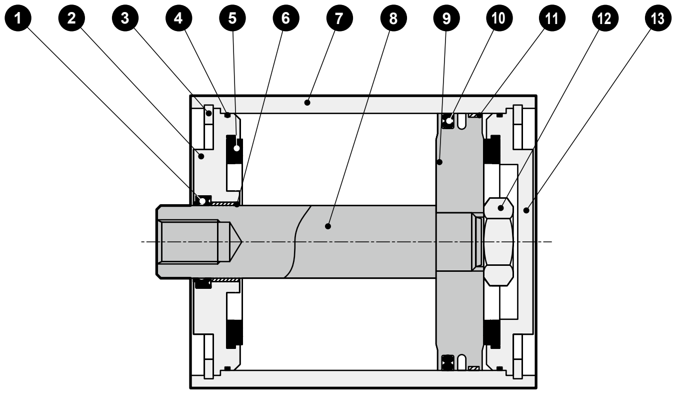
Switch model No.
(Item Ⓕ on page 770)

Internal structure and parts list (ø125 to ø160) (with cushion)

- SSD2-L-125 to 160 (double acting/single rod/with switch)



- SSD2-125 to 160 (double acting/single rod/without switch)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Rod packing	Nitrile rubber		9	Piston	Aluminum die-casting	
2	Rod metal	Aluminum die-casting	Chromate	10	Piston packing	Nitrile rubber	
3	C type snap ring	Steel	Zinc phosphate	11	Wear ring	Polyacetal resin	
4	Metal gasket	Nitrile rubber		12	Hexagon nut	Steel	Zinc chromate
5	Cushion rubber	Urethane rubber		13	Base plate	Aluminum die-casting	Chromate
6	Bush	Oiles drymet		14	Magnet	Rubber	With switch only
7	Body	Aluminum alloy	Hard alumite				
8	Piston rod	Steel	Industrial chrome plating				

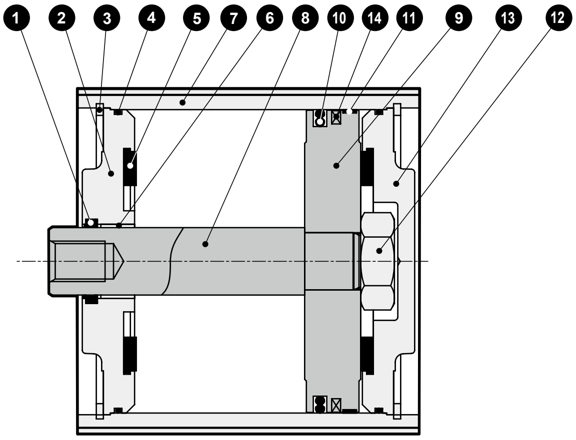
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø125	SSD2-125K	① ④ ⑤ ⑩ ⑪
ø140	SSD2-140K	
ø160	SSD2-160K	

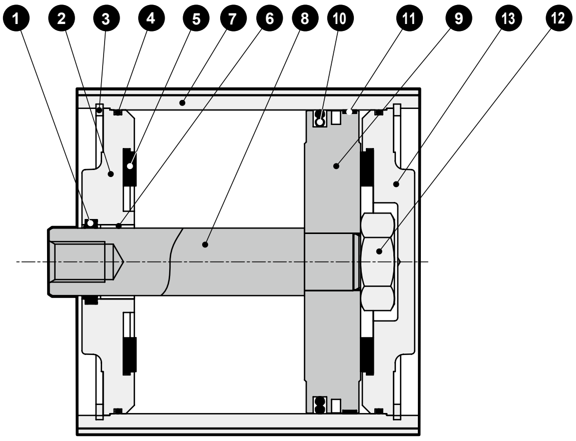
*1: Specify the kit No. when placing an order.

Internal structure and parts list (ø180, ø200)

- SSD2-L-180, 200 (double acting/single rod/with switch)



- SSD2-180, 200 (double acting/single rod/without switch)



Parts list

No.	Part name	Material	Remarks
1	Rod packing	Nitrile rubber	
2	Rod metal	Cast iron	Paint
3	C type snap ring	Steel	Zinc phosphate
4	Gasket	Nitrile rubber	
5	Cushion rubber	Urethane rubber	
6	Bush	Oiles drymet	
7	Body	Aluminum alloy	Hard alumite
8	Piston rod	Steel	Industrial chrome plating
9	Piston	Aluminum alloy	
10	Piston packing	Nitrile rubber	
11	Wear ring	Polyacetal resin	
12	Hexagon nut	Steel	Zinc chromate
13	Cover	Cast iron	Paint
14	Magnet	Rubber	With switch only

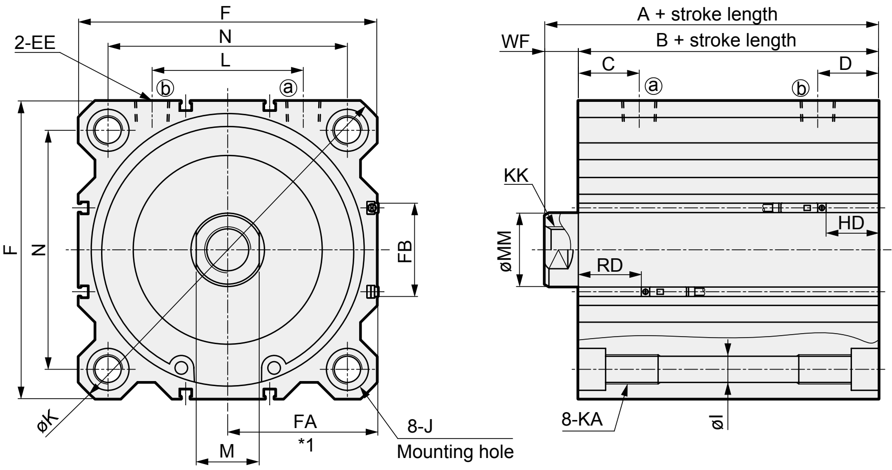
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø180	SSD2-180K	❶❹❺❿⓫
ø200	SSD2-200K	

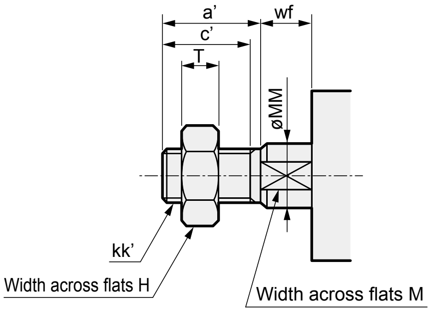
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/
COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/
MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd
Contr
Ending

Dimensions (ø125 to ø160)

- SSD2-(L)-125 to 160 (double acting/single rod)



- Rod end male thread



Code	Common dimensions with switch															
Bore size (mm)	A	B	C	D	EE	F	I	J	K	KA	KK	L	M	MM	N	WF
ø125	99	83	29	29	Rc3/8	142	12.5	20 spot face depth 13	190	M14 depth 25	M22 depth 30	72	30	35	114	16
ø140	99	83	27.5	27.5	Rc3/8	158	12.5	20 spot face depth 13	210	M14 depth 25	M22 depth 30	80	30	35	128	16
ø160	108	91	30	30	Rc3/8	178	14.7	23 spot face depth 15.2	238	M16 depth 28	M24 depth 33	90	36	40	144	17

Code	T0H/V, T2H/V, T3H/V, T5/V				T2YH/V, T3YH/V, T2JH/V				T1H/V, T2YD				T2WH/V, T3WH/V				T8H/V			
Bore size (mm)	HD	RD	FA *1	FB	HD	RD	FA *1	FB	HD	RD	FA *1	FB	HD	RD	FA *1	FB	HD	RD	FA *1	FB
ø125	30	35	71.5 (75)	44.5	28.5	33.5	77 (80)	48	28.5	33.5	82.5 (85.5)	48	31.5	36.5	71.5 (75)	44.5	24	29	77 (80)	48
ø140	31.5	33.5	79.5 (83)	44.5	30	32	85 (88)	48	30	32	90.5 (93.5)	48	33	35	79.5 (83)	44.5	25.5	27.5	85 (88)	48
ø160	34	39	89.5 (93)	48.5	32.5	37.5	95 (98)	52	32.5	37.5	100.5 (103.5)	52	35.5	40.5	89.5 (93)	48.5	28	33	95 (98)	52

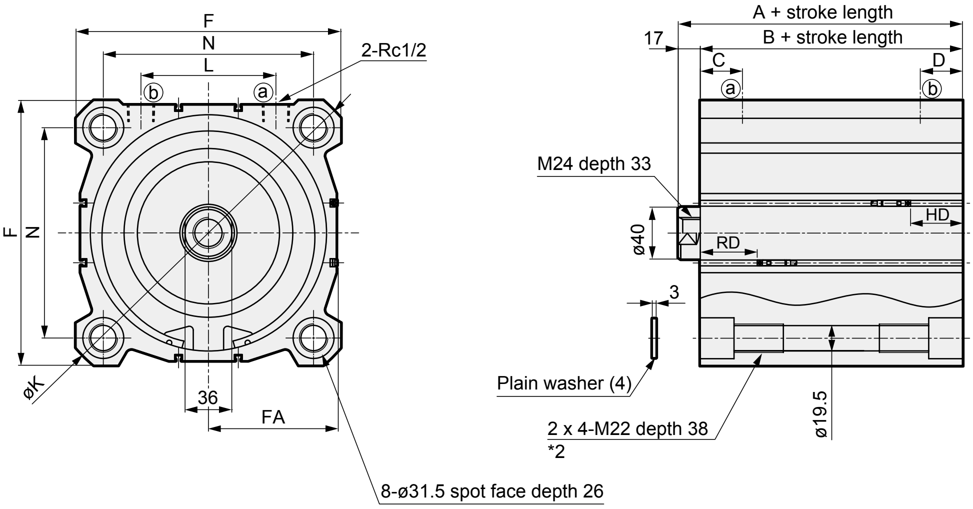
*1: Dimensions in ( ) of FA are for the radial lead wire.

Dimensions of rod end male thread

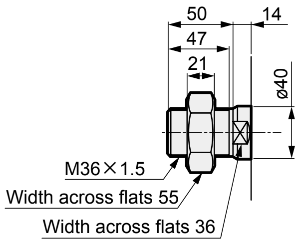
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø125	45	42	46	M30×1.5	30	35	18	13
ø140	45	42	46	M30×1.5	30	35	18	13
ø160	50	47	55	M36×1.5	36	40	21	14

Dimensions (ø180, ø200)

- SSD2-(L)-180, 200 (double acting/single rod)



- Rod end male thread



Code Bore size (mm)	A	B	C	D	F	K	L	N
ø180	119	102	32.5	32.5	204	270	104	162
ø200	126	109	33.5	33.5	226	300	110	182

Code	T0H/V, T2H/V, T3H/V, T5H/V			T2YH/V, T3YH/V, T2JH/V			T1H/V, T2YD			T2WH/V, T3WH/V			T8H/V		
Bore size (mm)	HD	RD	FA [*1]	HD	RD	FA [*1]	HD	RD	FA [*1]	HD	RD	FA [*1]	HD	RD	FA [*1]
ø180	39.5	43.5	99 (102.5)	38.5	42.5	104.5 (107.5)	38.5	42.5	110 (113)	41.5	45.5	99 (102.5)	33.5	37.5	104.5 (107.5)
ø200	44.5	45.5	109.5 (113)	43.5	44.5	115 (118)	43.5	44.5	120.5 (123.5)	46.5	47.5	109.5 (113)	38.5	39.5	115 (118)

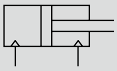
*1: Dimensions in ( ) of FA are for the radial lead wire.
*2: 2×4-M22 through hole for 20 mm or less stroke length.

Compact cylinder, double acting/single rod/high load

SSD2-K Series

- Bore size: ø12/ø16/ø20/ø25/ø32
  ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-K SSD2-KL (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)									
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)								0.05 (≈7.3 psi, 0.5 bar)	
Proof pressure MPa	1.6 (≈230 psi, 16 bar)									
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)									
Port size	M5				Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$									
Working piston speed mm/s	50 to 500								50 to 300	
Cushion	Rubber cushion									
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)									
Allowable absorbed energy J	0.04	0.09	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20 25/30	30	1
ø16			
ø20	5/10/15/20/25 30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

*1 : When using the type with switch, refer to the table of the min. stroke length with switch.

*2: Refer to page 789 for the min. stroke length with mounting bracket LB.

Min. stroke length with switch (1 or 2 switches)

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø12	10(5)	5
ø16		
ø20	5	
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

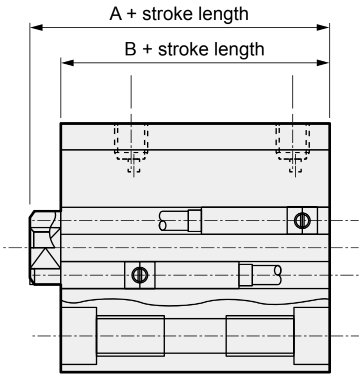
1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.

*2: Values in ( ) are for the type with 1 on rod side.

Custom stroke length

● SSD2-K Series

Item	Standard products		Optional products	
	Standard stroke length body with spacer		Dedicated unit (-S)	
Model No.	Refer to How to order.		Add "-S" option code to the model No.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.		Dedicated units of the required stroke length are available.	
Stroke range	Bore size	Stroke range	Bore size	Stroke range
	12/16	1 to 29	12, 16	6 to 29
	20 to 25	1 to 49	20, 25	6 to 49
	32 to 100	1 to 99	32 to 100	11 to 99
Example of model No.	Model No.: SSD2-K-32-41 A +4 mm spacer is added to the SSD2-K-32-45 standard cylinder to create 41 mm stroke length. B + stroke length is 88 mm.		Model No.: SSD2-K-32-41-S Dedicated units for 41 mm stroke length are available. B + stroke length is 74mm.	



Switch specifications (F switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/ F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1: Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2: Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3: The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C.
(5 to 10 mA at 60°C)
*4: Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5: The F type switch uses a bend-resistant lead wire.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^{2}	1.13×10^{2}
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	-	49.1	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	-	37.8	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	-	80.4	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	-	60.3	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	-	1.26×10^{2}	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.06×10^{2}	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	1.96×10^{2}	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	1.65×10^{2}	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	1.56×10^{2}	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	1.40×10^{2}	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	2.51×10^{2}	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	2.27×10^{2}	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	3.93×10^{2}	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	3.57×10^{2}	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

How to order

Without switch (without magnet for switch)

SSD2-K - 12 ◯ - 10 ———— N - LB - I

With switch (built-in magnet for switch)

SSD2-KL - 12 ◯ - 10 - T0H - R - N - LB - I

Ⓐ Bore size

Ⓑ Port thread

Ⓒ Stroke length

Ⓓ Switch model No. *1 *2 *3 *8 *9

Ⓔ Switch quantity

Ⓕ Option *4

Ⓖ Mounting bracket *5 *6

Ⓗ Accessory *7

Code	Description
Ⓐ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓑ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)

Ⓒ Stroke length (mm)

Refer to the stroke length table on the following page.

Ⓓ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	12	16	20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire			●	●						
-	F3S*			●		3-wire			●	●						
F2H*	F2V*			●		2-wire			●	●						
F3H*	F3V*			●		3-wire			●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire			●	●						
F2YH*	F2YV*			●	2-color display	2-wire			●	●						
F3YH*	F3YV*			●		3-wire			●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display							●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire			●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●					●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●					●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display AC magnetic field	2-wire			●	●	●	●	●	●	●	●
T2YDT*	-			●					●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire			●	●	●	●	●	●	●	●

*** Lead wire length**

Code	Description
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *11

Ⓔ Switch quantity

Code	Description
R	1 on rod side
H	1 on head side
D	2

Ⓕ Option

	Bore size (ø)	12	16	20	25	32	40	50	63	80	100
Blank	Rod end female thread	●	●	●	●	●	●	●	●	●	●
N	Rod end male thread	●	●	●	●	●	●	●	●	●	●
M *4	Piston rod material (stainless steel)	●	●	●	●	●	●	●	●	●	●
P6	Copper and PTFE free	Standard		●	●	●	●	●	●	●	●
S	Dedicated unit for custom stroke length	●	●	●	●	●	●	●	●	●	●
P4	Specifications for rechargeable battery	●	●	●	●	●	●	●	●	●	●
P40		●	●	●	●	●	●	●	●	●	●

Ⓖ Mounting bracket

Code	Description
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange

Ⓗ Accessory (available when rod end male thread "N" is selected)

Code	Description
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

1 : The T2YD switch cannot be mounted on the ø12 and ø16 bore sizes.
2 : The T8 switch cannot be mounted on ø12 and ø16.
*3 : The F switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.
*4 : Piston rod of ø12 to ø25 is stainless steel as standard. C type snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.
*5 : The mounting bracket is included at shipment.
*6 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 783, 785, 787, 789 and 790. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
*7 : "I" and "Y" cannot be selected together.
*8 : The F switch with L type lead wire on ø20 models cannot be selected on stroke lengths 10 mm or under.
*9 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
*10 : Refer to pages 750 and 751 for combinations of variations/options.
*11 : F type switch cannot be selected.

[Example of model No.]

SSD2-KL-12-10-T0H-R-N

Model: Compact cylinder, high load
Ⓐ Bore size : ø12 mm
Ⓑ Port thread : Rc thread
Ⓒ Stroke length : 10mm
Ⓓ Switch model No. : Reed T0H switch
· Lead wire 1 m
Ⓔ Switch quantity : 1 on rod side
Ⓕ Option : Rod end male thread

[Stroke length table]

Stroke length (mm)		Applicable bore size									
		12	16	20	25	32	40	50	63	80	100
Standard stroke length	5	●	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●
	100					●	●	●	●	●	●

1 : Less than 5 mm with 1-color display switch and less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available.
Refer to page 776 for the min. stroke length with switch.

*2 : The total length is the same as that of the next longer standard stroke length.

*3: Refer to page 789 for the min. stroke length with mounting bracket LB.

How to order switch

SW - **T0H**

Switch model No.
(Item Ⓓ on page 778)

Cylinder weight table

(the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø12	44	86	53	95	61	103	70	112	78	121	87	129	-	-	-	-	-	-	-	-	-	-	-	-
ø16	59	104	69	114	80	125	91	136	102	147	113	158	-	-	-	-	-	-	-	-	-	-	-	-
ø20	75	150	88	163	101	176	113	188	126	201	138	213	151	226	163	238	176	251	188	263	-	-	-	-
ø25	102	193	118	209	134	225	150	241	165	256	182	273	198	289	214	305	230	321	246	337	-	-	-	-
ø32	167	281	188	302	209	323	231	345	253	367	275	389	297	411	318	432	340	454	361	475	534	583	642	690
ø40	236	379	263	406	290	433	316	459	342	485	369	512	396	539	422	565	449	592	475	618	702	751	834	883
ø50	-	-	425	619	467	661	510	704	553	747	594	788	636	830	678	872	720	914	762	956	1109	1166	1319	1376
ø63	-	-	617	896	672	951	727	1006	782	1061	838	1117	893	1172	948	1227	1003	1282	1058	1337	1548	1612	1823	1887
ø80	-	-	1101	1514	1188	1601	1274	1687	1361	1774	1448	1861	1535	1948	1621	2034	1708	2121	1794	2207	2574	2640	3006	3072
ø100	-	-	1660	2227	1774	2341	1888	2455	2002	2569	2115	2682	2229	2796	2343	2910	2457	3024	2571	3138	3636	3708	4206	4278

How to order mounting bracket

Bore size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

*1: The foot mounting bracket is provided as 2 pcs./set.

Specifications for rechargeable battery

(catalog No. CC-1226A)

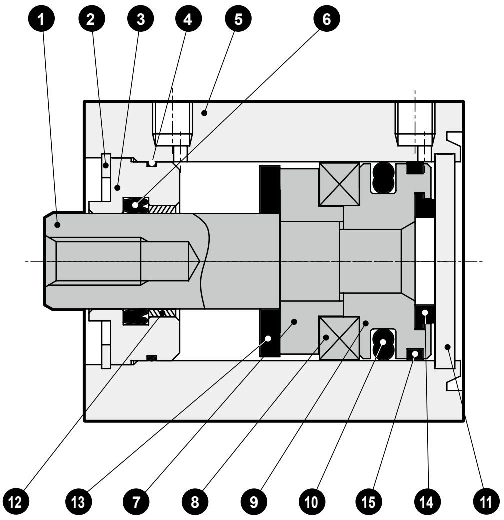
- Design compatible with rechargeable battery manufacturing process

SSD2-K··········- **P4***

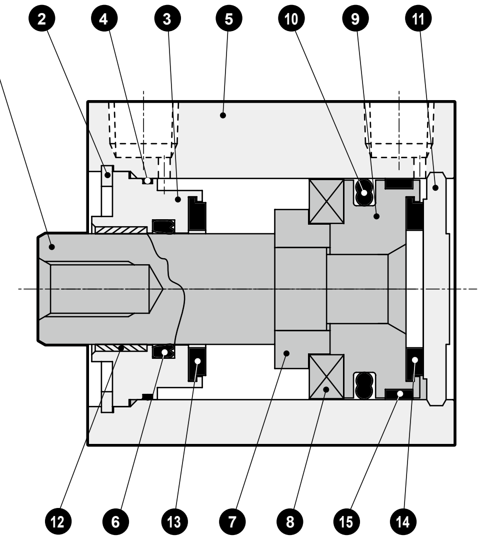
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

Internal structure and parts list

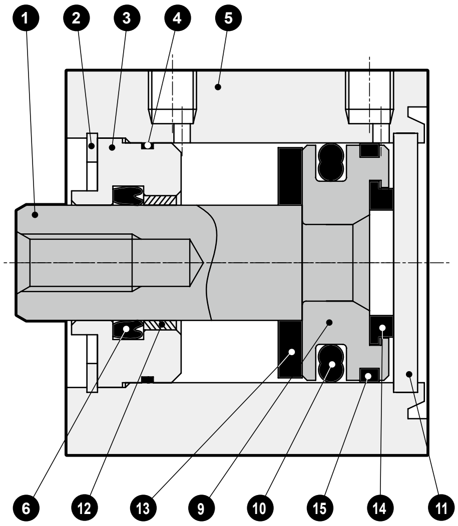
● SSD2-KL-12 to 25 (double acting/single rod/with switch)



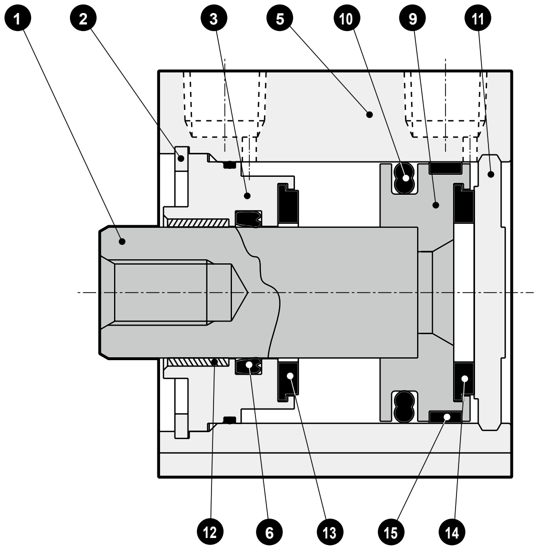
● SSD2-KL-32 (double acting/single rod high load/with switch)



● SSD2-K-12 to 25 (double acting/single rod high load)



● SSD2-K-32 (double acting/single rod high load)



No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32: Steel	ø16 to ø32 Industrial chrome plating
2	C type snap ring	Steel	Zinc phosphate
3	Rod metal	Special aluminum	Alumite (*2)
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Nitrile rubber	
7	Spacer	Aluminum alloy	Chromate
8	Magnet	Plastic	
9	Piston	Aluminum alloy	Chromate
10	Piston packing	Nitrile rubber	
11	Cover	ø12 to ø25: Stainless steel ø32: Aluminum alloy	ø32: Alumite
12	Bush	Oiles drymet	ø20 to ø32 (*1)
13	Cushion rubber (R)	Urethane rubber	
14	Cushion rubber (H)	Urethane rubber	
15	Wear ring	Polyacetal resin	

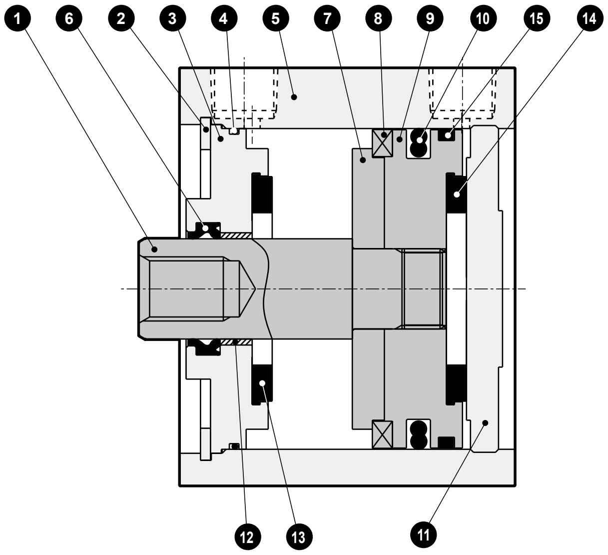
*1: Material is steel for copper and PTFE free specifications.
*2: Chromate-coated for ø32.

Repair parts list

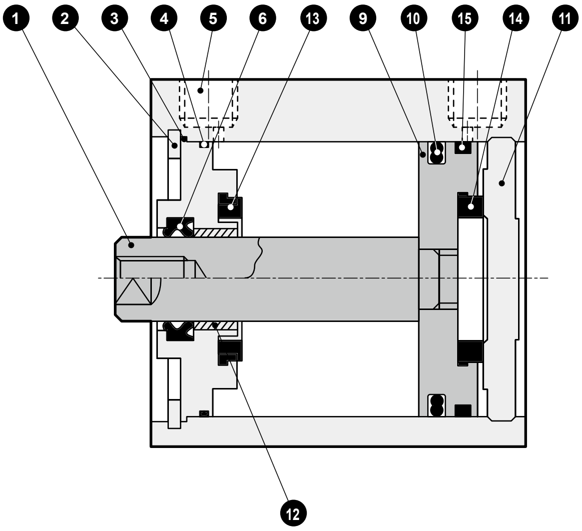
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-K-12K	④⑥⑩ ⑬⑭⑮
ø16	SSD2-K-16K	
ø20	SSD2-K-20K	
ø25	SSD2-K-25K	
ø32	SSD2-K-32K	

Internal structure and parts list

- SSD2-KL-40 to 100 (double acting/single rod/with switch)



- SSD2-K-40 to 100 (double acting/single rod high load)



No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating
2	C snap ring	Steel	Zinc phosphate
3	Rod metal	Aluminum alloy	Alumite (*2)
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Nitrile rubber	
7	Spacer	Aluminum alloy	
8	Magnet	Plastic	
9	Piston	Aluminum alloy	Chromate
10	Piston packing	Nitrile rubber	
11	Cover	Aluminum alloy	Alumite
12	Bush	Oiles drymet	*1
13	Cushion rubber (R)	Urethane rubber	
14	Cushion rubber (H)	Urethane rubber	
15	Wear ring	Polyacetal resin	

*1: Material is steel for copper and PTFE free specifications.
*2: Chromate-coated for ø40 and ø50.

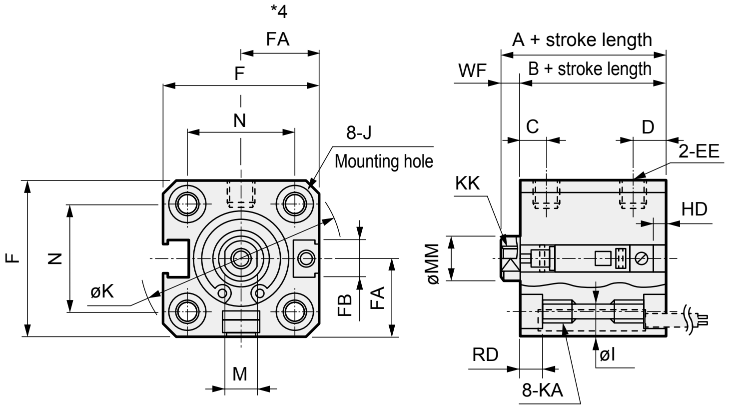
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø40	SSD2-K-40K	④ ⑥ ⑩ ⑬ ⑭ ⑮
ø50	SSD2-K-50K	
ø63	SSD2-K-63K	
ø80	SSD2-K-80K	
ø100	SSD2-K-100K	

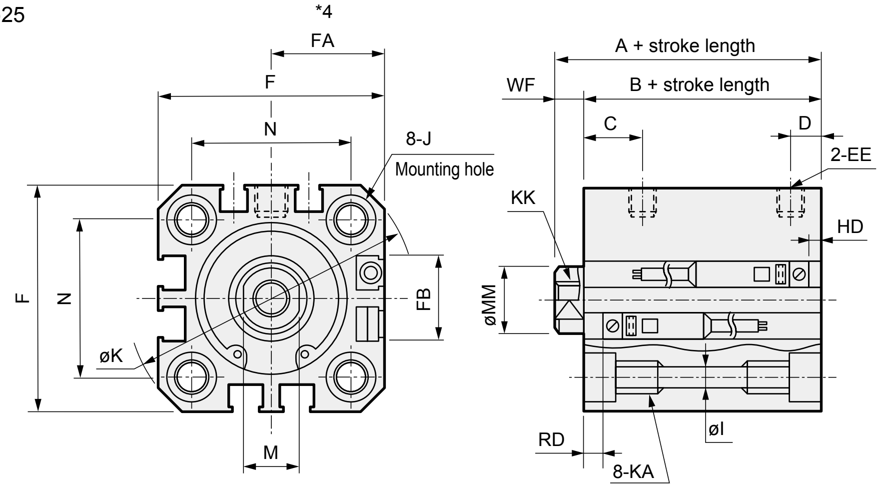
Dimensions

● SSD2-KL-12 to 25 (with switch)

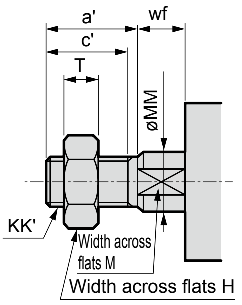
ø12/ø16



ø20/ø25



● Rod end male thread



· Precautions regarding the switch mounting groove
*1: Only F switch is available for the ø20 or ø25 piping port surface.

Code / Bore size (mm)	Common dimensions with switch																
	A *1	B *1	C	D	EE	F	FA *3	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	30.5	27	5.5	5.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	30.5	27	5.5	5.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	39	34.5	8	5.5	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	42.5	37.5	11	6	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimensions / Bore size (mm)	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	4.5	3.5	4.5	3.5	6.5	5.5				
ø16	3	5	3	5	5	7				
ø20	6.5	9	6.5	9	8.5	11	11	13.5	10	12.5
ø25	6	12.5	6	12.5	8	14.5	10.5	17	9.5	16

*1 : To calculate A + stroke length or B + stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
· For ø16: A + stroke length = 40.5 B + stroke length = 37
When you have selected "S" (dedicated unit for custom stroke length), apply the custom stroke length of 7 mm.
· For ø16: A + stroke length = 37.5 B + stroke length = 34

2 : Refer to page 1045 for HD and RD dimensions of the 2-color display, off-delay, AC magnetic field tolerant, T1 and T8* switches.

3 : Refer to page 1045 for protruding dimensions of the 2-color display, off-delay, AC magnetic field tolerant, T1 and T8* switches.

*4 : Dimensions in ( ) of FA are for the radial lead wire.

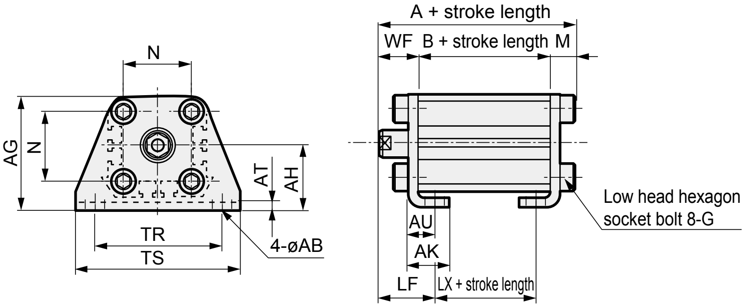
*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.

● Dimensions of rod end male thread part

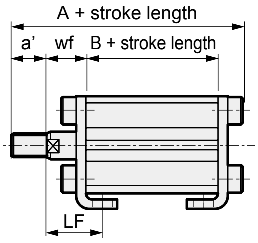
Code / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

Dimensions with mounting bracket

- Axial foot (LB) with switch
  SSD2-KL-12 to 25 -LB



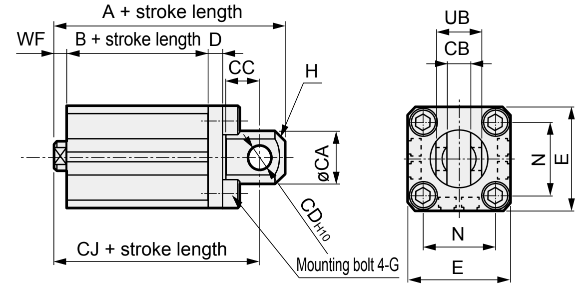
Rod end male thread



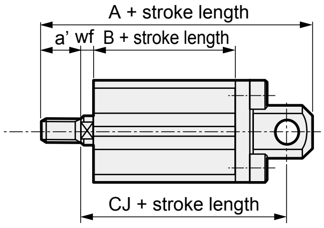
Code Bore size (mm)	Common dimensions						Female thread				
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

Code Bore size (mm)						Male thread					
	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	45.3	27	15	10.5	13.5	19.5	55.8	27	15
ø16	13.5	19.5	45.3	27	15	12	13.5	19.5	57.3	27	15
ø20	14.5	20.5	56.2	34.5	22.5	14	14.5	20.5	70.2	34.5	22.5
ø25	15	22.5	59.7	37.5	22.5	17.5	15	22.5	77.2	37.5	22.5

- Clevis bracket (CB) with switch
  SSD2-KL-12 to 25 -CB



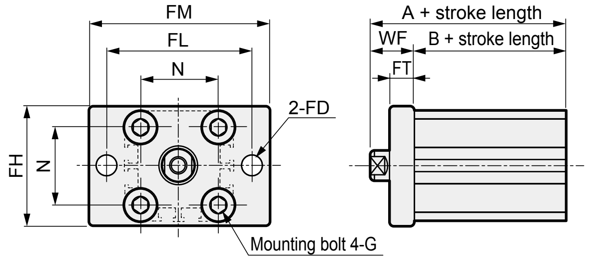
Rod end male thread



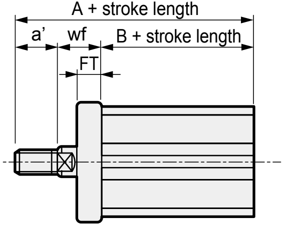
Code Bore size (mm)	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	$5.2^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	$10^{-0.1}_{-0.3}$
ø16	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	$12^{-0.1}_{-0.4}$
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$

Code Bore size (mm)	Female thread				Male thread				
	WF	A	B	CJ	a'	wf	A	B	CJ
ø12	3.5	50.5	27	44.5	10.5	3.5	61	27	44.5
ø16	3.5	51.5	27	45.5	12	3.5	63.5	27	45.5
ø20	4.5	66	34.5	57	14	4.5	80	34.5	57
ø25	5	72.5	37.5	62.5	17.5	5	90	37.5	62.5

- Rod side flange (FA) with switch
  SSD2-KL-12 to 25 -FA



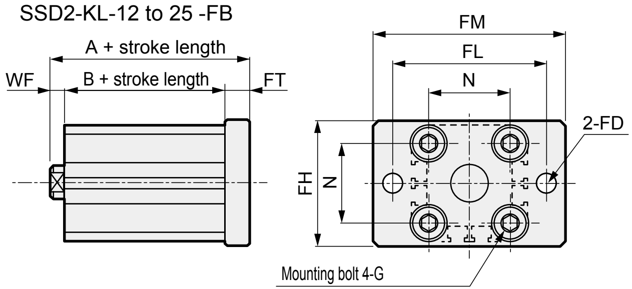
Rod end male thread



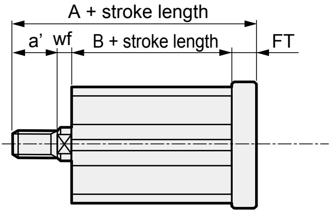
Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	13.5	40.5	27	10.5	13.5	51	27
ø16	13.5	40.5	27	12	13.5	52.5	27
ø20	14.5	49	34.5	14	14.5	63	34.5
ø25	15	52.5	37.5	17.5	15	70	37.5

- Head side flange (FB) with switch
  SSD2-KL-12 to 25 -FB



Rod end male thread



Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

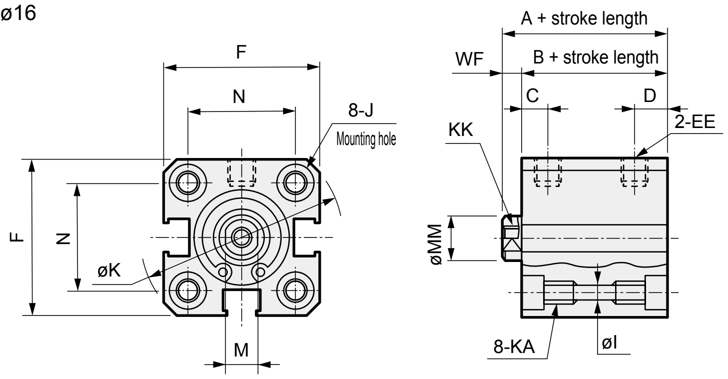
Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	3.5	36	27	10.5	3.5	46.5	27
ø16	3.5	36	27	12	3.5	48	27
ø20	4.5	47	34.5	14	4.5	61	34.5
ø25	5	50.5	37.5	17.5	5	68	37.5

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

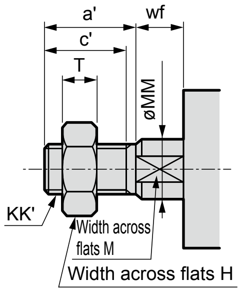
Dimensions

- SSD2-K-12 to 25 (without switch)

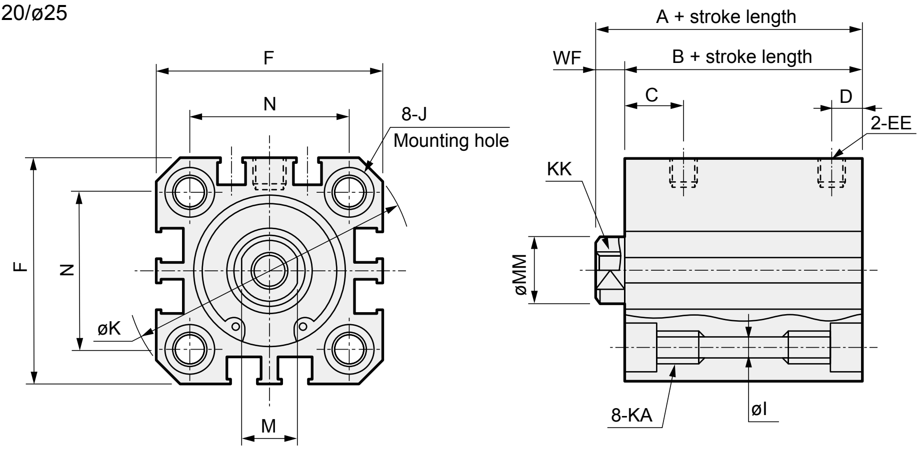
ø12/ø16



- Rod end male thread



ø20/ø25



Code	Dimensions without switch and common dimensions													
Bore size (mm)	A *1	B *1	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	25.5	22	5.5	5.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	25.5	22	5.5	5.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	29	24.5	8	5.5	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	32.5	27.5	11	6	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
· For ø16: A + stroke length = 35.5 B + stroke length = 32
When you have selected "S" (dedicated unit for custom stroke length), apply the custom stroke length of 7 mm.
· For ø16: A + stroke length = 32.5 B + stroke length = 29

*2 : For dimensions with accessories and of individual accessories, refer to pages 1046 to 1049.

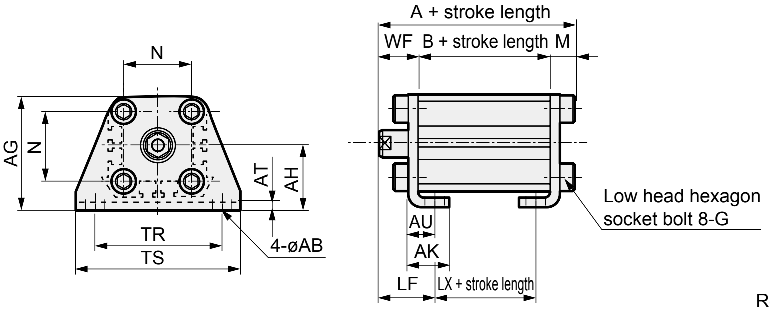
- Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

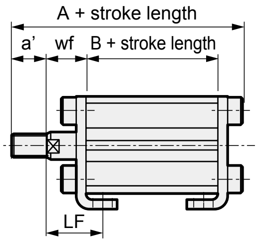
Dimensions with mounting bracket

CAD

- Axial foot (LB) without switch
SSD2-K-12 to 25 -LB



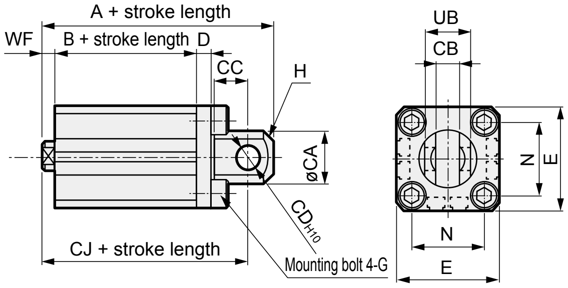
Rod end male thread



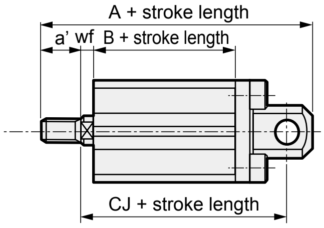
Code Bore size (mm)	Common dimensions						Female thread				
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

Code Bore size (mm)						Male thread					
	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	40.3	22	10	10.5	13.5	19.5	50.8	22	10
ø16	13.5	19.5	40.3	22	10	12	13.5	19.5	52.3	22	10
ø20	14.5	20.5	46.2	24.5	12.5	14	14.5	20.5	60.2	24.5	12.5
ø25	15	22.5	49.7	27.5	12.5	17.5	15	22.5	67.2	27.5	12.5

- Clevis bracket (CB) without switch
SSD2-K-12 to 25 -CB



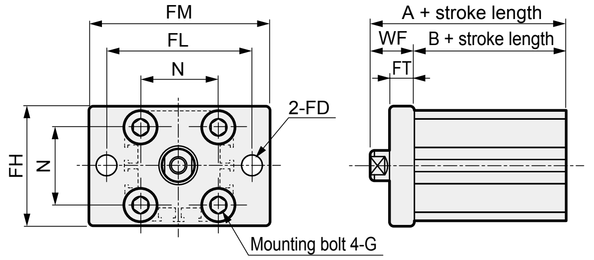
Rod end male thread



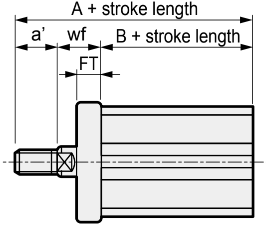
Code Bore size (mm)	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	$5.2^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	$10^{-0.1}_{-0.3}$
ø16	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	$12^{-0.1}_{-0.4}$
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$

Code Bore size (mm)	Female thread				Male thread				
	WF	A	B	CJ	a'	wf	A	B	CJ
ø12	3.5	45.5	22	39.5	10.5	3.5	56	22	39.5
ø16	3.5	46.5	22	40.5	12	3.5	58.5	22	40.5
ø20	4.5	56	24.5	47	14	4.5	70	24.5	47
ø25	5	62.5	27.5	52.5	17.5	5	80	27.5	52.5

- Rod side flange (FA) without switch
SSD2-K-12 to 25 -FA



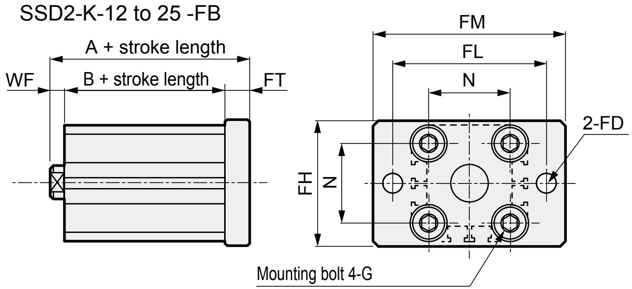
Rod end male thread



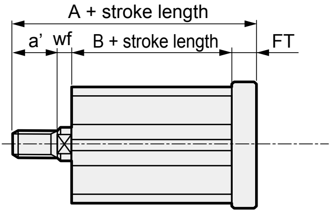
Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	13.5	35.5	22	10.5	13.5	46	22
ø16	13.5	35.5	22	12	13.5	47.5	22
ø20	14.5	39	24.5	14	14.5	53	24.5
ø25	15	42.5	27.5	17.5	15	60	27.5

- Head side flange (FB) without switch
SSD2-K-12 to 25 -FB



Rod end male thread

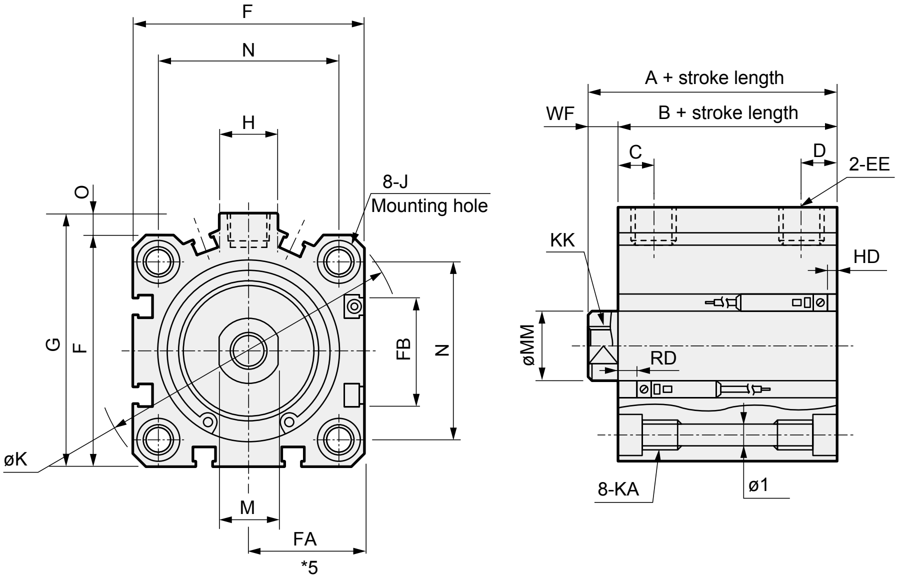


Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

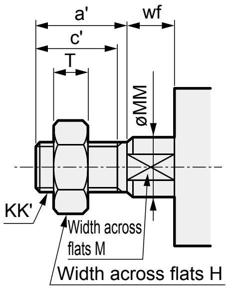
Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	3.5	31	22	10.5	3.5	41.5	22
ø16	3.5	31	22	12	3.5	43	22
ø20	4.5	37	24.5	14	4.5	51	24.5
ø25	5	40.5	27.5	17.5	5	58	27.5

Dimensions

- SSD2-KL-32 to 100 (with switch)



- Rod end male thread



Code Bore size (mm)	Common dimensions with switch																			
	A *1	B *1	C	D	EE	F	FA *5	FB	G	H	I	J	K	KA	KK	M	MM	N	O	WF
ø32	50	43	8	8	Rc1/8	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7
ø40	56.5	49.5	12	8.5	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7
ø50	58.5	50.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8
ø63	64	56	13	11	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	8
ø80	73.5	63.5	16	13	Rc3/8	98	49.5(53)	28.5	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	10
ø100	85	73	23	15	Rc3/8	117	59(62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12

Switch dimensions Bore size (mm)	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
	HD	RD	HD	RD	HD	RD
ø32	9	15	9	15	11	17
ø40	9.5	19.5	9.5	19.5	11	21
ø50	10	20	10	20	11.5	21.5
ø63	17.5	18	17.5	18	19	19.5
ø80	22	20.5	22.5	20.5	24	22
ø100	28	24.5	28	24.5	29.5	26

*1 : To calculate A + stroke length or B + stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
· For ø40: A + stroke length = 60 B + stroke length = 53
When you have selected "S" (dedicated unit for custom stroke length), apply the custom stroke length of 7 mm.
· For ø40: A + stroke length = 57 B + stroke length = 50

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

3 : Refer to page 1045 for HD and RD dimensions of the 2-color display, off-delay, AC magnetic field tolerant, T1 and T8* switches.

4 : Refer to page 1045 for protruding dimensions of the 2-color display, off-delay, AC magnetic field tolerant, T1 and T8* switches.

*5 : Dimensions in ( ) of FA are for the radial lead wire.

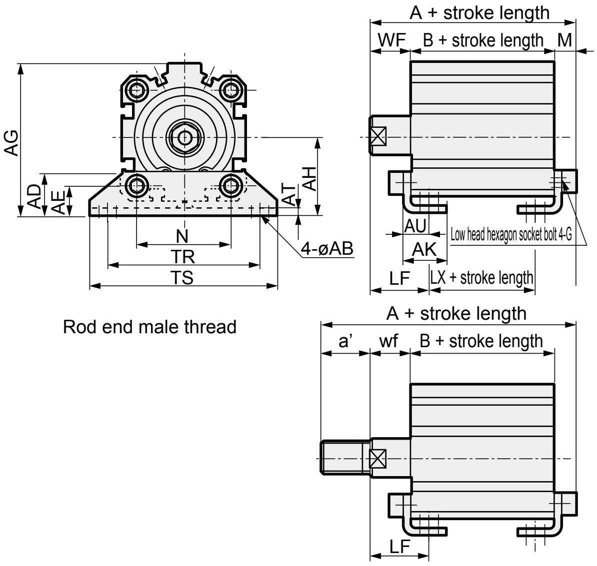
*6 : For dimensions with accessories and of individual accessories, refer to pages 1046 to 1049.

- Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

Dimensions with mounting bracket

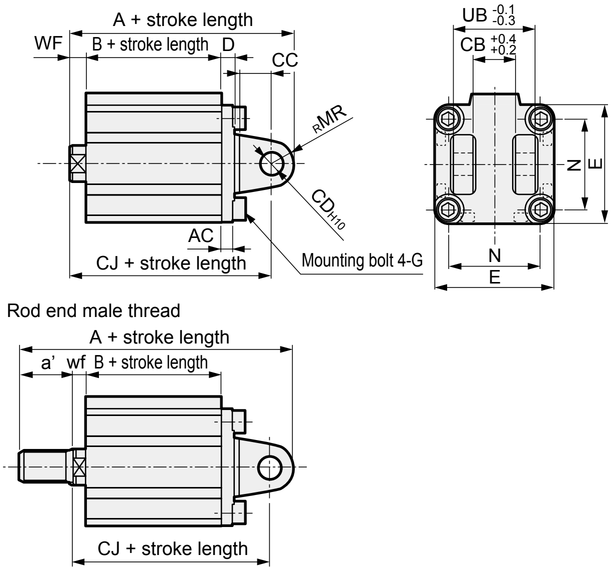
● Axial foot (LB) with switch
SSD2-KL-32 to 100 -LB



Code Bore size (mm)	Common dimensions						Female thread					
	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	77	118	140
ø100	13	35	24	136	71	35.5	6	23	M12×40	94	137	162

Code Bore size (mm)							Male thread					
	M	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø32	7.2	17	25	67.2	43	27	23.5	15	23	88.7	43	27
ø40	7.2	17	25	73.7	49.5	33.5	23.5	15	23	95.2	49.5	33.5
ø50	8.2	18	29.5	76.7	50.5	27.5	28.5	15	26.5	102.2	50.5	27.5
ø63	9.2	18	31	83.2	56	30	28.5	15	28	108.7	56	30
ø80	11.5	20	35	95	63.5	33.5	35.5	18	33	128.5	63.5	33.5
ø100	13	22	39	108	73	39	35.5	18	35	139.5	73	39

● Clevis bracket (CB) with switch
SSD2-KL-32 to 100 -CB

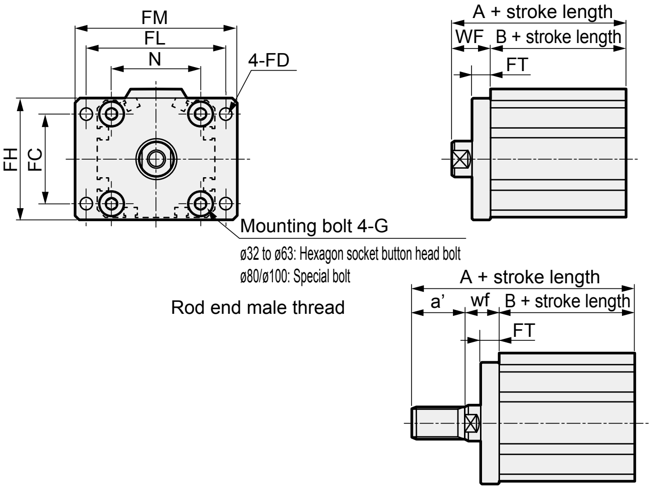


Code Bore size (mm)	Common dimensions									
	AC	CB	CC	CD	D	E	G	MR	N	UB
ø32	4.5	18.2	14	10	5	45	M6×16	10	34	36
ø40	5	18.2	14	10	6	52	M6×16	10	40	36
ø50	6	22.2	20	14	7	64	M8×20	14	50	44
ø63	7	22.2	20	14	8	77	M10×25	14	60	44
ø80	9	28.2	27	18	10	98	M12×40	18	77	56
ø100	12	32.2	31	22	13	117	M12×40	22	94	64

Code Bore size (mm)	Female thread				Male thread				
	WF	A	B	CJ	a'	wf	A	B	CJ
ø32	7	80	43	70	23.5	5	101.5	43	68
ø40	7	88.5	49.5	78.5	23.5	5	110	49.5	76.5
ø50	8	100.5	50.5	86.5	28.5	5	126	50.5	83.5
ø63	8	108	56	94	28.5	5	133.5	56	91
ø80	10	129.5	63.5	111.5	35.5	8	163	63.5	109.5
ø100	12	152	73	130	35.5	8	183.5	73	126

* A pin and a snap ring are included.

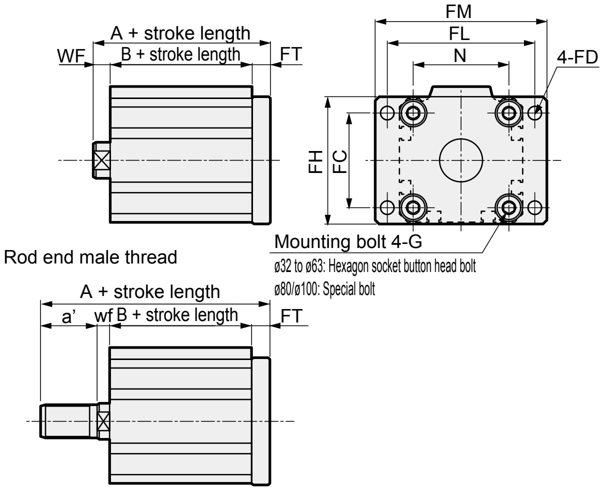
● Rod side flange (FA)
SSD2-KL-32 to 100 -FA



Code Bore size (mm)	Common dimensions							
	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20
ø63	60	9	80	92	108	9	60	M10×25
ø80	77	11	99	116	134	11	77	M12×40
ø100	94	11	117	136	154	11	94	M12×40

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø32	17	60	43	23.5	15	81.5	43
ø40	17	66.5	49.5	23.5	15	88	49.5
ø50	18	68.5	50.5	28.5	15	94	50.5
ø63	18	74	56	28.5	15	99.5	56
ø80	20	83.5	63.5	35.5	18	117	63.5
ø100	22	95	73	35.5	18	126.5	73

● Head side flange (FB)
SSD2-KL-32 to 100 -FB

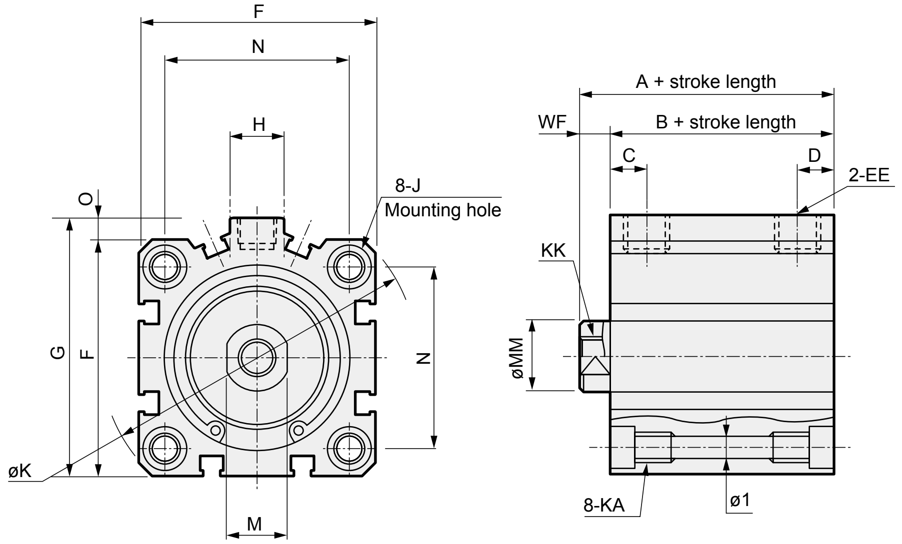


Code Bore size (mm)	Common dimensions							
	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20
ø63	60	9	80	92	108	9	60	M10×25
ø80	77	11	99	116	134	11	77	M12×40
ø100	94	11	117	136	154	11	94	M12×40

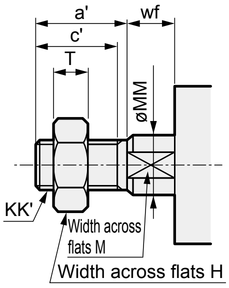
Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø32	7	58	43	23.5	5	79.5	43
ø40	7	64.5	49.5	23.5	5	86	49.5
ø50	8	67.5	50.5	28.5	5	93	50.5
ø63	8	73	56	28.5	5	98.5	56
ø80	10	84.5	63.5	35.5	8	118	63.5
ø100	12	96	73	35.5	8	127.5	73

Dimensions

- SSD2-K-32 to 100 (without switch)



- Rod end male thread



Code	Dimensions without switch and common dimensions											
Bore size (mm)	A [*1, *3]	B [*1, *3]	C	D	EE	F	G	H	I	J	K	KA	KK
ø32	40(50)	33(43)	8	8	Rc1/8	45	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13
ø40	46.5(56.5)	39.5(49.5)	12	8.5	Rc1/8	52	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13
ø50	48.5(58.5)	40.5(50.5)	10.5	10.5	Rc1/4	64	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15
ø63	54(64)	46(56)	13	11	Rc1/4	77	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15
ø80	63.5(73.5)	53.5(63.5)	16	13	Rc3/8	98	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21
ø100	75(85)	63(73)	23	15	Rc3/8	117	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27

Code	Dimensions without switch and common dimensions				
Bore size (mm)	M	MM	N	O	WF
ø32	14	16	34	4.5	7
ø40	14	16	40	5	7
ø50	17	20	50	7	8
ø63	17	20	60	7	8
ø80	22	25	77	6	10
ø100	27	30	94	6.5	12

*1 : To calculate A + stroke length or B + stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
· For ø40: A + stroke length = 50 B + stroke length = 43
When you have selected "S" (dedicated unit for custom stroke length), apply the custom stroke length of 7 mm.
· For ø40: A + stroke length = 47 B + stroke length = 40

*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

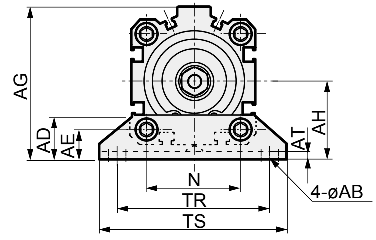
*3 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

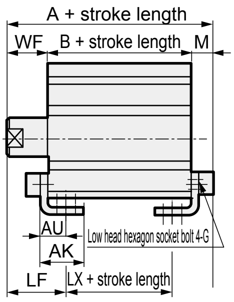
- Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

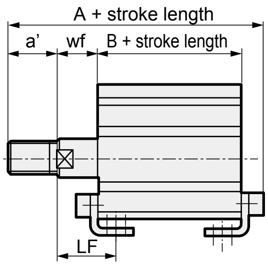
Dimensions with mounting bracket

- Axial foot (LB) without switch
  SSD2-K-32 to 100 -LB





Rod end male thread



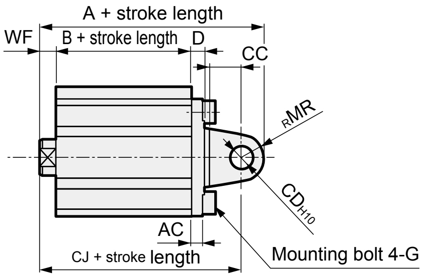
Code	Common dimensions						Female thread											
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	WF	LF	A	B	LX
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71	7.2	17	25	57.2(67.2)	33(43)	17(27)
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78	7.2	17	25	63.7(73.7)	39.5(49.5)	23.5(33.5)
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95	8.2	18	29.5	66.7(76.7)	40.5(50.5)	17.5(27.5)
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113	9.2	18	31	73.2(83.2)	46(56)	20(30)
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	77	118	140	11.5	20	35	85(95)	53.5(63.5)	23.5(33.5)
ø100	13	35	24	136	71	35.5	6	23	M12×40	94	137	162	13	22	39	98(108)	63(73)	29(39)

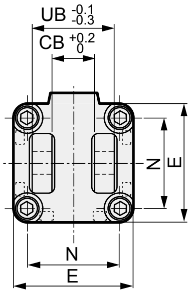
Code		Male thread					
Bore size (mm)	LX	a'	wf	LF	A	B	LX
ø32	17(27)	23.5	15	23	78.7(88.7)	33(43)	17(27)
ø40	23.5(33.5)	23.5	15	23	85.2(95.2)	39.5(49.5)	23.5(33.5)
ø50	17.5(27.5)	28.5	15	26.5	92.2(102.2)	40.5(50.5)	17.5(27.5)
ø63	20(30)	28.5	15	28	98.7(108.7)	46(56)	20(30)
ø80	23.5(33.5)	35.5	18	33	118.5(128.5)	53.5(63.5)	23.5(33.5)
ø100	29(39)	35.5	18	35	129.5(139.5)	63(73)	29(39)

Note: ø80: LB cannot be selected for 15 mm stroke length or less.

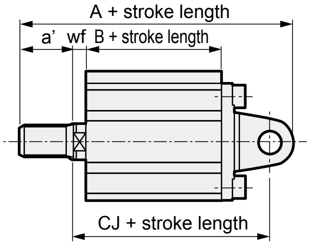
* Dimensions in ( ) are for stroke lengths of more than 50 mm.

- Clevis bracket (CB) without switch
  SSD2-K-32 to 100 -CB





Rod end male thread

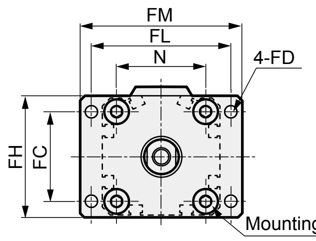


Code	Common dimensions										Female thread				Male thread				
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB	WF	A	B	CJ	a'	wf	A	B	CJ
ø32	4.5	18.2	14	10	5	45	M6×16	10	34	36	7	70(80)	33(43)	60	23.5	5	91.5(101.5)	33(43)	58
ø40	5	18.2	14	10	6	52	M6×16	10	40	36	7	78.5(88.5)	39.5(49.5)	68.5	23.5	5	100(110)	39.5(49.5)	66.5
ø50	6	22.2	20	14	7	64	M8×20	14	50	44	8	90.5(100.5)	40.5(50.5)	76.5	28.5	5	116(126)	40.5(50.5)	73.5
ø63	7	22.2	20	14	8	77	M10×25	14	60	44	8	98(108)	46(56)	84	28.5	5	123.5(133.5)	46(56)	81
ø80	9	28.2	27	18	10	98	M12×40	18	77	56	10	119.5(129.5)	53.5(63.5)	101.5	35.5	8	153(163)	53.5(63.5)	99.5
ø100	12	32.2	31	22	13	117	M12×40	22	94	64	12	142(152)	63(73)	120	35.5	8	173.5(183.5)	63(73)	116

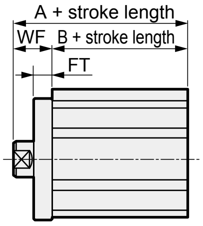
*1 Dimensions in ( ) are for stroke lengths of more than 50 mm.
*2 A pin and a snap ring are included.

Dimensions with mounting bracket

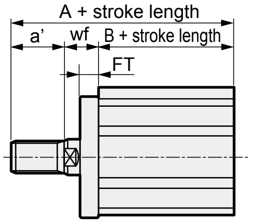
● Rod side flange (FA) without switch
SSD2-K-32 to 100 -FA



Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt



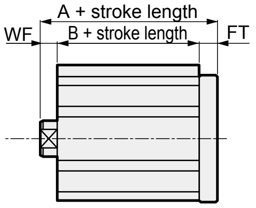
Rod end male thread

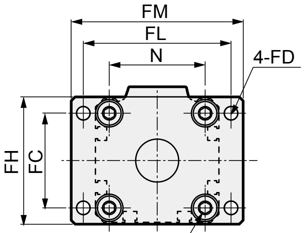


Code	Common dimensions								Female thread			Male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø32	34	5.5	48	56	65	8	34	M6×16	17	50(60)	33(43)	23.5	15	71.5(81.59)	33(43)
ø40	40	5.5	54	62	72	8	40	M6×16	17	56.5(66.5)	39.5(49.5)	23.5	15	78(88)	39.5(49.5)
ø50	50	6.6	67	76	89	9	50	M8×20	18	58.5(68.5)	40.5(50.5)	28.5	15	84(94)	40.5(50.5)
ø63	60	9	80	92	108	9	60	M10×25	18	64(74)	46(56)	28.5	15	89.5(99.5)	46(56)
ø80	77	11	99	116	134	11	77	M12×40	20	73.5(83.5)	53.5(63.5)	35.5	18	107(117)	53.5(63.5)
ø100	94	11	117	136	154	11	94	M12×40	22	85(95)	63(73)	35.5	18	116.5(126.5)	63(73)

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

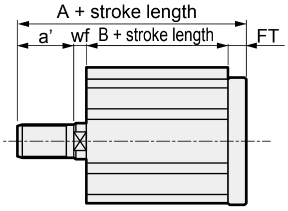
● Head side flange (FB) without switch
SSD2-K-32 to 100 -FB





Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt

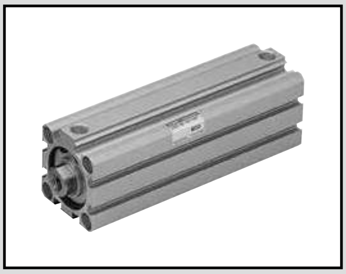
Rod end male thread



Code	Common dimensions								Female thread			Male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø32	34	5.5	48	56	65	8	34	M6×16	7	48(58)	33(43)	23.5	5	69.5(79.5)	33(43)
ø40	40	5.5	54	62	72	8	40	M6×16	7	54.5(64.5)	39.5(49.5)	23.5	5	76(86)	39.5(49.5)
ø50	50	6.6	67	76	89	9	50	M8×20	8	57.5(67.5)	40.5(50.5)	28.5	5	83(93)	40.5(50.5)
ø63	60	9	80	92	108	9	60	M10×25	8	63(73)	46(56)	28.5	5	88.5(98.5)	46(56)
ø80	77	11	99	116	134	11	77	M12×40	10	74.5(84.5)	53.5(63.5)	35.5	8	108(118)	53.5(63.5)
ø100	94	11	117	136	154	11	94	M12×40	12	86(96)	63(73)	35.5	8	117.5(127.5)	63(73)

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

MEMO

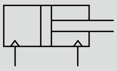


Compact cylinder double acting/single rod/long stroke length

SSD2 Series (long stroke length)

- Bore size: ø12/ø16/ø20/ø25/ø32
ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2 SSD2-L (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)									
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)							0.05 (≈7.3 psi, 0.5 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)									
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)									
Port size	M5				Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$									
Working piston speed mm/s	50 to 500							50 to 300		
Cushion	Rubber cushion									
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)									
Allowable absorbed energy J	0.04	0.09	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

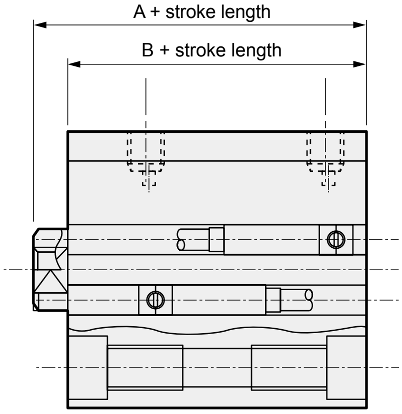
Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)
ø12	35/40/45/50/75/100	100
ø16		
ø20	75/100/125/150/175/200	200
ø25	75/100/125/150/175/200/250/300	300
ø32	125/150/175/200/250/300	
ø40		
ø50		
ø63		
ø80		
ø100		

Custom stroke length

● SSD2 Series

Item	Standard products Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	12/16	31 to 99
	20	51 to 199
	25	51 to 299
	32 to 100	101 to 299
Example of model No.	Model No.: SSD2-32-121 A +4 mm spacer is added to the SSD2-32-125 standard cylinder to create 121 mm stroke length. B + stroke length is 170.5mm.	



Switch specifications (F switch)

- 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	**F3S**	**F2H/F2V**	**F2YH/F2YV**	**F3H/F3V**	**F3PH/F3PV (made to order)**	**F3YH/F3YV**
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T switch)

- 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	**T2H/T2V/ T2JH/T2JV**	**T2YH/ T2YV**	**T2WH/ T2WV**	**T3H/T3V**	**T3PH/ T3PV**	**T3YH/ T3YV**	**T3WH/ T3WV**	**T0H/T0V**		**T5H/T5V**		**T8H/T8V**			**T2YD(*4) T2YDT**
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	**0.1**	**0.15**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^{2}	1.13×10^{2}
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	-	49.1	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	-	37.8	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	-	80.4	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	-	60.3	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	-	1.26×10^{2}	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.06×10^{2}	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	1.96×10^{2}	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	1.65×10^{2}	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	1.56×10^{2}	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	1.40×10^{2}	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	2.51×10^{2}	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	2.27×10^{2}	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	3.93×10^{2}	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	3.57×10^{2}	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

SSD2 (Long stroke length) Series

How to order

Without switch (without magnet for switch)

SSD2 - 12 ◯ - 100 ——— N - LB - I

With switch (built-in magnet for switch)

SSD2-L - 12 ◯ - 100 - T0H - R - N - LB - I

Ⓐ Bore size

Ⓑ Port thread

Ⓒ Stroke length

Ⓓ Switch model No. *1 *2 *3 *8

Ⓔ Switch quantity

Ⓕ Option *4

Ⓖ Mounting bracket *5 *6

Ⓗ Accessory *7

Code	Description
Ⓐ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓑ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)
Ⓒ Stroke length (mm)	
	Refer to the stroke length table on the following page.

Ⓓ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	Bore size 12	16	20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire			●	●						
-	F3S*			●		3-wire			●	●						
F2H*	F2V*			●		2-wire			●	●						
F3H*	F3V*			●		3-wire			●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire			●	●						
F2YH*	F2YV*			●	2-color display	2-wire			●	●						
F3YH*	F3YV*			●		3-wire			●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display				●	●	●	●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire			●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●					●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●					●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display AC magnetic field	2-wire			●	●	●	●	●	●	●	●
T2YDT*	-			●					●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire			●	●	●	●	●	●	●	●

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *10

Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2

Ⓕ Option

	Bore size (ø)	12	16	20	25	32	40	50	63	80	100
Blank	Rod end female thread	●	●	●	●	●	●	●	●	●	●
N	Rod end male thread	●	●	●	●	●	●	●	●	●	●
M *4	Piston rod material (stainless steel)	●	●	●	●	●	●	●	●	●	●
P6	Copper and PTFE free	Standard		●	●	●	●	●	●	●	●
P4	Specifications for rechargeable battery	●	●	●	●	●	●	●	●	●	●
P40		●	●	●	●	●	●	●	●	●	●

Ⓖ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange

Ⓗ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

1 : The T2YD switch cannot be mounted on the ø12 and ø16 bore sizes.

2 : The T8 switch cannot be mounted on ø12 and ø16.

*3 : The F type switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.

*4 : Piston rod of ø12 to ø25 is stainless steel as standard. C type snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.

*5 : The mounting bracket is included at shipment.

*6 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 799 and 801. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.

*7 : "I" and "Y" cannot be selected together.

*8 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

*9 : Refer to pages 750 and 751 for combinations of variations/options.

*10 : F type switch cannot be selected.

[Example of model No.]

SSD2-L-12-100-T0H-R-N

Model: Compact cylinder, long stroke length

Ⓐ Bore size : ø12 mm
Ⓑ Port thread : Rc thread
Ⓒ Stroke length : 100mm
Ⓓ Switch model No. : Reed T0H switch · Lead wire 1 m
Ⓔ Switch quantity : 1 on rod side
Ⓕ Option : Rod end male thread

[Stroke length table]

Stroke length (mm)		Applicable bore size									
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard stroke length	35	●	●								
	40	●	●								
	45	●	●								
	50	●	●								
	75	●	●	●	●						
	100	●	●	●	●						
	125			●	●	●	●	●	●	●	●
	150			●	●	●	●	●	●	●	●
	175			●	●	●	●	●	●	●	●
	200			●	●	●	●	●	●	●	●
	250				●	●	●	●	●	●	●
	300				●	●	●	●	●	●	●
Max. stroke length (mm)		100		200	300						
Custom stroke length *1		In 1 mm increments									

*1: The total length is the same as that of the next longer standard stroke length.

How to order switch

SW - **T0H**

Switch model No.
(Item Ⓓ on page 794)

Cylinder weight table

(the weight of the switches is when there are 2 cylinder switches.) (Unit: g)

Stroke length (mm)	35		40		45		50		75		100		125		150		175		200		250		300	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø12	144	146	153	155	161	163	170	172	212	214	255	257	-	-	-	-	-	-	-	-	-	-	-	-
ø16	179	180	190	191	201	202	212	213	267	268	322	323	-	-	-	-	-	-	-	-	-	-	-	-
ø20	-	-	-	-	-	-	-	-	321	326	383	388	446	451	508	513	571	576	633	638	-	-	-	-
ø25	-	-	-	-	-	-	-	-	412	417	492	497	572	577	652	657	732	737	812	817	972	977	1132	1137
ø32	-	-	-	-	-	-	-	-	-	-	-	-	790	799	897	905	1003	1012	1111	1119	1326	1334	1541	1549
ø40	-	-	-	-	-	-	-	-	-	-	-	-	1000	1016	1133	1148	1265	1281	1398	1413	1663	1678	1928	1943
ø50	-	-	-	-	-	-	-	-	-	-	-	-	1553	1571	1779	1796	2004	2022	2217	2234	2642	2659	3067	3084
ø63	-	-	-	-	-	-	-	-	-	-	-	-	2138	2162	2413	2437	2688	2712	2963	2987	3512	3536	4062	4086
ø80	-	-	-	-	-	-	-	-	-	-	-	-	3478	3505	3911	3937	4343	4370	4776	4802	5640	5666	6505	6531
ø100	-	-	-	-	-	-	-	-	-	-	-	-	4816	4848	5386	5418	5956	5988	6526	6558	7667	7699	8807	8839

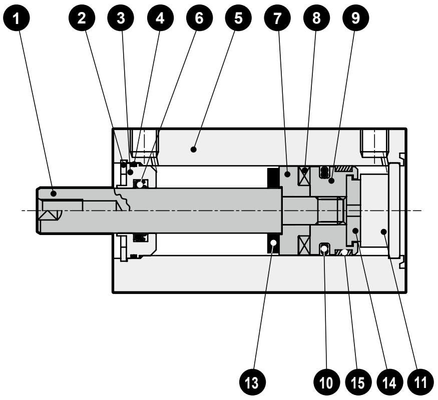
How to order mounting bracket

Bore size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

*1: The foot mounting bracket is provided as 2 pcs./set.

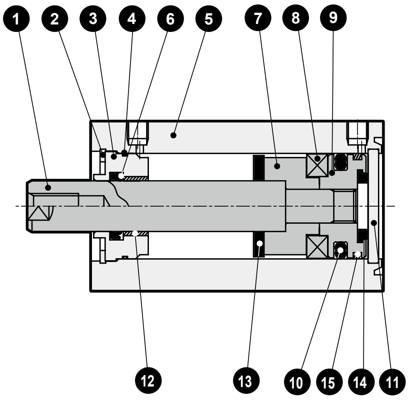
Internal structure and parts list

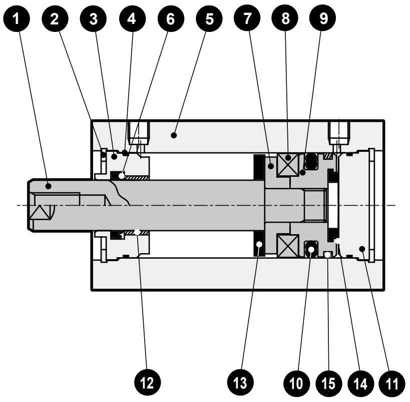
- SSD2 (long stroke length) -L-12, 16
  (double acting/single rod/with switch)



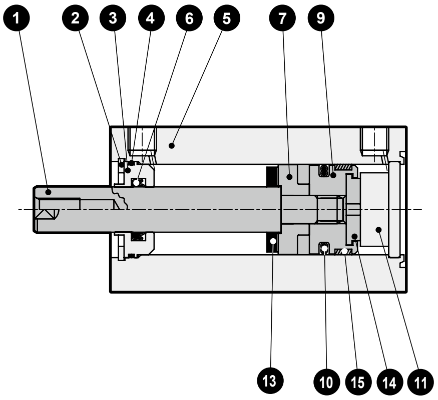
- SSD2 (long stroke length) -L-20 to 100
  (double acting/single rod/with switch)

ø20: Over 100 to 200 mm stroke length
ø25: Over 150 to 300 mm stroke length
ø32 to ø50: Over 150 to 300 mm stroke length
ø63 to ø100: Over 200 to 300 mm stroke length



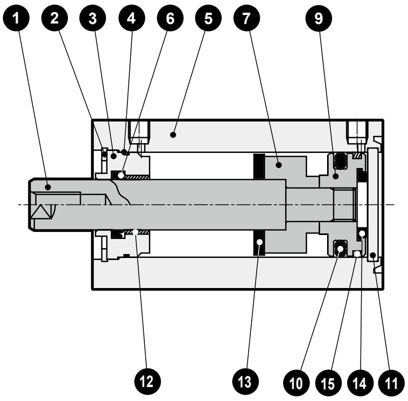


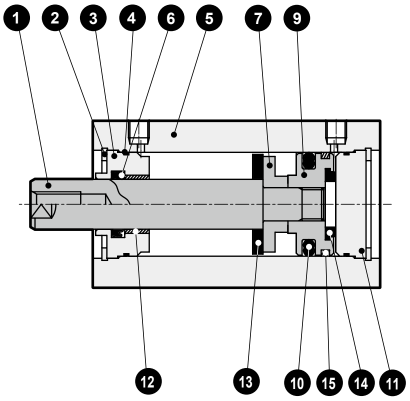
- SSD2 (long stroke length) -12, 16
  (double acting/single rod)



- SSD2 (long stroke length) -20 to 100
  (double acting/single rod)

ø20: Over 100 to 200 mm stroke length
ø25: Over 150 to 300 mm stroke length
ø32 to ø50: Over 150 to 300 mm stroke length
ø63 to ø100: Over 200 to 300 mm stroke length





No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	ø12 to 25: Stainless steel ø32 to 100: Steel	ø16 to 100 Industrial chrome plating	9	Piston	Aluminum alloy	Chromate
2	C type snap ring	Steel	Zinc phosphate	10	Piston packing	Nitrile rubber	
3	Rod metal	Special aluminum	Chromate	11	Cover	ø12 to 25: Stainless steel ø32 to 100: Aluminum alloy	ø32 to 100: Alumite (*1)
4	Rod metal gasket	Nitrile rubber		12	Bush	Oiles drymet	ø20 to 100 (*2)
5	Body	Aluminum alloy	Hard alumite	13	Cushion rubber (R)	Urethane rubber	
6	Rod packing	Nitrile rubber		14	Cushion rubber (H)	Urethane rubber	
7	Spacer	Aluminum alloy	ø12 to ø32: Chromate	15	Wear ring	Polyacetal resin	
8	Magnet	Plastic					

*1: For ø20 with more than 100 mm stroke length and ø25 with more than 150 mm stroke length, the standard cover material is aluminum alloy with chromate coating noted in remarks.
*2: Material is steel for copper and PTFE free specifications.

Repair parts list

Same as SSD2-K Series (double acting/high load). Refer to pages 780 and 781.

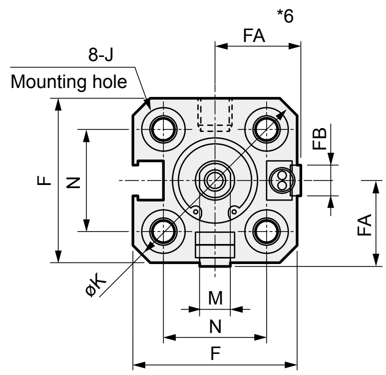
MEMO

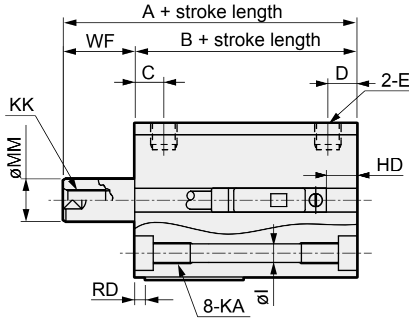
Dimensions

- SSD2 (long stroke length) -(L)-12 to 25

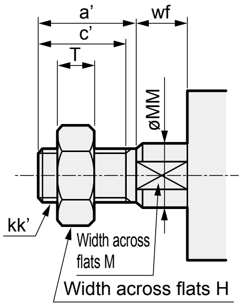
* The dimensions are common for types with and without switches.

ø12/ø16

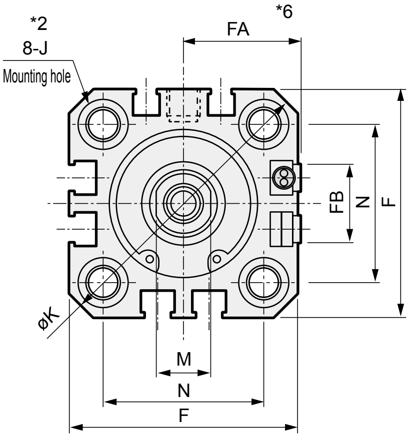


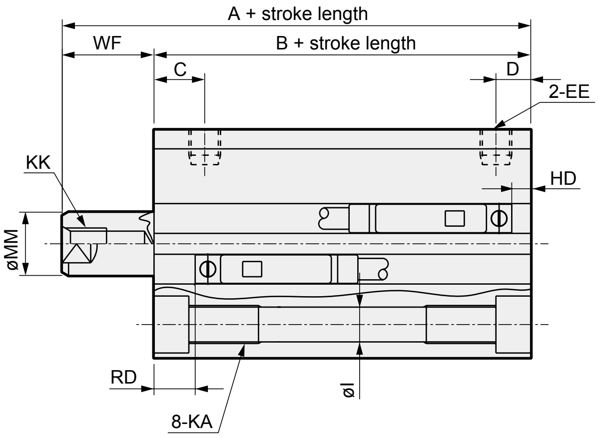


- Rod end male thread



ø20/ø25





· Precautions regarding the switch mounting groove
*1: Only F switch is available for the ø20 or ø25 piping port surface.

Code	Common dimensions with switch															
Bore size (mm)	A *1	B *1	C	D *3	EE	F	FA *6	FB	I	J *2	K	KA	KK	M	MM	N	WF
ø12	45.5	32	5.5	5.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	13.5
ø16	45.5	32	5.5	5.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	13.5
ø20	55.5	41	8	5.5(8)	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	14.5
ø25	59	44	11	6(11)	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	15

Switch dimensions	Reed T0H/T0V, T5H/T5V *3		Proximity T2H/T2V, T3H/T3V *3		Proximity T2WH/T2WV, T3WH/T3WV *3		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV *3		Proximity F2S/F3S	
Bore size (mm)	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	8.5	5	8.5	5	10.5	6.5				
ø16	8.5	5	8.5	5	10.5	6.5				
ø20	6(12.5)	16(10)	6(12.5)	16(10)	7.5(14)	17.5(12)	10(16.5)	20(14.5)	9(15.5)	19(13.5)
ø25	5.5(14)	19.5(12)	5.5(14)	19.5(12)	7(15.5)	21(14)	9.5(18)	23.5(16.5)	8.5(17)	22.5(15.5)

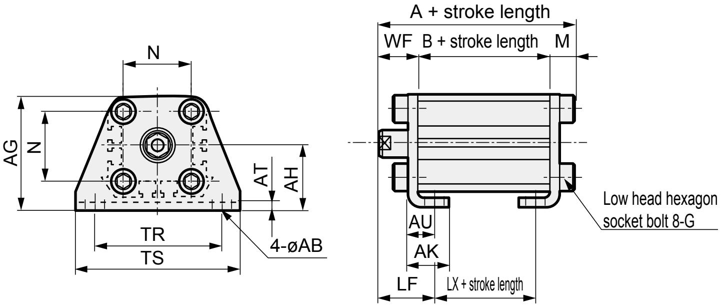
*1 : To calculate A + stroke length or B + stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.
(Example) If the custom stroke length is 70 mm, apply the standard stroke length 75 mm.
*2 : No spot facing J for ø20 with more than 100 mm stroke length and ø25 with more than 150 mm stroke length.
*3 : Values in ( ) are for ø20 with more than 100 mm stroke length and ø25 with more than 150 mm stroke length.
4 : Refer to page 1044 for HD and RD dimensions of the 2-color display, off-delay, AC magnetic field tolerant, T1 and T8* switches.
5 : Refer to page 1044 for protruding dimensions of the 2-color display, off-delay, AC magnetic field tolerant, T1 and T8* switches.
*6 : Dimensions in ( ) of FA are for the radial lead wire.
*7 : For dimensions of individual accessories, refer to pages 1046 to 1049.

- Dimensions of rod end male thread part

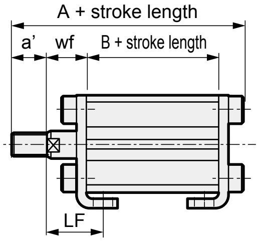
Code / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	13.5
ø16	12	10	10	M6	6	8	3.6	13.5
ø20	14	12	13	M8	8	10	5	14.5
ø25	17.5	15	17	M10×1.25	10	12	6	15

Dimensions with mounting bracket CAD

● Axial foot (LB)
SSD2-(L)-12 to 25 -LB



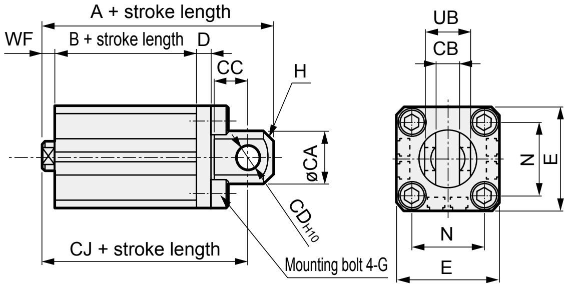
Rod end male thread



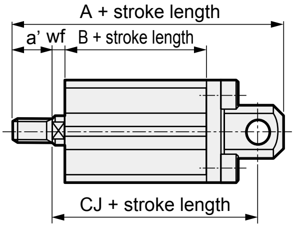
Code	Common dimensions						Female thread				
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

Code						Male thread					
Bore size (mm)	WF	LF	Without/with switch			a’	wf	LF	Without/with switch		
			A	B	LX				A	B	LX
ø12	13.5	19.5	50.3	32	20	10.5	13.5	19.5	60.8	32	20
ø16	13.5	19.5	50.3	32	20	12	13.5	19.5	62.3	32	20
ø20	14.5	20.5	62.7	41	29	14	14.5	20.5	76.7	41	29
ø25	15	22.5	66.2	44	29	17.5	15	22.5	83.7	44	29

● Clevis bracket (CB)
SSD2-(L)-12 to 25 -CB



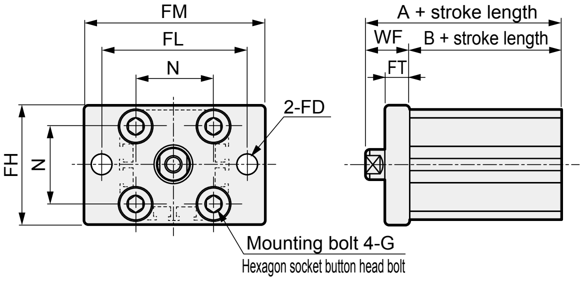
Rod end male thread



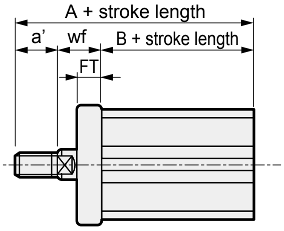
Code	Common dimensions									
Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	$5.2^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	$10^{-0.1}_{-0.3}$
ø16	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	$12^{-0.1}_{-0.4}$
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$

Code	Female thread				Male thread				
Bore size (mm)	WF	Without/with switch			a’	wf	Without/with switch		
		A	B	CJ			A	B	CJ
ø12	13.5	65.5	32	59.5	10.5	13.5	76	32	59.5
ø16	13.5	66.5	32	60.5	12	13.5	78.5	32	60.5
ø20	14.5	82.5	41	73.5	14	14.5	96.5	41	73.5
ø25	15	89	44	79	17.5	15	106.5	44	79

● Rod side flange (FA)
SSD2-(L)-12 to 25 -FA



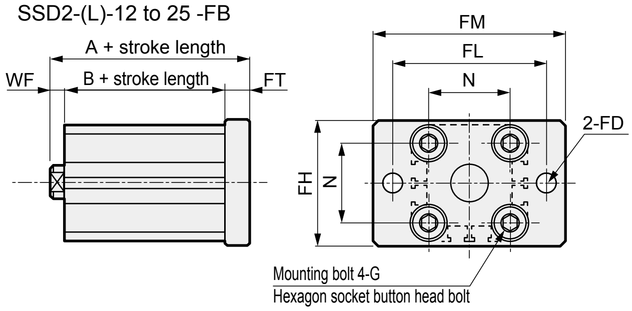
Rod end male thread



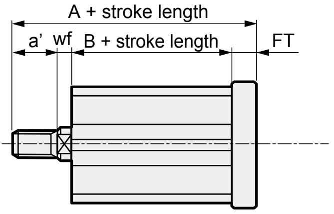
Code	Common dimensions						
Bore size (mm)	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code	Female thread			Male thread			
Bore size (mm)	WF	Without/with switch		a’	wf	Without/with switch	
		A	B			A	B
ø12	13.5	45.5	32	10.5	13.5	56	32
ø16	13.5	45.5	32	12	13.5	57.5	32
ø20	14.5	55.5	41	14	14.5	69.5	41
ø25	15	59	44	17.5	15	76.5	44

● Head side flange (FB)
SSD2-(L)-12 to 25 -FB



Rod end male thread

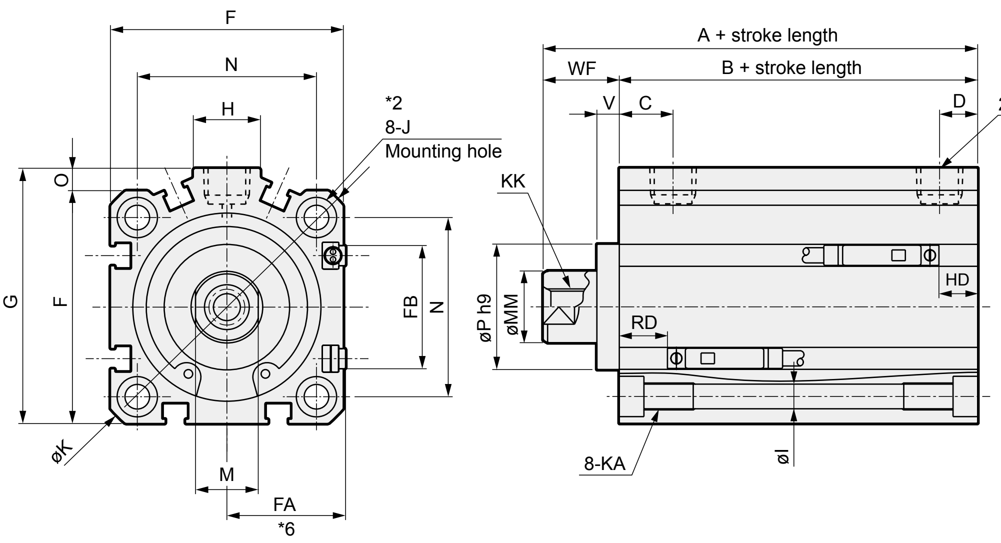


Code	Common dimensions						
Bore size (mm)	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

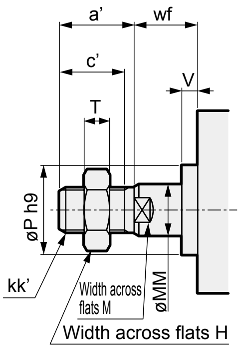
Code	Female thread			Male thread			
Bore size (mm)	WF	Without/with switch		a’	wf	Without/with switch	
		A	B			A	B
ø12	13.5	51	32	10.5	13.5	61.5	32
ø16	13.5	51	32	12	13.5	63	32
ø20	14.5	63.5	41	14	14.5	77.5	41
ø25	15	67	44	17.5	15	84.5	44

Dimensions CAD

- SSD2 (long stroke length) -(L)-32 to 100
  * The dimensions are common for types with and without switches.



- Rod end male thread



Code Bore size (mm)	Common dimensions with switch																					
	A *1	B *1	C	D *3	EE	F	FA *6	FB	G	H	I	J	K	KA	KK	M	MM	N	O	P	V	WF
ø32	62.5	45.5	8	8	Rc1/8	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	22	5	17
ø40	72	55	12	8.5(12)	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	28	5	17
ø50	73.5	55.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	35	5	18
ø63	75	57	13	11(13)	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	35	5	18
ø80	86	66	16	13(16)	Rc3/8	98	49.5(53)	28.5	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	43	5	20
ø100	97.5	75.5	23	15(23)	Rc3/8	117	59(62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	59	5	22

Switch dimensions Bore size (mm)	Reed T0H/T0V, T5H/T5V *3		Proximity T2H/T2V, T3H/T3V *3		Proximity T2WH/T2WV, T3WH/T3WV *3	
	HD	RD	HD	RD	HD	RD
ø32	8.5(16)	18(10)	8.5(16)	18(10)	10(17.5)	19.5(12)
ø40	9.5(19)	26.5(16.5)	9.5(19)	26.5(16.5)	11(20.5)	28(18.5)
ø50	10(19)	26(17)	10(19)	26(17)	11.5(20.5)	27.5(19)
ø63	17.5(23)	20(14.5)	17.5(23)	20(14.5)	19(24.5)	21.5(16.5)
ø80	22.5(28)	24(18.5)	22.5(28)	24(18.5)	24(29.5)	25.5(20.5)
ø100	28(33.5)	28(22.5)	28(33.5)	28(22.5)	29.5(35)	29.5(24.5)

*1 : To calculate A + stroke length or B + stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 121 mm, apply the standard stroke length 125 mm.
*2 : No spot facing J for ø32 to ø50 with more than 150 mm stroke length and ø63 to ø100 with more than 200 mm stroke length.
*3 : Values in ( ) are for ø32 to ø50 with more than 150 mm stroke length and ø63 to ø100 with more than 200 mm stroke length.
4 : Refer to page 1044 for HD and RD dimensions of the 2-color display, off-delay, AC magnetic field tolerant, T1 and T8* switches.
5 : Refer to page 1044 for protruding dimensions of the 2-color display, off-delay, AC magnetic field tolerant, T1 and T8* switches.
*6 : Dimensions in ( ) of FA are for the radial lead wire.
*7 : For dimensions of individual accessories, refer to pages 1046 to 1049.

- Dimensions of rod end male thread part

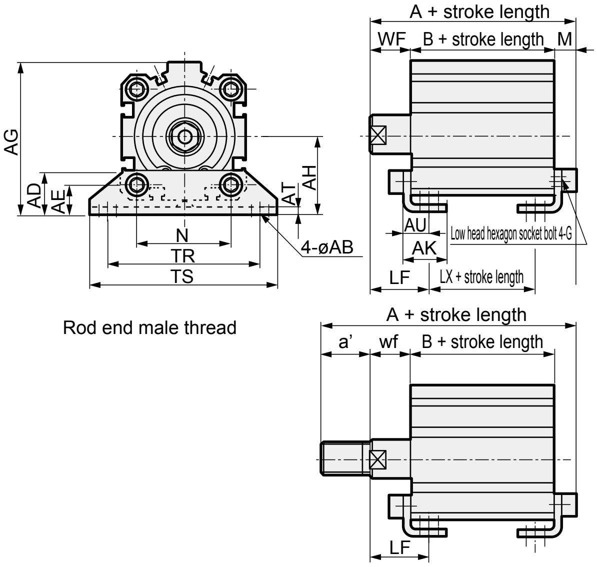
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	15
ø40	23.5	20.5	22	M14×1.5	14	16	8	15
ø50	28.5	26	27	M18×1.5	17	20	11	15
ø63	28.5	26	27	M18×1.5	17	20	11	15
ø80	35.5	32.5	32	M22×1.5	22	25	13	18
ø100	35.5	32.5	41	M26×1.5	27	30	16	18

Dimensions with mounting bracket

CAD

● Axial foot (LB)

SSD2-(L)-32 to 100 -LB

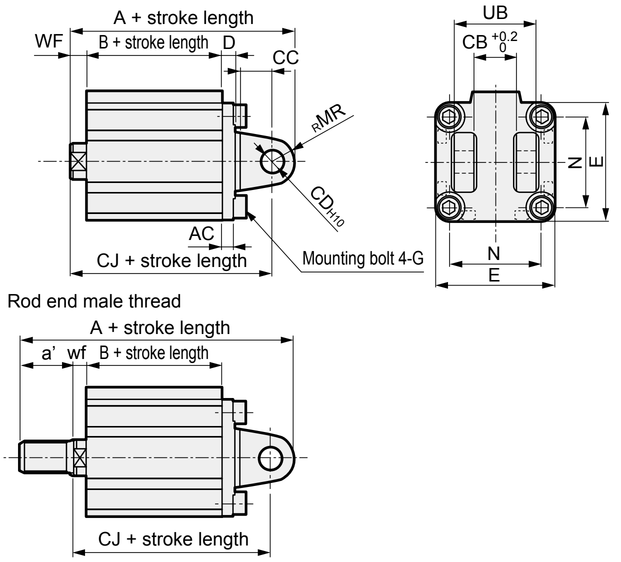


Code Bore size (mm)	Common dimensions						Female thread					
	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	77	118	140
ø100	13	35	24	136	71	35.5	6	23	M12×40	94	137	162

Code Bore size (mm)							Male thread					
	M	WF	LF	Without/with switch			a'	wf	LF	Without/with switch		
				A	B	LX				A	B	LX
ø32	7.2	17	25	69.7	45.5	29.5	23.5	15	23	91.2	45.5	29.5
ø40	7.2	17	25	79.2	55	39	23.5	15	23	100.7	55	39
ø50	8.2	18	29.5	81.7	55.5	32.5	28.5	15	26.5	107.2	55.5	32.5
ø63	9.2	18	31	84.2	57	31	28.5	15	28	109.7	57	31
ø80	11.5	20	35	97.5	66	36	35.5	18	33	131	66	36
ø100	13	22	39	110.5	75.5	41.5	35.5	18	35	142	75.5	41.5

● Clevis bracket (CB)

SSD2-(L)-32 to 100 -CB

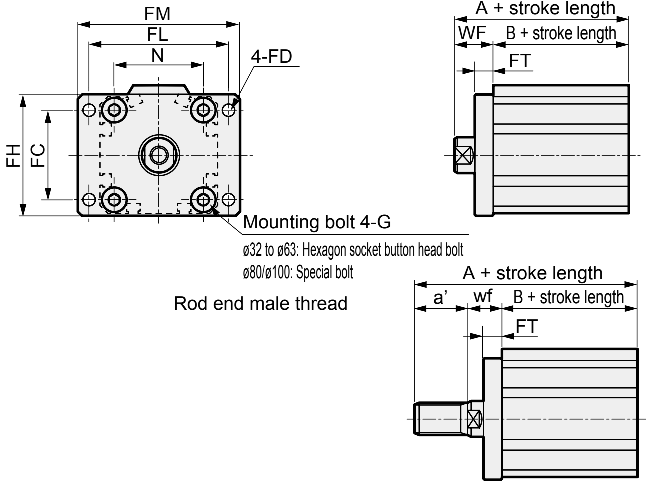


Code Bore size (mm)	Common dimensions									
	AC	CB	CC	CD	D	E	G	MR	N	UB
ø32	4.5	18.2	14	10	5	45	M6×16	10	34	36
ø40	5	18.2	14	10	6	52	M6×16	10	40	36
ø50	6	22.2	20	14	7	64	M8×20	14	50	44
ø63	7	22.2	20	14	8	77	M10×25	14	60	44
ø80	9	28.2	27	18	10	98	M12×40	18	77	56
ø100	12	32.2	31	22	13	117	M12×40	22	94	64

Code Bore size (mm)	Female thread				Male thread				
	WF	Without/with switch			a'	wf	Without/with switch		
		A	B	CJ			A	B	CJ
ø32	17	92.5	45.5	82.5	23.5	15	114	45.5	80.5
ø40	17	104	55	94	23.5	15	125.5	55	92
ø50	18	115.5	55.5	101.5	28.5	15	141	55.5	98.5
ø63	18	119	57	105	28.5	15	144.5	57	102
ø80	20	142	66	124	35.5	18	175.5	66	122
ø100	22	164.5	75.5	142.5	35.5	18	196	75.5	138.5

● Rod side flange (FA)

SSD2-(L)-32 to 100 -FA

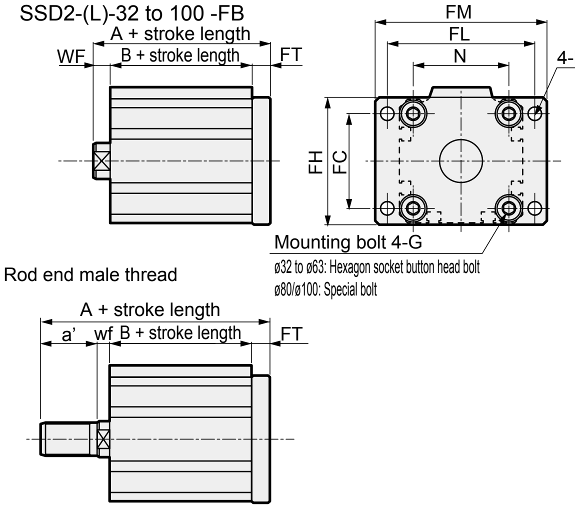


Code Bore size (mm)	Common dimensions							
	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20
ø63	60	9	80	92	108	9	60	M10×25
ø80	77	11	99	116	134	11	77	M12×40
ø100	94	11	117	136	154	11	94	M12×40

Code Bore size (mm)	Female thread			Male thread			
	WF	Without/with switch		a'	wf	Without/with switch	
		A	B			A	B
ø32	17	62.5	45.5	23.5	15	84	45.5
ø40	17	72	55	23.5	15	93.5	55
ø50	18	73.5	55.5	28.5	15	99	55.5
ø63	18	75	57	28.5	15	100.5	57
ø80	20	86	66	35.5	18	119.5	66
ø100	22	97.5	75.5	35.5	18	129	75.5

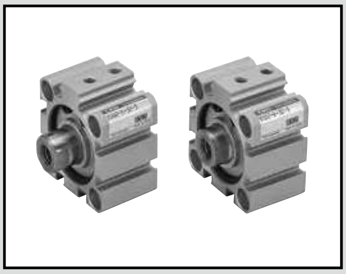
● Head side flange (FB)

SSD2-(L)-32 to 100 -FB



Code Bore size (mm)	Common dimensions							
	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20
ø63	60	9	80	92	108	9	60	M10×25
ø80	77	11	99	116	134	11	77	M12×40
ø100	94	11	117	136	154	11	94	M12×40

Code Bore size (mm)	Female thread			Male thread			
	WF	Without/with switch		a'	wf	Without/with switch	
		A	B			A	B
ø32	17	70.5	45.5	23.5	15	92	45.5
ø40	17	80	55	23.5	15	101.5	55
ø50	18	82.5	55.5	28.5	15	108	55.5
ø63	18	84	57	28.5	15	109.5	57
ø80	20	97	66	35.5	18	130.5	66
ø100	22	108.5	75.5	35.5	18	140	75.5



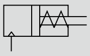
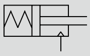
Compact cylinder single acting/push

SSD2-X Series

Single acting/pull/with switch

SSD2-Y Series

● Bore size: ø12/ø16/ø20/ø25/ø32/ø40/ø50

JIS symbol SSD2-X  SSD2-Y 

Specifications

Item	SSD2-X SSD2-XL (with switch)				SSD2-Y SSD2-YL (with switch)		
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Actuation	SSD2-X, XL: single acting/push, SSD2-Y, YL: single acting/pull						
Working fluid	Compressed air						
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)						
Min. working pressure MPa	0.2 (≈29 psi, 2 bar)		0.17 (≈25 psi, 1.7 bar)		0.12 (≈17 psi, 1.2 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)						
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)						
Port size	M5				Rc1/8 *2		Rc1/4
Stroke tolerance mm	$^{+1.0}_{0}$						
Working piston speed mm/s	50 to 500						
Cushion	None						
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)						
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1

*1: Do not leave the single acting cylinder pressurized for a long time. If it is left pressurized for long periods, the piston rod may not return due to spring load when the pressure is released. Use the double acting if the cylinder needs to be left pressurized for long periods.

*2: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5, 10	10	5
ø16			
ø20			
ø25			
ø32			
ø40			
ø50	10, 20	20	10

*1 : When using the type with switch, refer to the table on the right.

*2: Refer to pages 811 and 817 for the min. stroke length with mounting bracket LB.

Min. stroke length with switch (1 or 2 switches)

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø12	10 *2	5
ø16		
ø20	5	
ø25		
ø32		
ø40		
ø50	10	10

1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.

*2: 5 mm stroke length is available only for the type with 1 on rod side.

SSD2-X/SSD2-Y spring load

(Unit: N)

Bore size (mm)	Stroke length (mm)	SSD2-X		SSD2-Y	
		When stroke length = 0	At full stroke length operation	When stroke length = 0	At full stroke length operation
12	5	4	14	3	10
	10	4	14	3	10
16	5	6	15	4	19
	10	6	15	4	19
20	5	6	15	5	27
	10	6	15	5	27
25	5	11	21	10	29
	10	11	21	10	29
32	5	23	30	20	29
	10	16	30	20	29
40	5	13	30	20	29
	10	21	39	20	29
50	10	30	50	24	83
	20	24	54	24	83

Switch specifications (F switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1: Refer to Ending Page 1 for detailed switch specifications and dimensions.

*2: Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

*3: The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)

*4: Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.

*5: The F type switch uses a bend-resistant lead wire.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		20	
Bore size (mm)	Without switch	With switch	Without switch	With switch	Without switch	With switch
ø12	40	80	49	89	-	-
ø16	52	92	64	104	-	-
ø20	74	114	89	129	-	-
ø25	107	147	127	167	-	-
ø32	155	195	183	223	-	-
ø40	249	289	285	325	-	-
ø50	-	-	459	499	572	612

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^2	1.13×10^2
	Pull	-	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	-	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	-	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3

How to order

Without switch (without magnet for switch)

SSD2-X - 12 ○ - 5 ——— N - LB - I

With switch (built-in magnet for switch)

SSD2-XL - 12 ○ - 10 - T0H - R - N - LB - I

- Ⓐ Model No.
- Ⓑ Bore size
- Ⓒ Port thread
- Ⓓ Stroke length
- Ⓔ Switch model No. *1 *2 *3 *8 *9
- Ⓕ Switch quantity
- Ⓖ Option *4
- Ⓗ Mounting bracket *5 *6
- Ⓘ Accessory *7

Code	Description
Ⓐ Model No.	
SSD2-X	Single acting/push
SSD2-XL	Single acting/push/with switch
SSD2-Y	Single acting/pull
SSD2-YL	Single acting/pull/with switch

Ⓑ Bore size (mm)

12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50

Ⓒ Port thread

Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)

Ⓓ Stroke length (mm)

	Bore size (mm)	ø12	ø16	ø20	ø25	ø32	ø40	ø50
5	5	●	●	●	●	●	●	
10	10	●	●	●	●	●	●	●
20	20							●

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	12	16	20	25	32	40	50
-	F2S*	Proximity		●	1-color display	2-wire			●	●			
-	F3S*			●		3-wire			●	●			
F2H*	F2V*			●		2-wire			●	●			
F3H*	F3V*			●		3-wire			●	●			
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire			●	●			
F2YH*	F2YV*			●	2-color display	2-wire			●	●			
F3YH*	F3YV*			●		3-wire			●	●			
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display							●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire			●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●
T2YH*	T2YV*			●					●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●
T3YH*	T3YV*			●					●	●	●	●	●
T2YD*	-			●	2-color display AC magnetic field	2-wire			●	●	●	●	●
T2YDT*	-			●					●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire			●	●	●	●	●

*** Lead wire length**

Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *11

Ⓕ Switch quantity

R	1 on rod side
H	1 on head side
D	2

Ⓖ Option

	Bore size (mm)	12	16	20	25	32	40	50
Blank	Rod end female thread	●	●	●	●	●	●	●
N	Rod end male thread	●	●	●	●	●	●	●
P6	Copper and PTFE free specifications	Supported as standard						
M *4	Piston rod material (stainless steel)	●	●	●	●	●	●	●
P4	Specifications for rechargeable battery (Made to order)	●	●	●	●	●	●	●
P40		●	●	●	●	●	●	●

Ⓗ Mounting bracket

Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange

Ⓘ Accessory (available when rod end male thread "N" is selected)

I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

- *1 : The T2YD* switch cannot be mounted on the ø12 and ø16 bore sizes.
- *2 : The T8* switch cannot be mounted on the ø12 to ø32 bore sizes.
- *3 : The F switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.
- *4 : Piston rod of ø12 to ø25 is stainless steel as standard. C snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.
- *5 : The mounting bracket is included at shipment.
- *6 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 809, 811, 813, 815, 817 and 819. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
- *7 : "I" and "Y" cannot be selected together.
- *8 : The F switch with L lead wire cannot be selected on ø20 models.
- *9 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
- *10: Refer to pages 750 and 751 for combinations of variations/options.
- *11 : F type switch cannot be selected.
- *12: Refer to pages 811 and 817 for the min. stroke length with mounting bracket LB.

[Example of model No.]

SSD2-XL-12-5-T0H-R-N

Model: Compact cylinder

Ⓐ Model No.	: Single acting push
Ⓑ Bore size	: ø12 mm
Ⓒ Port thread	: Rc thread
Ⓓ Stroke length	: 5 mm
Ⓔ Switch model No.	: Reed T0H switch/ Lead wire length 1 m
Ⓕ Switch quantity	: 1 on rod side
Ⓖ Option	: Rod end male thread

How to order switch

SW - **T0H**

Switch model No.
(Item Ⓔ on page 804)

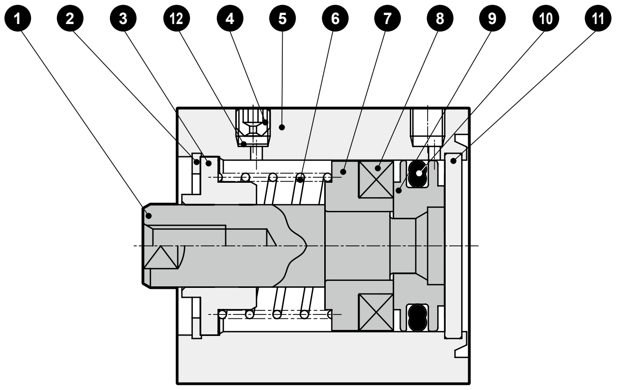
How to order mounting bracket

Bore size (mm) Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50
Clevis bracket (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50

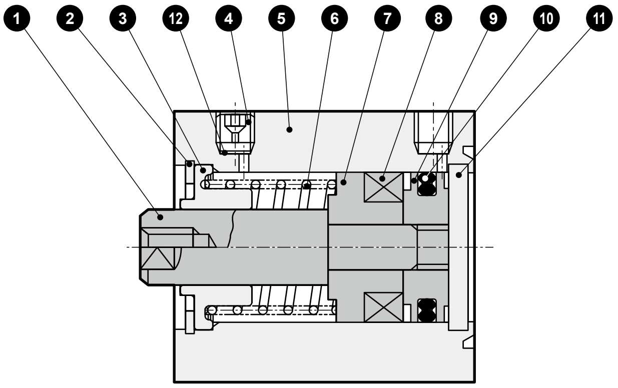
*1: The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list

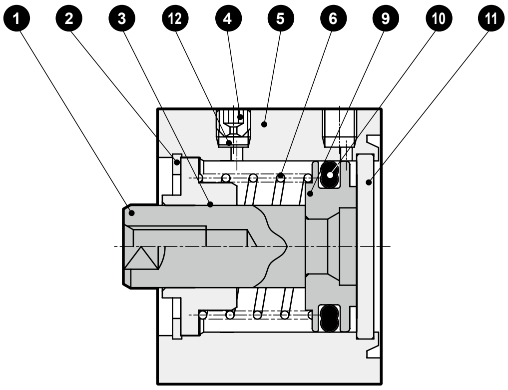
- SSD2-XL-12 to 32 (single acting/push/with switch)



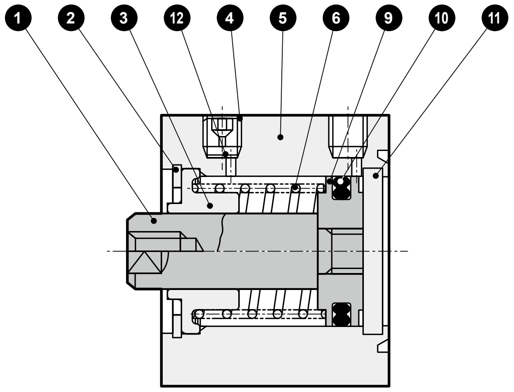
- SSD2-XL-40, 50 (single acting/push/with switch)



- SSD2-X-12 to 32 (single acting/push)



- SSD2-X-40, 50 (single acting/push)



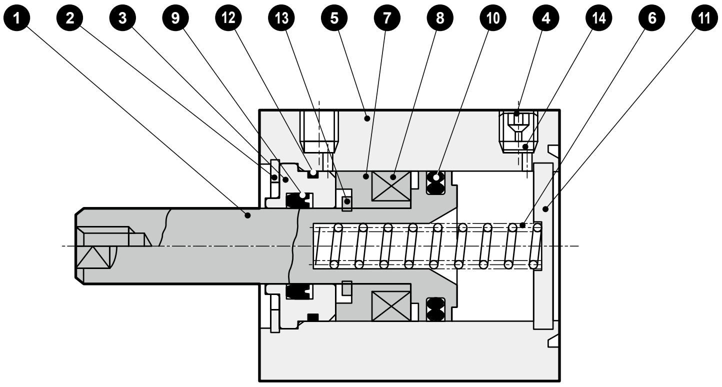
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating	7	Spacer	Aluminum alloy	Chromate
				8	Magnet	Plastic	
2	C snap ring	Steel	Zinc phosphate	9	Piston	Aluminum alloy	Chromate
3	Rod metal	Special aluminum	Alumite	10	Piston packing	Nitrile rubber	
4	Plug	Stainless steel		11	Cover	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
5	Body	Aluminum alloy	Hard alumite				
6	Spring	Piano wire	Electrodeposition	12	Stainless steel wire mesh	Stainless steel	

Repair parts list

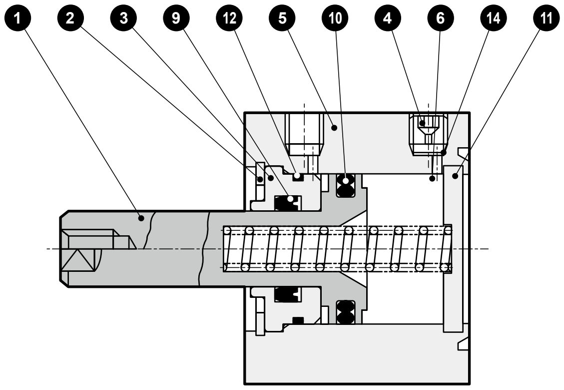
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-X-12K	⑩
ø16	SSD2-X-16K	
ø20	SSD2-X-20K	
ø25	SSD2-X-25K	
ø32	SSD2-X-32K	
ø40	SSD2-X-40K	
ø50	SSD2-X-50K	

Internal structure and parts list

● SSD2-YL (single acting/pull/with switch)



● SSD2-Y (single acting/pull)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston	Stainless steel		8	Magnet	Plastic	
				9	Rod packing	Nitrile rubber	
2	C snap ring	Steel	Zinc phosphate	10	Piston packing	Nitrile rubber	
3	Rod metal	Special aluminum alloy	Alumite	11	Cover	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
4	Plug	Stainless steel					
5	Body	Aluminum alloy	Hard alumite	12	Metal gasket	Nitrile rubber	
6	Spring	Piano wire	Electrodeposition	13	Round S type snap ring	Steel	Zinc phosphate
7	Spacer	Aluminum alloy	Chromate	14	Stainless steel wire mesh	Stainless steel	

Repair parts list

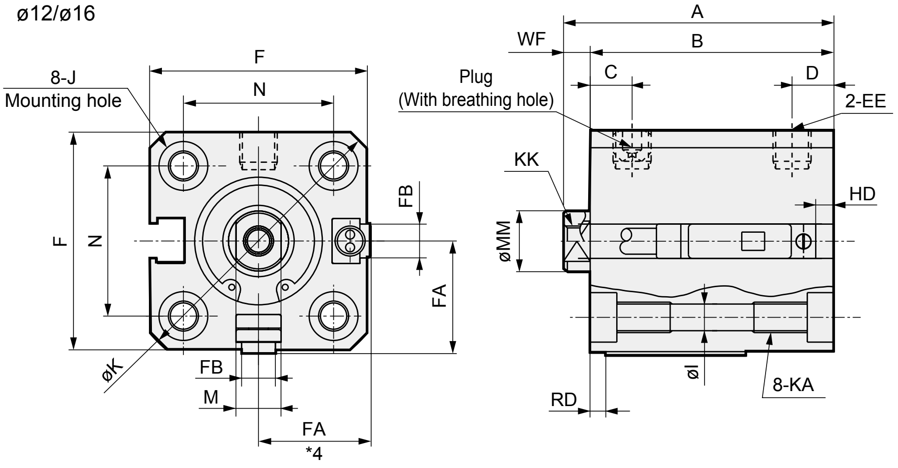
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-Y-12K	⑨ ⑩ ⑫
ø16	SSD2-Y-16K	
ø20	SSD2-Y-20K	
ø25	SSD2-Y-25K	
ø32	SSD2-Y-32K	
ø40	SSD2-Y-40K	
ø50	SSD2-Y-50K	

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/
COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/
MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd
Contr
Ending

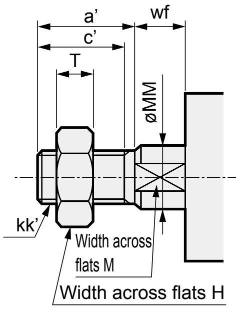
Dimensions CAD

● SSD2-XL-12 to 25 (with switch)

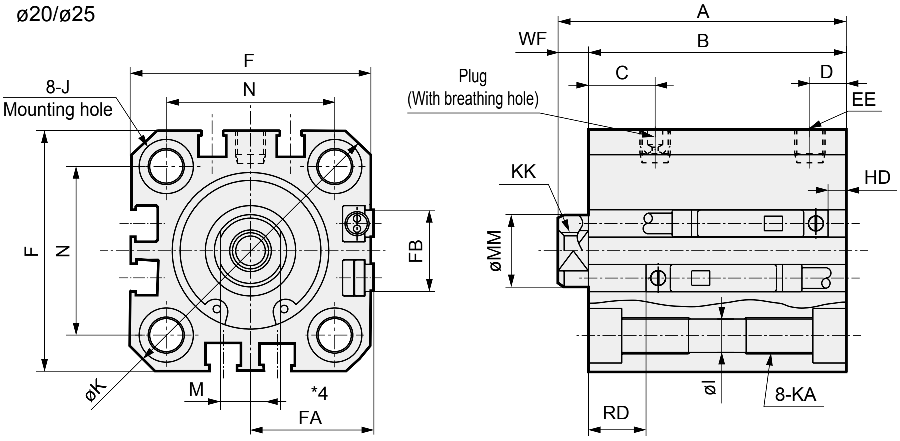
ø12/ø16



● Rod end male thread



ø20/ø25



Code Bore size (mm)		Common dimensions with switch A	B	C	D	EE	F	FA *4	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	Stroke length 5	30.5	27	5.5	5.5	M5	25	13 (16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
	10	35.5	32															
ø16	Stroke length 5	30.5	27	5.5	5.5	M5	29	15 (18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
	10	35.5	32															
ø20	Stroke length 5	39	34.5	8	5.5	M5	36	18.5 (22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
	10	44	39.5															
ø25	Stroke length 5	42.5	37.5	11	6	M5	40	20.5 (24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5
	10	47.5	42.5															

Switch dimensions	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
Bore size (mm)	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	0	3	0	3	2	5				
ø16	0	4	0	4.5	1	6				
ø20	3	7.5	3	7.5	5	9.5	7.5	12	6.5	11
ø25	4	9.5	4	9.5	6	11.5	8.5	14	7.5	13

*1 : Only F switch is available for the ø20 or ø25 piping port surface.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.

*4 : Dimensions in ( ) of FA are for the radial lead wire.

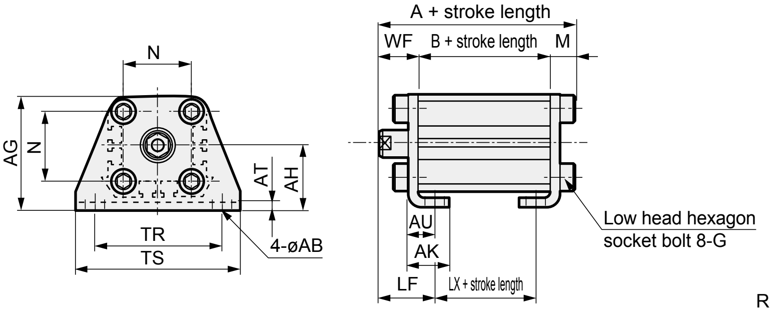
*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.

● Rod end male thread

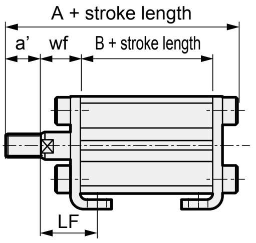
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

Dimensions with mounting bracket

- Axial foot (LB) with switch
  SSD2-XL-12 to 25 -LB



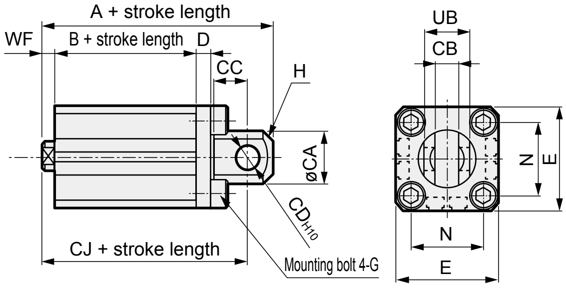
Rod end male thread



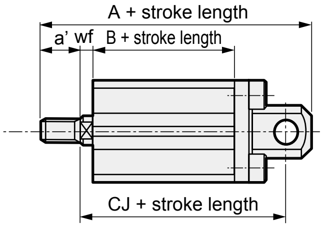
Code Bore size (mm)	Common dimensions						Female thread				
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

Code Bore size (mm)						Male thread					
	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	40.3	22	10	10.5	13.5	19.5	50.8	22	10
ø16	13.5	19.5	40.3	22	10	12	13.5	19.5	52.3	22	10
ø20	14.5	20.5	51.2	29.5	17.5	14	14.5	20.5	65.2	29.5	17.5
ø25	15	22.5	54.7	32.5	17.5	17.5	15	22.5	72.2	32.5	17.5

- Clevis bracket (CB) with switch
  SSD2-XL-12 to 25 -CB



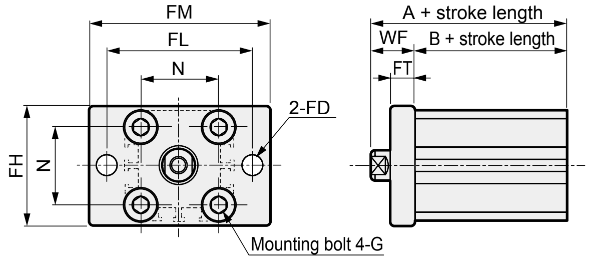
Rod end male thread



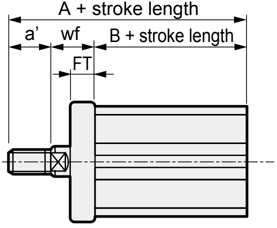
Code Bore size (mm)	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	$5.2^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	$10^{-0.1}_{-0.3}$
ø16	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	$12^{-0.1}_{-0.4}$
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$

Code Bore size (mm)	Female thread				Male thread				
	WF	With switch			a'	wf	With switch		
		A	B	CJ			A	B	CJ
ø12	3.5	45.5	22	39.5	10.5	3.5	56	22	39.5
ø16	3.5	46.5	22	40.5	12	3.5	58.5	22	40.5
ø20	4.5	61	29.5	52	14	4.5	75	29.5	52
ø25	5	67.5	32.5	57.5	17.5	5	85	32.5	57.5

- Rod side flange (FA) with switch
  SSD2-XL-12 to 25 -FA



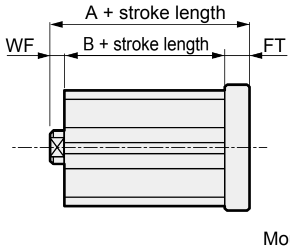
Rod end male thread

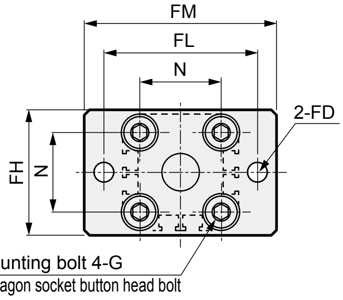


Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

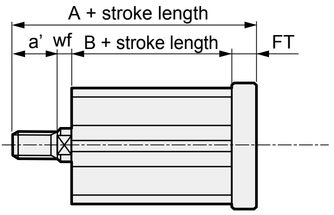
Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	13.5	35.5	22	10.5	13.5	46	22
ø16	13.5	35.5	22	12	13.5	47.5	22
ø20	14.5	44	29.5	14	14.5	58	29.5
ø25	15	47.5	32.5	17.5	15	65	32.5

- Head side flange (FB) with switch
  SSD2-XL-12 to 25 -FB





Rod end male thread



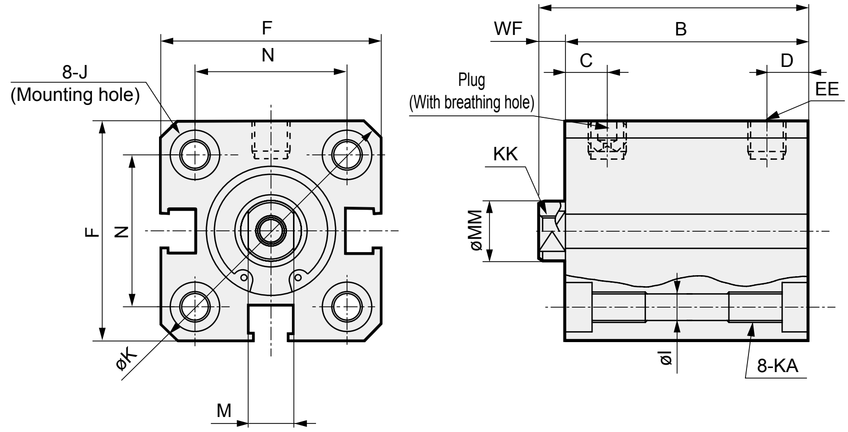
Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	With switch		a'	wf	With switch	
		A	B			A	B
ø12	3.5	31	22	10.5	3.5	41.5	22
ø16	3.5	31	22	12	3.5	43	22
ø20	4.5	42	29.5	14	4.5	56	29.5
ø25	5	45.5	32.5	17.5	5	63	32.5

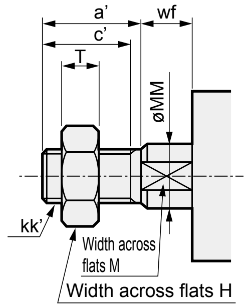
Dimensions

- SSD2-X-12 to 25 (without switch)

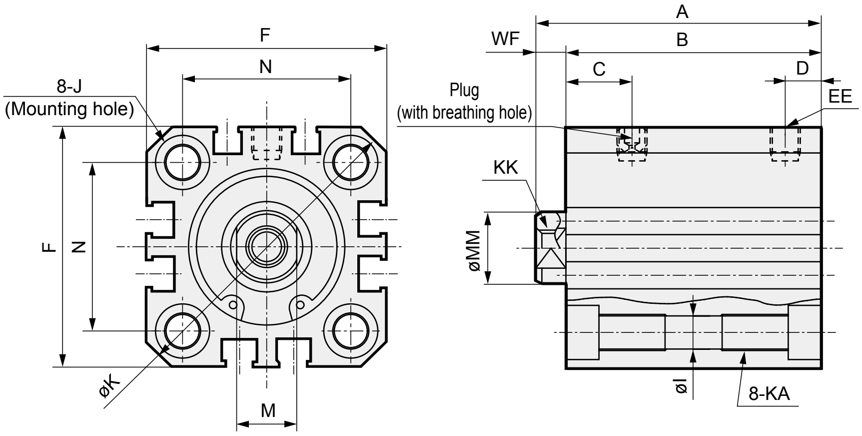
ø12/ø16



- Rod end male thread



ø20/ø25



Code Bore size (mm)			A	B	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
			Dimensions without switch and common dimensions														
ø12	Stroke length	5	25.5	22	5.5	5.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
		10	30.5	27													
ø16	Stroke length	5	25.5	22	5.5	5.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
		10	30.5	27													
ø20	Stroke length	5	29	24.5	8	5.5	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
		10	34	29.5													
ø25	Stroke length	5	32.5	27.5	11	6	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5
		10	37.5	32.5													

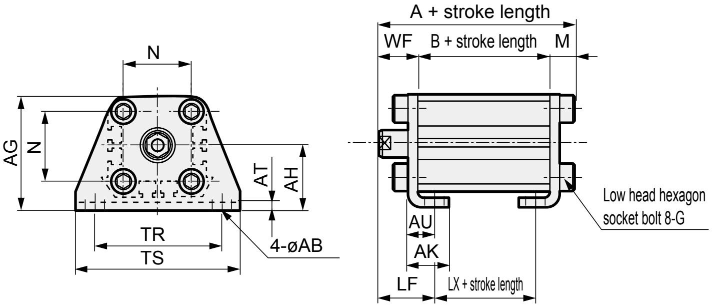
- Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

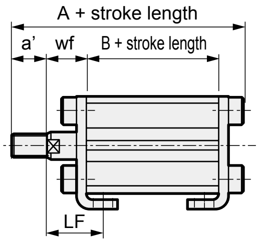
*1: For dimensions of individual accessories, refer to pages 1046 to 1049.

Dimensions with mounting bracket

● **Axial foot (LB) without switch**
SSD2-X-12 to 25 -LB



Rod end male thread

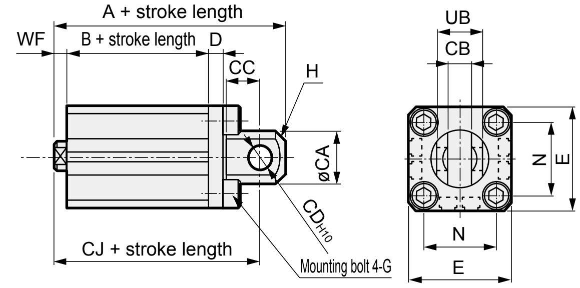


Code Bore size (mm)	Common dimensions AB	AG	AH	AK	AT	AU	G	N	TR	TS	Female thread M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

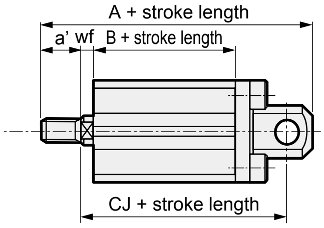
Code						Male thread					
Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	35.3	17	5	10.5	13.5	19.5	45.8	17	5
ø16	13.5	19.5	35.3	17	5	12	13.5	19.5	47.3	17	5
ø20	14.5	20.5	41.2	19.5	7.5	14	14.5	20.5	55.2	19.5	7.5
ø25	15	22.5	44.7	22.5	7.5	17.5	15	22.5	62.2	22.5	7.5

Note: ø20: LB cannot be selected for 5 mm stroke length.

● **Clevis bracket (CB) without switch**
SSD2-X-12 to 25 -CB



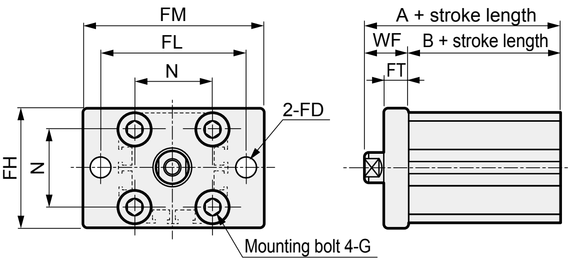
Rod end male thread



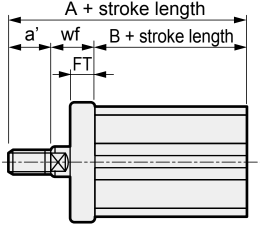
Code Bore size (mm)	Common dimensions CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	$5.2^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	$10^{-0.1}_{-0.3}$
ø16	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	$12^{-0.1}_{-0.4}$
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$

Code	Female thread				Male thread				
Bore size (mm)	WF	Without switch A	B	CJ	a'	wf	Without switch A	B	CJ
ø12	3.5	40.5	17	34.5	10.5	3.5	51	17	34.5
ø16	3.5	41.5	17	35.5	12	3.5	53.5	17	35.5
ø20	4.5	51	19.5	42	14	4.5	65	19.5	42
ø25	5	57.5	22.5	47.5	17.5	5	75	22.5	47.5

● **Rod side flange (FA) without switch**
SSD2-X-12 to 25 -FA



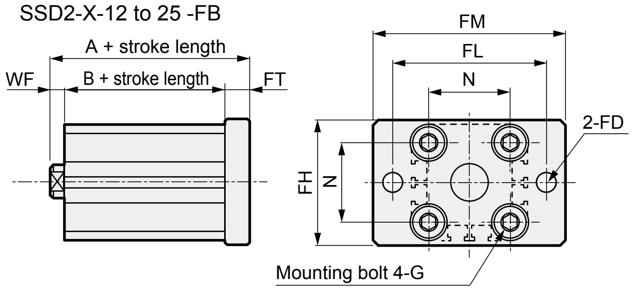
Rod end male thread



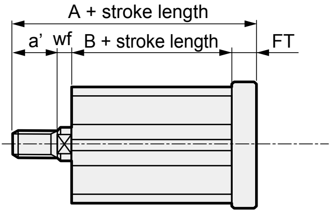
Code Bore size (mm)	Common dimensions FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code	Female thread			Male thread			
Bore size (mm)	WF	A	B	a'	wf	A	B
ø12	13.5	30.5	17	10.5	13.5	41	17
ø16	13.5	30.5	17	12	13.5	42.5	17
ø20	14.5	34	19.5	14	14.5	48	19.5
ø25	15	37.5	22.5	17.5	15	55	22.5

● **Head side flange (FB) without switch**
SSD2-X-12 to 25 -FB



Rod end male thread

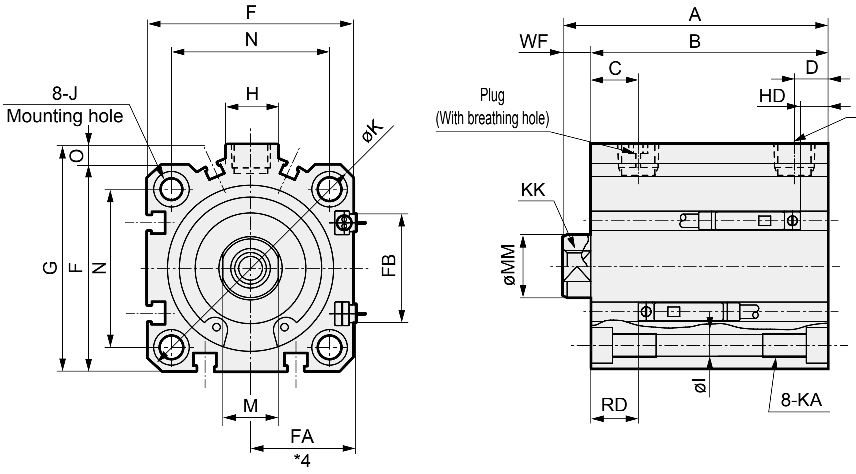


Code Bore size (mm)	Common dimensions FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

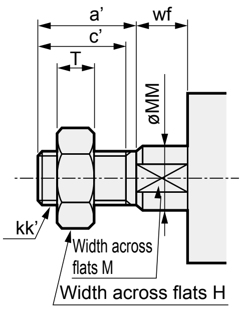
Code	Female thread			Male thread			
Bore size (mm)	WF	Without switch A	B	a'	wf	Without switch A	B
ø12	3.5	26	17	10.5	3.5	36.5	17
ø16	3.5	26	17	12	3.5	38	17
ø20	4.5	32	19.5	14	4.5	46	19.5
ø25	5	35.5	22.5	17.5	5	53	22.5

Dimensions CAD

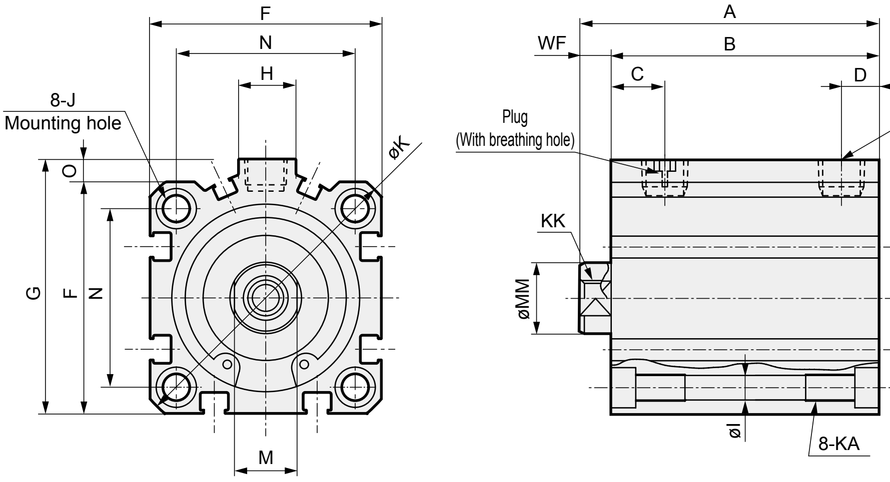
● SSD2-XL-32 to 50 (with switch)



● Rod end male thread



● SSD2-X-32 to 50 (without switch)



Code			Without switch		Common dimensions with switch																				
Bore size (mm)			A	B	A	B	C *7	D *7	EE *6	F	FA *4	FB	G	H	I	J	K	KA	KK	M	MM	N	O	WF
ø32	Stroke length	5	35	28	45	38	8 (10)	8 (5.5)	Rc1/8	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7
		10	40	33	50	43																		
ø40	Stroke length	5	41.5	34.5	51.5	44.5	12 (11.5)	8.5 (8)	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7
		10	46.5	39.5	56.5	49.5																		
ø50	Stroke length	10	48.5	40.5	58.5	50.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8
		20	58.5	50.5	68.5	60.5																		

Switch dimensions	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size (mm)	HD *2	RD *2	HD *2	RD *2	HD	RD
ø32	4	9.5	4	9.5	6	11.5
ø40	7	12	7	12	8.5	13.5
ø50	7.5	12.5	7.5	12.5	9	14

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.
*4 : Dimensions in ( ) of FA are for the radial lead wire.
*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.
*6 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.
*7 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

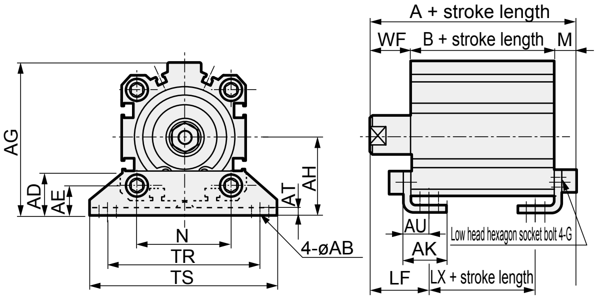
● Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5

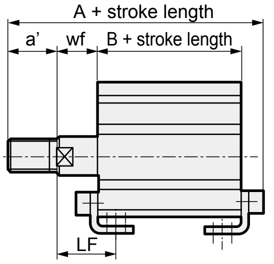
Dimensions with mounting bracket

● Axial foot (LB)

SSD2-X(L)-32 to 50 -LB



Rod end male thread



Code	Common dimensions						Female thread				
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79

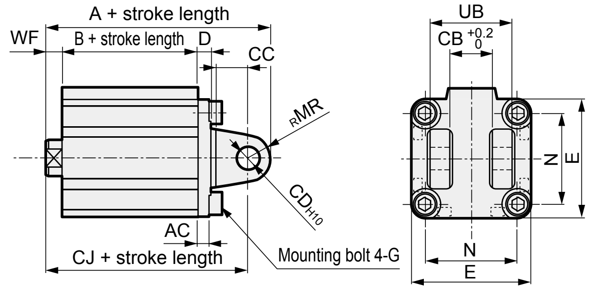
Code										
Bore size (mm)	TS	M	WF	LF	Without switch			With switch		
					A	B	LX	A	B	LX
ø32	71	7.2	17	25	47.2(57.2)	23(33)	7(17)	57.2	33	17
ø40	78	7.2	17	25	53.7(63.7)	29.5(39.5)	13.5(23.5)	63.7	39.5	23.5
ø50	95	8.2	18	29.5	56.7(66.7)	30.5(40.5)	7.5(17.5)	66.7	40.5	17.5

Code	Male thread								
Bore size (mm)	a'	wf	LF	Without switch			With switch		
				A	B	LX	A	B	LX
ø32	23.5	15	23	68.7(78.7)	23(33)	7(17)	78.7	33	17
ø40	23.5	15	23	75.2(85.2)	29.5(39.5)	13.5(23.5)	85.2	39.5	23.5
ø50	28.5	15	26.5	82.2(92.2)	30.5(40.5)	7.5(17.5)	92.2	40.5	17.5

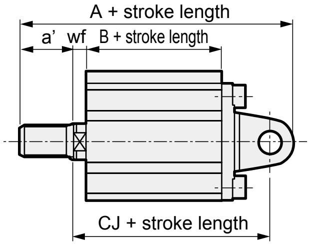
* Dimensions in ( ) are for stroke lengths of more than 50 mm.

● Clevis bracket (CB)

SSD2-X(L)-32 to 50 -CB



Rod end male thread



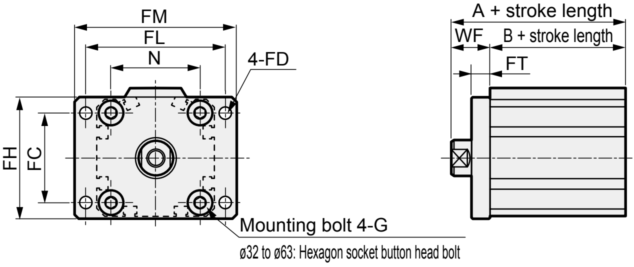
Code	Common dimensions									
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB
ø32	4.5	18.2	14	10	5	45	M6×16	10	34	36
ø40	5	18.2	14	10	6	52	M6×16	10	40	36
ø50	6	22.2	20	14	7	64	M8×20	14	50	44

Code	Female thread						
Bore size (mm)	WF	Without switch			With switch		
		A	B	CJ	A	B	CJ
ø32	7	60	23	50	70	33	60
ø40	7	68.5	29.5	58.5	78.5	39.5	68.5
ø50	8	80.5	30.5	66.5	90.5	40.5	76.5

Code	Male thread							
Bore size (mm)	a'	wf	Without switch			With switch		
			A	B	CJ	A	B	CJ
ø32	23.5	5	81.5	23	48	91.5	33	58
ø40	23.5	5	90	29.5	56.5	100	39.5	66.5
ø50	28.5	5	106	30.5	63.5	116	40.5	73.5

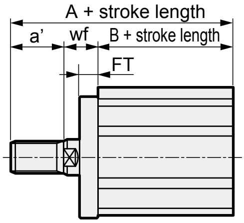
● Rod side flange (FA)

SSD2-X(L)-32 to 50 -FA



ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt

Rod end male thread



Code	Common dimensions							
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20

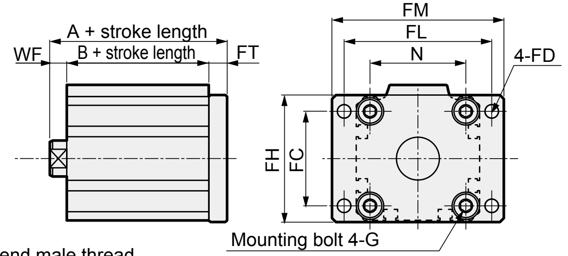
Code	Female thread				
Bore size (mm)	WF	Without switch		With switch	
		A	B	A	B
ø32	17	40(50)	23(33)	50	33
ø40	17	46.5(56.5)	29.5(39.5)	56.5	39.5
ø50	18	48.5(58.5)	30.5(40.5)	58.5	40.5

Code	Male thread					
Bore size (mm)	a'	wf	Without switch		With switch	
			A	B	A	B
ø32	23.5	15	61.5(71.5)	23(33)	71.5	33
ø40	23.5	15	68(78)	29.5(39.5)	78	39.5
ø50	28.5	15	74(84)	30.5(40.5)	84	40.5

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

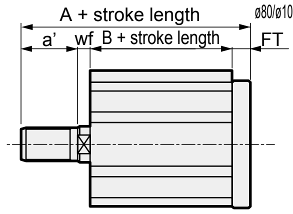
● Head side flange (FB)

SSD2-X(L)-32 to 50 -FB



ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt

Rod end male thread



Code	Common dimensions							
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20

Code	Female thread				
Bore size (mm)	WF	Without switch		With switch	
		A	B	A	B
ø32	7	38	23	48	33
ø40	7	44.5	29.5	54.5	39.5
ø50	8	47.5	30.5	57.5	40.5

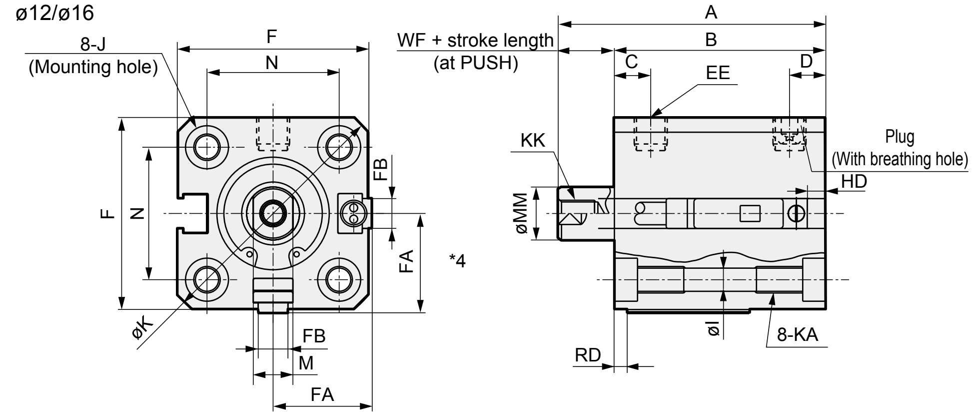
Code	Male thread					
Bore size (mm)	a'	wf	Without switch		With switch	
			A	B	A	B
ø32	23.5	5	59.5	23	69.5	33
ø40	23.5	5	66	29.5	76	39.5
ø50	28.5	5	73	30.5	83	40.5

Dimensions

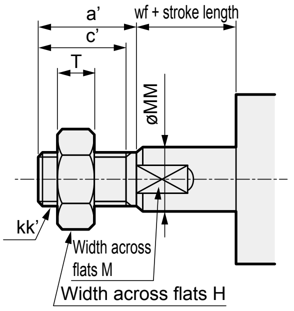
CAD

● SSD2-YL-12 to 25 (with switch)

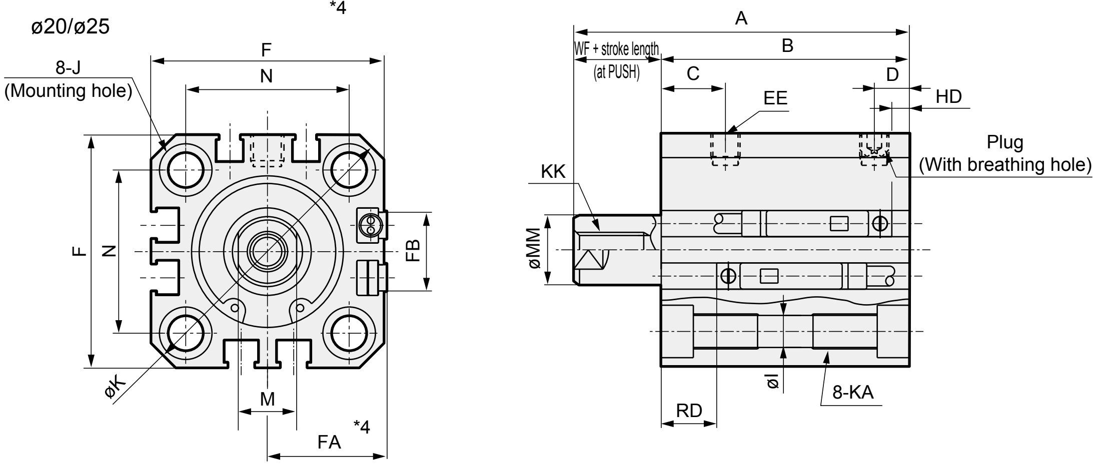
ø12/ø16



● Rod end male thread



ø20/ø25



Code / Bore size (mm)			Common dimensions with switch																
			A	B	C	D	EE	F	FA [*4]	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	Stroke length	5	35.5	27	5.5	5.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 Depth 7	M3 Depth 6	5	6	15.5	3.5
		10	45.5	32															
ø16	Stroke length	5	35.5	27	5.5	5.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 Depth 7	M4 Depth 8	6	8	20	3.5
		10	45.5	32															
ø20	Stroke length	5	44	34.5	8	5.5	M5	36	18.5(22)	12.5	5.5	9 spot face Depth 5.5	47	M6 Depth 11	M5 Depth 7	8	10	25.5	4.5
		10	54	39.5															
ø25	Stroke length	5	47.5	37.5	11	6	M5	40	20.5(24)	13.5	5.5	9 spot face Depth 5.5	51	M6 Depth 11	M6 Depth 12	10	12	28	5
		10	57.5	42.5															

Switch dimensions / Bore size (mm)	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	1.5	1.5	1.5	1.5	3.5	3.5				
ø16	0	4	0	4.5	1	6				
ø20	3	7.5	3	7.5	5	9.5	7.5	12	6.5	11
ø25	4	9.5	4	9.5	6	11.5	8.5	14	7.5	13

*1 : Only F switch is available for the ø20 or ø25 piping port surface.
*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
3: Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.
*4 : Dimensions in ( ) of FA are for the radial lead wire.
*5: For dimensions of individual accessories, refer to pages 1046 to 1049.

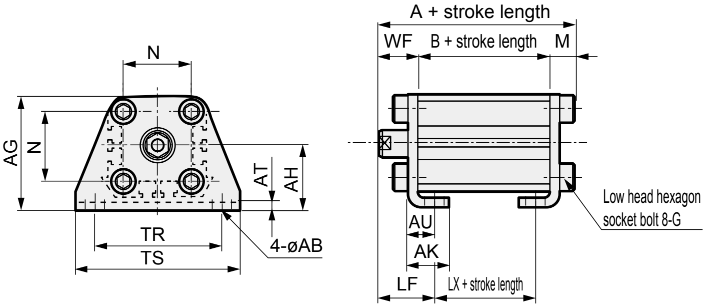
● Rod end male thread

Code / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

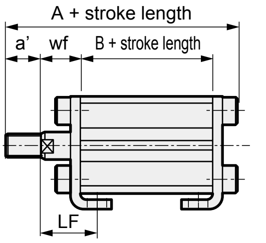
Dimensions with mounting bracket

CAD

● Axial foot (LB) with switch
SSD2-YL-12 to 25 -LB



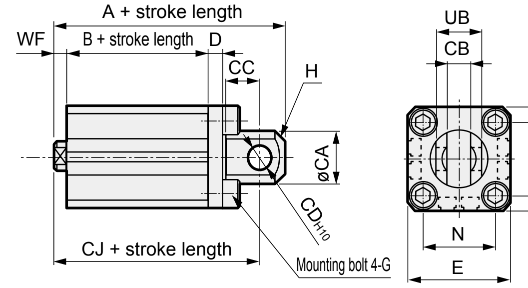
Rod end male thread



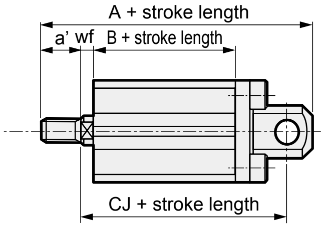
Code Bore size (mm)	Common dimensions						Female thread				
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

Code Bore size (mm)						Male thread					
	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	40.3	22	10	10.5	13.5	19.5	50.8	22	10
ø16	13.5	19.5	40.3	22	10	12	13.5	19.5	52.3	22	10
ø20	14.5	20.5	51.2	29.5	17.5	14	14.5	20.5	65.2	29.5	17.5
ø25	15	22.5	54.7	32.5	17.5	17.5	15	22.5	72.2	32.5	17.5

● Clevis bracket (CB) with switch
SSD2-YL-12 to 25 -CB



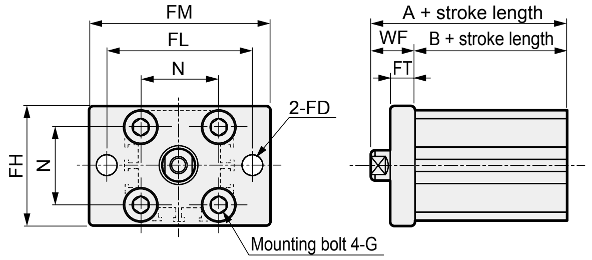
Rod end male thread



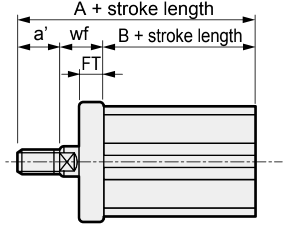
Code Bore size (mm)	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	$5.2^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	$10^{-0.1}_{-0.3}$
ø16	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	$12^{-0.1}_{-0.4}$
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$

Code Bore size (mm)	Female thread				Male thread				
	WF	With switch			a'	wf	With switch		
		A	B	CJ			A	B	CJ
ø12	3.5	45.5	22	39.5	10.5	3.5	56	22	39.5
ø16	3.5	46.5	22	40.5	12	3.5	58.5	22	40.5
ø20	4.5	61	29.5	52	14	4.5	75	29.5	52
ø25	5	67.5	32.5	57.5	17.5	5	85	32.5	57.5

● Rod side flange (FA) with switch
SSD2-YL-12 to 25 -FA



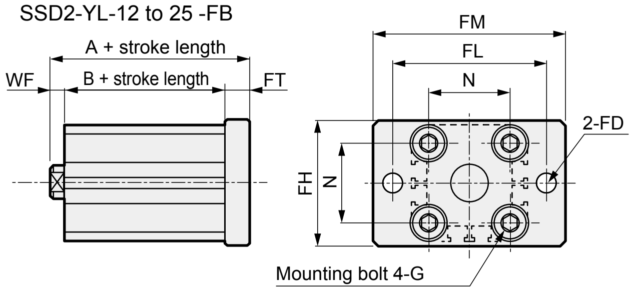
Rod end male thread



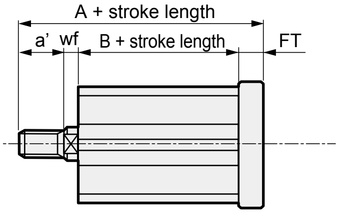
Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	13.5	35.5	22	10.5	13.5	46	22
ø16	13.5	35.5	22	12	13.5	47.5	22
ø20	14.5	44	29.5	14	14.5	58	29.5
ø25	15	47.5	32.5	17.5	15	65	32.5

● Head side flange (FB) with switch
SSD2-YL-12 to 25 -FB



Rod end male thread



Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

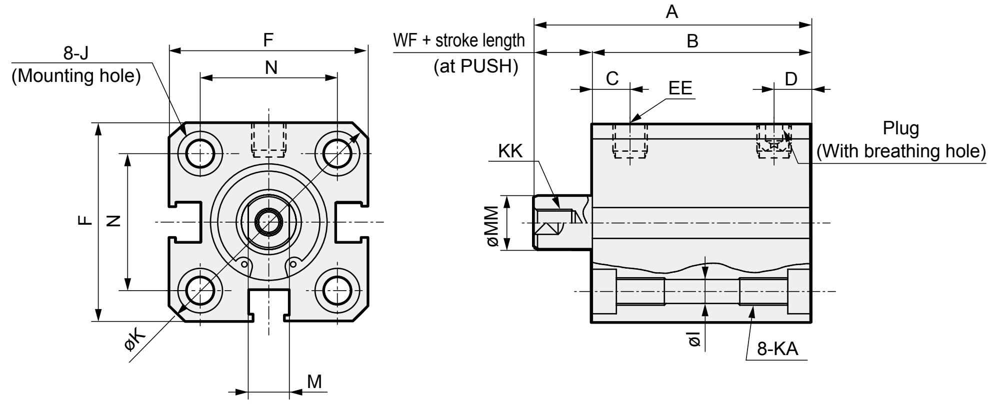
Code Bore size (mm)	Female thread			Male thread			
	WF	With switch		a'	wf	With switch	
		A	B			A	B
ø12	3.5	31	22	10.5	3.5	41.5	22
ø16	3.5	31	22	12	3.5	43	22
ø20	4.5	42	29.5	14	4.5	46	29.5
ø25	5	45.5	32.5	17.5	5	63	32.5

Dimensions

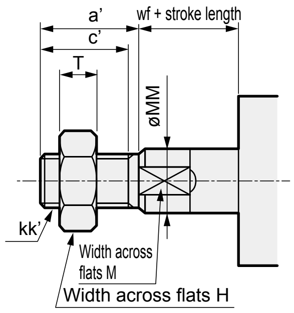
CAD

● SSD2-Y-12 to 25 (without switch)

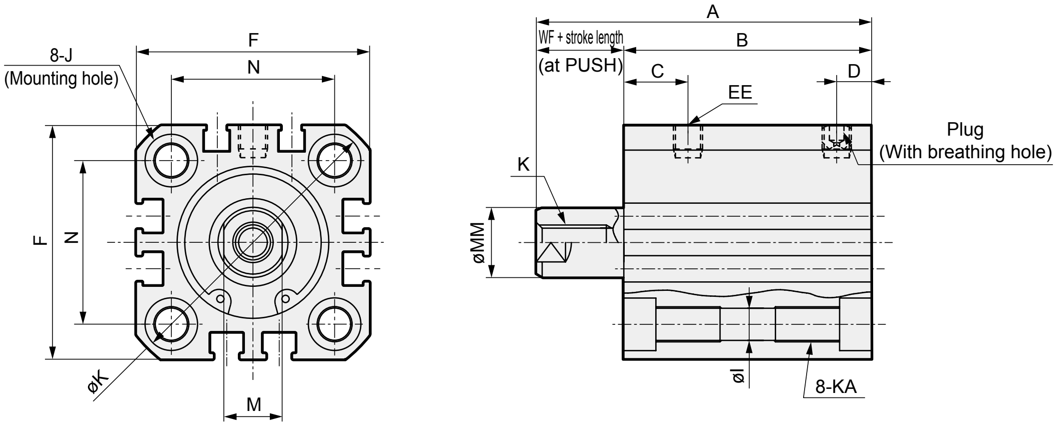
ø12/ø16



● Rod end male thread



ø20/ø25



Code			Without switch														
Bore size (mm)			A	B	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	Stroke length	5	30.5	22	5.5	5.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
		10	40.5	27													3.5
ø16	Stroke length	5	30.5	22	5.5	5.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
		10	40.5	27													3.5
ø20	Stroke length	5	34	24.5	8	5.5	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
		10	44	29.5													4.5
ø25	Stroke length	5	37.5	27.5	11	6	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5
		10	47.5	32.5													5

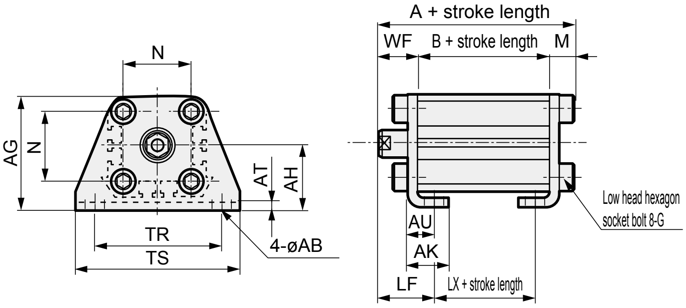
● Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

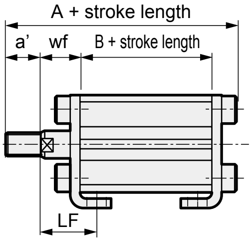
*1: For dimensions of individual accessories, refer to pages 1046 to 1049.

Dimensions with mounting bracket

● Axial foot (LB) without switch
SSD2-Y-12 to 25 -LB



Rod end male thread

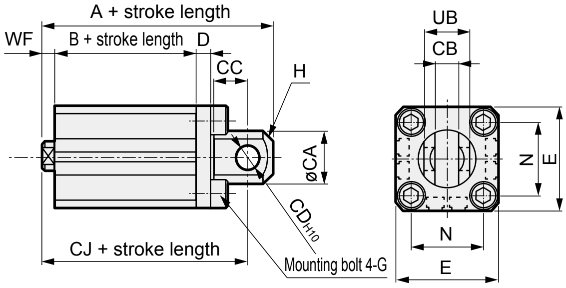


Code Bore size (mm)	Common dimensions				Female thread						
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

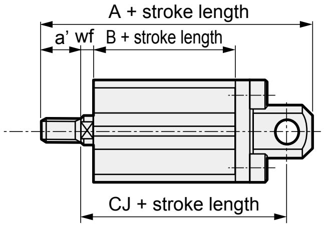
Code Bore size (mm)						Male thread					
	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	35.3	17	5	10.5	13.5	19.5	45.8	17	5
ø16	13.5	19.5	35.3	17	5	12	13.5	19.5	47.3	17	5
ø20	14.5	20.5	41.2	19.5	7.5	14	14.5	20.5	55.2	19.5	7.5
ø25	15	22.5	44.7	22.5	7.5	17.5	15	22.5	62.2	22.5	7.5

Note: ø20: LB cannot be selected for 5 mm stroke length.

● Clevis bracket (CB) without switch
SSD2-Y-12 to 25 -CB



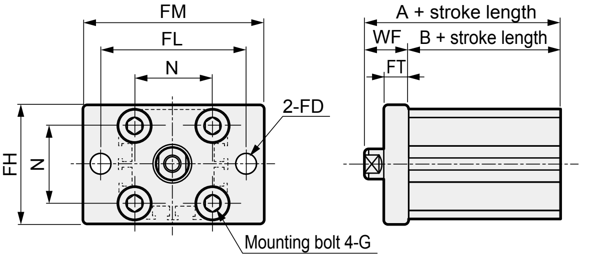
Rod end male thread



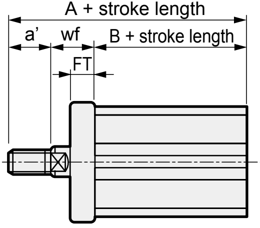
Code Bore size (mm)	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	$5.2^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	$10^{-0.1}_{-0.3}$
ø16	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	$12^{-0.1}_{-0.4}$
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$

Code Bore size (mm)	Female thread				Male thread				
	WF	Without switch			a'	wf	Without switch		
		A	B	CJ			A	B	CJ
ø12	3.5	40.5	17	34.5	10.5	3.5	51	17	34.5
ø16	3.5	41.5	17	35.5	12	3.5	53.5	17	35.5
ø20	4.5	51	19.5	42	14	4.5	65	19.5	42
ø25	5	57.5	22.5	47.5	17.5	5	75	22.5	47.5

● Rod side flange (FA) without switch
SSD2-Y-12 to 25 -FA



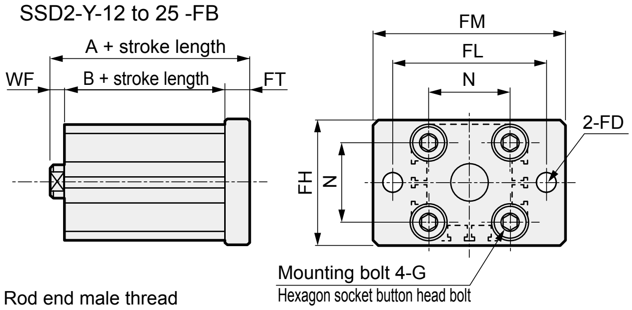
Rod end male thread



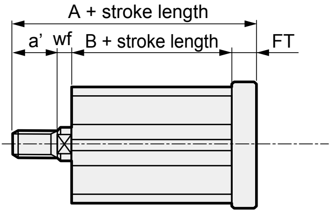
Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	13.5	30.5	17	10.5	13.5	41	17
ø16	13.5	30.5	17	12	13.5	42.5	17
ø20	14.5	34	19.5	14	14.5	48	19.5
ø25	15	37.5	22.5	17.5	15	55	22.5

● Head side flange (FB) without switch
SSD2-Y-12 to 25 -FB



Rod end male thread



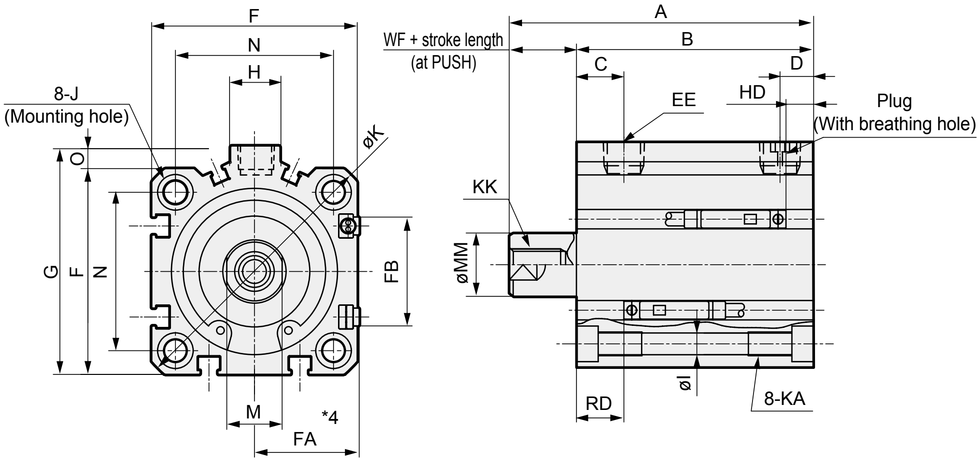
Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	Without switch		a'	wf	Without switch	
		A	B			A	B
ø12	3.5	26	17	10.5	3.5	36.5	17
ø16	3.5	26	17	12	3.5	38	17
ø20	4.5	32	19.5	14	4.5	46	19.5
ø25	5	35.5	22.5	17.5	5	53	22.5

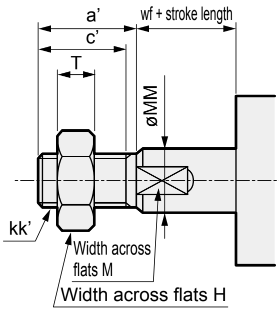
Dimensions

CAD

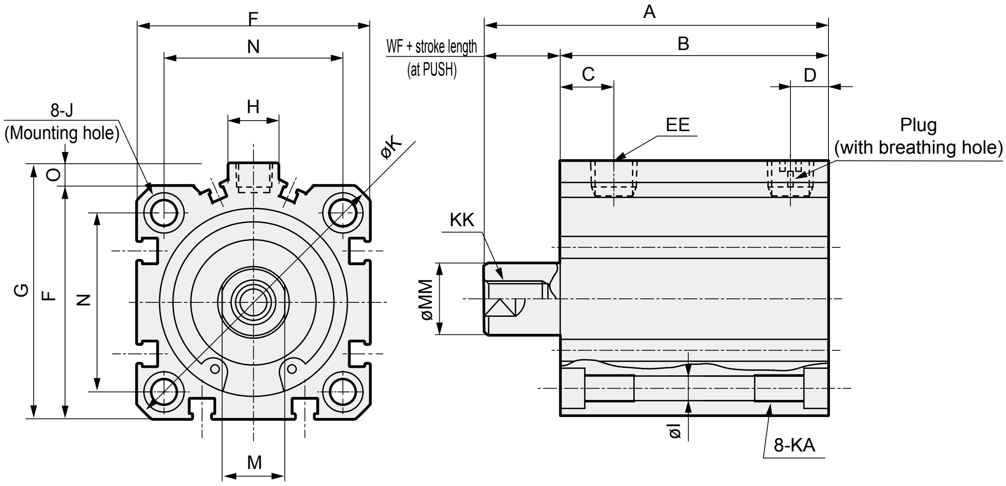
● SSD2-YL-32 to 50 (with switch)



● Rod end male thread



● SSD2-Y-32 to 50 (without switch)



Code			Without switch		Common dimensions with switch																			
Bore size (mm)			A	B	A	B	C *6	D *6	EE *5	F	FA *3	FB	G	H	I	J	K	KA	KK	M	MM	N	O	WF
ø32	Stroke length	5	40	28	50	38	8 (10)	8 (5.5)	Rc1/8	45	23 (26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 Depth 11	M8 Depth 13	14	16	34	4.5	7
		10	50	33	60	43																		
ø40	Stroke length	5	46.5	34.5	56.5	44.5	12 (11.5)	8.5 (18)	Rc1/8	52	26.5 (30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 Depth 11	M8 Depth 13	14	16	40	5	7
		10	56.5	39.5	66.5	49.5																		
ø50	Stroke length	10	58.5	40.5	68.5	50.5	10.5	10.5	Rc1/4	64	32.5 (36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 Depth 13	M10 Depth 15	17	20	50	7	8
		20	78.5	50.5	88.5	60.5																		

Switch dimensions	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size (mm)	HD *1	RD *1	HD *1	RD *1	HD	RD
ø32	4	9.5	4	9.5	6	11.5
ø40	7	12	7	12	8.5	13.5
ø50	7.5	12.5	7.5	12.5	9	14

*1 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
2 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.
*3 : Dimensions in ( ) of FA are for the radial lead wire.
*4 : For dimensions of individual accessories, refer to pages 1046 to 1049.
*5 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.
*6 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

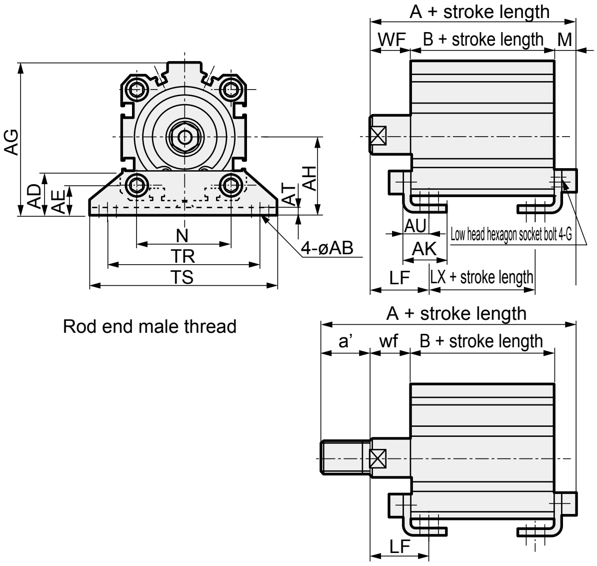
● Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5

Dimensions with mounting bracket

● Axial foot (LB)

SSD2-Y(L)-32 to 50 -LB



Code	Common dimensions						Female thread				
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79

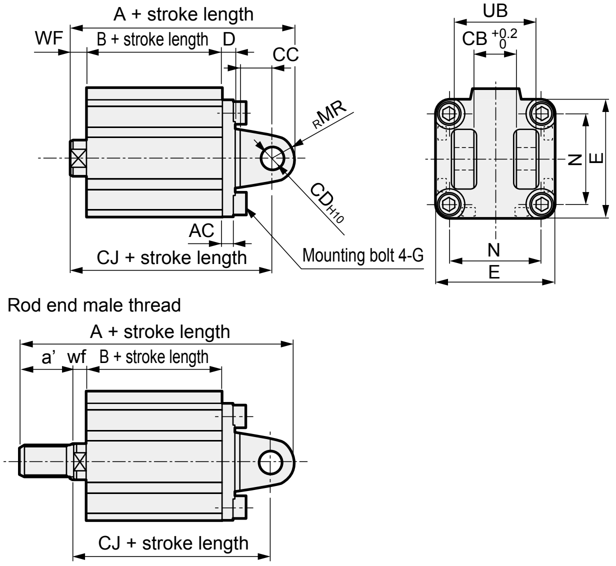
Code										
Bore size (mm)	TS	M	WF	LF	Without switch			With switch		
					A	B	LX	A	B	LX
ø32	71	7.2	17	25	47.2(57.2)	23(33)	7(17)	57.2	33	17
ø40	78	7.2	17	25	53.7(63.7)	29.5(39.5)	13.5(23.5)	63.7	39.5	23.5
ø50	95	8.2	18	29.5	56.7(66.7)	30.5(40.5)	7.5(17.5)	66.7	40.5	17.5

Code	Male thread								
Bore size (mm)	a'	wf	LF	Without switch			With switch		
				A	B	LX	A	B	LX
ø32	23.5	15	23	68.7(78.7)	23(33)	7(17)	78.7	33	17
ø40	23.5	15	23	75.2(85.2)	29.5(39.5)	13.5(23.5)	85.2	39.5	23.5
ø50	28.5	15	26.5	82.2(92.2)	30.5(40.5)	7.5(17.5)	92.2	40.5	17.5

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

● Clevis bracket (CB)

SSD2-Y(L)-32 to 50 -CB



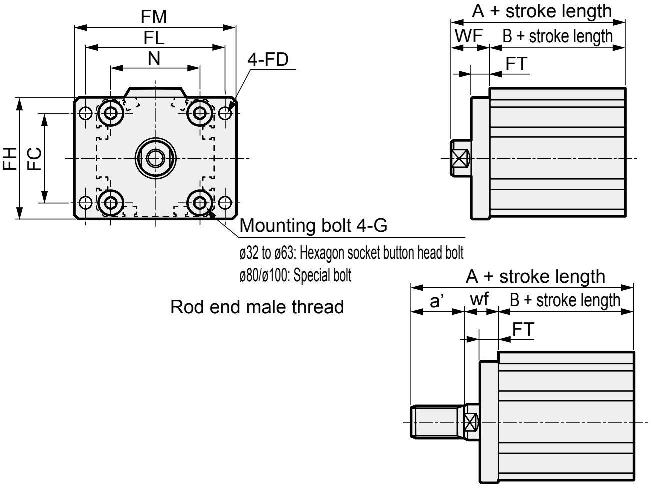
Code	Common dimensions									
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB
ø32	4.5	18.2	14	10	5	45	M6×16	10	34	36
ø40	5	18.2	14	10	6	52	M6×16	10	40	36
ø50	6	22.2	20	14	7	64	M8×20	14	50	44

Code	Female thread						
Bore size (mm)	WF	Without switch			With switch		
		A	B	CJ	A	B	CJ
ø32	7	60	23	50	70	33	60
ø40	7	68.5	29.5	58.5	78.5	39.5	68.5
ø50	8	80.5	30.5	66.5	90.5	40.5	76.5

Code	Male thread							
Bore size (mm)	a'	wf	Without switch			With switch		
			A	B	CJ	A	B	CJ
ø32	23.5	5	81.5	23	48	91.5	33	58
ø40	23.5	5	90	29.5	56.5	100	39.5	66.5
ø50	28.5	5	106	30.5	63.5	116	40.5	73.5

● Rod side flange (FA)

SSD2-Y(L)-32 to 50 -FA



Code	Common dimensions							
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20

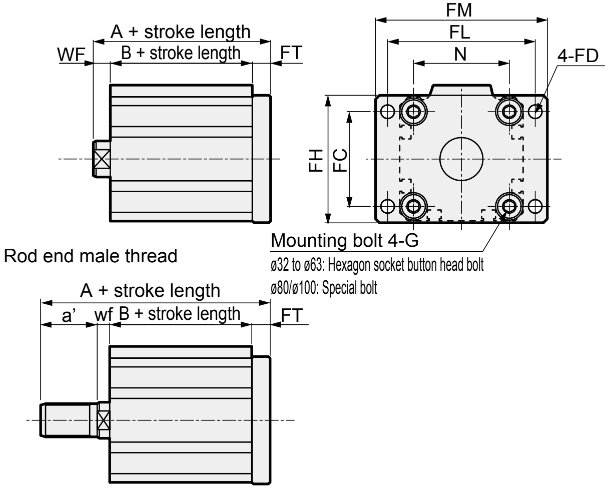
Code	Female thread				
Bore size (mm)	WF	Without switch		With switch	
		A	B	A	B
ø32	17	40(50)	23(33)	50	33
ø40	17	46.5(56.5)	29.5(39.5)	56.5	39.5
ø50	18	48.5(58.5)	30.5(40.5)	58.5	40.5

Code	Male thread					
Bore size (mm)	a'	wf	Without switch		With switch	
			A	B	A	B
ø32	23.5	15	61.5(71.5)	23(33)	71.5	33
ø40	23.5	15	68(78)	29.5(39.5)	78	39.5
ø50	28.5	15	74(84)	30.5(40.5)	84	40.5

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

● Head side flange (FB)

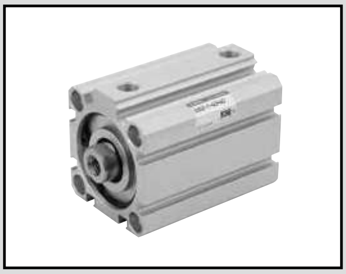
SSD2-Y(L)-32 to 50 -FB



Code	Common dimensions							
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20

Code	Female thread			
Bore size (mm)	WF	Without switch		With switch	
		A	B	A	B
ø32	7	38	23	48	33
ø40	7	44.5	29.5	54.5	39.5
ø50	8	47.5	30.5	57.5	40.5

Code	Male thread					
Bore size (mm)	a'	wf	Without switch		With switch	
			A	B	A	B
ø32	23.5	5	59.5	23	69.5	33
ø40	23.5	5	66	29.5	76	39.5
ø50	28.5	5	73	30.5	83	40.5

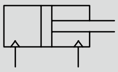


Compact cylinder double acting/heat resistant

SSD2-T1 Series

● Bore size: ø12/ø16/ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-T1									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)									
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)							0.05 (≈7.3 psi, 0.5 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)									
Ambient temperature °C	5 (41°F) to 150 (302°F)									
Port size	M5				Rc1/8 *1		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$									
Working piston speed mm/s	50 to 500							50 to 300		
Cushion	None									
Lubrication	Not available									
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

*1: The ø32 bore size with a 5 mm stroke has a port size of M5.

Stroke length

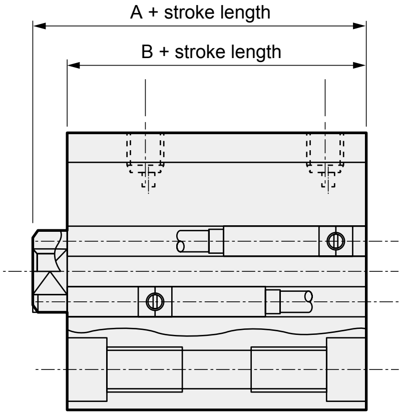
Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20 25/30	30	1
ø16			
ø20	5/10/15/20/25 30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

*: Refer to pages 763 and 765 for the min. stroke length with mounting bracket LB.

Custom stroke length

● SSD2-T1 Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	12/16	1 to 29
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-T32-38 A +2 mm spacer is added to the SSD2-T32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 63 mm.	



Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm) / Bore size (mm)	5	10	15	20	25	30	35	40	45	50	75	100
ø12	36	44	53	61	70	72	-	-	-	-	-	-
ø16	48	59	69	80	91	102	-	-	-	-	-	-
ø20	63	75	88	101	113	126	139	152	165	203	-	-
ø25	87	102	118	134	150	165	181	197	213	228	-	-
ø32	122	144	166	188	209	231	253	275	297	318	494	604
ø40	183	210	236	263	290	316	342	369	395	472	646	776
ø50	-	341	383	425	467	510	552	594	636	678	1025	1235
ø63	-	507	562	617	672	727	782	838	893	948	1438	1713
ø80	-	928	1015	1101	1188	1274	1361	1448	1535	1621	2401	2833
ø100	-	1433	1547	1660	1774	1888	2002	2115	2229	2343	3406	3973

How to order

SSD2-T1 - 12 ○ - 5 - N - LB - I

Ⓐ Bore size
Ⓑ Port thread
Ⓒ Stroke length
Ⓓ Option *1
Ⓔ Mounting bracket *2 *3
Ⓕ Accessory *4

Code	Description
Ⓐ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓑ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)
Ⓒ Stroke length (mm)	
	Refer to the stroke length table below.
Ⓓ Option	
Blank	Rod end female thread
N	Rod end male thread
M	Piston rod material (stainless steel)
Ⓔ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange
Ⓕ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : Piston rod of ø12 to ø25 is stainless steel as standard. C snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.
*2 : The mounting bracket is included at shipment.
*3 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 761, 763, 765 and 766. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
*4 : "I" and "Y" cannot be selected together.
*5 : Refer to pages 750 and 751 for combinations of variations/options.

[Stroke length table]

	Stroke length (mm)	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard stroke length	5	●	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●
	100					●	●	●	●	●	●
Min. stroke length (mm)		1									
Max. stroke length (mm)		30		50		100					
Custom stroke length *1		In 1 mm increments									

Applicable bore size: ø12 to ø100

*1: The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.
*2: Refer to pages 763 and 765 for the min. stroke length with mounting bracket LB.

[Example of model No.]

SSD2-T1-12-5-N

Model: Compact cylinder, heat resistant

Ⓐ Bore size	: ø12 mm
Ⓑ Port thread	: Rc thread
Ⓒ Stroke length	: 5mm
Ⓓ Option	: Rod end male thread

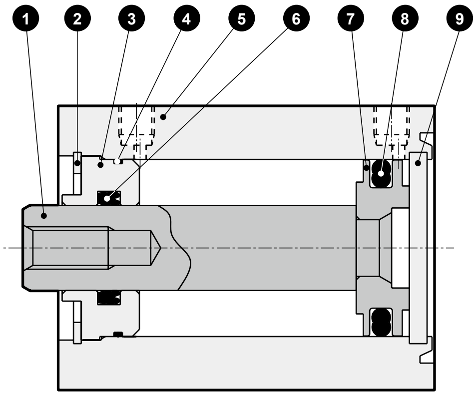
How to order mounting bracket

Bore size (mm) Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

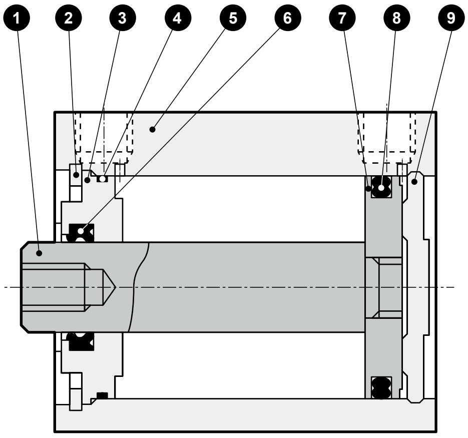
*1: The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list

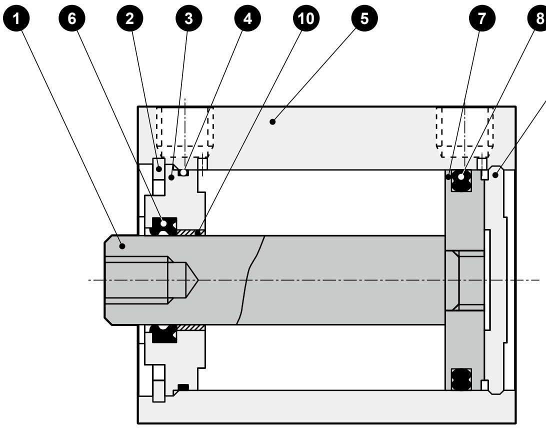
● SSD2-T1-12 to 25



● SSD2-T1-32 to 50



● SSD2-T1-63 to 100



No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø100: Steel	ø16 to ø100: Industrial chrome plating
2	C snap ring	Steel	Zinc phosphate
3	Rod metal	ø12 to ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø12 to ø50: Alumite ø63 to ø100: Chromate
4	Rod metal gasket	Fluoro rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Fluoro rubber	
7	Piston	Aluminum alloy	Chromate
8	Piston packing	Fluoro rubber	
9	Cover	ø12 to ø25: Stainless steel ø32 to ø100: Aluminum alloy	ø32 to ø100: Alumite
10	Bush	Oiles drymet	

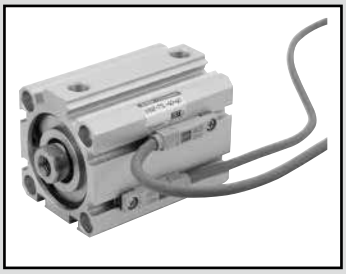
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-T-12K	④⑥⑧
ø16	SSD2-T-16K	
ø20	SSD2-T-20K	
ø25	SSD2-T-25K	
ø32	SSD2-T-32K	
ø40	SSD2-T-40K	
ø50	SSD2-T-50K	
ø63	SSD2-T-63K	
ø80	SSD2-T-80K	
ø100	SSD2-T-100K	

Dimensions

Same as double acting/single rod. Refer to pages 760 to 766.

MEMO

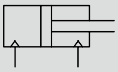


Compact cylinder double acting/with heat resistant cylinder switch

SSD2-T1L Series

● Bore size: ø16/ø20/ø25/ø32/ø40
ø50/ø63

JIS symbol



Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	SSD2-T1L						
Bore size mm	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Actuation	Double acting						
Working fluid	Compressed air						
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)						
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)						0.05
Proof pressure MPa	1.6 (≈230 psi, 16 bar)						
Ambient temperature °C	5 (41°F) to 150 (302°F) (*1)						
Port size	M5			Rc1/8		Rc1/4	
Stroke tolerance mm	$^{+1.0}_{0}$						
Working piston speed mm/s	50 to 500						50 to 300
Cushion	None						
Lubrication (*2)	-						

*1: At an ambient temperature of 150°C, external leakage will occur gradually after approximately 500,000 uses.
*2: Periodically apply additional heat-resistant grease.

Stroke length

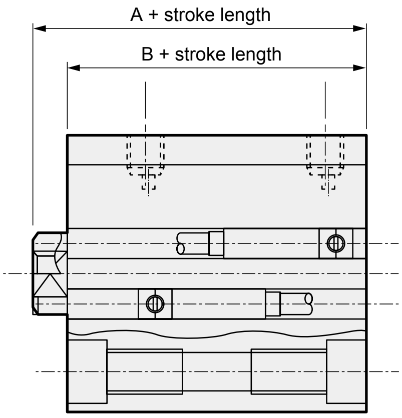
Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	
			With 1 switch	With 2 switches
ø16	10/15/20/25/30	30	10	20
ø20	15/20/25/30/ 35/40/45/50	50	15	25
ø25				20
ø32	15/20/25/30/35/ 40/45/50/70/100	100	15	
ø40				
ø50				
ø63				

Note: The custom stroke length is available in 1 mm increments. (Less than 7 mm is not available.) However, the total length is the same as that of the next longer standard stroke length.

Custom stroke length

● SSD2-T1L Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	12/16	1 to 29
	20 to 25	1 to 49
	32 to 63	1 to 99
Example of model No.	Model No.: SSD2-T1L-32-38 A +2 mm spacer is added to the SSD2-T1L-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 73 mm.	



Cylinder switch specifications

Item	Reed 2-wire	
	ET0H, ET0V	
Applications	For relay, programmable controller	
Load voltage	12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA
Internal voltage drop	3.0 V or less	
Leakage current	0mA	
Indicator lamp	LED (Lit when ON) (Note)	
Lead wire	Heat-resistant fluorine-insulated sheathed wire 1 m (0.5SQ (100/0.08) annealed copper wire x 2C)	
Insulation resistance	100 MΩ and over with 500 VDC megger	
Withstand voltage	No failure after 1 minute of 1,000 VAC application.	
Max. shock resistance	294 m/s^2	
Ambient temperature	-10 to 150°C	
Degree of protection	IEC standards IP67, JIS C0920 (water-tight)	
Weight g	40	

Note: Indicator uses LED. Visibility will gradually decrease with continuous use under high temperatures.
As the LED lamp circuit is separated from the switch output circuit, the switch output works normally even if the LED lamp goes out.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø16	71	127	82	127	92	137	103	148	114	159	125	170	-	-	-	-	-	-	-	-	-	-	-	-
ø20	63	118	75	150	88	163	101	176	113	188	126	201	139	214	152	227	165	240	203	278	-	-	-	-
ø25	87	178	102	193	118	209	134	225	150	241	165	256	181	272	197	288	213	304	228	319	-	-	-	-
ø32	122	236	144	258	166	280	188	302	209	323	231	345	253	367	275	389	297	411	318	432	494	542	604	652
ø40	183	326	210	353	236	379	263	406	290	433	316	459	342	485	369	512	395	538	472	565	646	695	776	825
ø50	-	-	341	535	383	577	425	619	467	661	510	704	552	746	594	788	636	830	678	872	1025	1082	1235	1292
ø63	-	-	507	786	562	841	617	896	672	951	727	1006	782	1061	838	1117	893	1172	948	1227	1438	1502	1713	1777

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	49.1	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	37.8	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	1.56×10^2	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	1.40×10^2	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3

How to order

SSD2-T1L - 16 ◯ - 10 - ET0H - D - N - LB - I

Double acting/heat resistant with compact heat resistant switch

Ⓐ Bore size
Ⓑ Port thread
Ⓒ Stroke length
Ⓓ Switch model No.
Ⓔ Switch quantity
Ⓕ Option *1
Ⓖ Mounting bracket *2 *3
Ⓗ Accessory *4

Code	Description
Ⓐ Bore size (mm)	
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
Ⓑ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)
Ⓒ Stroke length (mm)	
	Refer to the stroke length table on the following page.

Ⓓ Switch model No.				
ET0H	Reed	AC/DC	2-wire	Axial lead wire
ET0V				Radial lead wire

Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread
M	Piston rod material (stainless steel)
Ⓖ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange
Ⓗ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : Piston rod of ø12 to ø25 is stainless steel as standard. C snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.

*2 : The mounting bracket is included at shipment.

*3 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 830 and 831. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.

*4 : "I" and "Y" cannot be selected together.

*5 : Refer to pages 750 and 751 for combinations of variations/options.

*6 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

SSD2-T1L-16-10-ET0H-D-N

Model: Compact cylinder
with heat resistant cylinder switch

Ⓐ Bore size	: ø16 mm
Ⓑ Port thread	: Rc thread
Ⓒ Stroke length	: 10mm
Ⓓ Switch model No.	: Reed switch ET0H, lead wire length 1 m
Ⓔ Switch quantity	: 2 pcs. included
Ⓕ Option	: Rod end male thread

[Stroke length table]

Stroke length (mm)		Applicable bore size						
		ø16	ø20	ø25	ø32	ø40	ø50	ø63
Standard stroke length	10	●						
	15	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●
	35		●	●	●	●	●	●
	40		●	●	●	●	●	●
	45		●	●	●	●	●	●
	50		●	●	●	●	●	●
	70				●	●	●	●
	100				●	●	●	●
Min. stroke length (mm)		10(20)	15(25)	15(20)	15(20)			
Max. stroke length (mm)		30	50		100			
Custom stroke length *2		In 1 mm increments						

*1 : The value in ( ) is for types with two switches.
Refer to page 824 for the min. stroke length with switch.
*2 : The total length is the same as that of the next longer standard stroke length.

How to order switch

SW - **ET0H**

Switch model No.
(Item Ⓓ on page 826)

How to order mounting bracket

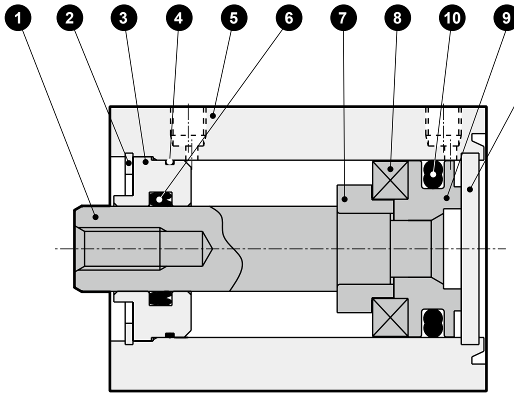
Bore size (mm) / Mounting bracket	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Foot (LB)	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63
Flange (FA/FB)	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63
Clevis bracket (CB)	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63

*1: The foot mounting bracket is provided as 2 pcs./set.

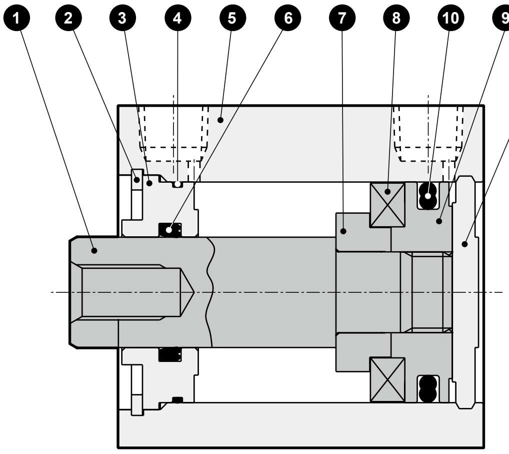
SSD2-T1L Series

Internal structure and parts list

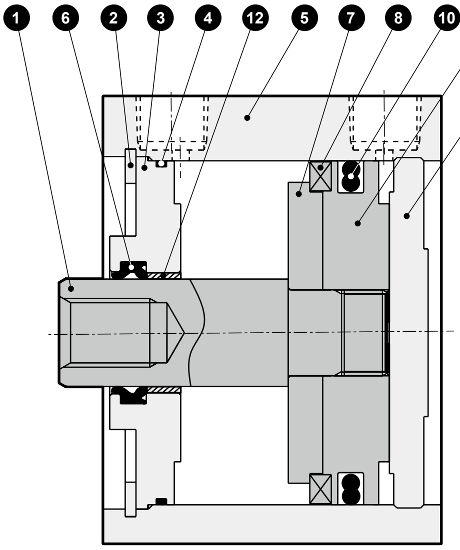
● SSD2-T1L-16 to 25



● SSD2-T1L-32 to 50



● SSD2-T1L-63



No.	Part name	Material	Remarks
1	Piston rod	ø16 to ø25: Stainless steel ø32 to ø63: Steel	Industrial chrome plating
2	C snap ring	Steel	Zinc phosphate
3	Rod metal	ø16 to ø50: Special aluminum ø63: Aluminum alloy	ø16 to ø50: Alumite ø63: Chromate
4	Rod metal gasket	Fluoro rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Fluoro rubber	
7	Spacer	Aluminum alloy	ø32: Chromate
8	Magnet	Special alloy	
9	Piston	ø16 to ø32: Aluminum alloy ø40 to ø63: Stainless steel	ø32: Chromate
10	Piston packing	Fluoro rubber	
11	Cover	ø16 to ø25: Stainless steel ø32 to ø63: Aluminum alloy	ø32 to ø100: Alumite
12	Bush	Oiles drymet	

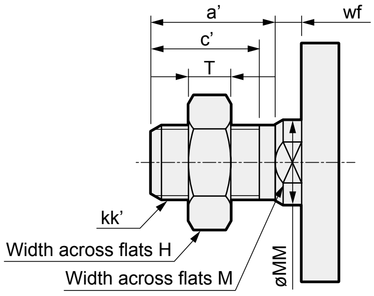
Fluorine grease is used.

Repair parts list

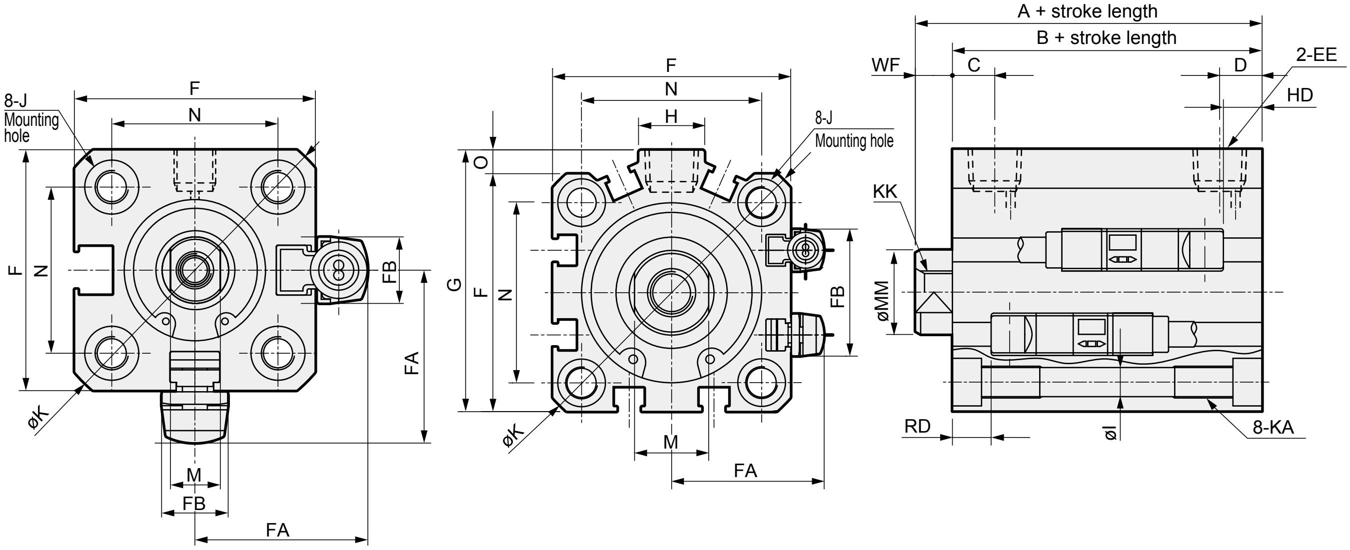
Bore size (mm)	Kit No.	Repair parts No.
ø16	SSD2-T-16K	④ ⑥ ⑩
ø20	SSD2-T-20K	
ø25	SSD2-T-25K	
ø32	SSD2-T-32K	
ø40	SSD2-T-40K	
ø50	SSD2-T-50K	
ø63	SSD2-T-63K	

Dimensions

- Rod end male thread



- SSD2-T1L-16 to 63



Code Bore size (mm)	Common dimensions with switch																		
	A *1	B *1	C	D	EE	F	FA	FB	G	H	I	J	K	KA	KK	M	MM	N	O	WF
ø16	35.5	32	5.5	5.5	M5	29	21	8	-	-	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	-	3.5
ø20	34	29.5	8	5.5	M5	36	24.5	16	-	-	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	-	4.5
ø25	37.5	32.5	11	6	M5	40	26.5	17	-	-	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	-	5
ø32	40	33	8	8	Rc1/8	45	29	24	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7
ø40	46.5	39.5	12	8.5	Rc1/8	52	32.5	31	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7
ø50	48.5	40.5	10.5	10.5	Rc1/4	64	38.5	32	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8
ø63	54	46	13	11	Rc1/4	77	45	32	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	8

Switch dimensions Bore size (mm)	Reed ET0H/ET0V	
	HD	RD
ø16	0.5	0
ø20	0	0
ø25	0	0.5
ø32	0.5	2
ø40	1.5	7
ø50	1.5	6
ø63	5.5	5.5

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

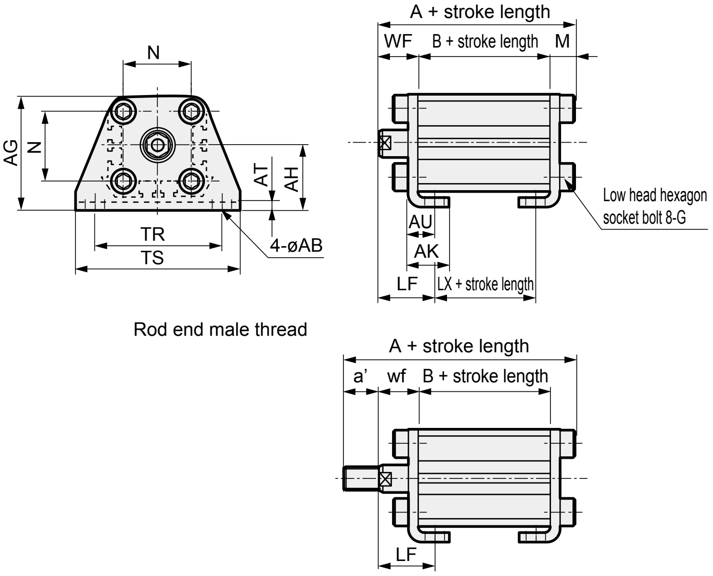
*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

- Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5

Dimensions with mounting bracket

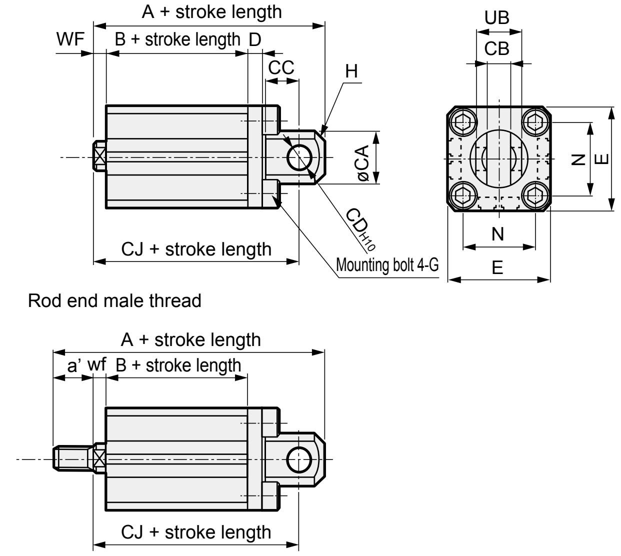
● Axial foot (LB) with switch
SSD2-T1L-16 to 25 -LB



Code Bore size (mm)	Common dimensions				Female thread						
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

Code Bore size (mm)						Male thread					
	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø16	13.5	19.5	50.3	32	20	12	13.5	19.5	62.3	32	20
ø20	14.5	20.5	51.2	29.5	17.5	14	14.5	20.5	65.2	29.5	17.5
ø25	15	22.5	54.7	32.5	17.5	17.5	15	22.5	72.2	32.5	17.5

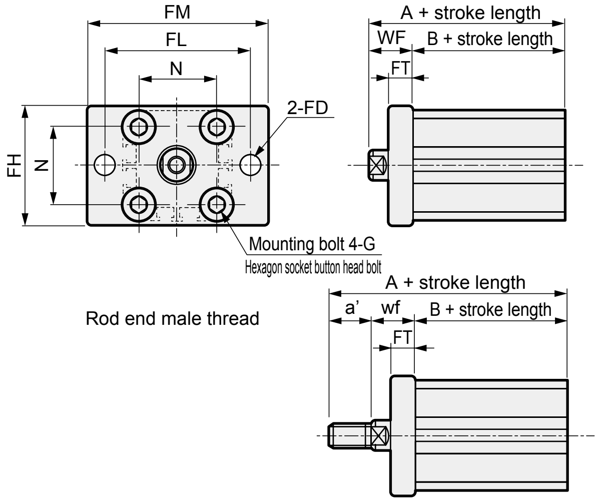
● Clevis bracket (CB) with switch
SSD2-T1L-16 to 25 -CB



Code Bore size (mm)	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø16	15	6.6 $^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	12 $^{-0.1}_{-0.4}$
ø20	20	8.2 $^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	16 $^{-0.1}_{-0.3}$
ø25	24	10.2 $^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	20 $^{-0.1}_{-0.3}$

Code Bore size (mm)	Female thread				Male thread				
	WF	A	B	CJ	a'	wf	A	B	CJ
ø16	3.5	56.5	32	50.5	12	3.5	68.5	32	50.5
ø20	4.5	61	29.5	52	14	4.5	75	29.5	52
ø25	5	67.5	32.5	57.5	17.5	5	85	32.5	57.5

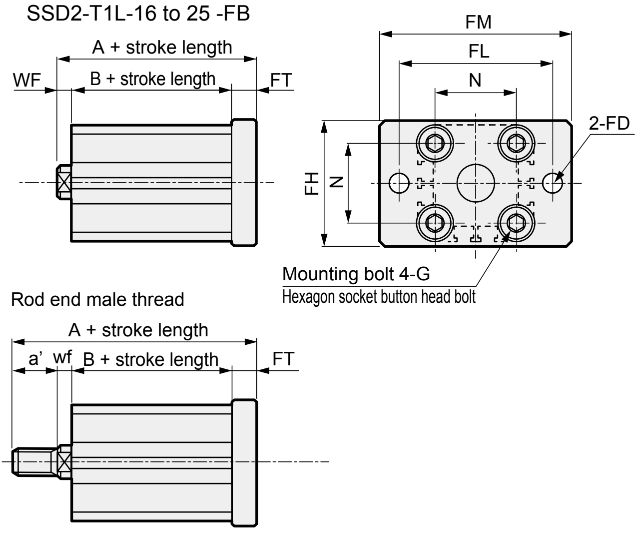
● Rod side flange (FA) with switch
SSD2-T1L-16 to 25 -FA



Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø16	13.5	45.5	32	12	13.5	57.5	32
ø20	14.5	44	29.5	14	14.5	58	29.5
ø25	15	47.5	32.5	17.5	15	65	32.5

● Head side flange (FB) with switch
SSD2-T1L-16 to 25 -FB

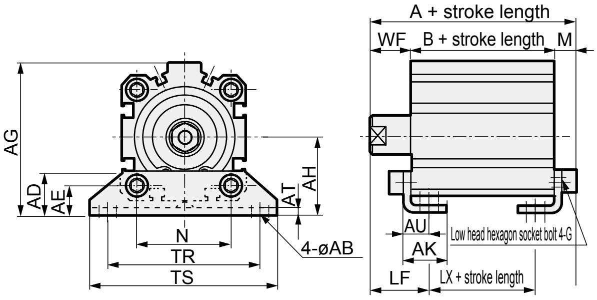


Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

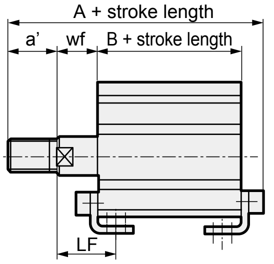
Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø16	3.5	41	32	12	3.5	53	32
ø20	4.5	42	29.5	14	4.5	56	29.5
ø25	5	45.5	32.5	17.5	5	63	32.5

Dimensions with mounting bracket

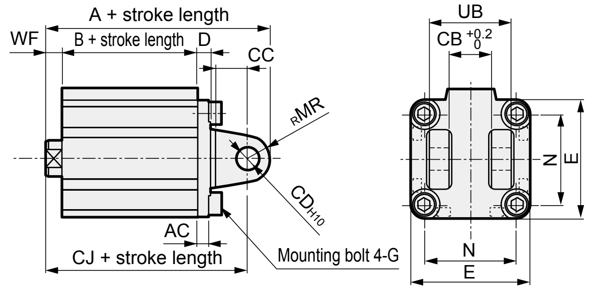
● Axial foot (LB)
SSD2-T1L -32 to 63 -LB



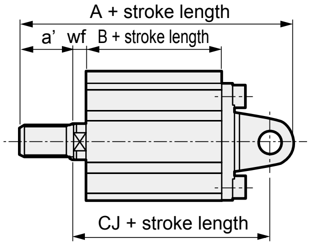
Rod end male thread



● Clevis bracket (CB)
SSD2-T1L -32 to 63 -CB



Rod end male thread



Code	Common dimensions						Female thread					
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113

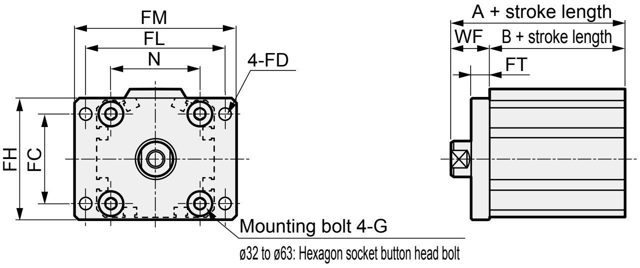
Code							Male thread					
Bore size (mm)	M	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø32	7.2	17	25	57.2	33	17	23.5	15	23	78.7	33	17
ø40	7.2	17	25	63.7	39.5	23.5	23.5	15	23	85.2	39.5	23.5
ø50	8.2	18	29.5	66.7	40.5	17.5	28.5	15	26.5	92.2	40.5	17.5
ø63	9.2	18	31	73.2	46	20	28.5	15	28	98.7	46	20

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

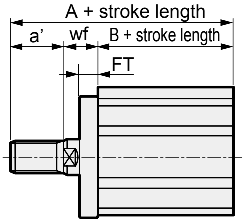
Code	Common dimensions									
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB
ø32	4.5	18.2	14	10	5	45	M6×16	10	34	36
ø40	5	18.2	14	10	6	52	M6×16	10	40	36
ø50	6	22.2	20	14	7	64	M8×20	14	50	44
ø63	7	22.2	20	14	8	77	M10×25	14	60	44

Code	Female thread				Male thread				
Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø32	7	70	33	60	23.5	5	91.5	33	58
ø40	7	78.5	39.5	68.5	23.5	5	100	39.5	66.5
ø50	8	90.5	40.5	76.5	28.5	5	116	40.5	73.5
ø63	8	98	46	84	28.5	5	123.5	46	81

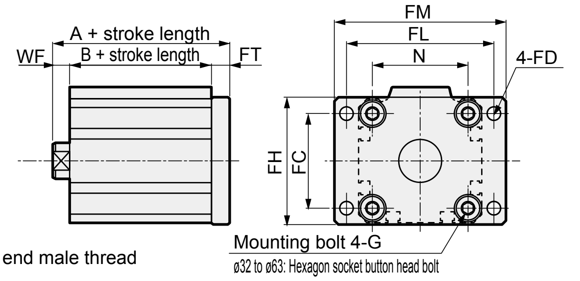
● Rod side flange (FA)
SSD2-T1L -32 to 50 -FA



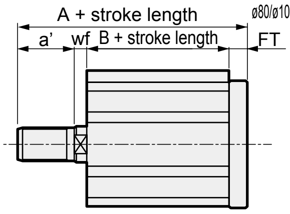
Rod end male thread



● Head side flange (FB)
SSD2-T1L -32 to 50 -FB



Rod end male thread



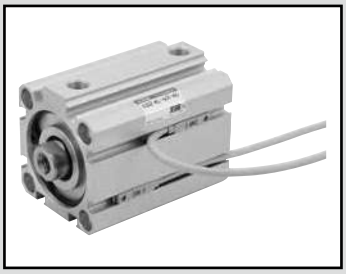
Code	Common dimensions							
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20
ø63	60	9	80	92	108	9	60	M10×25

Code	Female thread		Male thread				
Bore size (mm)	WF	A	B	a'	wf	A	B
ø32	17	50	33	23.5	15	71.5	33
ø40	17	56.5	39.5	23.5	15	78	39.5
ø50	18	58.5	40.5	28.5	15	84	40.5
ø63	18	64	46	28.5	15	89.5	46

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

Code	Common dimensions							
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20
ø63	60	9	80	92	108	9	60	M10×25

Code	Female thread		Male thread				
Bore size (mm)	WF	A	B	a'	wf	A	B
ø32	7	48	33	23.5	5	69.5	33
ø40	7	54.5	39.5	23.5	5	76	39.5
ø50	8	57.5	40.5	28.5	5	83	40.5
ø63	8	63	46	28.5	5	88.5	46

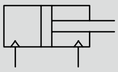


Compact cylinder high load/rubber-air cushioned

SSD2-K-*C Series

● Bore size: ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



RoHS CAD

Specifications

Item	SSD-K-*C SSD-KL-*C (with switch)							
Bore size mm	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)							
Min. working pressure MPa	0.25 (≈36 psi, 2.5 bar)		0.2 (≈29 psi, 2 bar)					
Proof pressure MPa	1.6 (≈230 psi, 16 bar)							
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)							
Port size	Rc1/8				Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$							
Working piston speed mm/s	50 to 500					50 to 300		
Cushion	Rubber-air cushion							
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)							
Allowable absorbed energy J	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø20	5/10/15/20/25/30/35/40/45/50	50	5
ø25			
ø32	5/10/15/20/25/30/35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25/30/35/40/45/50/75/100		
ø63			10
ø80			
ø100			

*1 : The custom stroke length is available in 1 mm increments. However, the total length is the same as that of the next longer standard stroke length.

*2: Refer to page 789 for the min. stroke length with mounting bracket LB.

Min. stroke length with switch (2 switches)

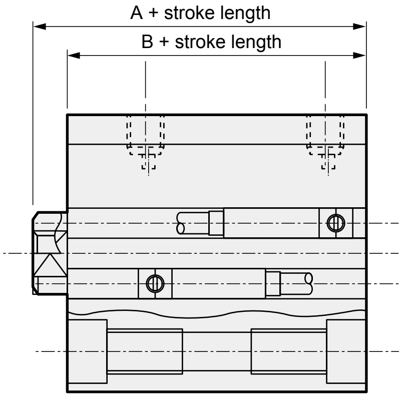
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø20	5	5
ø25		
ø32		
ø40		
ø50		
ø63		10
ø80		
ø100		

1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.

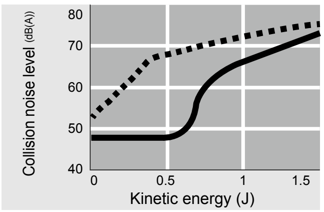
Custom stroke length

● SSD2-K-*C Series

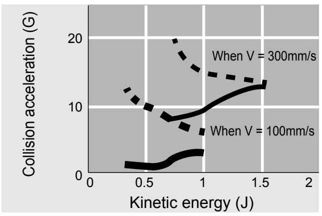
Item	Standard products Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-K-32C-38 A +2 mm spacer is added to the SSD2-K-32C-40 standard cylinder to create 38 mm stroke length. B + stroke length is 73 mm.	



Data of the reduction of collision noise level (an example case)



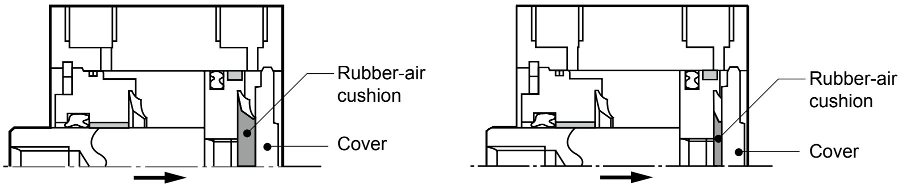
Data of the reduction of collision acceleration level (an example case)



- - - Cylinder with rubber cushion

▬ Cylinder with rubber-air cushion

Rubber-air cushion mechanism



When pulled

An airtight space is created in the ■ area when the piston operates and the rubber-air cushion and cover make contact. Air in the airtight area is further compressed, absorbing energy as the piston operates.
At the end of the stroke, energy generated by compression distortion of the rubber cushion is also added.

Switch specifications (F switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	-	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

SSD2-K-*C Series

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

How to order

Without switch (without magnet for switch)

SSD2-K - 40 ( ) C - 10 ———— N - LB - I

With switch (built-in magnet for switch)

SSD2-KL - 40 ( ) C - 10 - T0H - R - N - LB - I

Ⓐ Bore size

Rubber-air cushioned

Ⓑ Port thread

Ⓒ Stroke length

Ⓓ Switch model No. *6

Ⓔ Switch quantity

Ⓕ Option *1

Ⓖ Mounting bracket *2 *3

Ⓗ Accessory *4

⚠ Precautions for model No. selection

*1 : Piston rod of ø20 and ø25 is stainless steel as standard. C snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.
*2 : The mounting bracket is included at shipment.
*3 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 761, 763, 765 and 766. The number of the specified protruding dimension will be added at the end of the model No. printed on the body.
*4 : "I" and "Y" cannot be selected together.
*5 : Refer to pages 750 and 751 for combinations of variations/options.
*6 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
*7 : F type switch cannot be selected.

[Example of model No.]

SSD2-KL-32C-10-T0H-R-N

Model: Compact cylinder, rubber-air cushioned

Ⓐ Bore size	: ø32 mm
Ⓑ Port thread	: Rc thread
Ⓒ Stroke length	: 10 mm
Ⓓ Switch model No.	: Reed switch T0H, lead wire length 1 m
Ⓔ Switch quantity	: 1 on rod side
Ⓕ Option	: Rod end male thread

How to order switch

SW - T0H

(Item Ⓓ above)

Code	Description
Ⓐ Bore size (mm)	
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓑ Port thread	
Blank	Rc thread
N	NPT thread (ø32 and over) (made-to-order product)
G	G thread (ø32 and over) (made-to-order product)
Ⓒ Stroke length (mm)	
	Refer to the stroke length table on the following page.

Ⓓ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	Bore size 20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire	●	●						
-	F3S*			●		3-wire	●	●						
F2H*	F2V*			●		2-wire	●	●						
F3H*	F3V*			●		3-wire	●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire	●	●						
F2YH*	F2YV*			●	2-color display	2-wire	●	●						
F3YH*	F3YV*			●		3-wire	●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display					●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire	●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●			●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●			●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display for AC magnetic field	2-wire	●	●	●	●	●	●	●	●
T2YDT*	-			●			●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire	●	●	●	●	●	●	●	●

*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *7
Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread
M	Piston rod material (stainless steel)
Ⓖ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange
Ⓗ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

[Stroke length table]

Stroke length (mm)		Applicable bore size							
		ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard stroke length	5	●	●	●	●				
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●
	35	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●
	45	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
	75			●	●	●	●	●	●
	100			●	●	●	●	●	●
Min. stroke length (mm) *1		5					10		
Max. stroke length (mm)		50		100					
Custom stroke length *2		In 1 mm increments							

1 : Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.
Refer to page 832 for the number of installed switches and the min. stroke length.

*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

*3 : Refer to page 789 for the min. stroke length with mounting bracket LB.

How to order mounting bracket

Bore size (mm) / Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80
Foot (LB)	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80
Flange (FA/FB)	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80
Clevis bracket (CB)	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80

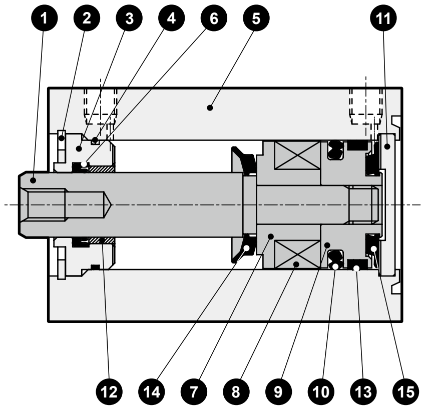
Bore size (mm) / Mounting bracket	ø100
Foot (LB)	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-100

*1: The foot mounting bracket is provided as 2 pcs./set.

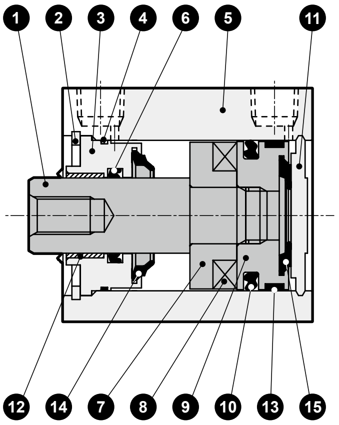
SSD2-K-*C Series

Internal structure and parts list

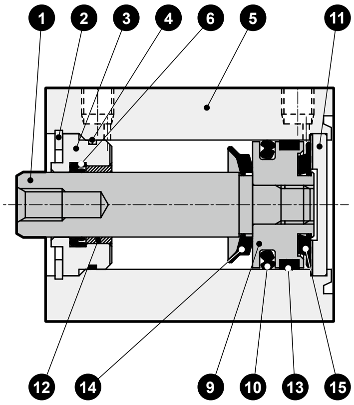
● SSD2-KL-20C, 25C
(double acting/single rod high load/rubber-air cushioned/with switch)



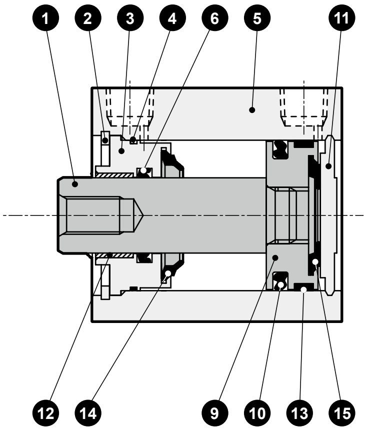
● SSD2-KL-32C to 100C
(double acting/single rod high load/rubber-air cushioned/with switch)

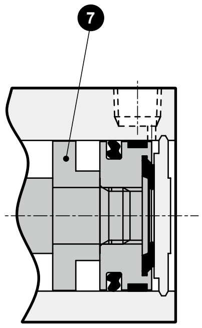


● SSD2-K-20C, 25C
(double acting/single rod high load/rubber-air cushioned)



● SSD2-K-32C to 100C
(double acting/single rod high load/rubber-air cushioned)





Over 50 st

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	ø20 to ø25: Stainless steel ø32 to ø100: steel	Industrial chrome plating	8	Magnet	Plastic	
				9	Piston	Aluminum alloy	Chromate
2	C snap ring	Steel	Zinc phosphate	10	Piston packing	Nitrile rubber	
3	Rod metal	ø20 to ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø20 to ø50: Alumite ø63 to ø100: Chromate	11	Cover	ø20 to ø25: Stainless steel ø32 to ø100: Aluminum alloy	ø32 to ø100: Alumite
4	Rod metal gasket	Nitrile rubber		12	Bush	Oiles drymet	
5	Body	Aluminum alloy	Hard alumite	13	Wear ring	Polyacetal resin	
6	Rod packing	Nitrile rubber		14	Rubber air cushion (R)	Special rubber	
7	Spacer	Aluminum alloy	Chromate	15	Rubber air cushion (H)	Special rubber	

Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø20	SSD2-K-20CK	④⑥⑩⑬⑭⑮
ø25	SSD2-K-25CK	
ø32	SSD2-K-32CK	
ø40	SSD2-K-40CK	
ø50	SSD2-K-50CK	
ø63	SSD2-K-63CK	
ø80	SSD2-K-80CK	
ø100	SSD2-K-100CK	

Dimensions

Same as SSD2-K Series (double acting/high load). Refer to pages 782 to 790.

Technical data

[Comparison of collision noise level]

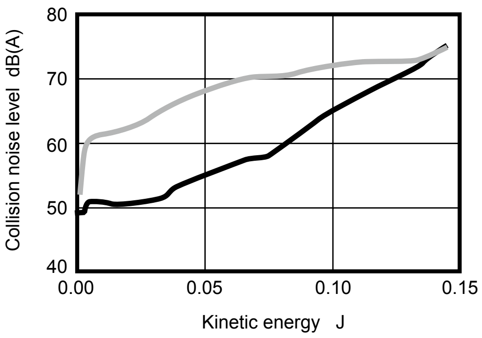
Standard rubber cushion :
Rubber-air cushion :

Values are comparison samples obtained under the conditions below.
As the values vary with base rigidity, etc., they are not guaranteed.

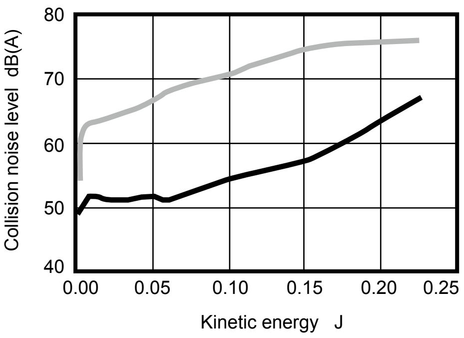
(Test conditions)

Cylinder	: SSD2
Mounting direction of cylinder	: Vertical with rod upward
Cylinder supply pressure	: 0.5 MPa
Measurement position of sound level meter	: 1 m from sample

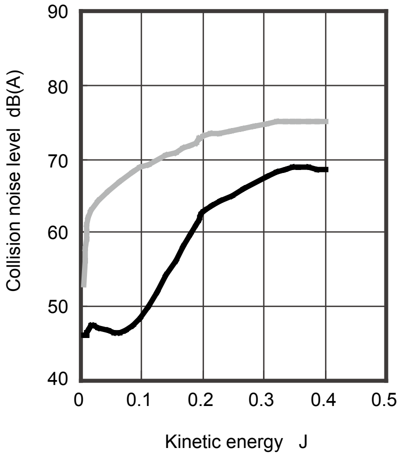
ø20



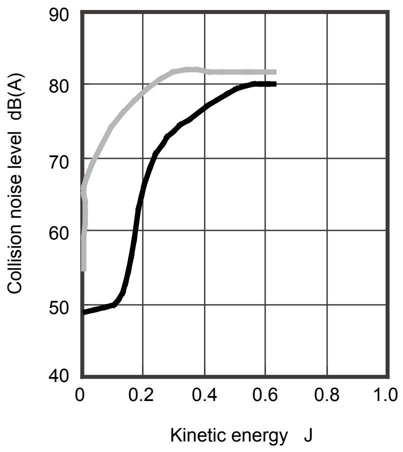
ø25



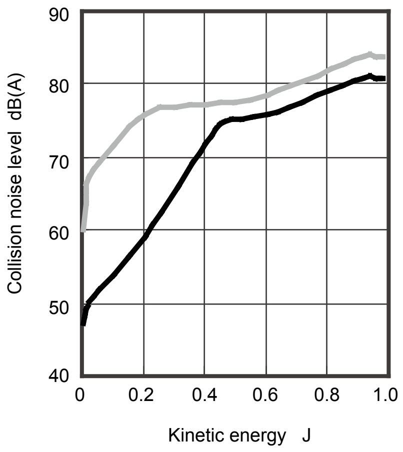
ø32



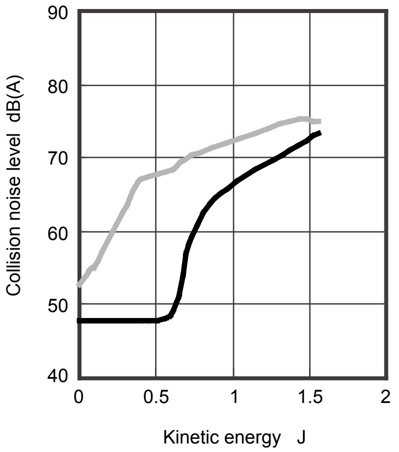
ø40



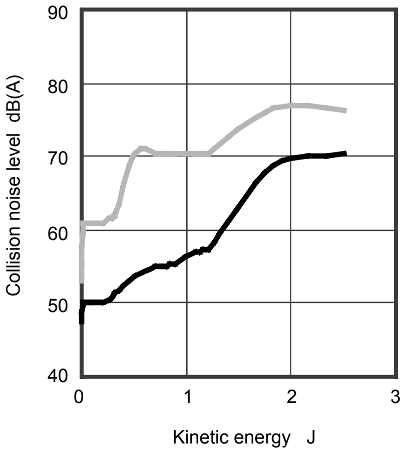
ø50



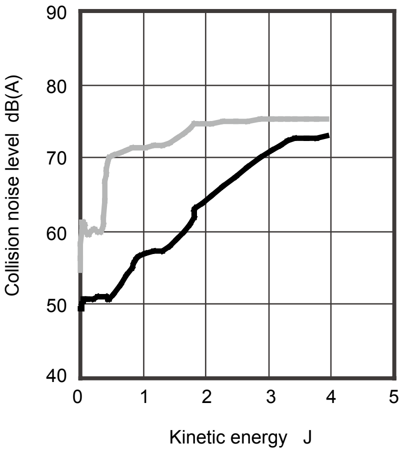
ø63



ø80



ø100

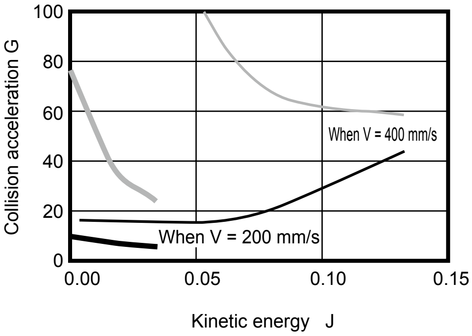


Technical data

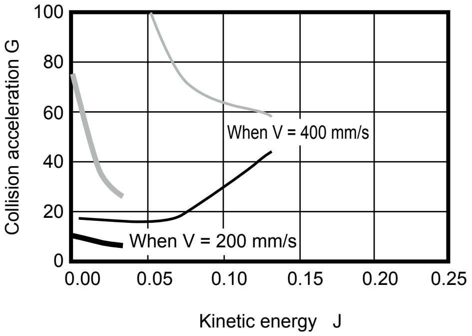
[Comparison of collision acceleration]

Standard rubber cushion : ▬
Rubber-air cushion : ▬

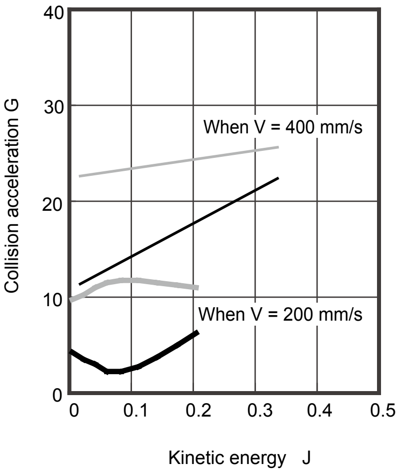
ø20



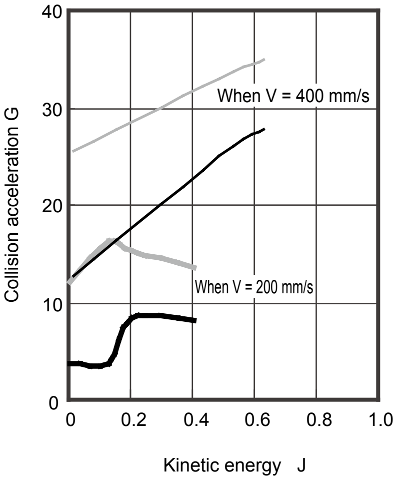
ø25



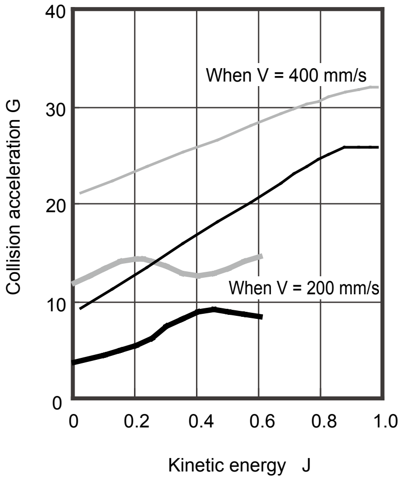
ø32



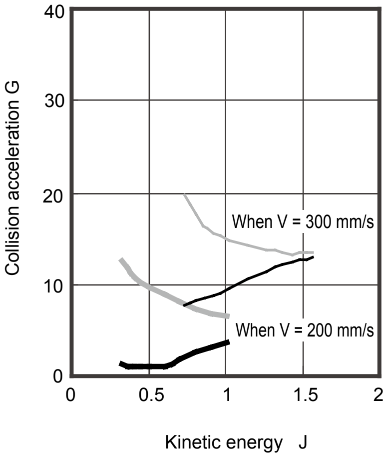
ø40



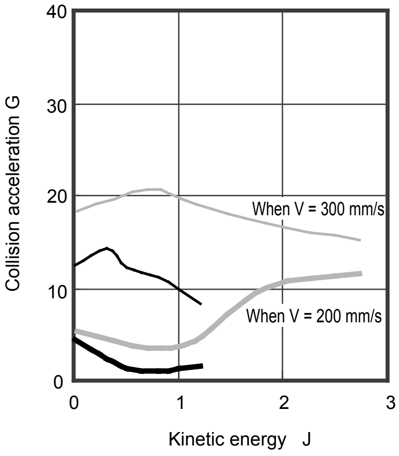
ø50



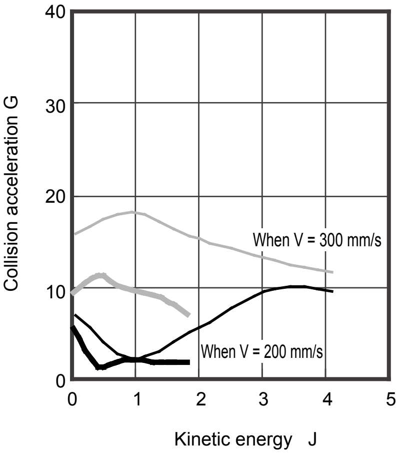
ø63



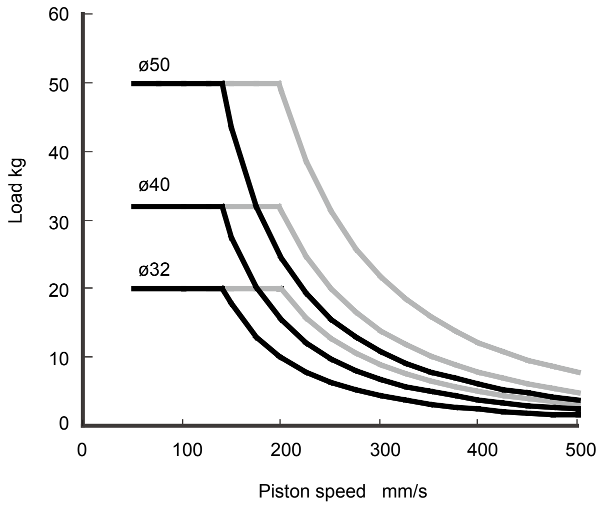
ø80

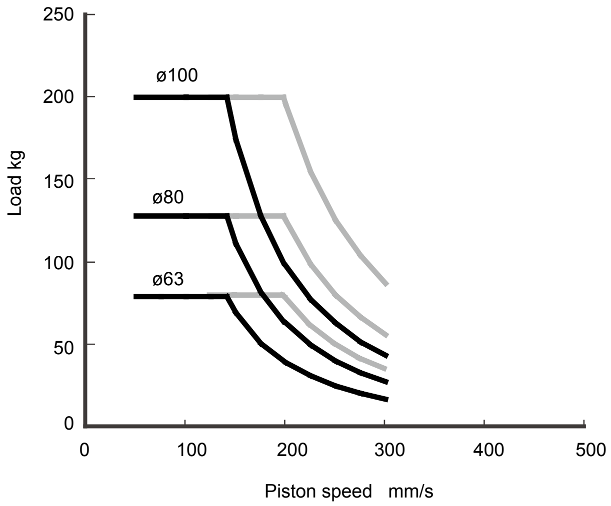


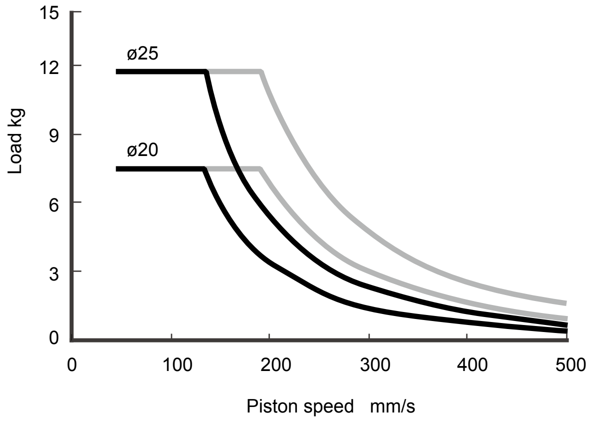
ø100



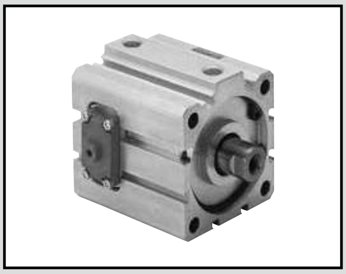
[Allowable energy value]







Usable in the range below and to the left of the curve.
Although it can also be used in the range marked with — in the figure, we recommend use within the range marked with a solid line to maximize the noise reduction effect.

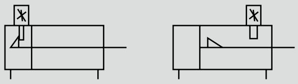


Compact cylinder double acting/with position locking

SSD2-Q Series

● Bore size: ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-Q SSD2-QL (with switch)							
Bore size mm	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting/position locking							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)							
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)							
Proof pressure MPa	1.6 (≈230 psi, 16 bar)							
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)							
Port size	M5		Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.5}_{0}$							
Working piston speed mm/s	50 to 500						50 to 300	
Cushion	Rubber cushion							
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)							
Position locking mechanism	Rod side or head side							
Holding force N	Max. thrust x 0.7							
Allowable absorbed energy J	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø20	10/15/20/25/50/75/100	100	10
ø25			
ø32			
ø40			
ø50			
ø63			
ø80	25/50/75/100		25
ø100			

⚠ Be sure to read the Safety precautions for the position locking on pages 1058 to 1063 before use.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

Switch specifications (F switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)

*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.

*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

● With rod side position locking (Unit: g)

Stroke length (mm)	10		15		20		25		50		75		100	
Bore size (mm)	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø20	201	242	213	254	226	267	238	279	330	370	392	433	455	495
ø25	274	315	290	331	306	347	322	363	439	480	519	560	599	640
ø32	430	474	451	495	473	517	494	538	602	646	709	753	817	861
ø40	632	681	658	708	685	734	711	761	844	893	976	1026	1109	1158
ø50	1096	1147	1138	1189	1180	1231	1222	1273	1432	1483	1642	1693	1852	1903
ø63	1609	1663	1664	1718	1719	1773	1774	1828	2049	2103	2324	2378	2599	2653
ø80	-	-	-	-	-	-	3822	3882	4255	4315	4904	4964	5336	5396
ø100	-	-	-	-	-	-	5769	5835	6339	6405	7194	7260	7764	7830

● With head side position locking (Unit: g)

Stroke length (mm)	10		15		20		25		50		75		100	
Bore size (mm)	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø20	217	258	230	270	242	283	255	295	330	370	392	433	455	495
ø25	295	336	311	352	327	368	343	384	439	480	519	560	599	640
ø32	462	506	484	528	505	549	527	571	634	678	742	786	849	893
ø40	688	737	714	763	741	790	767	816	900	949	1032	1081	1165	1214
ø50	1180	1231	1222	1273	1264	1315	1306	1357	1516	1567	1726	1777	1936	1987
ø63	1675	1729	1730	1784	1785	1839	1840	1894	2115	2169	2390	2444	2665	2719
ø80	-	-	-	-	-	-	3952	4012	4385	4445	4904	4964	5336	5396
ø100	-	-	-	-	-	-	5940	6006	6510	6576	7194	7260	7764	7830

How to order

● Without switch (without magnet for switch)

SSD2-Q - 20 ○ - 10 - R ——— NMO - LB - I

● With switch (built-in magnet for switch)

SSD2-QL - 20 ○ - 10 - R - T0H - R - NMO - LB - I

Ⓐ Bore size

Ⓑ Port thread

Ⓒ Stroke length

Ⓓ Position locking mechanism

Ⓔ Switch model No.
*1
*6

Ⓕ Switch quantity

Ⓖ Option
*2

Ⓗ Mounting bracket
*3
*4

Ⓘ Accessory
*5

Code	Description
Ⓐ Bore size (mm)	
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

Ⓑ Port thread

Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)

Ⓒ Stroke length (mm)

Refer to the stroke length table on the following page.

Ⓓ Position locking mechanism

R	With rod side position locking
H	With head side position locking

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	Bore size 20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire	●	●						
-	F3S*			●		3-wire	●	●						
F2H*	F2V*			●		2-wire	●	●						
F3H*	F3V*			●		3-wire	●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire	●	●						
F2YH*	F2YV*			●	2-color display	2-wire	●	●						
F3YH*	F3YV*			●		3-wire	●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display		●	●	●	●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire	●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●			●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●			●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display for AC magnetic field	2-wire	●	●	●	●	●	●	●	●
T2YDT*	-			●			●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire	●	●	●	●	●	●	●	●

* Lead wire length

Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *8

Ⓕ Switch quantity

R	1 on rod side
H	1 on head side
D	2

Ⓖ Option

Blank	Rod end female thread
N	Rod end male thread
M0	Non-locking manual override (with release bolt)
M1	Locking manual override
P4	Specifications for rechargeable battery (made to order)
P40	

Ⓗ Mounting bracket

Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange

Ⓘ Accessory (available when rod end male thread "N" is selected)

I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : The F switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.

*2 : Only non-locking manual override unless "M0" or "M1" of Ⓖ option is selected. A release bolt is not included.

*3 : The mounting bracket is included at shipment.

*4 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 847, 848, 850 and 851. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.

*5 : "I" and "Y" cannot be selected together.

*6 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

*7 : Refer to pages 750 and 751 for combinations of variations/options.

*8 : F type switch cannot be selected.

[Example of model No.]

SSD2-QL-20-10-R-T0H-R-N-LB-I

Model: Compact cylinder, position locking

Ⓐ Bore size : ø20 mm
Ⓑ Port thread : Rc thread
Ⓒ Stroke length : 10mm
Ⓓ Position locking mechanism : With rod side position locking
Ⓔ Switch model No. : Reed switch T0H, lead wire 1 m
Ⓕ Switch quantity : 1 on rod side
Ⓖ Option : Rod end male thread
Ⓗ Mounting bracket : Axial foot
Ⓘ Accessory : Rod eye

How to order switch

SW - T0H

Switch model No. (Item Ⓔ above)

[Stroke length table]

Stroke length (mm)		Applicable bore size							
		ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard stroke length	10	●	●	●	●	●	●		
	15	●	●	●	●	●	●		
	20	●	●	●	●	●	●		
	25	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
	75	●	●	●	●	●	●	●	●
	100	●	●	●	●	●	●	●	●
Min. stroke length (mm)		10						25	
Max. stroke length (mm)		100							

How to order mounting bracket

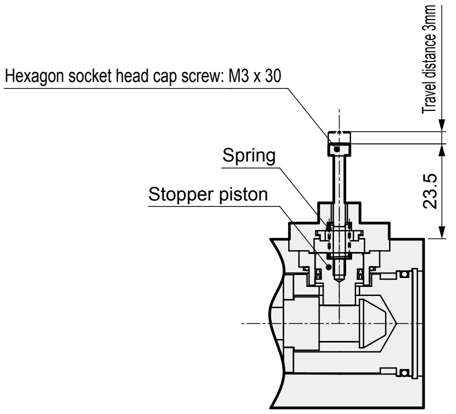
Bore size (mm) / Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80
Foot (LB)	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80
Flange (FA/FB)	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80
Clevis bracket (CB)	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80

Bore size (mm) / Mounting bracket	ø100
Foot (LB)	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-100

*1: The foot mounting bracket is provided as 2 pcs./set.

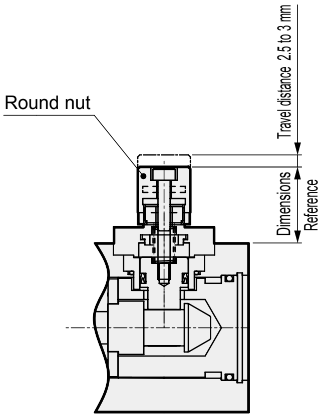
[Explanation of manual override]

● Non-locking manual override (option code: M0)



By screwing the hexagon socket head cap screw (M3 x 30) into the stopper piston and pulling the bolt with force of 20 N or more, the stopper piston moves and the lock is released. (Perform when horizontally installed with no load or when the opposite side port is pressurized)
When you release the bolt, the stopper piston is returned to the original position and engaged in the groove, and the piston is locked.

● Locking manual override (option code: M1)

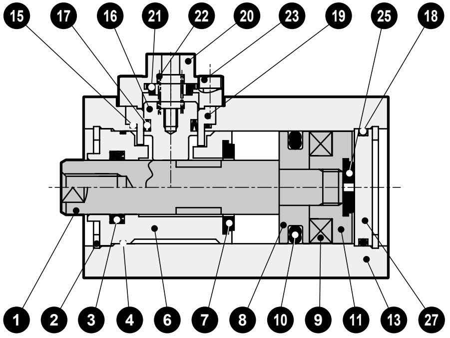


By rotating the round nut leftward (counterclockwise), the stopper piston moves and the lock is released. Locking the round nut by rotating it to the right (clockwise) causes the stopper piston to return. When it fits into the lock groove, the piston is locked. Screw in the round nut fully, since the cylinder may be damaged if the stopper piston is not securely locked in the groove.

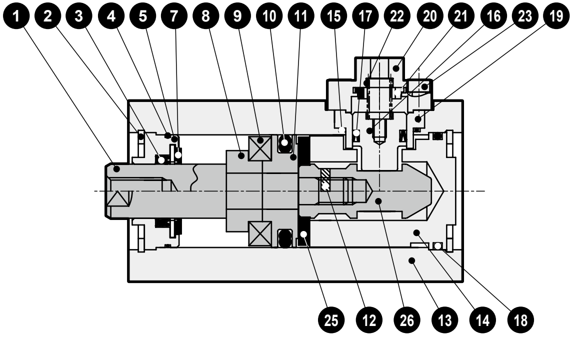
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

Internal structure and parts list (ø20 to ø50)

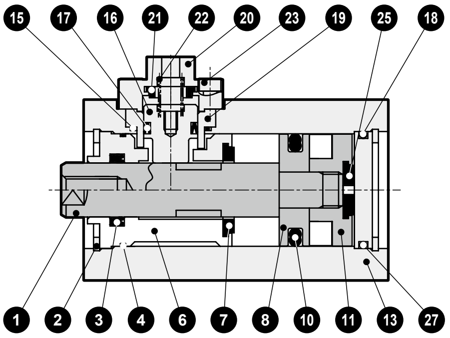
- SSD2-QL-20 to 50-R
(double acting/single rod/with switch/rod side position locking)



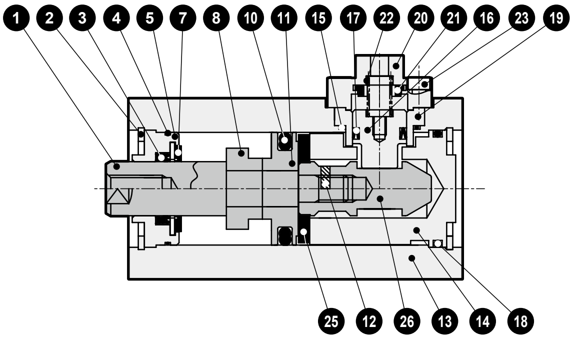
- SSD2-QL-20 to 50-H
(double acting/single rod/with switch/head side position locking)



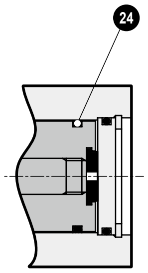
- SSD2-Q-20 to 50-R
(double acting/single rod/rod side position locking)



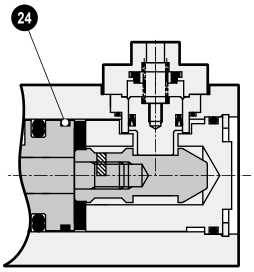
- SSD2-Q-20 to 50-H
(double acting/single rod/head side position locking)



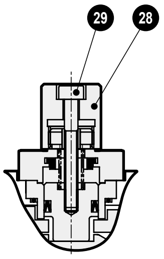
- ø20, ø25: 50 stroke length and over



- ø20, ø25: 50 stroke length and over



- Locking manual override



Parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	ø20 to ø25: Stainless steel ø32 to ø50: Steel	Industrial chrome plating	16	Stopper piston	Steel	Nitriding
2	C snap ring	Steel	Zinc phosphate	17	Stopper packing	Nitrile rubber	
3	Rod packing	Nitrile rubber		18	O-ring	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		19	Stopper housing	ø20 to ø30, ø50: Aluminum alloy ø40: Alloy steel	Alumite Chromate
5	Rod metal	Special aluminum	Alumite				
6	Rod cover	Aluminum alloy	Alumite	20	Stopper cover	Aluminum alloy	Chromate
7	Cushion rubber (R)	Urethane rubber		21	Cushion rubber	Urethane rubber	
8	Spacer	Aluminum alloy	ø20 to ø32: Chromate	22	Coil spring	Piano wire	Electrodeposition
9	Magnet	Plastic		23	Hexagon socket head cap screw	Steel	
10	Piston packing	Nitrile rubber		24	Wear ring	Polyacetal resin (only for ø20 and ø25 with 50 mm stroke length and over)	
11	Piston	Aluminum alloy	Chromate	25	Cushion rubber (H)	Urethane rubber	
12	Spring pin	Steel	Black finish	26	Sleeve	Steel	Nitriding
13	Body	Aluminum alloy	Hard alumite	27	Cover	Aluminum alloy	Chromate
14	Head cover	Aluminum alloy	Chromate	28	Round nut	Aluminum alloy	
15	O-ring	Nitrile rubber		29	Hexagon socket head cap screw	Steel	

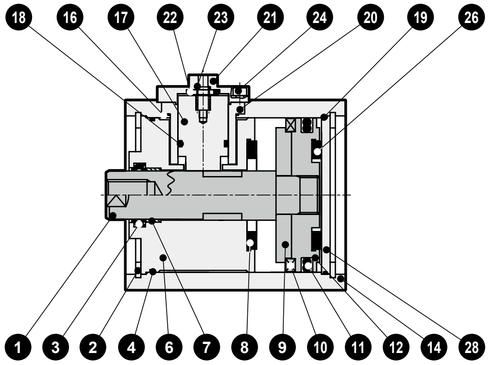
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø20	SSD2-Q-20K	③ ④ ⑦ ⑩ ⑮ ⑰ ⑱ ㉑ ㉔ ㉕
ø25	SSD2-Q-25K	
ø32	SSD2-Q-32K	
ø40	SSD2-Q-40K	
ø50	SSD2-Q-50K	

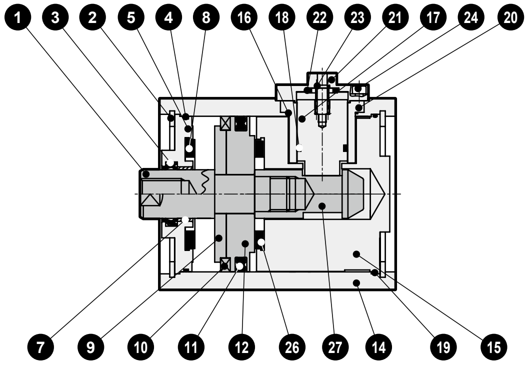
*1: ㉔ is included only with ø20 and ø25.

Internal structure and parts list (ø63 to ø100)

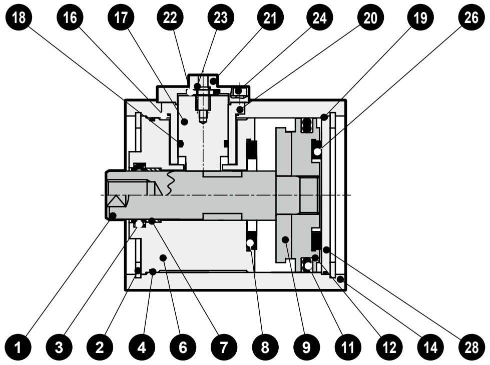
- SSD2-QL-63 to 100-R
  (double acting/single rod/with switch/rod side position locking)



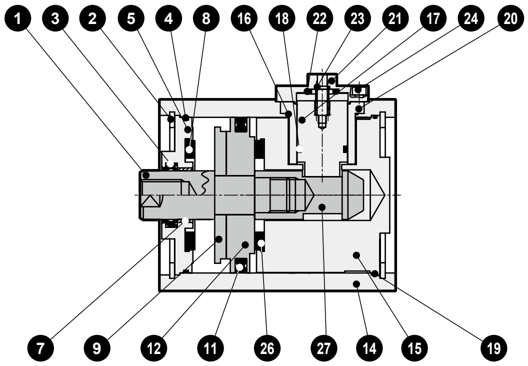
- SSD2-QL-63 to 100-H
  (double acting/single rod/with switch/head side position locking)



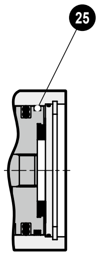
- SSD2-Q-63 to 100-R
  (double acting/single rod/rod side position locking)



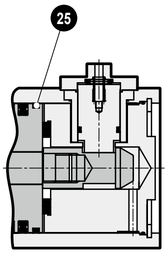
- SSD2-Q-63 to 100-H
  (double acting/single rod/head side position locking)



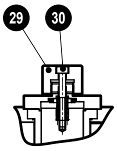
- ø80, ø100: 75 stroke length and over



- ø80, ø100: 75 stroke length and over



- Locking manual override



Parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	17	Stopper piston	Steel	Nitriding
2	C snap ring	Steel	Zinc phosphate	18	Stopper packing	Nitrile rubber	
3	Rod packing	Nitrile rubber		19	O-ring	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		20	Stopper housing	ø80: Aluminum alloy	Alumite
5	Rod metal	Special aluminum	Alumite			ø63, ø100: Alloy steel	Chromate
6	Rod cover	Aluminum alloy	Alumite	21	Stopper cover	Aluminum alloy	Chromate
7	Bush	Oiles drymet		22	Cushion rubber	Urethane rubber	
8	Cushion rubber (R)	Urethane rubber		23	Coil spring	Piano wire	Electrodeposition
9	Spacer	Aluminum alloy		24	Hexagon socket head cap screw	Steel	
10	Magnet	Plastic		25	Wear ring	Polyacetal resin (only for ø80 and ø100 with 75 mm stroke length and over)	
11	Piston packing	Nitrile rubber		26	Cushion rubber (H)	Urethane rubber	
12	Piston	Aluminum alloy	Chromate	27	Sleeve	Steel	Nitriding
13	Spring pin	Steel	Black finish	28	Cover	Aluminum alloy	Chromate
14	Body	Aluminum alloy	Hard alumite	29	Round nut	Aluminum alloy	
15	Head cover	Aluminum alloy	Chromate	30	Hexagon socket head cap screw	Steel	
16	O-ring	Nitrile rubber					

Repair parts list

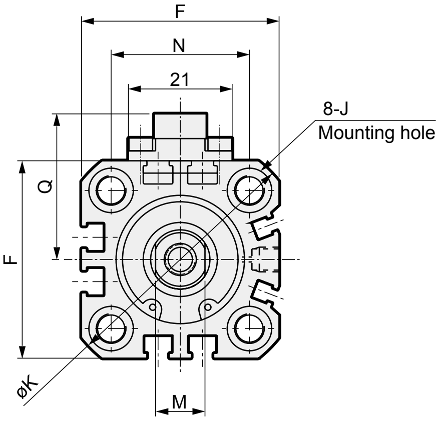
Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-Q-63K	③④⑧⑪⑯ ⑱⑲㉒㉕㉖
ø80	SSD2-Q-80K	
ø100	SSD2-Q-100K	

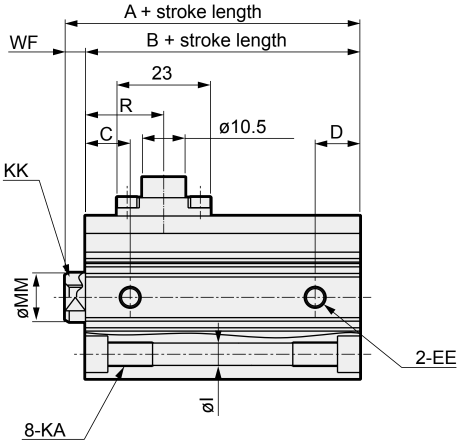
*1: ㉕ is included only with ø80 and ø100.

Dimensions (ø20, ø25) CAD

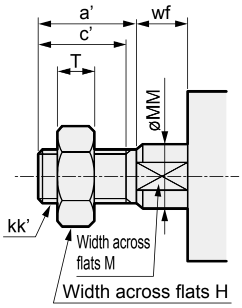
- SSD2-Q(L)-20 to 25-R

  * The dimensions are common for types with and without switches.



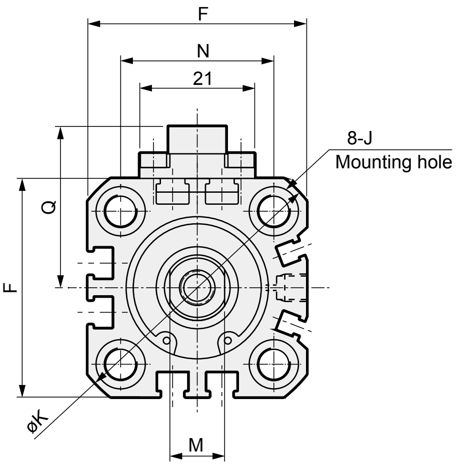


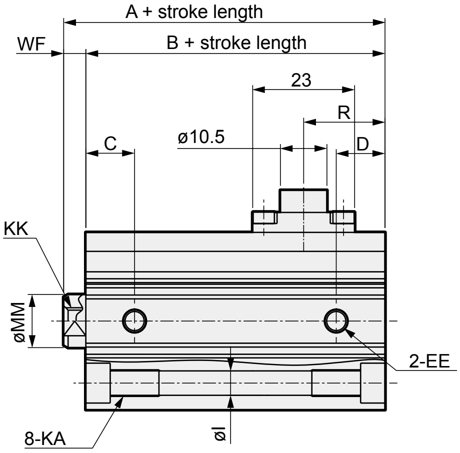
- Rod end male thread

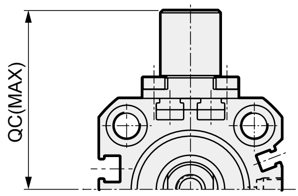


- SSD2-Q(L)-20 to 25-H

  * The dimensions are common for types with and without switches.







- Precautions regarding the switch mounting groove

  *1: Only F switch is available for the ø20 or ø25 piping port surface.

Code	Common dimensions											
Bore size (mm)	EE	F	I	J	K	KA	KK	M	MM	N	WF *1	Q	QC
ø20	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5(14.5)	28.5	40
ø25	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5(15)	29.5	41

Code	With rod side position locking mechanism					With head side position locking mechanism				
Bore size (mm)	A *1	B *1	C	D	R	A *1	B *1	C	D	R
ø20	59(80.5)	54.5(66)	9.5	8	18.6	65.5(80.5)	61(66)	9.5	8	17.3
ø25	62.5(84)	57.5(69)	12	8.5	19.3	69(84)	64(69)	12	8.5	18.4

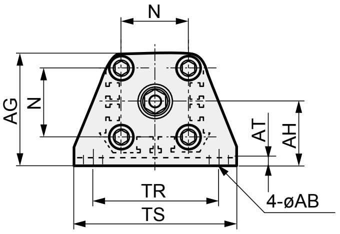
- Rod end male thread

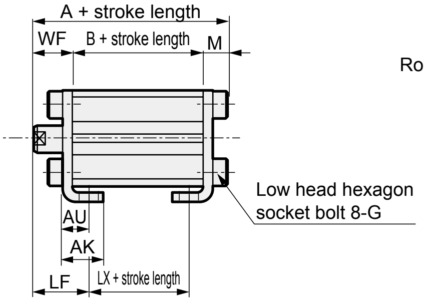
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf *1
ø20	14	12	13	M8	8	10	5	4.5(14.5)
ø25	17.5	15	17	M10×1.25	10	12	6	5(15)

*1 : Dimensions in ( ) are for stroke lengths of more than 25 mm.
*2 : Refer to pages 852 and 853 for switch mounting position.
*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

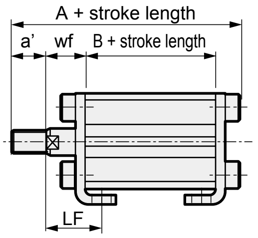
Dimensions with mounting bracket

- Axial foot (LB)
  SSD2-Q(L)-20, 25 -LB





Rod end male thread



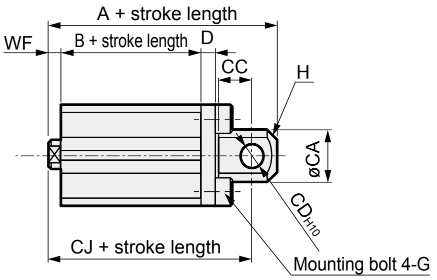
Code	Common dimensions						Female thread					SSD2-Q-R (female thread)				
														Without/with switch		
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M	WF	LF	A	B	LX
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2	14.5	20.5	76.2(87.7)	54.5(66)	42.5(54)
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2	15	22.5	79.7(91.2)	57.5(69)	42.5(54)

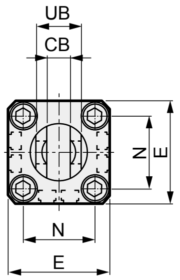
Code	SSD2-Q-R (male thread)						SSD2-Q-H (female thread)				
				Without/with switch					Without/with switch		
Bore size (mm)	a'	wf	LF	A	B	LX	WF	LF	A	B	LX
ø20	14	14.5	20.5	90.2(101.7)	54.5(66)	42.5(54)	14.5	20.5	82.7(87.7)	61(66)	49(54)
ø25	17.5	15	22.5	97.2(108.7)	57.5(69)	42.5(54)	15	22.5	86.2(91.2)	64(69)	49(54)

Code	SSD2-Q-H (male thread)					
				Without/with switch		
Bore size (mm)	a'	wf	LF	A	B	LX
ø20	14	14.5	20.5	96.7(101.7)	61(66)	49(54)
ø25	17.5	15	22.5	103.7(108.7)	64(69)	49(54)

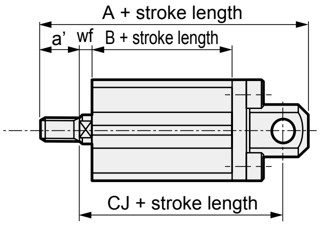
* Dimensions in ( ) are for ø20 and ø25 with more than 25 mm stroke length and ø80 and ø100 with more than 50 mm stroke length.

- Clevis bracket (CB)
  SSD2-Q(L)-20, 25 -CB





Rod end male thread



Code	Common dimensions										SSD2-Q-R (female thread)			
Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N	UB	WF	A	B	CJ
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$	4.5(14.5)	86(107.5)	54.5(66)	77(98.5)
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$	5(15)	92.5(114)	57.5(69)	82.5(104)

Code	SSD2-Q-R (male thread)					SSD2-Q-H (female thread)			
Bore size (mm)	a'	wf	A	B	CJ	WF	A	B	CJ
ø20	14	4.5(14.5)	100(121.5)	54.5(66)	77(98.5)	4.5(14.5)	92.5(107.5)	61(66)	83.5(98.5)
ø25	17.5	5(15)	110(131.5)	57.5(69)	82.5(104)	5(15)	99(114)	64(69)	89(104)

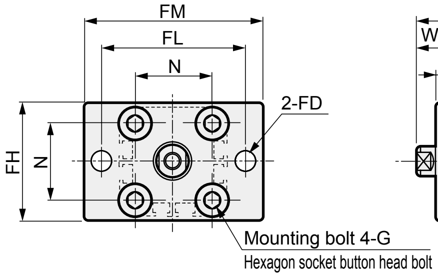
Code	SSD2-Q-H (male thread)				
Bore size (mm)	a'	wf	A	B	CJ
ø20	14	4.5(14.5)	106.5(121.5)	61(66)	83.5(98.5)
ø25	17.5	5(15)	116.5(131.5)	64(69)	89(104)

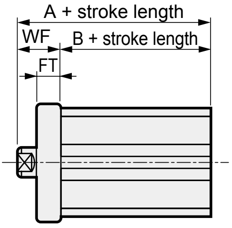
*1: Dimensions in ( ) are for more than 25 mm stroke length.

Dimensions with mounting bracket

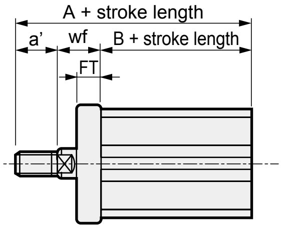
CAD

● Rod side flange (FA)
SSD2-Q(L)-20, 25 -FA





Rod end male thread

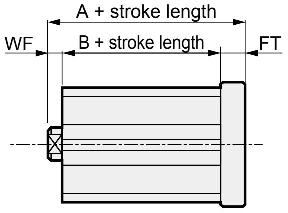


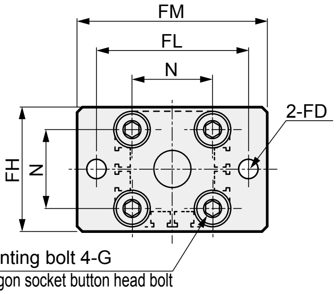
Code	Common dimensions							SSD2-Q-R (female thread)			SSD2-Q-R (male thread)			
Bore size (mm)	FD	FH	FL	FM	FT	N	G	WF	Without/with switch		a'	wf	Without/with switch	
									A	B			A	B
ø20	6.6	39	48	60	8	25.5	M6×16	14.5	69(80.5)	54.5(66)	14	14.5	83(94.5)	54.5(66)
ø25	6.6	42	52	64	8	28	M6×16	15	72.5(84)	57.5(69)	17.5	15	90(101.5)	57.5(69)

Code	SSD2-Q-H (female thread)			SSD2-Q-H (male thread)			
Bore size (mm)	WF	Without/with switch		a'	wf	Without/with switch	
		A	B			A	B
ø20	14.5	75.5(80.5)	61(66)	14	14.5	89.5(94.5)	61(66)
ø25	15	79(84)	64(69)	17.5	15	96.5(101.5)	64(69)

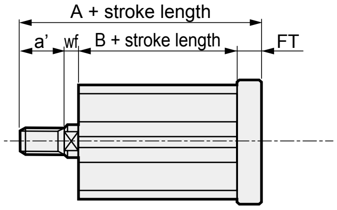
* Dimensions in ( ) are for ø20 and ø25 with more than 25 mm stroke length and ø80 and ø100 with more than 50 mm stroke length.

● Head side flange (FB)
SSD2-Q(L)-20, 25 -FB





Rod end male thread



Code	Common dimensions							SSD2-Q-R (female thread)			SSD2-Q-R (male thread)			
Bore size (mm)	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø20	6.6	39	48	60	8	25.5	M6×16	4.5(14.5)	67(88.5)	54.5(66)	46	19.5(14.5)	71(92.5)	54.5(66)
ø25	6.6	42	52	64	8	28	M6×16	5(15)	70.5(92)	57.5(69)	53	22.5(15)	88(109.5)	57.5(69)

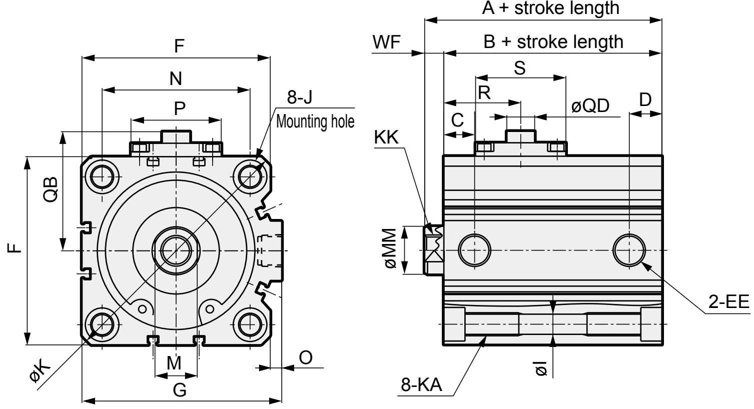
Code	SSD2-Q-H (female thread)			SSD2-Q-H (male thread)			
Bore size (mm)	WF	A	B	a'	wf	A	B
ø20	4.5(14.5)	73.5(88.5)	61(66)	46	19.5(14.5)	77.5(92.5)	61(66)
ø25	5(15)	77(92)	64(69)	53	22.5(15)	94.5(109.5)	64(69)

*1: Dimensions in ( ) are for more than 25 mm stroke length.

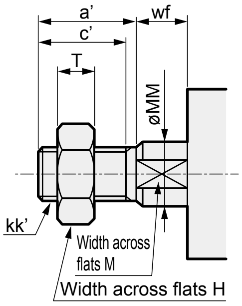
Dimensions (ø32 to ø100) CAD

- SSD2-Q(L)-32 to 100-R

* The dimensions are common for types with and without switches.

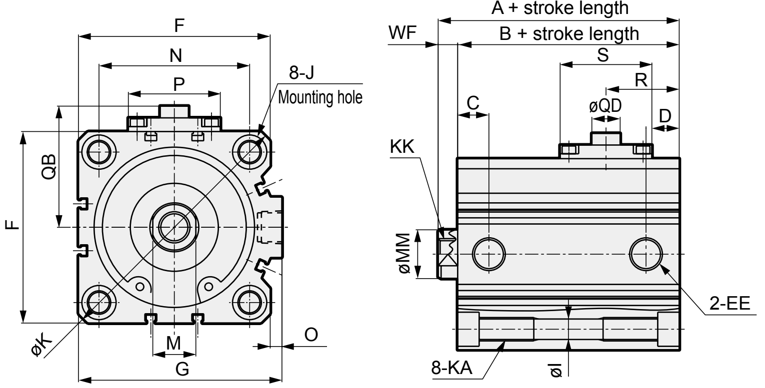


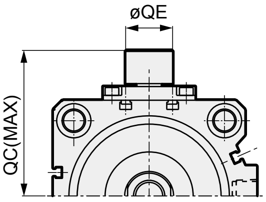
- Rod end male thread



- SSD2-Q(L)-32 to 100-H

* The dimensions are common for types with and without switches.





Code	Common dimensions										
Bore size (mm)	EE	F	G	I	J	K	KA	KK	M	MM	N
ø32	Rc1/8	45	49.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34
ø40	Rc1/8	52	57	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40
ø50	Rc1/4	64	71	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50
ø63	Rc1/4	77	84	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60
ø80	Rc3/8	98	104	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	22	25	77
ø100	Rc3/8	117	123.5	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	27	30	94

Code	Common dimensions							
Bore size (mm)	O	P	S	QB	QC	QD	QE	WF *1
ø32	4.5	22	30.5	33.5	46.3	10.5	13	7
ø40	5	22	30.5	37	49.8	10.5	13	7
ø50	7	40.5	23	44	56.3	10.5	13	8
ø63	7	40.5	23	50.5	62.8	10.5	13	8
ø80	6	47	47	62	77.5	14.5	24	10(20)
ø100	6.5	47	47	71.5	87	14.5	24	12(22)

Code	With rod side position locking mechanism					With head side position locking mechanism				
Bore size (mm)	A *1	B *1	C	D	R	A *1	B *1	C	D	R
ø32	65	58	11	9	19.2	72.5	65.5	11	9	20.9
ø40	71.5	64.5	14	11	21.7	82	75	14	14	23.9
ø50	73.5	65.5	15	12.5	24.7	83.5	75.5	15	12.5	29.8
ø63	79	71	19	16	26.2	85	77	15	16	25.5
ø80	113.5(136)	103.5(116)	18	17	40	121(136)	111(116)	18	17	37.5
ø100	125(147.5)	113(125.5)	23	21	44.5	132.5(147.5)	120.5(125.5)	23	21	40

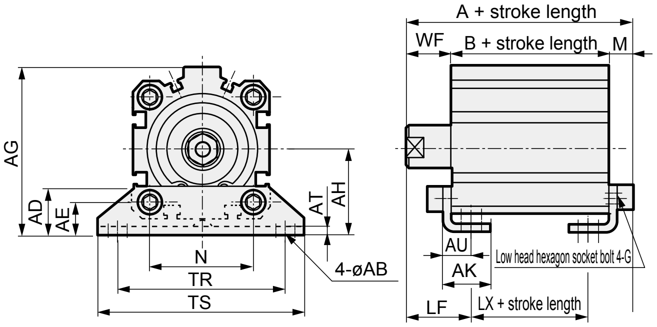
- Rod end male thread

Code Bore size (mm)	a’	c’	H	kk’	M	MM	T	wf *1
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8(18)
ø100	35.5	32.5	41	M26×1.5	27	30	16	8(18)

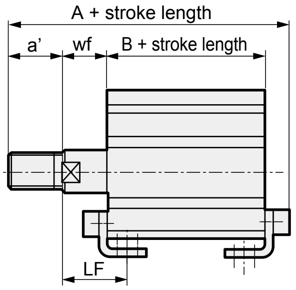
*1 : Dimensions in ( ) are for stroke lengths of more than 50 mm.
*2 : Refer to pages 852 and 853 for switch mounting position.
*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

Dimensions with mounting bracket

● Axial foot (LB)
SSD2-Q(L)-32 to 100 -LB



Rod end male thread

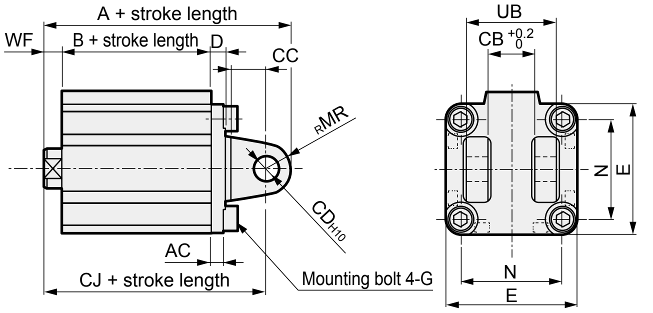


Code	Common dimensions						Female thread							SSD2-Q-R (female thread)				
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	WF	LF	Without/with switch		
																A	B	LX
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71	7.2	17	25	82.2	58	42
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78	7.2	17	25	88.7	64.5	48.5
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95	8.2	18	29.5	91.7	65.5	42.5
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113	9.2	18	31	98.2	71	45
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	77	118	140	11.5	20	35	135(147.5)	103.5(116)	73.5(86)
ø100	13	35	24	136	71	35.5	6	23	M12×40	94	137	162	13	22	39	148(160.5)	113(125.5)	79(91.5)

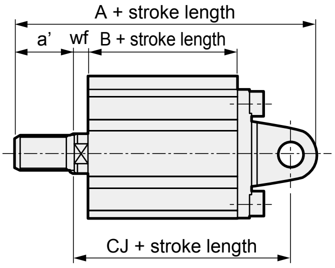
Code	SSD2-Q-R (male thread)						SSD2-Q-H (female thread)					SSD2-Q-H (male thread)					
Bore size (mm)	a'	wf	LF	Without/with switch			WF	LF	Without/with switch			a'	wf	LF	Without/with switch		
				A	B	LX			A	B	LX				A	B	LX
ø32	23.5	15	23	103.7	58	42	17	25	89.7	65.5	49.5	23.5	15	23	111.2	65.5	49.5
ø40	23.5	15	23	110.2	64.5	48.5	17	25	99.2	75	59	23.5	15	23	120.7	75	59
ø50	28.5	15	26.5	117.2	65.5	42.5	18	29.5	101.7	75.5	52.5	28.5	15	26.5	127.2	75.5	52.5
ø63	28.5	15	28	123.7	71	45	18	31	104.2	77	51	28.5	15	28	129.7	77	51
ø80	35.5	18	33	168.5(181)	103.5(116)	73.5(86)	20	35	142.5(147.5)	111(116)	81(86)	35.5	18	33	176(181)	111(116)	81(86)
ø100	35.5	18	35	179.5(192)	113(125.5)	79(91.5)	22	39	155.5(160.5)	120.5(125.5)	86.5(91.5)	35.5	18	35	187(192)	120.5(125.5)	86.5(91.5)

* Dimensions in ( ) are for ø20 and ø25 with more than 25 mm stroke length and ø80 and ø100 with more than 50 mm stroke length.

● Clevis bracket (CB)
SSD2-Q(L)-32 to 100 -CB



Rod end male thread



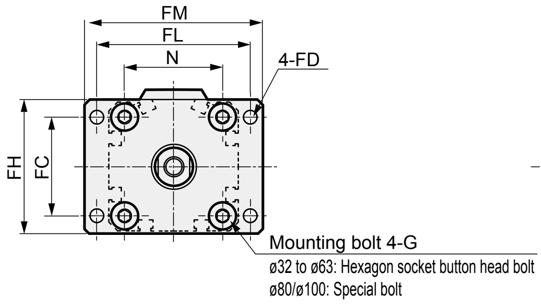
Code	Common dimensions										SSD2-Q-R (female thread)			
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB	WF	A	B	CJ
ø32	4.5	18.2	14	10	5	45	M6×16	10	34	36	7	95	58	85
ø40	5	18.2	14	10	6	52	M6×16	10	40	36	7	103.5	64.5	93.5
ø50	6	22.2	20	14	7	64	M8×20	14	50	44	8	115.5	65.5	101.5
ø63	7	22.2	20	14	8	77	M10×25	14	60	44	8	123	71	109
ø80	9	28.2	27	18	10	98	M12×40	18	77	56	10(20)	169.5(192)	103.5(116)	151.5(174)
ø100	12	32.2	31	22	13	117	M12×40	22	94	64	12(22)	192(214.5)	113(125.5)	170(192.5)

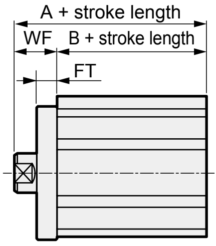
Code	SSD2-Q-R (male thread)					SSD2-Q-H (female thread)				SSD2-Q-H (male thread)				
Bore size (mm)	a'	wf	A	B	CJ	WF	A	B	CJ	a'	wf	A	B	CJ
ø32	23.5	5	116.5	58	83	7	102.5	65.5	92.5	23.5	5	124	65.5	90.5
ø40	23.5	5	125	64.5	91.5	7	114	75	104	23.5	5	135.5	74.5	102
ø50	28.5	5	141	65.5	98.5	8	125.5	75.5	111.5	28.5	5	151	71.5	108.5
ø63	28.5	5	148.5	71	106	8	129	77	115	28.5	5	154.5	77	112
ø80	35.5	8(18)	203(225.5)	103.5(116)	149.5(172)	10(20)	177(192)	111(116)	159(174)	35.5	8(18)	210.5(225.5)	111(116)	157(172)
ø100	35.5	8(18)	223.5(246)	113(125.5)	166(188.5)	12(22)	199.5(214.5)	120.5(125.5)	177.5(192.5)	35.5	8(18)	231(246)	120.5(125.5)	173.5(188.5)

*1: Dimensions in ( ) of ø80 and ø100 are for more than 50 mm stroke length.

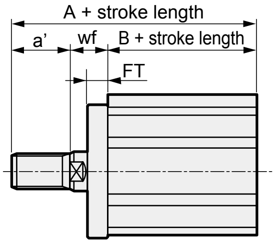
Dimensions with mounting bracket

● Rod side flange (FA)
SSD2-Q(L)-32 to 100 -FA





Rod end male thread

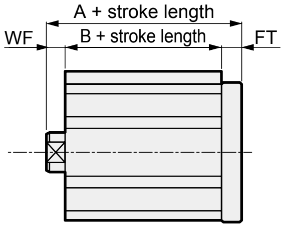


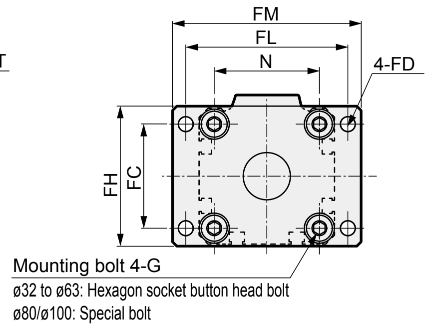
Code	Common dimensions								SSD2-Q-R (female thread)			SSD2-Q-R (male thread)			
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without/with switch		a'	wf	Without/with switch	
										A	B			A	B
ø32	34	5.5	48	56	65	8	34	M6×16	17	75	58	23.5	15	96.5	58
ø40	40	5.5	54	62	72	8	40	M6×16	17	81.5	64.5	23.5	15	103	64.5
ø50	50	6.6	67	76	89	9	50	M8×20	18	83.5	65.5	28.5	15	109	65.5
ø63	60	9	80	92	108	9	60	M10×25	18	89	71	28.5	15	114.5	71
ø80	77	11	99	116	134	11	77	M12×40	20	123.5(136)	103.5(116)	35.5	18	157(169.5)	103.5(116)
ø100	94	11	117	136	154	11	94	M12×40	22	135(147.5)	113(125.5)	35.5	18	166.5(179)	113(125.5)

Code	SSD2-Q-H (female thread)			SSD2-Q-H (male thread)			
Bore size (mm)	WF	Without/with switch		a'	wf	Without/with switch	
		A	B			A	B
ø32	17	82.5	65.5	23.5	15	104	65.5
ø40	17	92	75	23.5	15	113.5	75
ø50	18	93.5	75.5	28.5	15	119	75.5
ø63	18	95	77	28.5	15	120.5	77
ø80	20	131(136)	111(116)	35.5	18	164.5(169.5)	111(116)
ø100	22	142.5(147.5)	120.5(125.5)	35.5	18	174(179)	120.5(125.5)

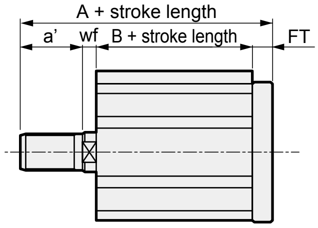
* Dimensions in ( ) are for ø20 and ø25 with more than 25 mm stroke length and ø80 and ø100 with more than 50 mm stroke length.

● Head side flange (FB)
SSD2-Q(L)-32 to 100 -FB





Rod end male thread



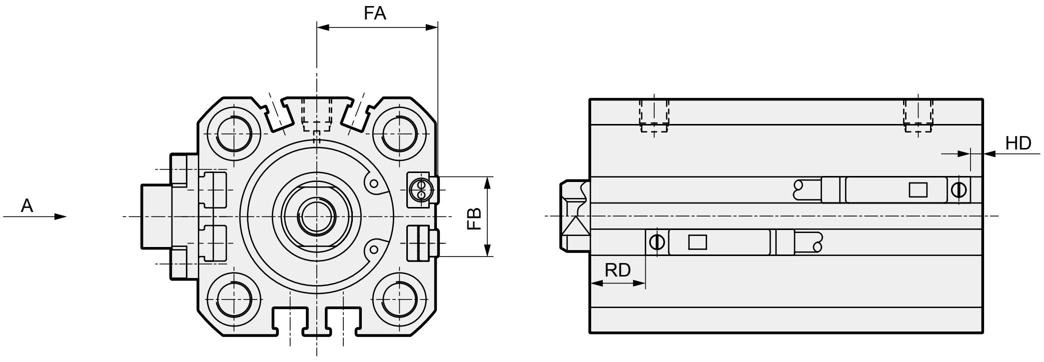
Code	Common dimensions								SSD2-Q-R (female thread)			SSD2-Q-R (male thread)			
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø32	34	5.5	48	56	65	8	34	M6×16	7	73	58	59.5	23	94.5	58
ø40	40	5.5	54	62	72	8	40	M6×16	7	79.5	64.5	66	29.5	101	64.5
ø50	50	6.6	67	76	89	9	50	M8×20	8	82.5	65.5	73	30.5	108	65.5
ø63	60	9	80	92	108	9	60	M10×25	8	88	71	78.5	36	113.5	71
ø80	77	11	99	116	134	11	77	M12×40	10(20)	124.5(147)	103.5(116)	98	43.5(18)	158(180.5)	103.5(116)
ø100	94	11	117	136	154	11	94	M12×40	12(22)	136(158.5)	113(125.5)	107.5	53(18)	167.5(190)	113(125.5)

Code	SSD2-Q-H (female thread)			SSD2-Q-H (male thread)			
Bore size (mm)	WF	A	B	a'	wf	A	B
ø32	7	80.5	65.5	59.5	23	102	65.5
ø40	7	90	75	66	29.5	111.5	74.5
ø50	8	92.5	75.5	73	30.5	118	71.5
ø63	8	94	77	78.5	36	119.5	77
ø80	10(20)	132(147)	111(116)	98	43.5(18)	165.5(180.5)	111(116)
ø100	12(22)	143.5(158.5)	120.5(125.5)	107.5	53(18)	175(190)	120.5(125.5)

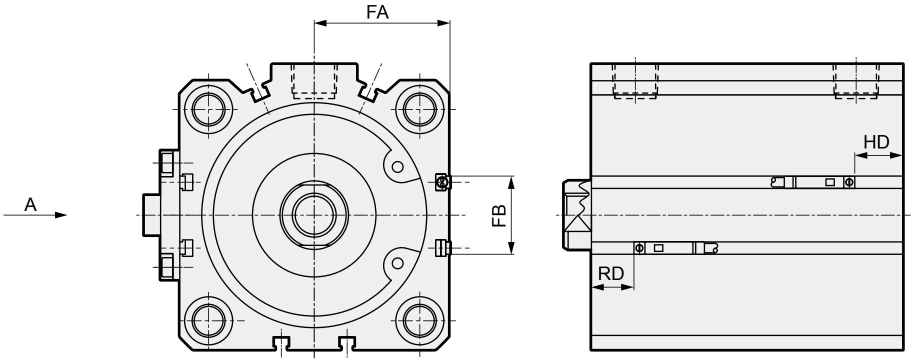
*1: Dimensions in ( ) of ø80 and ø100 are for more than 50 mm stroke length.

Dimensions (with the 1-color display, 2-color display, off-delay, strong magnetic field proof, T1* or T8* switch)

● SSD2-QL-20 to 25-R (with switch/rod side position locking)



● SSD2-QL-32 to 100-R (with switch/rod side position locking)



Code	Common dimensions		T0H/T0V, T5H/T5V				T2H/T2V, T3H/T3V				T2WH/T2WV, T3WH/T3WV				F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV			F2S/F3S		
Bore size (mm)	FA	FB	HD		RD		HD		RD		HD		RD		HD	RD		HD	RD	
ø20	18.5	12.5	4		32	37	4		32	37	6		33.5	38.5	8.5	36	41	7.5	35	40
ø25	20.5	13.5	6.5		33.5	38.5	6.5		33.5	38.5	8.5		35	40	11	37.5	42.5	10	36.5	41.5
ø32	23	20.5	5.5		34		5.5		34		7.5		36							
ø40	26.5	27.5	8		38		8		38		10		39.5							
ø50	32.5	28.5	6.5		41		6.5		41		8.5		42.5							
ø63	39	28.5	10.5		42		10.5		42		12.5		44							
ø80	49.5	28.5	19	24	66	73.5	19	24	66	73.5	21	26	68	75.5						
ø100	59	28.5	24.5	29.5	70	77.5	24.5	29.5	70	77.5	26.5	31.5	72	79.5						

Code	T2YH/T2YV, T3YH/T3YV, T2JH/T2JV						T2YD, T2YDT, T1H/T1V						T8H/T8V [*1]					
Bore size (mm)	FA	FB	HD		RD		FA	FB	HD		RD		FA	FB	HD		RD	
ø20	24.3	16	3		30	35	29.3	16	3		30	35	24.3	16	0		25.5	30.5
ø25	26.3	17	5.5		32	37	31.3	17	5.5		32	37	26.3	17	0.5		27	32
ø32	28.8	24	4		32.5		33.8	24	4		32.5		28.8	24	0		28	
ø40	32.3	31	7		36.5		37.3	31	7		36.5		32.3	31	2		31.5	
ø50	38.3	32	5.5		39.5		43.3	32	5.5		39.5		38.3	32	0.5		34.5	
ø63	44.8	32	9		40.5		49.8	32	9		40.5		44.8	32	4		35.5	
ø80	55.3	32	17.5	22.5	64.5	72	60.3	32	17.5	22.5	64.5	72	55.3	32	12.5	17.5	60	67.5
ø100	64.8	32	23	28	68.5	76	69.8	32	23	28	68.5	76	64.8	32	18	23	64	71.5

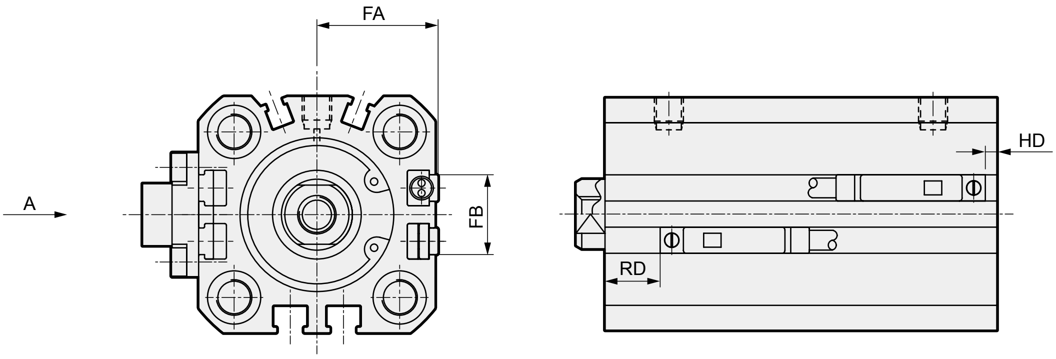
*1: T8 switch cannot be mounted on side A (the side with position locking mechanism).

*2: Only F switch is available for the ø20 or ø25 piping port surface.

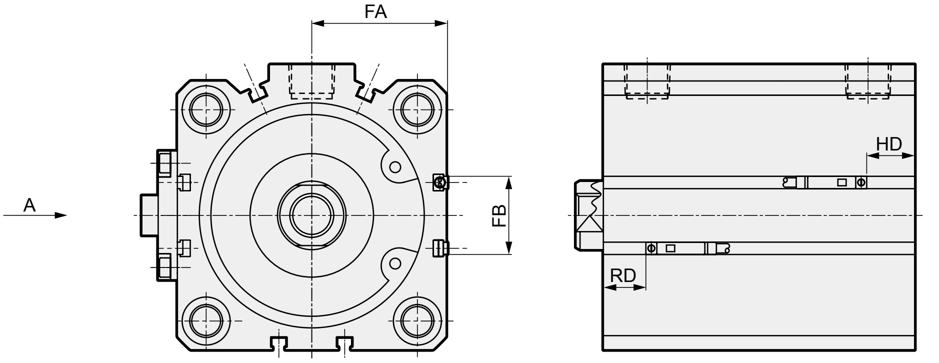
*3: In fields with two values, the left value is for 25 mm stroke length or less and the right for more than 25 mm stroke length in ø20 and ø25, and the left for 50 mm stroke length or less and the right for more than 50 mm stroke length in ø80 and ø100.

Dimensions (with the 1-color display, 2-color display, off-delay, AC magnetic field proof, T1* or T8* switch)

- SSD2-QL-20 to 25-H (with switch/head side position locking)



- SSD2-QL-32 to 100-H (with switch/head side position locking)



Code	Common dimensions		T0H/T0V, T5H/T5V			T2H/T2V, T3H/T3V			T2WH/T2WV, T3WH/T3WV			F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV			F2S/F3S		
Bore size (mm)	FA	FB	HD	RD		HD	RD		HD	RD		HD	RD		HD	RD	
ø20	18.5	12.5	34	8.5	13.5	34	8.5	13.5	35.5	10.5	15.5	38	13	18	37	12	17
ø25	20.5	13.5	35.5	10	15	35.5	10	15	37.5	12	17	40	14	19	39	13	18
ø32	23	20.5	38	9		38	9		40	11							
ø40	26.5	27.5	46	10.5		46	10.5		48	12							
ø50	32.5	28.5	46	11		46	11		48	12.5							
ø63	39	28.5	46.5	12		46.5	12		48.5	14							
ø80	49.5	28.5	78	14.5	19.5	78	14.5	19.5	80	16	21						
ø100	59	28.5	84.5	28	33	84.5	28	33	86.5	29.5	34.5						

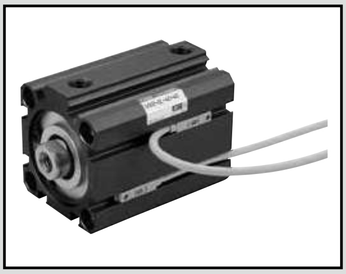
Code	T2YH/T2YV, T3YH/T3YV, T2JH/T2JV					T2YD, T2YDT, T1H/T1V					T8H/T8V [*1]				
Bore size (mm)	FA	FB	HD	RD		FA	FB	HD	RD		FA	FB	HD	RD	
ø20	24.3	16	32.5	7.5	12.5	29.3	16	32.5	7.5	12.5	24.3	16	27.5	2.5	7.5
ø25	26.3	17	34	8.5	13.5	31.3	17	34	8.5	13.5	26.3	17	29.5	3.5	8.5
ø32	28.8	24	36.5	7.5		33.8	24	36.5	7.5		28.8	24	32	2.5	
ø40	32.3	31	44.5	9		37.3	31	44.5	9		32.3	31	40	4	
ø50	38.3	32	45	9		43.3	32	45	9		38.3	32	40	4.5	
ø63	44.8	32	45	10.5		49.8	32	45	10.5		44.8	32	40	5.5	
ø80	55.3	32	76.5	13	18	60.3	32	76.5	13	18	55.3	32	72	8	13
ø100	64.8	32	83	26	31	69.8	32	83	26	31	64.8	32	78	21	26

*1: T8 switch cannot be mounted on side A (the side with position locking mechanism).

*2: Only F switch is available for the ø20 or ø25 piping port surface.

*3: In fields with two values, the left value is for 25 mm stroke length or less and the right for more than 25 mm stroke length in ø20 and ø25, and the left for 50 mm stroke length or less and the right for more than 50 mm stroke length in ø80 and ø100.

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/
COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/
MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd
Contr
Ending

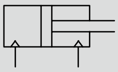


Compact cylinder double acting/fine speed

SSD2-F/SSD2-KF Series

● Bore size: ø12/ø16/ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



RoHS CAD

Specifications

1 MPa = 10 bar

Item	SSD2-F SSD2-LF (with switch)										SSD2-KF SSD2-KLF (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting																			
Working fluid	Compressed air																			
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)																			
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)							0.05 (≈7.3 psi)			0.1 (≈15 psi, 1 bar)							0.05 (≈7.3 psi)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)																			
Ambient temperature °C	5 (41°F) to 60 (140°F)																			
Port size	M5				Rc1/8 *1		Rc1/4		Rc3/8		M5				Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$										$^{+2.0}_{0}$									
Working piston speed mm/s	1 to 200																			
Cushion	None										Rubber cushion									
Lubrication	Not available																			
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56	0.04	0.09	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20 25/30	30	1
ø16			
ø20	5/10/15/20/25 30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

*1 : When using the type with switch, refer to the table of the min. stroke length with switch.
*2: Refer to pages 763 and 765 (F and LF) or page 789 (KF) for the min. stroke length with mounting bracket LB.

Min. stroke length with switch (2 switches)

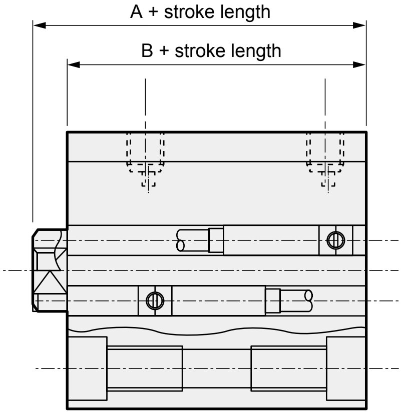
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø12	10(5)	5
ø16		
ø20	5	
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.
*2: Values in ( ) are for the type with 1 on rod side.

Custom stroke length

● SSD2-F Series

Item	Standard products Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	12/16	1 to 29
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-F-32-38 A +2 mm spacer is added to the SSD2-F-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 63 mm.	



Switch specifications (F switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/ F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.

*5 : The F type switch uses a bend-resistant lead wire.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^{2}	1.13×10^{2}
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	-	49.1	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	-	37.8	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	-	80.4	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	-	60.3	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	-	1.26×10^{2}	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.06×10^{2}	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	1.96×10^{2}	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	1.65×10^{2}	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	1.56×10^{2}	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	1.40×10^{2}	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	2.51×10^{2}	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	2.27×10^{2}	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	3.93×10^{2}	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	3.57×10^{2}	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

Dimensions

Same as SSD2 Series (double acting/single rod) and SSD2-K Series (double acting/high load). Refer to pages 760 to 766 and 782 to 790.

SSD2-F/SSD2-KF Series

How to order

Without switch (without magnet for switch)

SSD2-F - 12 ◯ - 5 ———— N - LB - I

With switch (built-in magnet for switch)

SSD2-LF - 12 ◯ - 10 - T0H - R - N - LB - I

Ⓐ Model No.

Ⓑ Bore size

Ⓒ Port thread

Ⓓ Stroke length

Ⓔ Switch model No. *1 *2 *3 *8 *10

Ⓕ Switch quantity

Ⓖ Option *4

Ⓗ Mounting bracket *5 *6

Ⓘ Accessory *7

Code	Description
Ⓐ Model No.	
SSD2-F	Double acting/single rod
SSD2-LF	Double acting/single rod/with switch
SSD2-KF	Double acting/high load
SSD2-KLF	Double acting/high load/with switch
Ⓑ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓒ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)
Ⓓ Stroke length (mm)	
	Refer to the stroke length table on the following page.

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	Bore size 12	16	20	25	32	40	50	63	80	100
-	**F2S***	Proximity		●	1-color display	2-wire			●	●						
-	**F3S***			●		3-wire			●	●						
F2H*	**F2V***			●		2-wire			●	●						
F3H*	**F3V***			●		3-wire			●	●						
F3PH*	**F3PV***			●	1 color display (PNP output) (custom)	3-wire			●	●						
F2YH*	**F2YV***			●	2-color display	2-wire			●	●						
F3YH*	**F3YV***			●		3-wire			●	●						
T0H*	**T0V***	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	**T5V***		●	●	Without indicator lamp		●	●	●	●	●	●	●	●	●	●
T8H*	**T8V***		●	●	1-color display							●	●	●	●	●
T1H*	**T1V***	Proximity	●		1-color display	2-wire			●	●	●	●	●	●	●	●
T2H*	**T2V***			●			●	●	●	●	●	●	●	●	●	●
T3H*	**T3V***			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	**T3PV***			●	1-color display (PNP output)		●	●	●	●	●	●	●	●	●	●
T2WH*	**T2WV***			●	2-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	**T2YV***			●					●	●	●	●	●	●	●	●
T3WH*	**T3WV***			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	**T3YV***			●					●	●	●	●	●	●	●	●
T2YD*	**-**			●	2-color display for AC magnetic field	2-wire			●	●	●	●	●	●	●	●
T2YDT*	**-**			●					●	●	●	●	●	●	●	●
T2JH*	**T2JV***			●	1-color display off-delay	2-wire			●	●	●	●	●	●	●	●

Code	Description
*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *11
Ⓕ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓖ Option	
Blank	Rod end female thread
N	Rod end male thread
M *4	Piston rod material (stainless steel)
Ⓗ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange
Ⓘ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

1 : The T2YD switch cannot be mounted on the ø12 and ø16 bore sizes.
2 : The T8 switch cannot be mounted on the ø12 to ø32 bore sizes.
*3 : The F switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.
*4 : Piston rod of ø12 to ø25 is stainless steel as standard. C snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.
*5 : The mounting bracket is included at shipment.
*6 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 761, 763, 765 and 766. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
*7 : "I" and "Y" cannot be selected together.
*8 : The F switch with L lead wire on ø20 models cannot be selected on stroke lengths of 15 mm or under.
*9 : Refer to pages 750 and 751 for combinations of variations/options.
*10 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
*11 : F type switch cannot be selected.

[Example of model No.]

SSD2-LF-12-10-T0H-R-N-LB-I

Model: Compact cylinder, fine speed

Ⓑ Bore size : ø12 mm
Ⓒ Port thread : Rc thread
Ⓓ Stroke length : 10mm
Ⓔ Switch model No. : Reed switch T0H, lead wire length 1 m
Ⓕ Switch quantity : 1 on rod side
Ⓖ Option : Rod end male thread
Ⓗ Mounting bracket : Axial foot
Ⓘ Accessory : Rod eye

[Stroke length table]

● SSD2-F/SSD2-KF

Stroke length (mm)		Applicable bore size									
		12	16	20	25	32	40	50	63	80	100
Standard stroke length	5	●	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●
	100					●	●	●	●	●	●
Min. stroke length (mm) *1		1									
Max. stroke length (mm)		30		50		100					
Custom stroke length *2		In 1 mm increments									

1 : Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available.
Refer to page 854 for the min. stroke length with switch.

*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

*3 : Refer to pages 763 and 765 (F and LF) or page 789 (KF) for the min. stroke length with mounting bracket LB.

How to order switch

SW - **T0H**

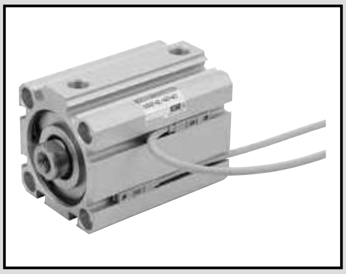
Switch model No.
(Item Ⓔ on page 856)

How to order mounting bracket

Bore size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50
Clevis bracket (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50

Bore size (mm) / Mounting bracket	ø63	ø80	ø100
Foot (LB)	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

*1: The foot mounting bracket is provided as 2 pcs./set.

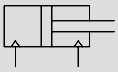


Compact cylinder double acting/low speed

SSD2-O Series

● Bore size: ø12/ø16/ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-O SSD2-OL (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)									
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)							0.05 (≈7.3 psi, 0.5 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)									
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)									
Port size	M5				Rc1/8 *1		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$									
Working piston speed mm/s	10 to 200									
Cushion	None									
Lubrication	Not available									
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20/25/30	30	1
ø16			
ø20	5/10/15/20/25/30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30/35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25/30/35/40/45/50/75/100		
ø63			
ø80			
ø100			

*1 : When using the type with switch, refer to the table of the min. stroke length with switch.
*2: Refer to pages 763 and 765 for the min. stroke length with mounting bracket LB.

Min. stroke length with switch (2 switches)

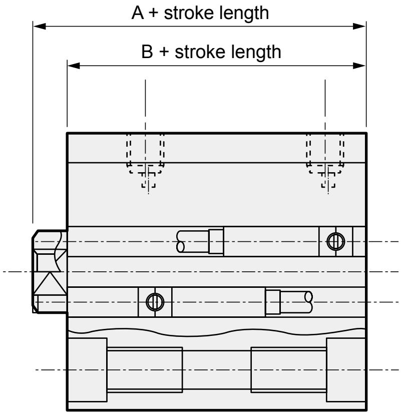
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø12	10(5)	5
ø16		
ø20	5	
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.
*2: Values in ( ) are for the type with 1 on rod side.

Custom stroke length

● SSD2-O Series

<table>
<tr><th rowspan="2">Item</th><th colspan="2">Standard products</th></tr>
<tr><th colspan="2">Standard stroke length body with spacer</th></tr>
<tr><td>Model No.</td><td colspan="2">Refer to How to order.</td></tr>
<tr><td>Description</td><td colspan="2">A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.</td></tr>
<tr><td rowspan="4">Stroke range</td><td>Bore size</td><td>Stroke range</td></tr>
<tr><td>12/16</td><td>1 to 29</td></tr>
<tr><td>20 to 25</td><td>1 to 49</td></tr>
<tr><td>32 to 100</td><td>1 to 99</td></tr>
<tr><td>Example of model No.</td><td colspan="2">Model No.: SSD2-O-32-38
A +2 mm spacer is added to the SSD2-O-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 63mm.</td></tr>
</table>



Switch specifications (F switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD (*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)

*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.

*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø12	36	86	44	86	53	95	61	103	70	112	72	114	-	-	-	-	-	-	-	-	-	-	-	-
ø16	48	104	59	104	69	114	80	125	91	136	102	147	-	-	-	-	-	-	-	-	-	-	-	-
ø20	63	118	75	150	88	163	101	176	113	188	126	201	139	214	152	227	165	240	203	278	-	-	-	-
ø25	87	178	102	193	118	209	134	225	150	241	165	256	181	272	197	288	213	304	228	319	-	-	-	-
ø32	122	236	144	258	166	280	188	302	209	323	231	345	253	367	275	389	297	411	318	432	494	542	604	652
ø40	183	326	210	353	236	379	263	406	290	433	316	459	342	485	369	512	395	538	472	565	646	695	776	825
ø50	-	-	341	535	383	577	425	619	467	661	510	704	552	746	594	788	636	830	678	872	1025	1082	1235	1292
ø63	-	-	507	786	562	841	617	896	672	951	727	1006	782	1061	838	1117	893	1172	948	1227	1438	1502	1713	1777
ø80	-	-	928	1341	1015	1428	1101	1514	1188	1601	1274	1687	1361	1774	1448	1861	1535	1948	1621	2034	2401	2467	2833	2899
ø100	-	-	1433	2000	1547	2114	1660	2227	1774	2341	1888	2455	2002	2569	2115	2682	2229	2796	2343	2910	3406	3478	3973	4045

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^{2}	1.13×10^{2}
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	-	49.1	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	-	37.8	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	-	80.4	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	-	60.3	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	-	1.26×10^{2}	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.06×10^{2}	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	1.96×10^{2}	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	1.65×10^{2}	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	1.56×10^{2}	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	1.40×10^{2}	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	2.51×10^{2}	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	2.27×10^{2}	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	3.93×10^{2}	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	3.57×10^{2}	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

How to order

Without switch (without magnet for switch)

SSD2-O - 12 ◯ - 5 —— N - LB - I

With switch (built-in magnet for switch)

SSD2-OL - 12 ◯ - 10 - T0H - R - N - LB - I

Ⓐ Model No.
Ⓑ Bore size
Ⓒ Port thread
Ⓓ Stroke length
Ⓔ Switch model No. *1 *2 *3 *8 *10
Ⓕ Switch quantity
Ⓖ Option *4
Ⓗ Mounting bracket *5 *6
Ⓘ Accessory *7

Code	Description
Ⓐ Model No.	
SSD2-O	Double acting/single rod
SSD2-OL	Double acting/single rod/with switch
Ⓑ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓒ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)
Ⓓ Stroke length (mm)	
Refer to the stroke length table on the following page.	

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	Bore size 12	16	20	25	32	40	50	63	80	100
-	**F2S***	Proximity		●	1-color display	2-wire			●	●						
-	**F3S***			●		3-wire			●	●						
F2H*	**F2V***			●		2-wire			●	●						
F3H*	**F3V***			●		3-wire			●	●						
F3PH*	**F3PV***			●	1 color display (PNP output) (custom)	3-wire			●	●						
F2YH*	**F2YV***			●	2-color display	2-wire			●	●						
F3YH*	**F3YV***			●		3-wire			●	●						
T0H*	**T0V***	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	**T5V***		●	●	Without indicator lamp		●	●	●	●	●	●	●	●	●	●
T8H*	**T8V***		●	●	1-color display							●	●	●	●	●
T1H*	**T1V***	Proximity	●		1-color display	2-wire			●	●	●	●	●	●	●	●
T2H*	**T2V***			●			●	●	●	●	●	●	●	●	●	●
T3H*	**T3V***			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	**T3PV***			●	1-color display (PNP output)		●	●	●	●	●	●	●	●	●	●
T2WH*	**T2WV***			●	2-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	**T2YV***			●					●	●	●	●	●	●	●	●
T3WH*	**T3WV***			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	**T3YV***			●					●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display for AC magnetic field	2-wire			●	●	●	●	●	●	●	●
T2YDT*	-			●					●	●	●	●	●	●	●	●
T2JH*	**T2JV***			●	1-color display off-delay	2-wire			●	●	●	●	●	●	●	●

Code	Description
*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *11
Ⓕ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓖ Option	
Blank	Rod end female thread
N	Rod end male thread
M *4	Piston rod material (stainless steel)
Ⓗ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange
Ⓘ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

1 : The T2YD switch cannot be mounted on the ø12 and ø16 bore sizes.
2 : The T8 switch cannot be mounted on the ø12 to ø32 bore sizes.
*3 : The F switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.
*4 : Piston rod of ø12 to ø25 is stainless steel as standard. C snap ring is stainless steel instead of steel.
The rod end male thread nut is stainless steel.
*5 : The mounting bracket is included at shipment.
*6 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard.
Refer to the dimensions on pages 761, 763, 765 and 766. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
*7 : "I" and "Y" cannot be selected together.
*8 : The F switch with L lead wire on ø20 models cannot be selected on stroke lengths of 15 mm or under.
*9 : Refer to pages 750 and 751 for combinations of variations/options.
*10 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
*11 : F type switch cannot be selected.

[Example of model No.]

SSD2-OL-12-10-T0H-R-N-LB-I

Model: Compact cylinder double acting/low speed

Ⓑ Bore size	: ø12 mm
Ⓒ Port thread	: Rc thread
Ⓓ Stroke length	: 10mm
Ⓔ Switch model No.	: Reed switch T0H, lead wire length 1 m
Ⓕ Switch quantity	: 1 on rod side
Ⓖ Option	: Rod end male thread
Ⓗ Mounting bracket	: Axial foot
Ⓘ Accessory	: Rod eye

[Stroke length table]

Stroke length (mm)		Applicable bore size									
		12	16	20	25	32	40	50	63	80	100
Standard stroke length	5	●	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●
	100					●	●	●	●	●	●
Min. stroke length (mm) *1		1									
Max. stroke length (mm)		30		50		100					
Custom stroke length *2		In 1 mm increments									

1: Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available.
Refer to page 858 for the min. stroke length with switch.

*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

*3: Refer to pages 763 and 765 for the min. stroke length with mounting bracket LB.

How to order switch

SW - **T0H**

Switch model No.
(Item Ⓔ on page 860)

How to order mounting bracket

Bore size (mm) Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50
Clevis bracket (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50

Bore size (mm) Mounting bracket	ø63	ø80	ø100
Foot (LB)	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

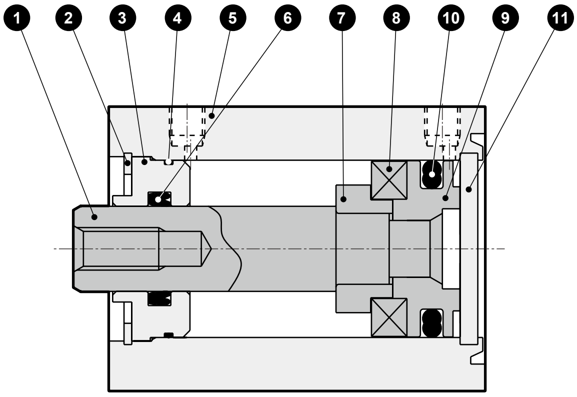
*1: The foot mounting bracket is provided as 2 pcs./set.

Dimensions

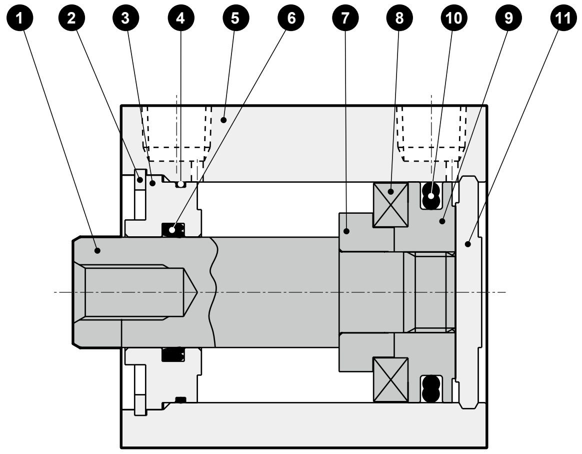
Same as SSD2 Series (double acting/single rod). Refer to pages 760 to 766.

Internal structure and parts list (ø12 to 50)

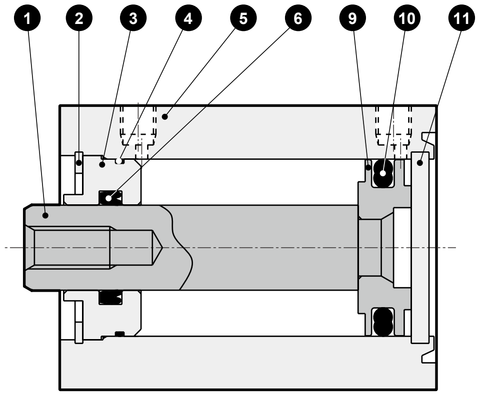
- SSD2-O-L-12 to 25 (double acting/with switch)



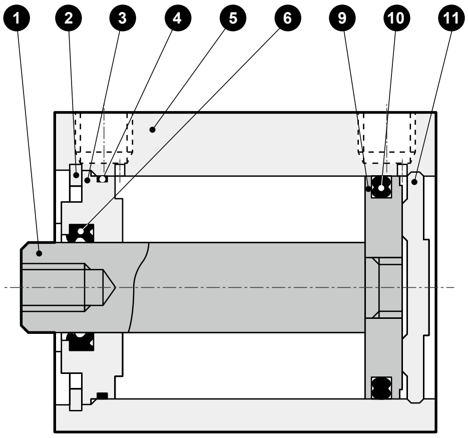
- SSD2-O-L-32 to 50 (double acting/with switch)



- SSD2-O-12 to 25 (double acting)



- SSD2-O-32 to 50 (double acting)



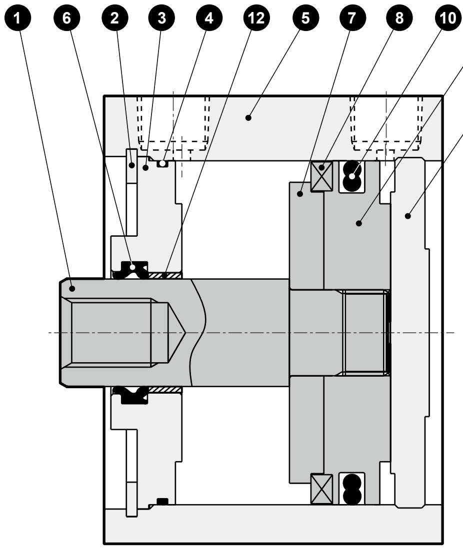
No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
2	C snap ring	Steel	Zinc phosphate
3	Rod metal	Special aluminum	Alumite
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Nitrile rubber	
7	Spacer	Aluminum alloy	ø12 to ø32: Chromate
8	Magnet	Plastic	
9	Piston	Aluminum alloy	Chromate
10	Piston packing	Nitrile rubber	
11	Cover	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite

Repair parts list

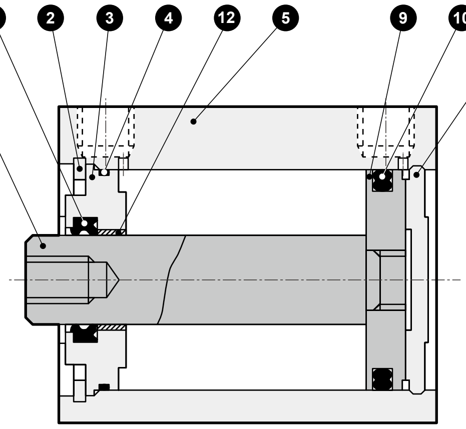
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-O-12K	④ ⑥ ⑩
ø16	SSD2-O-16K	
ø20	SSD2-O-20K	
ø25	SSD2-O-25K	
ø32	SSD2-O-32K	
ø40	SSD2-O-40K	
ø50	SSD2-O-50K	

Internal structure and parts list (ø63 to ø100)

- SSD2-O-L-63 to 100 (double acting/with switch)



- SSD2-O-63 to 100 (double acting)

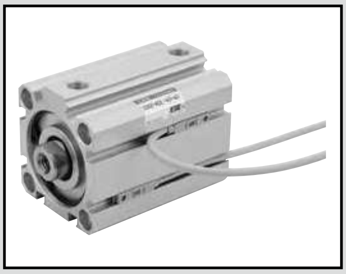


No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	7	Spacer	Aluminum alloy	
2	C snap ring	Steel	Zinc phosphate	8	Magnet	Plastic	
3	Rod metal	Aluminum alloy	Chromate	9	Piston	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		10	Piston packing	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite	11	Cover	Aluminum alloy	Alumite
6	Rod packing	Nitrile rubber		12	Bush	Oiles drymet	*1

*1: Material is steel for copper and PTFE free specifications.

Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-O-63K	④⑥⑩
ø80	SSD2-O-80K	
ø100	SSD2-O-100K	

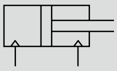


Compact cylinder double acting/high load/low friction

SSD2-KU Series

● Bore size: ø20/ø25/ø32/ø40
ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-KU SSD2-KUL (with switch)							
Bore size mm	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)							
Min. working pressure MPa	0.03 (≈4.4 psi, 0.3 bar)							
Proof pressure MPa	1.0 (≈150 psi, 10 bar)							
Ambient temperature °C	5 (41°F) to 60 (140°F)							
Port size	M5		Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$							
Working piston speed mm/s	10 to 500					10 to 300		
Cushion	Rubber cushion							
Lubrication	Not available							
Allowable absorbed energy J	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92
Internal leakage ℓ/min	5						8	

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø20	5/10/15/20/25 30/35/40/45/50	50	5
ø25			
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

*1 : When using the type with switch, refer to the table of the min. stroke length with switch.
*2: Refer to page 789 for the min. stroke length with mounting bracket LB.

Min. stroke length with switch (1 or 2 switches)

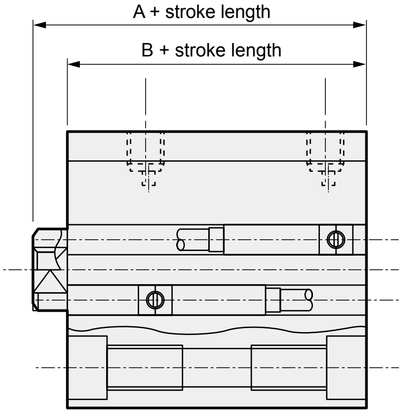
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø20	5	5
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.

Custom stroke length

● SSD2-KU Series

Item	Standard products Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-KU-32-41 A +4 mm spacer is added to the SSD2-KU-32-45 standard cylinder to create 41 mm stroke length. B + stroke length is 78mm.	



Switch specifications (F switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 µA or less	1 mA or less		10 µA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 µA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa								
		0.03	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7
ø20	Push	9.42	31.4	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2
	Pull	7.07	23.6	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2
ø25	Push	14.7	49.1	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2
	Pull	11.3	37.8	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2
ø32	Push	24.1	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2
	Pull	18.1	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2
ø40	Push	37.7	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2
	Pull	31.7	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2
ø50	Push	58.9	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3
	Pull	49.5	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3
ø63	Push	93.5	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3
	Pull	84.0	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3
ø80	Push	1.51×10^2	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3
	Pull	1.36×10^2	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3
ø100	Push	2.36×10^2	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3
	Pull	2.14×10^2	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3

How to order

Without switch (without magnet for switch)

SSD2-KU - 20 ◯ - 10 ——— N - LB - I

With switch (built-in magnet for switch)

SSD2-KUL - 20 ◯ - 10 - T0H - R - N - LB - I

Ⓐ Bore size

Ⓑ Port thread

Ⓒ Stroke length

Ⓓ Switch model No. *1 *6 *8

Ⓔ Switch quantity

Ⓕ Option *2

Ⓖ Mounting bracket *3 *4

Ⓗ Accessory *5

Code	Description
Ⓐ Bore size (mm)	
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓑ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)
Ⓒ Stroke length (mm)	
Refer to the stroke length table on the following page.	

Ⓓ Switch model No.

Lead wire	Lead wire	Contact	Voltage		Display	Lead wire	Bore size							
Straight	L-shaped		AC	DC			20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire	●	●						
-	F3S*			●		3-wire	●	●						
F2H*	F2V*			●		2-wire	●	●						
F3H*	F3V*			●		3-wire	●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire	●	●						
F2YH*	F2YV*			●	2-color display	2-wire	●	●						
F3YH*	F3YV*			●		3-wire	●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display					●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire	●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●			●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●			●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display for AC magnetic field	2-wire	●	●	●	●	●	●	●	●
T2YDT*	-			●			●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire	●	●	●	●	●	●	●	●

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *9

Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2

Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread
M *2	Piston rod material (stainless steel)

Ⓖ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange

Ⓗ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : The F switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.

*2 : Piston rod of ø20 and ø25 is stainless steel as standard. C snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.

*3 : The mounting bracket is included at shipment.

*4 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 783, 785, 787, 789 and 790. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.

*5 : "I" and "Y" cannot be selected together.

*6 : The F switch with L lead wire on ø20 models cannot be selected on stroke lengths 10 mm or under.

*7 : Refer to pages 750 and 751 for combinations of variations/options.

*8 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

*9 : F type switch cannot be selected.

[Example of model No.]

SSD2-KUL-20-10-T0H-R-N

Model: Compact cylinder, high load/low friction

Ⓐ Bore size : ø20 mm
Ⓑ Port thread : Rc thread
Ⓒ Stroke length : 10mm
Ⓓ Switch model No. : Reed T0H switch
· Lead wire 1 m
Ⓔ Switch quantity : 1 on rod side
Ⓕ Option : Rod end male thread

[Stroke length table]

Stroke length (mm)		Applicable bore size							
		ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard stroke length	5	●	●	●	●				
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●
	35	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●
	45	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
	75			●	●	●	●	●	●
	100			●	●	●	●	●	●
Min. stroke length (mm)		5							
Max. stroke length (mm)		50		100					
Custom stroke length *2		In 1 mm increments							

1:Less than 10 mm with the 2-color display, off-delay, strong magnetic field proof, T1 or T8* switch is not available.
Refer to page 864 for the min. stroke length with switch.

*2 :The total length is the same as that of the next longer standard stroke length.

*3:Refer to page 789 for the min. stroke length with mounting bracket LB.

How to order mounting bracket

Bore size (mm) Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

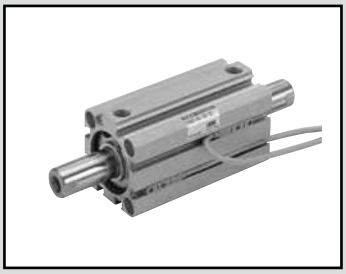
*1: The foot mounting bracket is provided as 2 pcs./set.

Dimensions

Same as SSD2-K Series (double acting/high load). Refer to pages 782 to 790.

Technical data

Refer to SCM-U Series on page 306 for technical data regarding sliding resistance values. SSD2-KU Series shows a similar trend to the data of “SCM-U Series”.

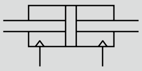


Compact cylinder double acting/double rod

SSD2-D Series

● Bore size: ø12/ø16/ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item		SSD2-D SSD2-DL (with switch)									
Bore size mm		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation		Double acting									
Working fluid		Compressed air									
Max. working pressure MPa		1.0 (≈150 psi, 10 bar)									
Min. working pressure MPa		0.15 (≈22 psi, 1.5 bar)							0.1 (≈15 psi, 1 bar)		
Proof pressure MPa		1.6 (≈230 psi, 16 bar)									
Ambient temperature °C		-10 (14°F) to 60 (140°F) (no freezing)									
Port size		M5				Rc1/8 *1		Rc1/4		Rc3/8	
Stroke tolerance mm	With rubber cushion	$^{+2.0}_{0}$									
	Without cushion	$^{+1.0}_{0}$									
Working piston speed mm/s		50 to 500							50 to 300		
Cushion		With or without cushion can be selected									
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)									
Allowable absorbed energy J	With rubber cushion	0.03	0.05	0.10	0.16	0.16	0.44	0.75	0.78	2.51	3.92
	Without cushion	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20 25/30	30	5
ø16			
ø20	5/10/15/20/25 30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		10
ø63			
ø80			
ø100			

*: Refer to page 881 for the min. stroke length with mounting bracket LB.

Min. stroke length with switch (1 or 2 switches)

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø12	5	5
ø16		
ø20		
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

Note: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1* or T8* switch is not available.

Switch specifications (F switch)

- 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T switch)

- 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C.
(5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table

(the weight of the switches is when there are 2 cylinder switches.) (Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø12	52	105	60	105	69	115	77	124	86	134	95	147	-	-	-	-	-	-	-	-	-	-	-	-
ø16	74	133	85	133	95	144	106	156	117	168	128	177	-	-	-	-	-	-	-	-	-	-	-	-
ø20	131	187	143	222	161	238	179	254	196	269	214	285	232	301	249	316	267	332	284	347	-	-	-	-
ø25	147	238	162	253	178	269	194	285	210	301	226	316	242	332	257	348	275	364	288	379	-	-	-	-
ø32	184	299	230	344	275	390	322	436	366	481	413	527	459	573	469	612	485	628	522	665	776	785	1004	1012
ø40	283	426	310	453	336	479	363	506	390	533	416	569	443	601	507	617	553	663	601	707	1317	1333	1475	1490
ø50	-	-	508	702	558	751	608	803	658	851	708	901	758	950	808	1001	835	1033	911	1105	2007	2025	2252	2270
ø63	-	-	902	1266	977	1341	1052	1416	1127	1491	1202	1566	1278	1642	1353	1717	1428	1792	1503	1867	2218	2242	2593	2617
ø80	-	-	1608	1538	1725	1916	1841	2294	1958	2411	2074	2527	2191	2649	2308	2771	2425	2888	2541	3004	3560	3587	4143	4169
ø100	-	-	2483	3105	2652	3254	2820	3402	2989	3586	3158	3770	3327	3934	3495	4097	3664	4261	3833	4425	5213	5245	6033	6065

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push/Pull	-	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push/Pull	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push/Pull	-	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push/Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push/Pull	-	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push/Pull	-	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push/Pull	-	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push/Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push/Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push/Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

How to order

Without switch (without magnet for switch)

SSD2-D - 12 ○ ○ - 5 ——— N - LB - I

With switch (built-in magnet for switch)

SSD2-DL - 12 ○ ○ - 10 - T0H - R - N - LB - I

Ⓐ Model No.

Ⓑ Bore size

Ⓒ Port thread

Ⓓ Cushion

Ⓔ Stroke length

Ⓕ Switch model No. *1, *2 *3, *8 *9

Ⓖ Switch quantity

Ⓗ Option *4

Ⓘ Mounting bracket *5 *6

Ⓙ Accessory *7

⚠ Precautions for model No. selection

1 : The T2YD switch cannot be mounted on the ø12 and ø16 bore sizes.
2 : The T8 switch cannot be mounted on ø12 and ø16.
*3 : The F switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.
*4 : Piston rod of ø12 to ø25 is stainless steel as standard. C snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.
*5 : The mounting bracket is included at shipment.
*6 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 877, 879 and 881. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
*7 : "I" and "Y" cannot be selected together.
*8 : The F switch with L type lead wire on ø20 models cannot be selected on stroke lengths of 15 mm or under.
*9 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
*10: Refer to pages 750 and 751 for combinations of variations/options.
*11 : F type switch cannot be selected.

[Example of model No.]

SSD2-DL-12-5-T0H-R-N-LB-I

Model: Compact cylinder double acting/double rod
Ⓑ Bore size : ø12 mm
Ⓒ Port thread : Rc thread
Ⓓ Cushion : No cushion
Ⓔ Stroke length : 5mm
Ⓕ Switch model No. : Reed T0H switch/ Lead wire length 1 m
Ⓖ Switch quantity : 1 on rod side
Ⓗ Option : Rod end male thread
Ⓘ Mounting bracket : Axial foot
Ⓙ Accessory : Rod eye

How to order switch

SW - T0H

Switch model No. (Item Ⓕ above)

Code	Description
Ⓐ Model No.	
SSD2-D	Double acting/double rod
SSD2-DL	Double acting/double rod/with switch

Code	Description
Ⓑ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

Code	Description
Ⓒ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)

Code	Description
Ⓓ Cushion	
Blank	Without cushion
D	With rubber cushion

Ⓔ Stroke length (mm)

Refer to the stroke length table on the following page.

Ⓕ Switch model No.

Lead wire	Lead wire	Contact	Voltage		Display	Lead wire	Bore size									
Straight	L-shaped		AC	DC			12	16	20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire			●	●						
-	F3S*			●		3-wire			●	●						
F2H*	F2V*			●		2-wire			●	●						
F3H*	F3V*			●		3-wire			●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire			●	●						
F2YH*	F2YV*			●	2-color display	2-wire			●	●						
F3YH*	F3YV*			●		3-wire			●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display				●	●	●	●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●			●	●	●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●			●	●	●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display AC magnetic field	2-wire			●	●	●	●	●	●	●	●
T2YDT*	-			●					●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire	●	●	●	●	●	●	●	●	●	●

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *11

Ⓖ Switch quantity	
R	1 on rod side
H	1 on head side
D	2

Ⓗ Option

	Bore size (mm)	12	16	20	25	32	40	50	63	80	100
Blank	Rod end female thread	●	●	●	●	●	●	●	●	●	●
N	Rod end male thread	●	●	●	●	●	●	●	●	●	●
P6	Copper and PTFE free specifications	Supported as standard							●	●	●
M *4	Piston rod material (stainless steel)	●	●	●	●	●	●	●	●	●	●
P4	Specifications for rechargeable battery (made to order)	●	●	●	●	●	●	●	●	●	●
P40		●	●	●	●	●	●	●	●	●	●

Ⓘ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
FA	Rod side flange

Ⓙ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

[Stroke length table]

Stroke length (mm)		Applicable bore size									
		12	16	20	25	32	40	50	63	80	100
Standard stroke length	5	●	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●
	100					●	●	●	●	●	●
Min. stroke length (mm) *1		1									
Max. stroke length (mm)		30		50		100					
Custom stroke length *2		-				By 5mm increments					

1 : Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available.
Refer to page 868 for the min. stroke length with switch.
*2 : Available only for more than 50 mm stroke length.

How to order mounting bracket

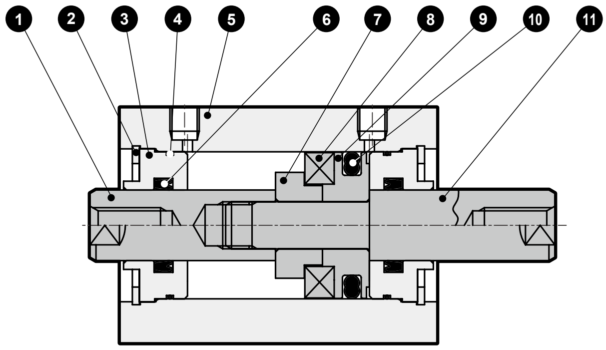
Bore size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50
Flange (FA)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50

Bore size (mm) / Mounting bracket	ø63	ø80	ø100
Foot (LB)	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA)	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100

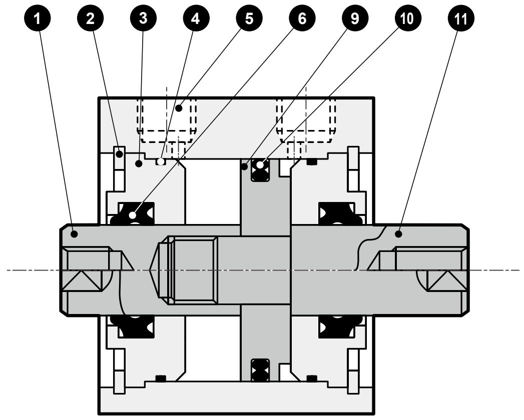
*1: The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list (ø12 to 50) (no cushion)

- SSD2-DL-12 to 50 (double acting/double rod/with switch)



- SSD2-D-12 to 50 (double acting/double rod)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod Ⓐ	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating	7	Spacer	ø12, ø20, ø32, ø40: Aluminum alloy ø16, ø25, ø50: Special resin	ø12, 20, 32, 40: Chromate
2	C snap ring	Steel	Zinc phosphate	8	Magnet	Plastic	
3	Rod metal	Special aluminum	Alumite	9	Piston	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		10	Piston packing	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite	11	Piston rod Ⓑ	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
6	Rod packing	Nitrile rubber					

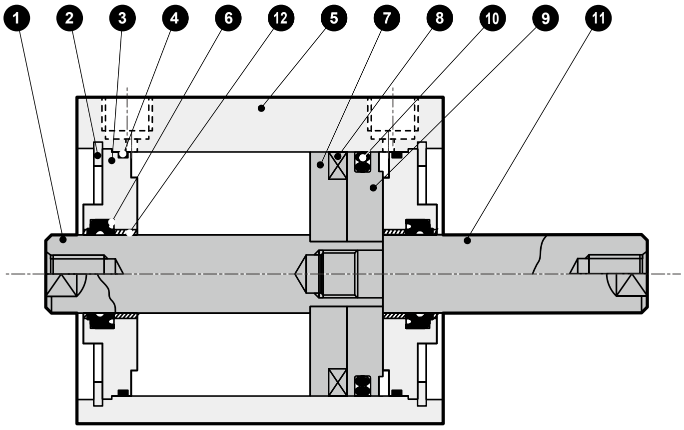
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-D-12K	④⑥⑩
ø16	SSD2-D-16K	
ø20	SSD2-D-20K	
ø25	SSD2-D-25K	
ø32	SSD2-D-32K	
ø40	SSD2-D-40K	
ø50	SSD2-D-50K	

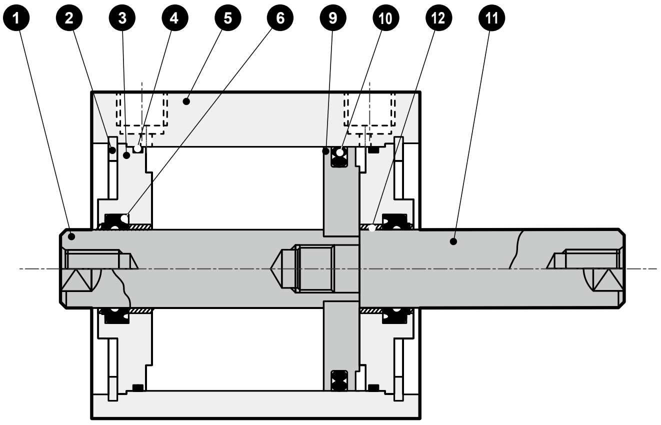
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

Internal structure and parts list (ø63 to 100) (no cushion)

- SSD2-DL-63 to 100 (double acting/double rod/with switch)



- SSD2-D-63 to 100 (double acting/double rod)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod Ⓐ	Steel	Industrial chrome plating	7	Spacer	Aluminum alloy	Chromate
2	C snap ring	Steel	Zinc phosphate	8	Magnet	Plastic	
3	Rod metal	Aluminum alloy	Alumite	9	Piston	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		10	Piston packing	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite	11	Piston rod Ⓑ	Steel	Industrial chrome plating
6	Rod packing	Nitrile rubber		12	Bush	Oiles drymet	*1

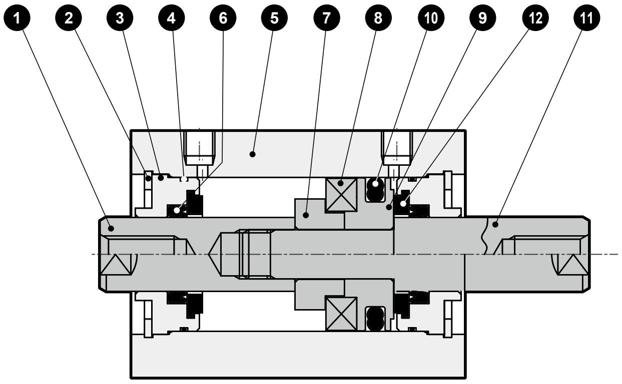
*1: Material is steel for copper and PTFE free specifications.

Repair parts list

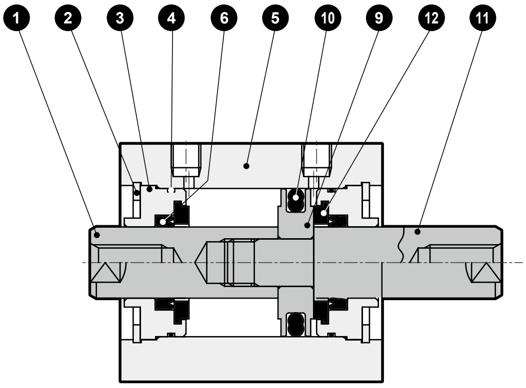
Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-D-63K	❹❻❿
ø80	SSD2-D-80K	
ø100	SSD2-D-100K	

Internal structure and parts list (ø12 to 50) (with rubber cushion)

- SSD2-DL-12D to 50D (double acting/double rod/with switch)



- SSD2-D-12D to 50D (double acting/double rod)



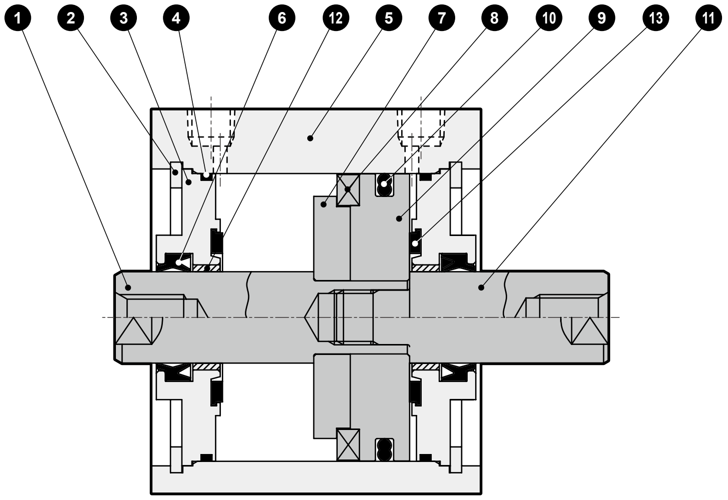
No.	Part name	Material	Remarks
1	Piston rod Ⓐ	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
2	C snap ring	Steel	Zinc phosphate
3	Rod metal	Special aluminum	Alumite
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Nitrile rubber	
7	Spacer	ø12, ø20, ø32, ø40: Aluminum alloy ø16, ø25, ø50: Special resin	ø12, 20, 32, 40: Chromate
8	Magnet	Plastic	
9	Piston	Aluminum alloy	Chromate
10	Piston packing	Nitrile rubber	
11	Piston rod Ⓑ	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
12	Cushion rubber	Urethane rubber	

Repair parts list

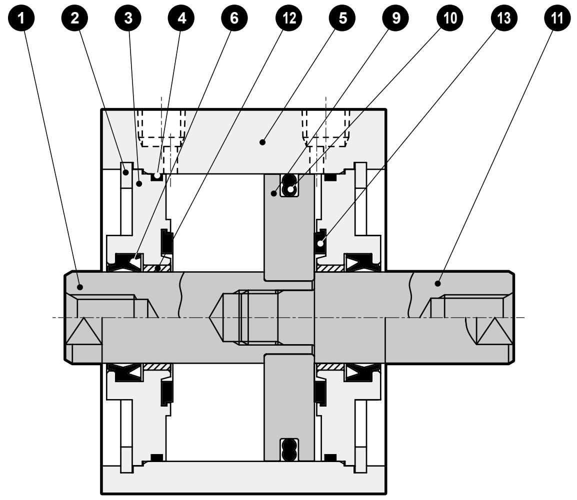
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-D-12DK	④⑥⑩⑫
ø16	SSD2-D-16DK	
ø20	SSD2-D-20DK	
ø25	SSD2-D-25DK	
ø32	SSD2-D-32DK	
ø40	SSD2-D-40DK	
ø50	SSD2-D-50DK	

Internal structure and parts list (ø63 to 100) (with rubber cushion)

- SSD2-DL-63D to 100D (double acting/double rod/with switch)



- SSD2-D-63D to 100D (double acting/double rod)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod Ⓐ	Steel	Industrial chrome plating	8	Magnet	Plastic	
2	C snap ring	Steel	Zinc phosphate	9	Piston	Aluminum alloy	Chromate
3	Rod metal	Aluminum alloy	Alumite	10	Piston packing	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		11	Piston rod Ⓑ	Steel	Industrial chrome plating
5	Body	Aluminum alloy	Hard alumite	12	Bush	Oiles drymet	*1
6	Rod packing	Nitrile rubber		13	Cushion rubber	Urethane rubber	
7	Spacer	Aluminum alloy	Chromate				

*1: Material is steel for copper and PTFE free specifications.

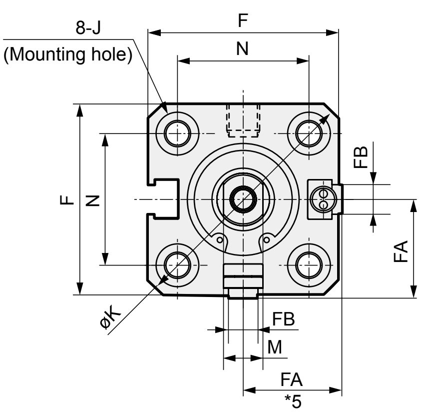
Repair parts list

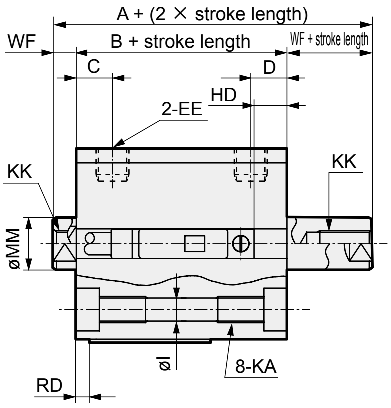
Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-D-63DK	④ ⑥ ⑩ ⑬
ø80	SSD2-D-80DK	
ø100	SSD2-D-100DK	

Dimensions

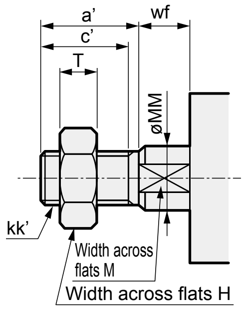
● SSD2-DL-12 to 25 (with switch)

ø12/ø16

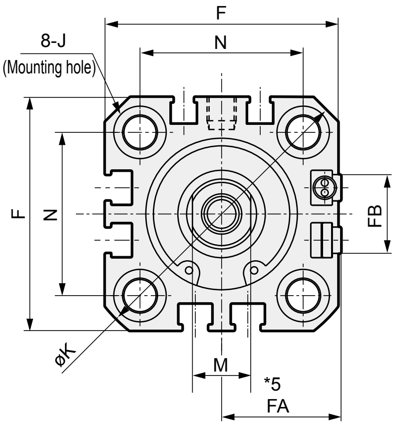


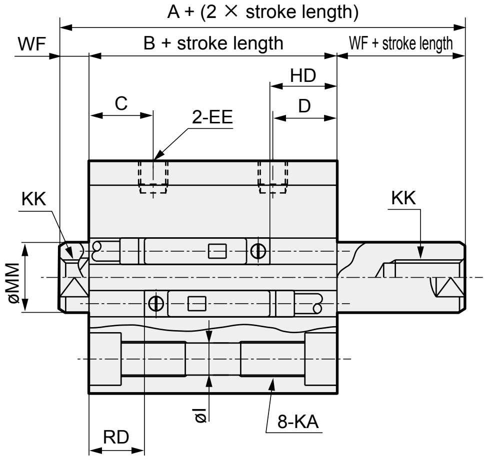


● Rod end male thread



ø20/ø25





Note: The positions for the left and right widths across flats are unspecified.

Code	Common dimensions with switch																
Bore size (mm)	A	B	C	D	EE	F	FA *5	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	34	27	5.5	5.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	34	27	5.5	5.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	45	36	8	8	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	49	39	11	11	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimensions	Reed T0H/T0V, T5H/T5V *6		Proximity T2H/T2V, T3H/T3V *6		Proximity T2WH/T2WV, T3WH/T3WV *6		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
Bore size (mm)	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	5.5	3	5.5	3	7.5	4.5				
ø16	5	2	5	2	6.5	3.5				
ø20	10	7.5	10	7.5	11.5	9.5	14	12	13	11
ø25	11.5	9.5	11.5	9.5	11.5	11	15	13	14	12

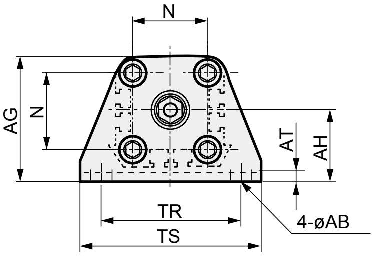
*1 : Only F switch is available for the ø20 or ø25 piping port surface.
*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.
*4 : Dimensions in ( ) of FA are for the radial lead wire.
*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.
*6 : The RD side can be identified with a mark on the port surface of the body.

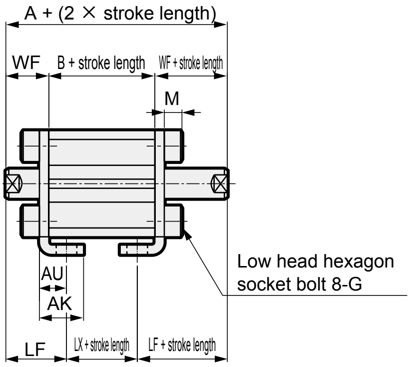
● Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

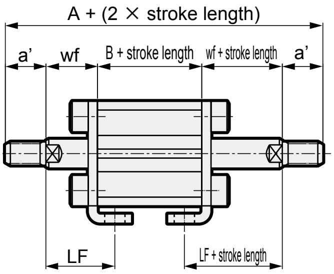
Dimensions with mounting bracket

- Axial foot (LB) with switch
  SSD2-DL-12 to 25 -LB





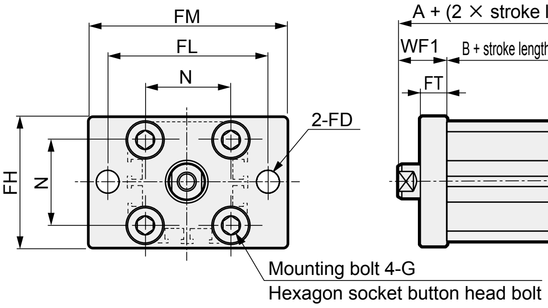
Rod end male thread

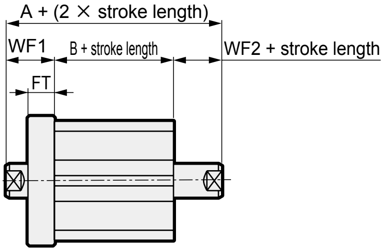


Code	Common dimensions									
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

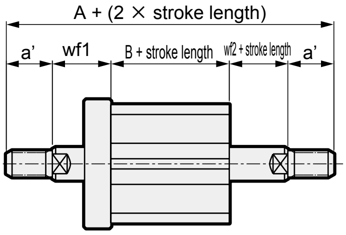
Code	Female thread					Male thread					
Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	54	27	15	10.5	13.5	19.5	75	27	15
ø16	13.5	19.5	54	27	15	12	13.5	19.5	78	27	15
ø20	14.5	20.5	65	36	24	14	14.5	20.5	93	36	24
ø25	15	22.5	69	39	24	17.5	15	22.5	104	39	24

- Rod side flange (FA) with switch
  SSD2-DL-12 to 25 -FA





Rod end male thread

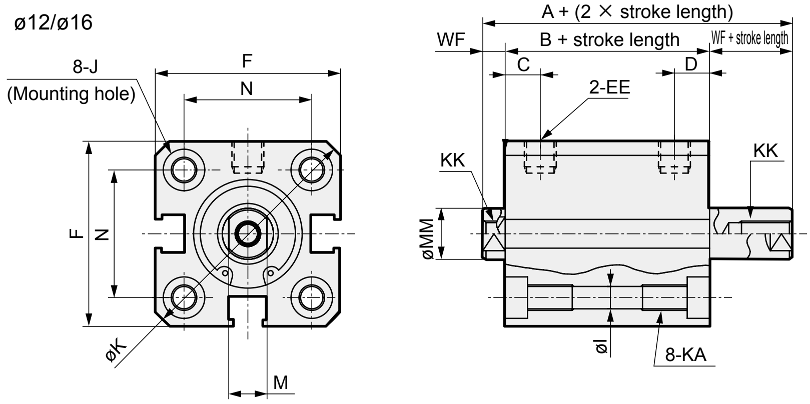


Code	Common dimensions							Female thread				Male thread				
Bore size (mm)	FD	FH	FL	FM	FT	N	G	WF1	WF2	A	B	a'	wf1	wf2	A	B
ø12	4.5	25	45	55	5.5	15.5	M4×12	13.5	3.5	44	27	11	13.5	3.5	65	27
ø16	4.5	30	45	55	5.5	20	M4×12	13.5	3.5	44	27	12	13.5	3.5	68	27
ø20	6.6	39	48	60	8	25.5	M6×16	14.5	4.5	55	36	14	14.5	4.5	83	36
ø25	6.6	42	52	64	8	28	M6×16	15	5	59	39	18	15	5	94	39

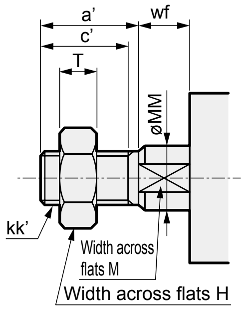
Dimensions CAD

● SSD2-D-12 to 25 (without switch)

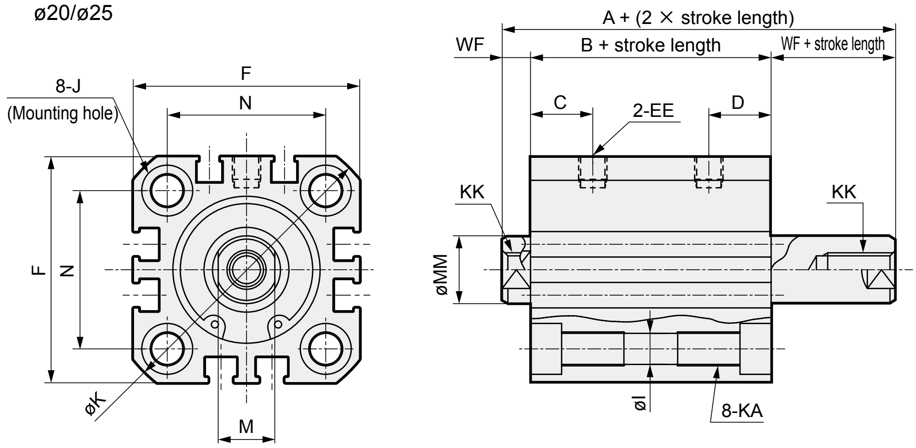
ø12/ø16



● Rod end male thread



ø20/ø25



Note: The positions for the left and right widths across flats are unspecified.

Code	Dimensions without switch and common dimensions														
Bore size (mm)	A	B	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	29	22	5.5	5.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	29	22	5.5	5.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	35	26	8	8	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	39	29	11	11	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

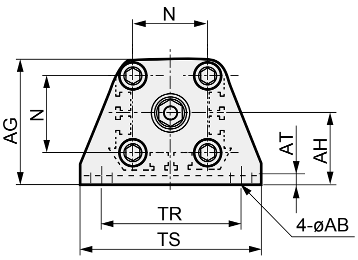
● Dimensions of rod end male thread part

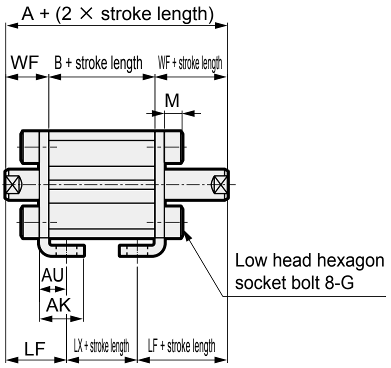
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

*1: For dimensions of individual accessories, refer to pages 1046 to 1049.

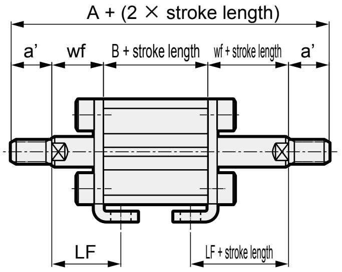
Dimensions with mounting bracket CAD

- Axial foot (LB) without switch
SSD2-D-12 to 25 -LB





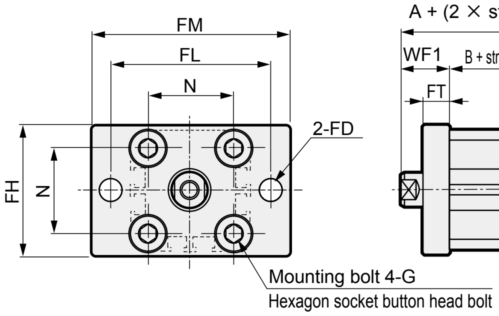
Rod end male thread

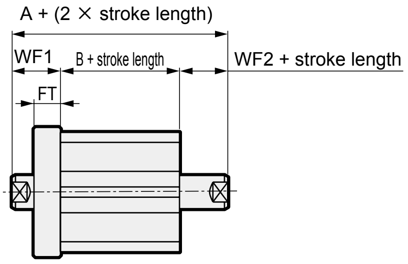


Code	Common dimensions										
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

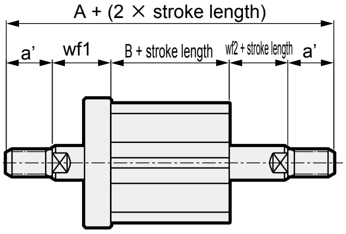
Code	Female thread					Male thread					
Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	49	22	10	10.5	13.5	19.5	70	22	10
ø16	13.5	19.5	49	22	10	12	13.5	19.5	73	22	10
ø20	14.5	20.5	55	26	14	14	14.5	20.5	83	26	14
ø25	15	22.5	59	29	14	17.5	15	22.5	94	29	14

- Rod side flange (FA) without switch
SSD2-D-12 to 25 -FA





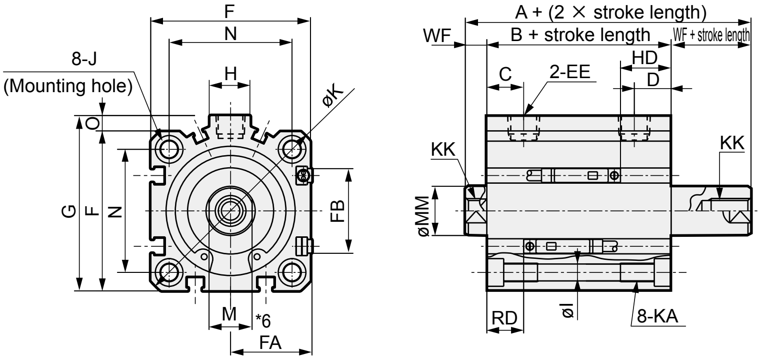
Rod end male thread



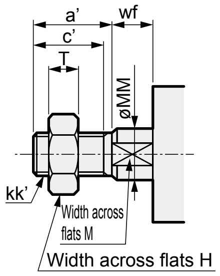
Code	Common dimensions							Female thread				Male thread				
Bore size (mm)	FD	FH	FL	FM	FT	N	G	WF1	WF2	A	B	a'	wf1	wf2	A	B
ø12	4.5	25	45	55	5.5	15.5	M4×12	13.5	3.5	39	22	11	13.5	3.5	60	22
ø16	4.5	30	45	55	5.5	20	M4×12	13.5	3.5	39	22	12	13.5	3.5	63	22
ø20	6.6	39	48	60	8	25.5	M6×16	14.5	4.5	45	26	14	14.5	4.5	73	26
ø25	6.6	42	52	64	8	28	M6×16	15	5	49	29	18	15	5	84	29

Dimensions CAD

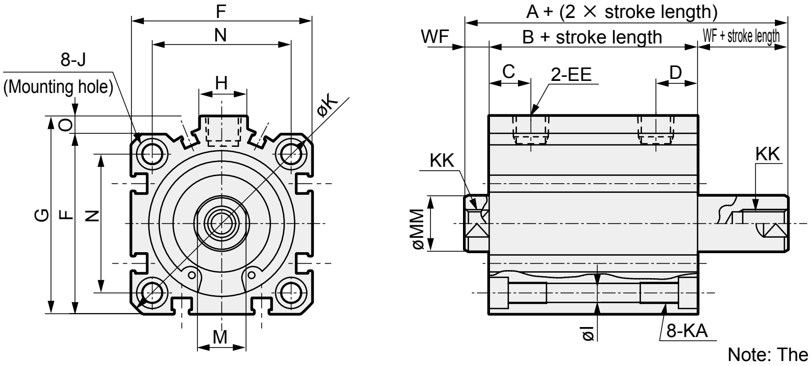
● SSD2-DL-32 to 100 (with switch)



● Rod end male thread



● SSD2-D-32 to 100 (without switch)



Note: The positions for the left and right widths across flats are unspecified.

Code	Without switch		Common dimensions with switch														
Bore size (mm)	A *2, *8	B *3, *8	A *2	B *3	C *10	D *10	EE *9	F	FA *6	FB	G	H	I	J	K	KA	KK
ø32	44.5(54.5)	30.5(40.5)	54.5	40.5	8(10)	8(5.5)	Rc1/8	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13
ø40	54(64)	40(50)	64	50	12(11.4)	12(7.8)	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13
ø50	56.5(66.5)	40.5(50.5)	66.5	50.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15
ø63	58(68)	42(52)	68	52	13	13	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15
ø80	71(81)	51(61)	81	61	16	16	Rc3/8	98	49.5(53)	28.5	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21
ø100	84.5(94.5)	60.5(70.5)	94.5	70.5	23	23	Rc3/8	117	59(62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27

Code	Common dimensions with switch					Switch dimensions					
						Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size (mm)	M	MM	N	O	WF	HD *4	RD *4	HD *4	RD *4	HD	RD
ø32	14	16	34	4.5	7	11	9	11	9	12.5	10.5
ø40	14	16	40	5	7	16.5	12	16.5	12	18	13.5
ø50	17	20	50	7	8	16.5	12.5	16.5	12.5	18	14
ø63	17	20	60	7	8	18	13	18	13	19.5	14.5
ø80	22	25	77	6	10	23	15.5	23	15.5	24.5	17
ø100	27	30	94	6.5	12	28.5	19.5	28.5	19.5	30	21

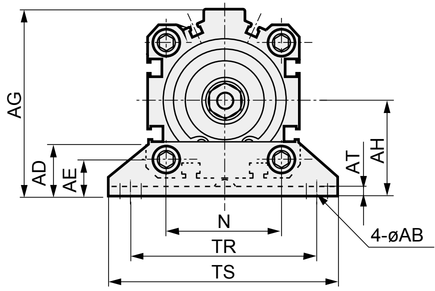
*1 : Custom stroke length is available only for more than 50 mm stroke lengths.
*2 : To calculate A + (2 x stroke length) when using a custom stroke length, apply "A + next longer standard stroke length + custom stroke length".
(Example) If the custom stroke length is 70 mm, apply "A + standard stroke length 75 mm + custom stroke length 70 mm".
*3 : To calculate B + stroke length when using custom stroke length, apply the next longer standard stroke length instead of the custom stroke length.
(Example) If the custom stroke length is 70 mm, apply the standard stroke length 75 mm.
*4 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
5 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.
*6 : Dimensions in ( ) of FA are for the radial lead wire.
*7 : For dimensions of individual accessories, refer to pages 1046 to 1049.
*8 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.
*9 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.
*10 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.
*11 : The RD side can be identified with a mark on the port surface of the body.

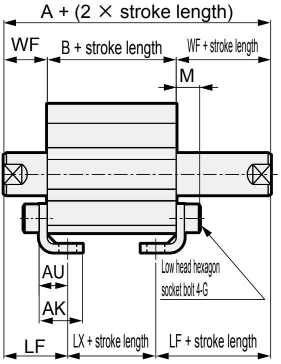
● Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

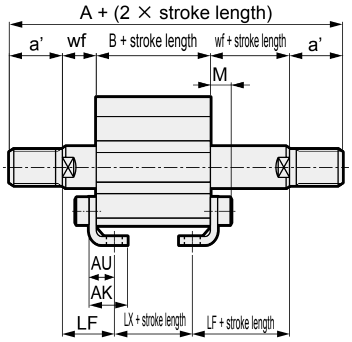
Dimensions with mounting bracket

● Axial foot (LB)
SSD2-D(L)-32 to 100 -LB





Rod end male thread

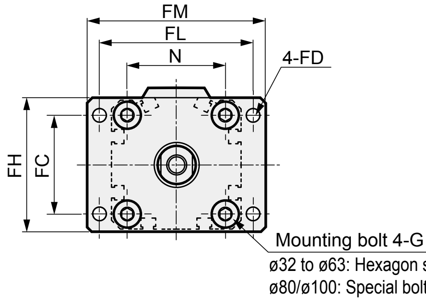


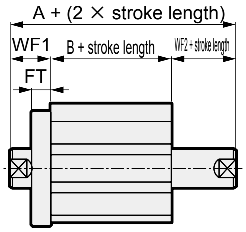
Code	Common dimensions											
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71	7.2
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78	7.2
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95	8.2
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113	9.2
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	77	118	140	11.5
ø100	13	35	24	136	71	35.5	6	23	M12×40	94	137	162	13

Code	Female thread								Male thread								
Bore size (mm)	WF	LF	Without switch			With switch			a'	wf	LF	Without switch			With switch		
			A	B	LX	A	B	LX				A	B	LX	A	B	LX
ø32	17	25	64.5(74.5)	30.5(40.5)	14.5(24.5)	74.5	40.5	24.5	23.5	15	23	107.5(117.5)	30.5(40.5)	14.5(24.5)	117.5	40.5	24.5
ø40	17	25	74(84)	40(50)	24(34)	84	50	34	23.5	15	23	117(127)	40(50)	24(34)	127	50	34
ø50	18	29.5	76.5(86.5)	40.5(50.5)	17.5(27.5)	86.5	50.5	27.5	28.5	15	26.5	127.5(137.59)	40.5(50.5)	17.5(27.5)	137.5	50.5	27.5
ø63	18	31	78(88)	42(52)	16(26)	88	52	26	28.5	15	28	129(139)	42(52)	16(26)	139	52	26
ø80	20	35	91(101)	51(61)	21(31)	101	61	31	35.5	18	33	158(168)	51(61)	21(31)	168	61	31
ø100	22	39	104.5(114.5)	60.5(70.5)	26.5(36.5)	115	70.5	36.5	35.5	18	35	167.5(177.5)	60.5(70.5)	26.5(36.5)	177.5	70.5	36.5

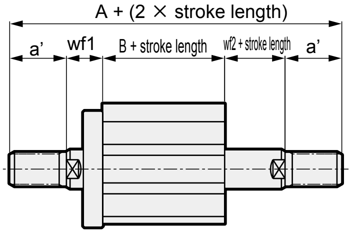
* Dimensions in ( ) are for stroke lengths of more than 50 mm.
Note: ø80: LB cannot be selected when B + stroke length is 72 or less.

● Rod side flange (FA)
SSD2-D(L)-32 to 100 -FA





Rod end male thread



Code	Common dimensions								Female thread						Male thread						
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF1	WF2	Without switch		With switch		a'	wf1	wf2	Without switch		With switch	
											A	B	A	B				A	B	A	B
ø32	34	5.5	48	56	65	8	34	M6×16	17	7	54.5(64.5)	30.5(40.5)	64.5	40.5	24	15	5	97.5(107.5)	30.5(40.5)	107.5	40.5
ø40	40	5.5	54	62	72	8	40	M6×16	17	7	64(74)	40(50)	74	50	24	15	5	107(117)	40(50)	117	50
ø50	50	6.6	67	76	89	9	50	M8×20	18	8	66.5(76.5)	40.5(50.5)	76.5	50.5	29	15	5	117.5(127.5)	40.5(50.5)	127.5	50.5
ø63	60	9	80	92	108	9	60	M10×25	18	8	68(78)	42(52)	78	52	29	15	5	119(129)	42(52)	129	52
ø80	77	11	99	116	134	11	77	M12×40	20	10	81(91)	51(61)	91	61	36	18	8	148(158)	51(61)	158	61
ø100	94	11	117	136	154	11	94	M12×40	22	12	94.5(104.5)	60.5(70.5)	104.5	70.5	36	18	8	157.5(167.5)	60.5(70.5)	167.5	70.5

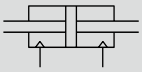
* Dimensions in ( ) are for stroke lengths of more than 50 mm.

Compact cylinder double acting/double rod (large bore size)

SSD2-D Series

- Bore size: ø125/ø140/ø160/ø180/ø200

JIS symbol



Specifications

Item	SSD2-D SSD2-DL (with switch)				
Bore size mm	ø125	ø140	ø160	ø180	ø200
Actuation	Double acting/double rod				
Working fluid	Compressed air				
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)			0.7 (≈100 psi, 7 bar)	
Min. working pressure MPa	0.05 (≈7.3 psi, 0.5 bar)				
Proof pressure MPa	1.6 (≈230 psi, 16 bar)			1.05 (≈150 psi, 10.5 bar)	
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)				
Port size	Rc3/8			Rc1/2	
Stroke tolerance mm	$^{+2.0}_{0}$				
Working piston speed mm/s	50 to 300			20 to 300	
Cushion	With rubber cushion (standard)				
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)				
Allowable absorbed energy J	6.52	6.52	7.78	12.4	

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø125	10, 20, 30, 40, 50 75, 100, 125, 150 175, 200, 250, 300	300	10
ø140			
ø160			
ø180			
ø200			

*1: Total length dimension with custom stroke length is handled as custom stroke dedicated length.
*2: When using the type with switch, refer to the table below.

Number of installed switches and min. stroke length (mm)

Switch quantity	1	2	3	4	5
Switch model No. / Bore size (mm)	T*	T*	T*	T*	T*
ø125	10	10	40	55	70
ø140	10	10	40	55	70
ø160	10	10	40	55	70
ø180	10	10	40	55	70
ø200	10	10	40	55	70

Switch specifications

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/ T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: kg)

Stroke length (mm)	10		20		30		40		50		75		100	
Bore size (mm)	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø125	4.64	4.74	4.98	5.08	5.32	5.42	5.66	5.76	6.00	6.10	6.85	6.95	7.70	7.80
ø140	6.62	6.73	7.00	7.11	7.38	7.49	7.77	7.88	8.15	8.26	9.00	9.11	10.07	10.18
ø160	9.10	9.22	9.58	9.70	10.06	10.18	10.54	10.66	11.02	11.14	12.22	12.34	13.41	13.53
ø180	13.12	13.27	13.62	13.77	14.12	14.27	14.62	14.77	15.12	15.27	16.36	16.51	17.61	17.76
ø200	16.09	16.27	16.65	16.83	17.21	17.39	17.77	17.95	18.33	18.51	19.73	19.91	21.13	21.31

Stroke length (mm)	125		150		175		200		250		300	
Bore size (mm)	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø125	8.55	8.65	9.40	9.50	10.25	10.35	11.10	11.20	12.80	12.90	14.50	14.60
ø140	11.02	11.13	11.87	11.98	12.72	12.83	13.57	13.68	15.27	15.38	16.97	17.08
ø160	14.61	14.73	15.81	15.93	17.01	17.13	18.21	18.33	20.61	20.73	23.01	23.13
ø180	18.85	19.00	20.10	20.25	21.35	21.50	22.59	22.74	25.09	25.24	27.58	27.73
ø200	22.53	22.71	23.93	24.11	25.32	25.50	26.72	26.90	29.52	29.70	32.32	32.50

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø125	Push/Pull	1.13×10^3	1.70×10^3	2.26×10^3	3.39×10^3	4.52×10^3	5.65×10^3	6.79×10^3	7.92×10^3	9.05×10^3	1.02×10^4	1.13×10^4
ø140	Push/Pull	1.44×10^3	2.16×10^3	2.89×10^3	4.33×10^3	5.77×10^3	7.22×10^3	8.66×10^3	1.01×10^4	1.15×10^4	1.30×10^4	1.44×10^4
ø160	Push/Pull	1.88×10^3	2.83×10^3	3.77×10^3	5.65×10^3	7.54×10^3	9.42×10^3	1.13×10^4	1.32×10^4	-	-	-
ø180	Push/Pull	2.39×10^3	3.58×10^3	4.77×10^3	7.16×10^3	9.54×10^3	1.19×10^4	1.43×10^4	1.67×10^4	-	-	-
ø200	Push/Pull	3.02×10^3	4.52×10^3	6.03×10^3	9.05×10^3	1.21×10^4	1.51×10^4	1.81×10^4	2.11×10^4	-	-	-

SSD2-D (Large bore size) Series

How to order

Without switch (without magnet for switch)

SSD2-D - 125 ○ - 50 ——— N

With switch (built-in magnet for switch)

SSD2-DL - 125 ○ - 50 - T0H - R - N

Ⓐ Bore size

Ⓑ Port thread

Ⓒ Stroke length

Ⓓ Switch model No. *1

Ⓔ Switch quantity

Ⓕ Option

Code	Description
Ⓐ Bore size (mm)	
125	ø125
140	ø140
160	ø160
180	ø180
200	ø200
Ⓑ Port thread	
Blank	Rc thread
NN	NPT thread (ø125 to ø160) (made-to-order product)
GN	G thread (ø125 to ø160) (made-to-order product)
Ⓒ Stroke length (mm)	
	Refer to the stroke length table on the following page.

Ⓓ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead Line
T0H*	**T0V***	Reed	●	●	1-color display	2-wire
T5H*	**T5V***		●	●	Without indicator lamp	
T8H*	**T8V***		●	●	1-color display	
T1H*	**T1V***	Proximity	●		1-color display	2-wire
T2H*	**T2V***			●		
T3H*	**T3V***			●		3-wire
T3PH*	**T3PV***			●	1-color display	
T2WH*	**T2WV***			●	2-color display	2-wire
T2YH*	**T2YV***			●		
T3WH*	**T3WV***			●		3-wire
T3YH*	**T3YV***			●		
T2JH*	**T2JV***			●	1-color display off-delay	2-wire
T2YD*	-			●	2-color display AC magnetic field	2-wire
T2YDT*	-			●		

Code	Description
*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)
Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread
P4	Specifications for rechargeable battery (made to order)
P40	

⚠ Precautions for model No. selection

*1: Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

SSD2-DL-125-50-T0H-R-N

Model: Compact cylinder double acting/double rod

Ⓐ Bore size : 125 mm
Ⓑ Port thread : Rc thread
Ⓒ Stroke length : 50 mm
Ⓓ Switch model No. : Reed T0H switch
· Lead wire length 1 m
Ⓔ Switch quantity : 1 on rod side
Ⓕ Option : Rod end male thread

How to order switch

SW - T0H

Switch model No.
(Item Ⓓ above)

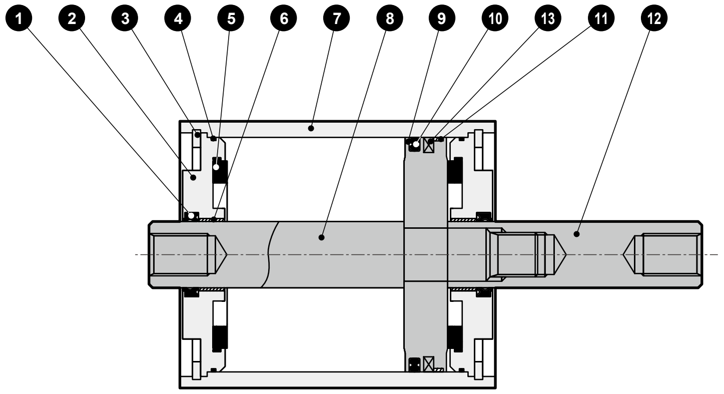
[Stroke length table]

Stroke length (mm)		Applicable bore size				
		ø125	**ø140**	**ø160**	**ø180**	**ø200**
Standard stroke length	10	●	●	●	●	●
	20	●	●	●	●	●
	30	●	●	●	●	●
	40	●	●	●	●	●
	50	●	●	●	●	●
	75	●	●	●	●	●
	100	●	●	●	●	●
	125	●	●	●	●	●
	150	●	●	●	●	●
	175	●	●	●	●	●
	200	●	●	●	●	●
	250	●	●	●	●	●
	300	●	●	●	●	●
Min. stroke length (mm) *1		10				
Max. stroke length (mm)		300				
Custom stroke length *2		In 1 mm increments				

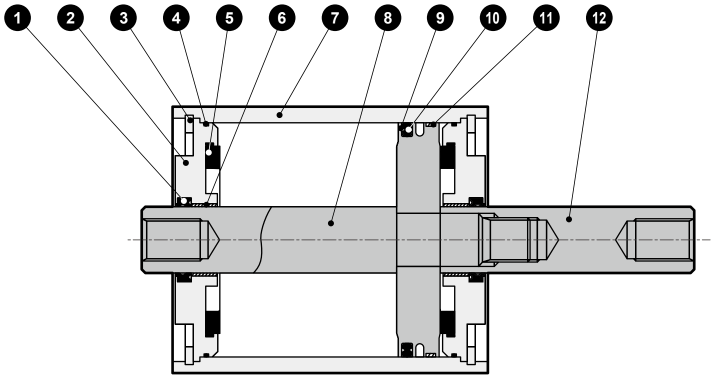
*1 : Refer to page 882 for the number of installed switches and the min. stroke length.
*2 : Total length dimension with custom stroke length is handled as custom stroke dedicated length.

Internal structure and parts list (ø125 to 160)

- SSD2-DL-125 to 160 (double acting/double rod/with switch)



- SSD2-D-125 to 160 (double acting/double rod/without switch)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Rod packing	Nitrile rubber		8	Piston rod Ⓐ	Steel	Industrial chrome plating
2	Rod metal	Aluminum die-casting	Chromate	9	Piston	Aluminum die-casting	
3	C type snap ring	Steel	Zinc phosphate	10	Piston packing	Nitrile rubber	
4	Metal gasket	Nitrile rubber		11	Wear ring	Polyacetal resin	
5	Cushion rubber	Urethane rubber		12	Piston rod Ⓑ	Steel	Industrial chrome plating
6	Bush	Oiles drymet		13	Magnet	Rubber	With switch only
7	Body	Aluminum alloy	Hard alumite				

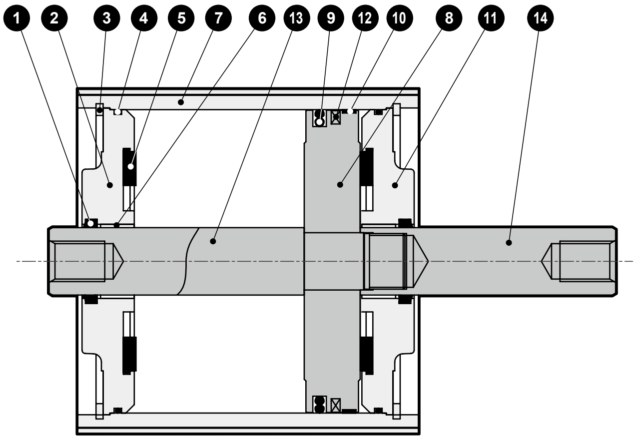
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø125	SSD2-D-125K	❶ ❹ ❺ ❿ ⓫
ø140	SSD2-D-140K	
ø160	SSD2-D-160K	

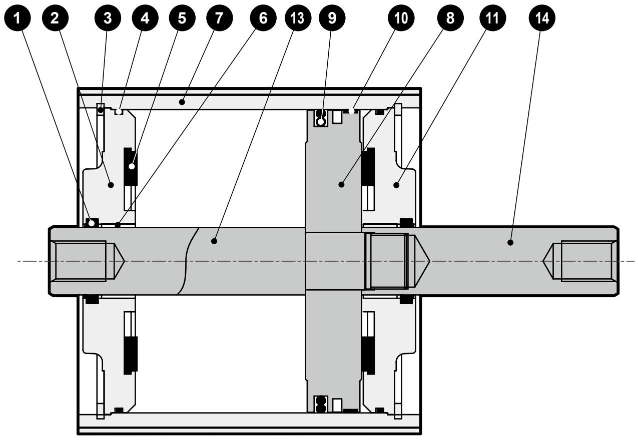
*1: Specify the kit No. when placing an order.

Internal structure and parts list (ø180, ø200)

- SSD2-DL-180, 200 (double acting/double rod/with switch)



- SSD2-D-180, 200 (double acting/double rod/without switch)



Parts list

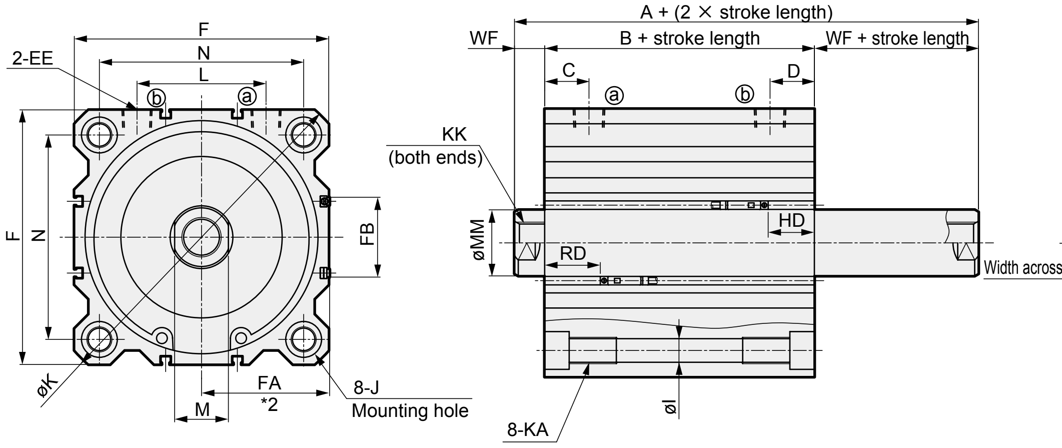
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Rod packing	Nitrile rubber		8	Piston	Aluminum alloy	
2	Rod metal	Cast iron	Paint	9	Piston packing	Nitrile rubber	
3	C type snap ring	Steel	Zinc phosphate	10	Wear ring	Polyacetal resin	
4	Gasket	Nitrile rubber		11	Cover	Cast iron	Paint
5	Cushion rubber	Urethane rubber		12	Magnet	Rubber	With switch only
6	Bush	Oiles drymet		13	Piston rod A	Steel	Industrial chrome plating
7	Body	Aluminum alloy	Hard alumite	14	Piston rod B	Steel	Industrial chrome plating

Repair parts list

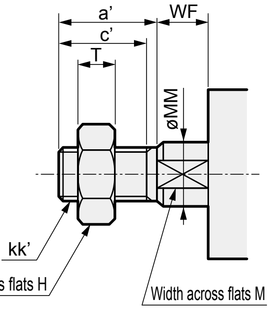
Bore size (mm)	Kit No.	Repair parts No.
ø180	SSD2-D-180K	❶❹❺❾❿
ø200	SSD2-D-200K	

Dimensions (ø125 to ø160) CAD

● SSD2-D(L)-125 to 160 (double acting/single rod)



● Rod end male thread



Note: The positions for the left and right widths across flats are unspecified.

Code / Bore size (mm)	Common dimensions with switch														
	A	B	C	D	EE	F	I	J	K	KA	KK (*1)	L	M	MM	N	WF
ø125	115	83	29	29	Rc3/8	142	12.5	20 spot face depth 13	190	M14 depth 25	M22 x 2.5 depth 30 (22.5)	72	30	35	114	16
ø140	115	83	27.5	27.5	Rc3/8	158	12.5	20 spot face depth 13	210	M14 depth 25	M22 x 2.5 depth 30 (22.5)	80	30	35	128	16
ø160	125	91	30	30	Rc3/8	178	14.7	23 spot face depth 15.2	238	M16 depth 28	M24 x 3 depth 33 (24)	90	36	40	144	17

Code	T0H/V, T2H/V, T3H/V, T5/V				T2YH/V, T3YH/V, T2JH/V				T1H/V, T2YD			
Bore size (mm)	HD	RD	FA *2	FB	HD	RD	FA *2	FB	HD	RD	FA *2	FB
ø125	30	35	71.5(75)	44.5	28.5	33.5	77(80)	48	28.5	33.5	82.5(85.5)	48
ø140	31.5	33.5	79.5(83)	44.5	30	32	85(88)	48	30	32	90.5(93.5)	48
ø160	34	39	89.5(93)	48.5	32.5	37.5	95(98)	52	32.5	37.5	100.5(103.5)	52

Code	T2WH/V, T3WH/V				T8H/V			
Bore size (mm)	HD	RD	FA *2	FB	HD	RD	FA *2	FB
ø125	31.5	36.5	71.5(75)	44.5	24	29	77(80)	48
ø140	33	35	79.5(83)	44.5	25.5	27.5	85(88)	48
ø160	35.5	40.5	89.5(93)	48.5	28	33	95(98)	52

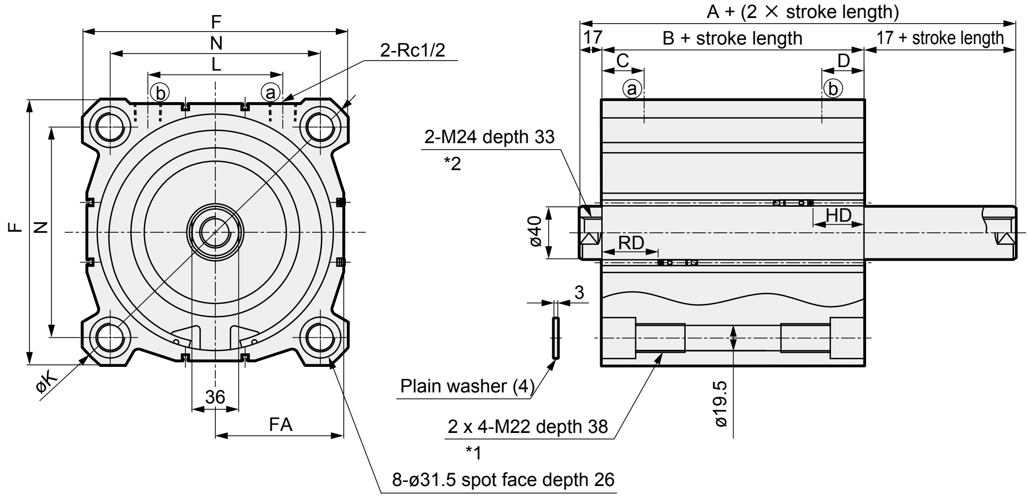
*1: Values in ( ) for KK dimensions indicate effective thread length on one side with 10 mm stroke length.
*2: Dimensions in ( ) of FA are for the radial lead wire.
*3: The RD side can be identified by a mark on the port surface of the body.

Dimensions of rod end male thread

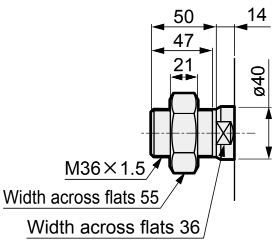
Code / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø125	45	42	46	M30×1.5	30	35	18	13
ø140	45	42	46	M30×1.5	30	35	18	13
ø160	50	47	55	M36×1.5	36	40	21	14

Dimensions (ø180 to ø200)

- ● SSD2-D(L)-180, 200 (double acting/double rod)



- ● Rod end male thread



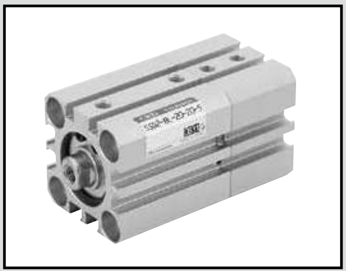
*1: 2×4-M22 through hole for 20 mm or less stroke length.
*2: 2-M24 depth 27 (ø180) and 2-M24 depth 29 (ø200) for 10 mm stroke length.
*3: The positions for the left and right widths across flats are unspecified.

Code / Bore size (mm)	A	B	C	D	F	K	L	N
ø180	136	102	32.5	32.5	204	270	104	162
ø200	143	109	33.5	33.5	226	300	110	182

Code	T0H/V, T2H/V, T3H/V, T5H/V			T2YH/V, T3YH/V, T2JH/V			T1H/V, T2YD		
Bore size (mm)	HD	RD	FA	HD	RD	FA	HD	RD	FA
ø180	39.5	43.5	99(102.5)	38.5	42.5	104.5(107.5)	38.5	42.5	110(113)
ø200	44.5	45.5	109.5(113)	43.5	44.5	115(118)	43.5	44.5	120.5(123.5)

Code	T2WH/V, T3WH/V			T8H/V		
Bore size (mm)	HD	RD	FA	HD	RD	FA
ø180	41.5	45.5	99(102.5)	33.5	37.5	104.5(107.5)
ø200	46.5	47.5	109.5(113)	38.5	39.5	115(118)

*1: Dimensions in ( ) of FA are for the radial lead wire.
*2: The RD side can be identified by a mark on the port surface of the body.

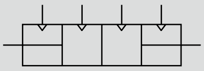


Compact cylinder double acting/back to back

SSD2-B Series

● Bore size: ø12/ø16/ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



RoHS

Specifications

Item	SSD2-B SSD2-BL (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting/back to back									
Working fluid	Compressed air									
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)									
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)							0.05 (≈7.3 psi, 0.5 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)									
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)									
Port size	M5				Rc1/8 *1		Rc1/4		Rc3/8	
Stroke tolerance mm					$S_1=^{+1.0}_{0}$			$S_2=^{+1.0}_{0}$		
Working piston speed mm/s	50 to 500							50 to 300		
Cushion	None									
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)									
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20 25/30	30	1
ø16			
ø20	5/10/15/20/25 30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

*1: When using the type with switch, refer to the table of the min. stroke length with switch.

Min. stroke length with switch (2 switches)

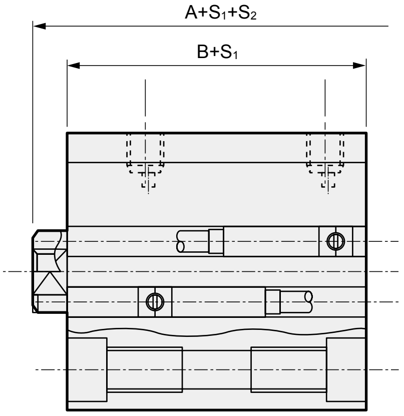
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø12	10(5)	5
ø16		
ø20	5	
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.
*2: Values in ( ) are for the type with 1 on rod side.

Custom stroke length

● SSD2-B Series

Item	Standard products Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	12/16	1 to 29
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-B-32-38-50 A +2 mm spacer is added to the SSD2-B-32-40 standard cylinder to create 38 mm stroke length. B + S_1 dimension is 63 mm.	



Switch specifications (F type switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/ F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/ F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 µA or less	1mA or less		10 µA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T type switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			Dedicated for programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 µA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

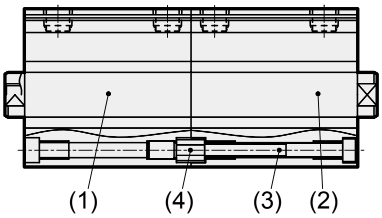
Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø12	36	86	44	86	53	95	61	103	70	112	72	114	-	-	-	-	-	-	-	-	-	-	-	-
ø16	48	104	59	104	69	114	80	125	91	136	102	147	-	-	-	-	-	-	-	-	-	-	-	-
ø20	63	118	75	150	88	163	101	176	113	188	126	201	139	214	152	227	165	240	203	278	-	-	-	-
ø25	87	178	102	193	118	209	134	225	160	241	165	256	181	272	197	288	213	304	228	319	-	-	-	-
ø32	122	236	144	258	166	280	188	302	209	323	231	345	253	367	275	389	297	411	318	432	494	542	604	652
ø40	183	326	210	353	236	379	263	406	290	433	316	459	342	485	369	512	395	538	472	565	646	695	776	825
ø50	-	-	341	535	383	577	425	619	467	661	510	704	552	746	594	788	636	830	678	872	1025	1082	1235	1292
ø63	-	-	507	786	562	841	617	896	672	951	727	1006	782	1061	838	1117	893	1172	948	1227	1438	1502	1713	1777
ø80	-	-	928	1341	1015	1428	1101	1514	1188	1601	1274	1887	1361	1774	1448	1861	1535	1948	1621	2034	2401	2467	2833	2899
ø100	-	-	1433	2000	1547	2114	1660	2227	1774	2341	1888	2455	2002	2569	2115	2682	2229	2796	2343	2910	3406	3478	3973	4045

Hexagon socket head cap screw weight

(Unit: g)

Stroke length (mm)	Cylinder 2 stroke length												Connector
Bore size (mm)	5	10	15	20	25	30	35	40	45	50	75	100	
ø12	3.2	4	4.8	5.6	6.4	7.2	-	-	-	-	-	-	5.6
ø16	3.2	2.4	2.4	2.4	2.4	2.4	-	-	-	-	-	-	5.6
ø20	8	11	14	16	19	22	25	28	30	33	-	-	14
ø25	8	11	14	16	19	22	25	28	30	33	-	-	14
ø32	8	11	14	16	19	22	25	28	30	33	47	61	14
ø40	8	11	14	16	19	22	25	28	30	33	47	61	14
ø50	-	16.7	20.6	24.5	28.5	32.4	36.3	40.3	44.2	48.1	67.8	87.5	28.8
ø63	-	40.8	47.2	53.6	60	66.4	72.8	79.2	85.6	92	124	156	60
ø80	-	60	72	84	96	108	120	132	144	156	216	276	116
ø100	-	60	72	84	96	108	120	132	144	156	216	276	116

(1) Cylinder 1
(2) Cylinder 2
(3) Hexagon socket head cap screw
(4) Connector



Total cylinder weight
Total weight = weight of cylinder 1 + weight of cylinder 2 + (hexagon socket head cap screw + connector).

[Example: Total weight of SSD-B-25-30-N-10-N]
Weight of ø25 with 30 mm stroke length:····(1)
Weight of ø25 with 10 mm stroke length:····(2)
Weight of hexagon socket head cap screw for ø25 cylinder 2 with 10 mm stroke length + weight of connector: ··· (3)

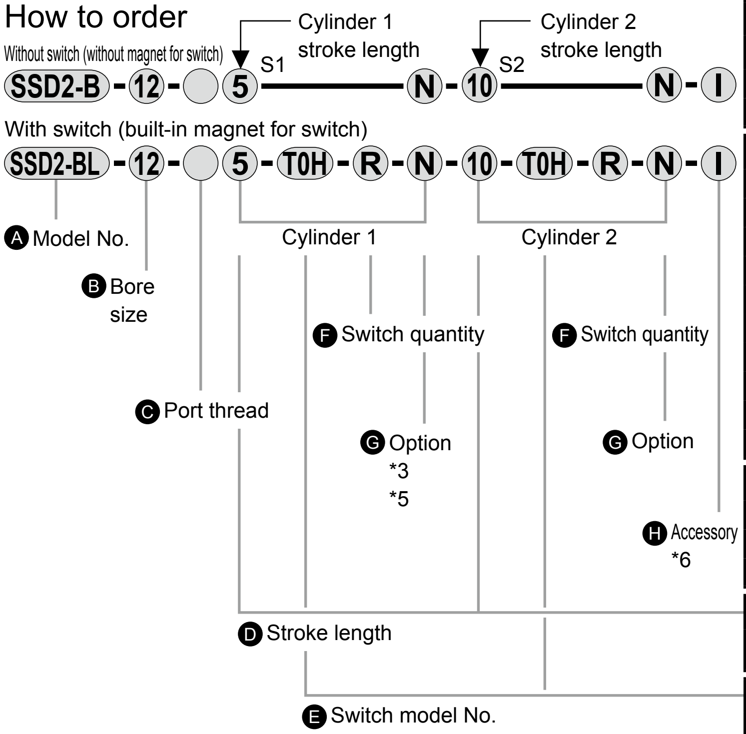
Total weight = (1) + (2) + (3) = 165 g + 102 g + 11 g + 14 g = 292 g

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^2	1.13×10^2
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	49.1	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	37.8	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	1.56×10^2	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	1.40×10^2	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	2.51×10^2	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	2.27×10^2	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	3.93×10^2	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	3.57×10^2	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

How to order



⚠ Precautions for model No. selection

*1 : When two cylinders are connected, the connection is from Cylinder 2 side. (Refer to dimensions) Determine cylinders 1 and 2 with the mounting method in mind.

2 : The T2YD switch cannot be installed on ø12 and ø16. In addition, T8* switch cannot be installed on ø12 to ø32.

*3 : Piston rod of ø12 to ø25 is stainless steel as standard. C type snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.

*4 : Refer to pages 750 and 751 for combinations of variations/options.

*5 : Option "N" will be inscribed on both S1 and S2 sides, but for all other option codes, they will only be written on S2.

*6 : Two units are included when an accessory is selected. One unit each is included when "IY" is selected.

*7 : The F type switch with L type lead wire on ø20 models cannot be selected on stroke lengths of 15 mm or under.

*8 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

*9 : When S1 stroke length is at or below that in the table below, the length of the usable mounting bolts will differ from the standard and so contact CKD.

Bore size	Without switch	With switch
	S1 Stroke length	
ø20	10 or less	-
ø25	5 or less	-
ø32	5 or less	-
ø50	5 or less	-
ø63	15 or less	5 or less
ø80	20 or less	10 or less
ø100	10 or less	-

*10: F type switch cannot be selected.

[Example of model No.]

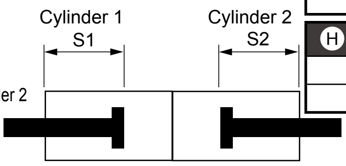
SSD2-BL-12-5-T0H-R-N-10-T0H-R-N

Model: Compact cylinder, back to back

Cylinder 1
Ⓑ Bore size : ø12 mm
Ⓒ Port thread : Rc thread
Ⓓ Stroke length S1 : 5 mm
Ⓔ Switch model No. : Reed switch T0H, lead wire 1 m
Ⓕ Switch quantity : 1 on rod side
Ⓒ Option : Rod end male thread

Cylinder 2
Ⓓ Stroke length S2 : 10 mm
Ⓔ Switch model No. : Reed switch T0H, lead wire 1 m
Ⓕ Switch quantity : 1 on rod side
Ⓖ Option : Rod end male thread

Cylinder 1 stroke length	5 mm (S1)	
+ Cylinder 2 stroke length	10 mm (S2)	
Total stroke	15 mm	S1+S2



Code	Description
Ⓐ Model No.	
SSD2-B	Double acting/back to back
SSD2-BL	Double acting/back to back/with switch
Ⓑ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓒ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)

Ⓓ Stroke length (mm)

Refer to the stroke length table on the following page.

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	Bore size 12	16	20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire			●	●						
-	F3S*			●		3-wire			●	●						
F2H*	F2V*			●		2-wire			●	●						
F3H*	F3V*			●		3-wire			●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire			●	●						
F2YH*	F2YV*			●	2-color display	2-wire			●	●						
F3YH*	F3YV*			●		3-wire			●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	no indicator lamp		●	●	●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display							●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire			●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●					●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●					●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display (AC magnetic field)	2-wire			●	●	●	●	●	●	●	●
T2YDT*	-			●					●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire			●	●	●	●	●	●	●	●

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *9

Ⓕ Switch quantity	
R	1 on rod side
H	1 on head side
D	2

Ⓖ Option	
Blank	Rod end female thread
N	Rod end male thread
M *3	Piston rod material (stainless steel)

Ⓗ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

[Stroke length table]

Stroke length (mm)		Applicable bore size									
		12	16	20	25	32	40	50	63	80	100
Standard stroke length	5	●	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●
	100					●	●	●	●	●	●
Min. stroke length (mm) *1		1									
Max. stroke length (mm)		30		50		100					
Custom stroke length *2		In 1 mm increments									

1 : Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available.
Refer to page 890 for the min. stroke length with switch.

*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

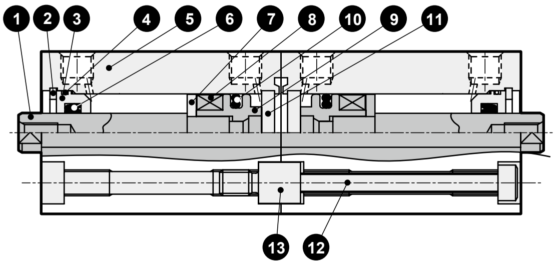
How to order switch

SW - **T0H**

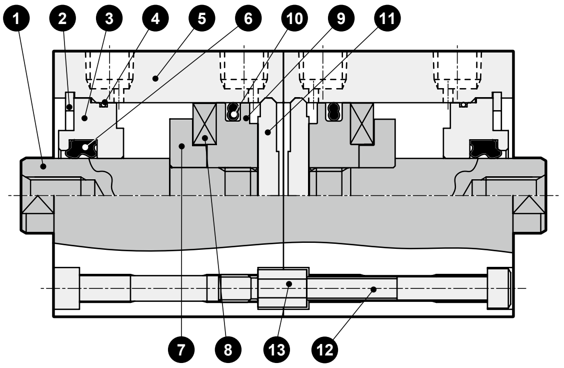
Switch model No.
(Item Ⓔ on page 894)

Internal structure and parts list

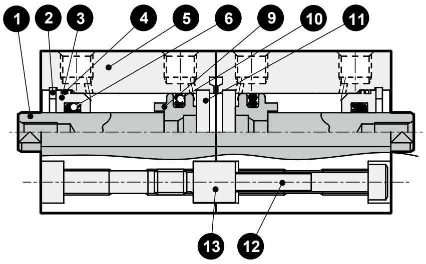
● SSD2-BL-12 to 25 (double acting/back to back/with switch)



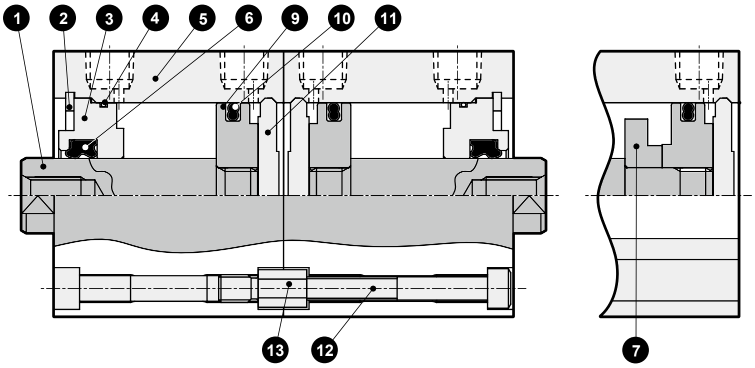
● SSD2-BL-32 to 50 (double acting/back to back/with switch)



● SSD2-B-12 to 25 (double acting/back to back)



● SSD2-B-32 to 50 (double acting/back to back)



Over 50 st

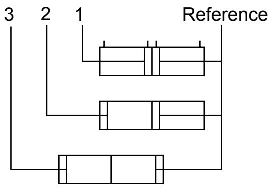
No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50 Industrial chrome plating
2	C type snap ring	Steel	Zinc phosphate
3	Rod metal	Special aluminum	Alumite
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Nitrile rubber	
7	Spacer	Aluminum alloy	Chromate
8	Magnet	Plastic	
9	Piston	Aluminum alloy	Chromate
10	Piston packing	Nitrile rubber	
11	Cover	ø12 to 25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
12	Hexagon socket head cap screw	Steel	Black finish
13	Connector	Steel	Zinc chromate

Repair parts list

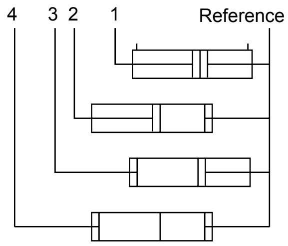
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-B-12K	④⑥⑩
ø16	SSD2-B-16K	
ø20	SSD2-B-20K	
ø25	SSD2-B-25K	
ø32	SSD2-B-32K	
ø40	SSD2-B-40K	
ø50	SSD2-B-50K	

SSD2-B application examples

When the same stroke lengths are combined, 3 positions are possible.

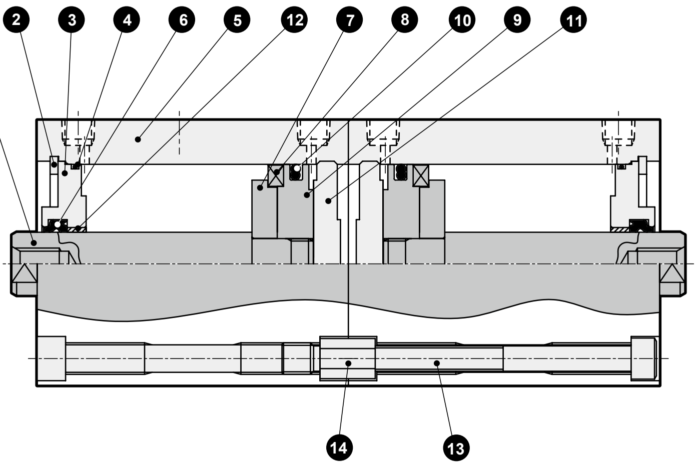


When different stroke lengths are combined, 4 positions are possible.

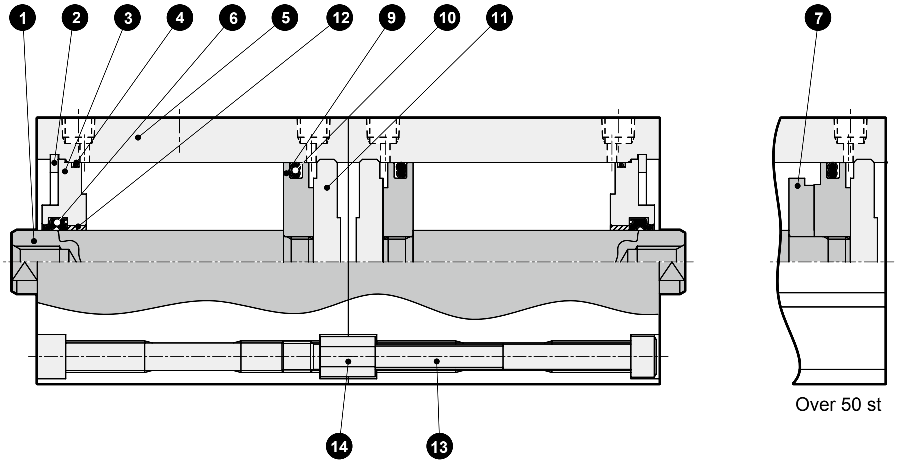


Internal structure and parts list

- SSD2-BL-63 to 100 (double acting/back to back/with switch)



- SSD2-B-63 to 100 (double acting/back to back)



Over 50 st

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	8	Magnet	Plastic	
2	C type snap ring	Steel	Zinc phosphate	9	Piston	Aluminum alloy	Chromate
3	Rod metal	Aluminum alloy	Chromate	10	Piston packing	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		11	Cover	Aluminum alloy	Alumite
5	Body	Aluminum alloy	Hard alumite	12	Bush	Oiles drymet	*1
6	Rod packing	Nitrile rubber		13	Hexagon socket head cap screw	Steel	Black finish
7	Spacer	Aluminum alloy	Chromate	14	Connector	Steel	Zinc chromate

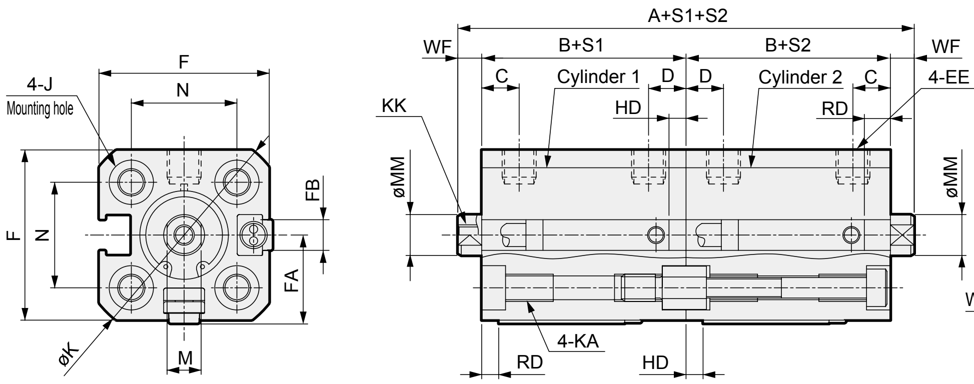
*1: Material is steel for copper and PTFE free specifications.

Repair parts list

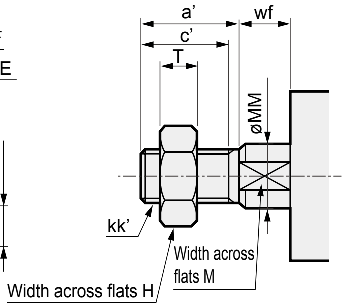
Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-B-63K	④⑥⑩
ø80	SSD2-B-80K	
ø100	SSD2-B-100K	

Dimensions

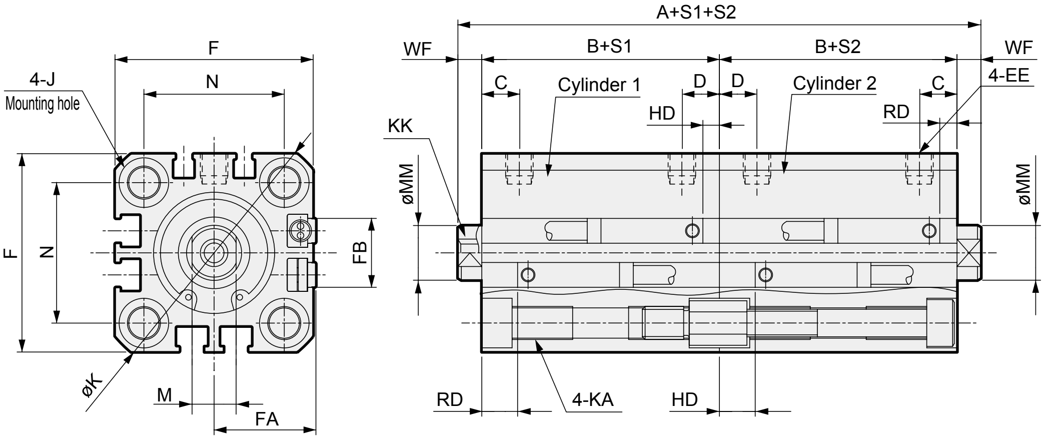
● SSD2-BL-12/16 (with switch)



● Rod end male thread



● SSD2-BL-25, 32 (with switch)



Code	Common dimensions with switch															
Bore size (mm)	A *1	B *1	C	D	EE	F	FA *4	FB	J	K	KA	KK	M	MM	N	WF
ø12	51	22	5.5	5.5	M5	25	13(16.5)	4.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	51	22	5.5	5.5	M5	29	15(18.5)	4.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	68	29.5	8	5.5	M5	36	18.5(22)	12.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	75	32.5	11	6	M5	40	20.5(24)	13.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimensions	Reed T0H/T0V, T5H/T5V *6		Proximity T2H/T2V, T3H/T3V *6		Proximity T2WH/T2WV, T3WH/T3WV *6		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
Bore size (mm)	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	1.5	1.5	1.5	1.5	3.5	3.5				
ø16	0	4	0	4.5	1	6				
ø20	3	7.5	3	7.5	5	9.5	7.5	12	6.5	11
ø25	4	9.5	4	9.5	6	11.5	8.5	14	7.5	13

*1 : To calculate A + S1 + S2, B + S1 or B + S2 when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.

*4 : Dimensions in ( ) of FA are for the radial lead wire.

*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.

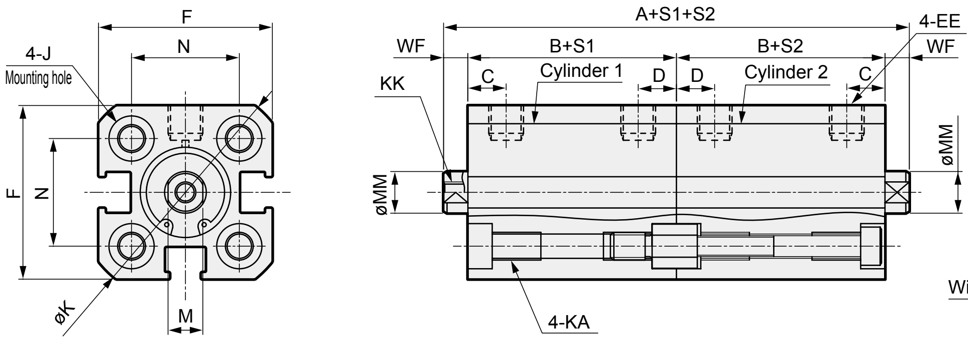
*6 : Only F type switch is available for the ø20 or ø25 piping port surface.

● Rod end male thread

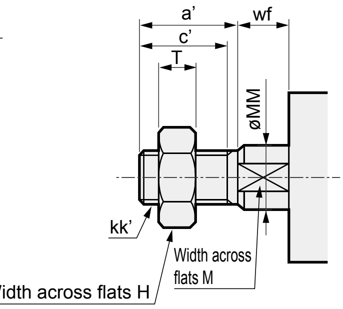
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

Dimensions

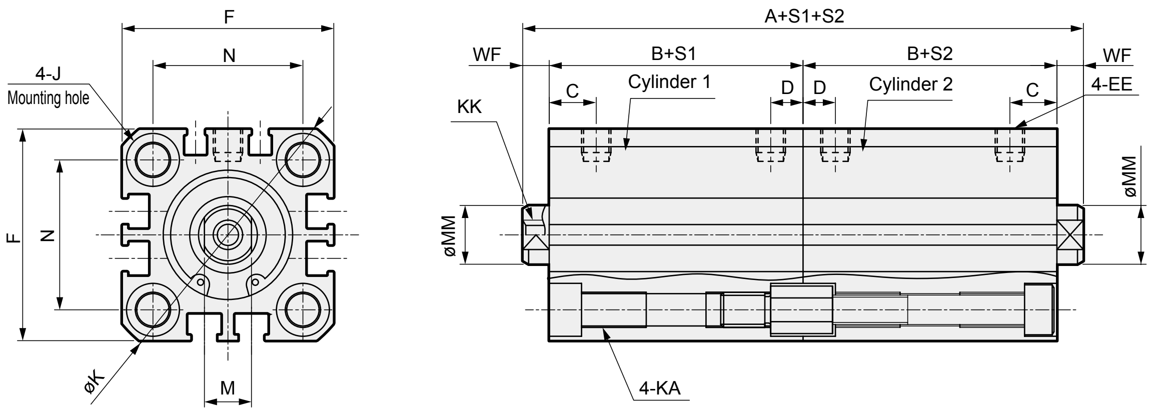
- SSD2-B-12/16 (without switch)



- Rod end male thread



- SSD2-B-20, 25 (without switch)



Code	Dimensions without switch and common dimensions													
Bore size (mm)	A [*1]	B [*1]	C	D	EE	F	J	K	KA	KK	M	MM	N	WF
ø12	41	17	5.5	5.5	M5	25	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	41	17	5.5	5.5	M5	29	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	48	19.5	8	5.5	M5	36	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	55	22.5	11	6	M5	40	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

- Rod end male thread

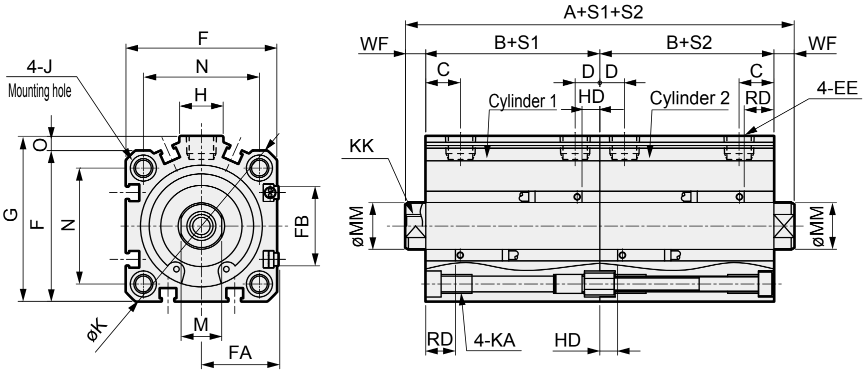
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

*1 : To calculate A + S1 + S2, B + S1 or B + S2 when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

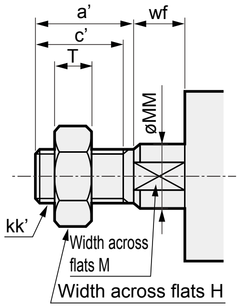
*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

Dimensions

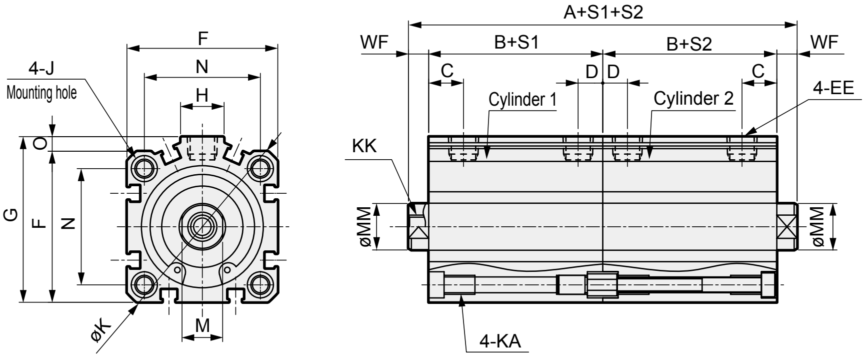
● SSD2-BL-32 to 100 (with switch)



● Rod end male thread



● SSD2-B-32 to 100 (without switch)



Code	Without switch		Common dimensions with switch											
Bore size (mm)	A *1, *6	B *1, *6	A *1	B *1	C *8	D *8	EE	F	FA *4	FB	G	H	J	K
ø32	60(80)	23(33)	80	33	8(10)	8(5.5)	Rc1/8 *7	45	23(26.5)	20.5	49.5	12.5	9 spot face depth 5.5	60
ø40	73(93)	29.5(39.5)	93	39.5	12(11.5)	8.5(8)	Rc1/8	52	26.5(30)	27.5	57	15	9 spot face depth 5.5	69
ø50	77(97)	30.5(40.5)	97	40.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	11 spot face depth 6.5	86
ø63	88(108)	36(46)	108	46	13	11	Rc1/4	77	39(42.5)	28.5	84	23	14 spot face depth 9	103
ø80	107(127)	43.5(53.5)	127	53.5	16	13	Rc3/8	98	49.5(53)	28.5	104	31	17.5 spot face depth 11	132
ø100	130(150)	53(63)	150	63	23	15	Rc3/8	117	59(62.5)	28.5	123.5	38	17.5 spot face depth 11	156

Code	Common dimensions with switch							Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH T3WV	
Bore size (mm)	KA	KK	M	MM	N	O	WF	HD *2	RD *2	HD *2	RD *2	HD	RD
ø32	M6 depth 11	M8 depth 13	14	16	34	4.5	7	4	9.5	4	9.5	6	11.5
ø40	M6 depth 11	M8 depth 13	14	16	40	5	7	7	12	7	12	8.5	13.5
ø50	M8 depth 13	M10 depth 15	17	20	50	7	8	7.5	12.5	7.5	12.5	9	14
ø63	M10 depth 25	M10 depth 15	17	20	60	7	8	12.5	13	12.5	13	14	14.5
ø80	M12 depth 28	M16 depth 21	22	25	77	6	10	17.5	15.5	17.5	15.5	19	17
ø100	M12 depth 28	M20 depth 27	27	30	94	6.5	12	23	19.5	23	19.5	24.5	21

*1 : To calculate A + S1 + S2, B + S1 or B + S2 when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.

*4 : Dimensions in ( ) of FA are for the radial lead wire.

*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.

*6 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

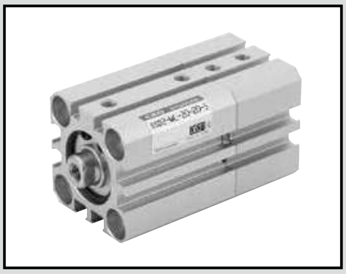
*7 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

*8 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

● Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

MEMO



Compact cylinder double acting/two-stage

SSD2-W Series

● Bore size: ø12/ø16/ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

RoHS

Specifications

Item	SSD2-W SSD2-WL (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting/two-stage									
Working fluid	Compressed air									
Max. working pressure MPa	1.0 (≈150 psi, 10 bar) (*1)									
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)							0.1 (≈15 psi, 1 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)									
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)									
Port size	M5				Rc1/8 (*2)		Rc1/4		Rc3/8	
Stroke tolerance mm	$S_1=^{+1.0}_{0}$					$S_2=^{0}_{-1.5}$				
Working piston speed mm/s	50 to 500							50 to 300		
Cushion	None									
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)									
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

*1: The max. working pressure is 0.5 MPa when S1 and S2 are the same value.
*2: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20 25/30	30	1
ø16			
ø20	5/10/15/20/25 30/35/40/45/50	50	
ø25			
ø32			
ø40			
ø50	10/15/20/25 30/35/40/45/50	50	
ø63			
ø80			
ø100			

*1: The custom stroke length is available in 1 mm increments. However, the total length is the same as that of the next longer standard stroke length.
*2: When using the type with switch, refer to the table on the right.

Min. stroke length with switch (2 switches)

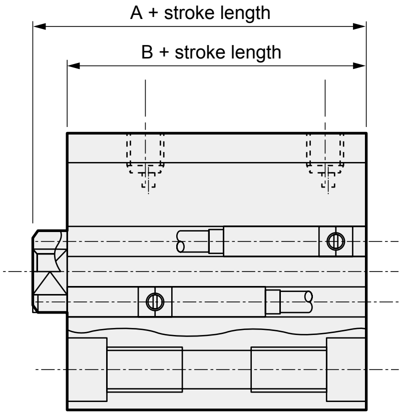
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø12	10(5)	5
ø16		
ø20	5	
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.
*2: Values in ( ) are for the type with 1 on rod side.

Custom stroke length

● SSD2-W Series

<table>
<tr><th rowspan="2">Item</th><th colspan="2">Standard products</th></tr>
<tr><th colspan="2">Standard stroke length body with spacer</th></tr>
<tr><td>Model No.</td><td colspan="2">Refer to How to order.</td></tr>
<tr><td>Description</td><td colspan="2">A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.</td></tr>
<tr><td rowspan="4">Stroke range</td><td>Bore size</td><td>Stroke range</td></tr>
<tr><td>12/16</td><td>1 to 29</td></tr>
<tr><td>20 to 25</td><td>1 to 49</td></tr>
<tr><td>32 to 100</td><td>1 to 99</td></tr>
<tr><td>Example of model No.</td><td colspan="2">Model No.: SSD2-W-32-38
A +2 mm spacer is added to the SSD2-W-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 63mm.</td></tr>
</table>



Switch specifications (F type switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/ F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/ F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T type switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/ T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			Dedicated for programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)

*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.

*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø12	37	87	45	87	54	96	62	104	71	113	73	115	-	-	-	-	-	-	-	-	-	-	-	-
ø16	49	105	60	105	70	115	81	126	92	137	103	148	-	-	-	-	-	-	-	-	-	-	-	-
ø20	65	120	77	152	90	165	103	178	115	190	128	203	141	216	154	229	167	242	205	280	-	-	-	-
ø25	90	181	105	196	121	212	137	228	163	244	168	259	184	275	200	291	216	307	231	322	-	-	-	-
ø32	126	240	148	262	170	284	192	306	213	327	235	349	257	371	279	393	301	415	322	436	494	542	604	652
ø40	189	332	216	359	242	385	269	412	296	439	322	465	348	491	375	518	401	544	478	571	646	695	776	825
ø50	-	-	354	548	396	590	438	632	480	674	523	717	565	759	607	801	649	843	691	885	1038	1095	1248	1305
ø63	-	-	543	822	598	877	653	932	708	987	763	1042	818	1097	874	1153	929	1208	984	1263	1474	1538	1749	1813
ø80	-	-	1002	1415	1089	1502	1175	1588	1262	1675	1348	1961	1435	1848	1522	1935	1609	2022	1695	2108	2475	2541	2907	2973
ø100	-	-	1558	2125	1672	2239	1785	2352	1899	2466	2013	2580	2127	2694	2240	2807	2354	2921	2468	3035	3531	3603	4098	4170

Total cylinder weight

Total weight = weight of cylinder 1 + weight of cylinder 2.

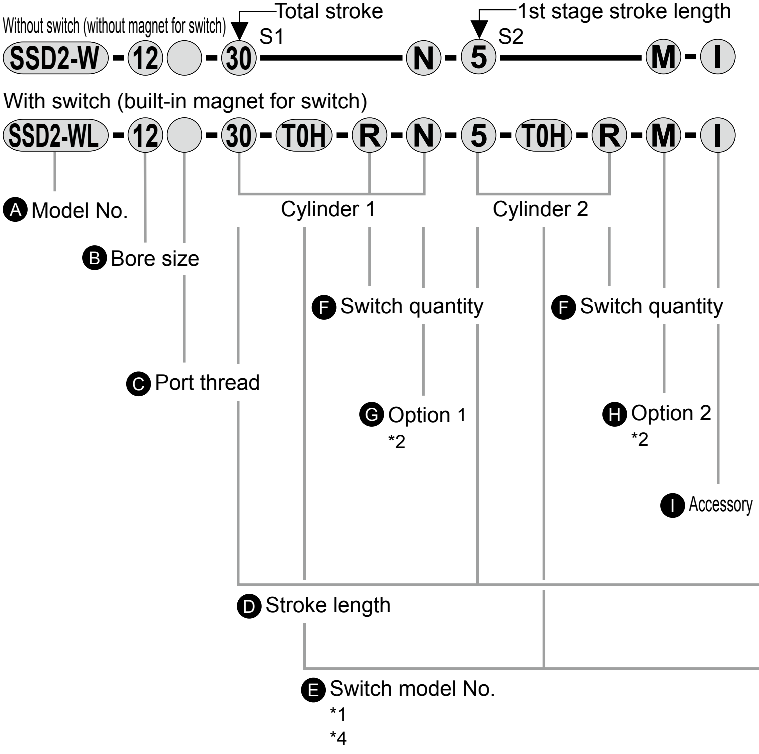
[Example: Total weight of SSD-W-25-30-N-10-N]

Weight of ø25 with 30 mm stroke length:····(1)

Weight of ø25 with 10 mm stroke length:····(2)

Total weight = (1) + (2) = 168 g + 105 g = 273 g

How to order



Code	Description
Ⓐ Model No.	
SSD2-W	Double acting/two-stage
SSD2-WL	Double acting/two-stage/with switch
Ⓑ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓒ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)

Ⓓ Stroke length (mm)

Refer to the stroke length table on the following page.

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	Bore size 12	16	20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire			●	●						
-	F3S*			●		3-wire			●	●						
F2H*	F2V*			●		2-wire			●	●						
F3H*	F3V*			●		3-wire			●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire			●	●						
F2YH*	F2YV*			●	2-color display	2-wire			●	●						
F3YH*	F3YV*			●		3-wire			●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	no indicator lamp		●	●	●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display							●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire			●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●					●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●					●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display (AC magnetic field)	2-wire			●	●	●	●	●	●	●	●
T2YDT*	-			●					●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire			●	●	●	●	●	●	●	●

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *5
Ⓕ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓖ Option 1	
Blank	Rod end female thread
N	Rod end male thread
Ⓗ Option 2	*2
M	Piston rod material (stainless steel)
Ⓘ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

1 : T2YD switch cannot be installed on ø12 and ø16. In addition, T8* switch cannot be installed on ø12 to ø32.

*2 : Piston rod of ø12 to ø25 is stainless steel as standard. C type snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.

*3 : Refer to pages 750 and 751 for combinations of variations/options.

*4 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

*5 : F type switch cannot be selected.

[Example of model No.]

SSD2-WL-12-30-T0H-R-N-5-T0H-R-I

Model: Compact cylinder two-stage

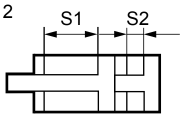
Cylinder 1

- Ⓑ Bore size : ø12 mm
- Ⓒ Port thread : Rc thread
- Ⓓ Total stroke length S1 : 30 mm
- Ⓔ Switch model No. : Reed switch T0H, lead wire 1 m
- Ⓕ Switch quantity : 1 on rod side
- Ⓖ Option 1 : Rod end male thread

Cylinder 2

- Ⓓ 1st stage stroke length S2 : 5 mm
- 2nd stage stroke length : 25 mm
- Ⓔ Switch model No. : Reed switch T0H, lead wire 1 m
- Ⓕ Switch quantity : 1 on rod side
- Ⓘ Accessory : Rod eye

1st stage stroke length	5 mm	(S2)
+ 2nd stage stroke length	25 mm	
Total stroke length	30 mm	(S1)



[Stroke length table]

Stroke length (mm)		**Applicable bore size**									
		ø12	**ø16**	**ø20**	**ø25**	**ø32**	**ø40**	**ø50**	**ø63**	**ø80**	**ø100**
Standard stroke length	5	●	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●
Min. stroke length (mm)		1									
Max. stroke length (mm)		30		50							
Custom stroke length *1		In 1 mm increments									

1 : Less than 5 mm with 1-color display switch and less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available.
Refer to page 902 for the number of installed switches and the min. stroke length.

*2 : The total length is the same as that of the next longer standard stroke length.

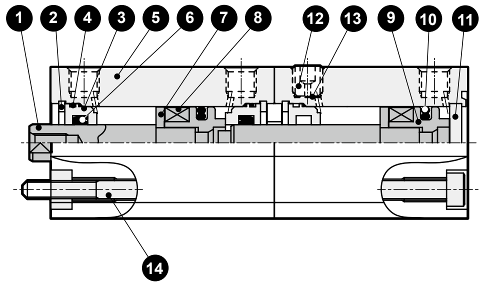
How to order switch

SW - **T0H**

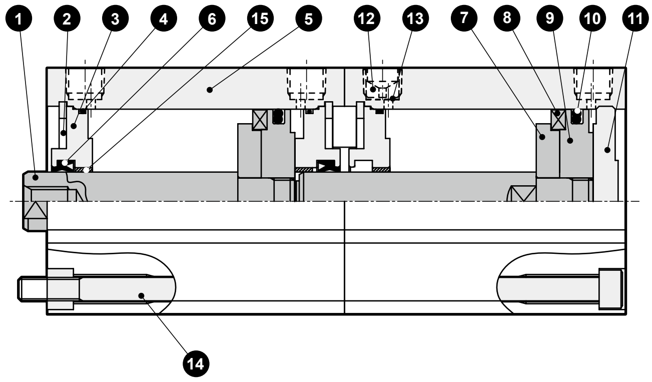
Switch model No.
(Item Ⓔ on page 904)

Internal structure and parts list

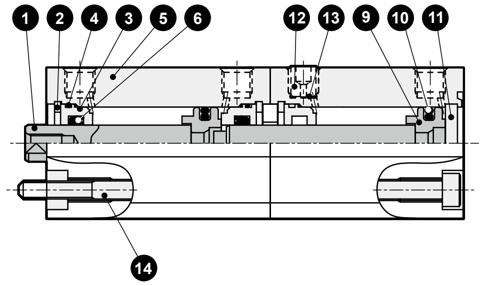
- SSD2-WL-12 to 50 (double acting/two-stage/with switch)



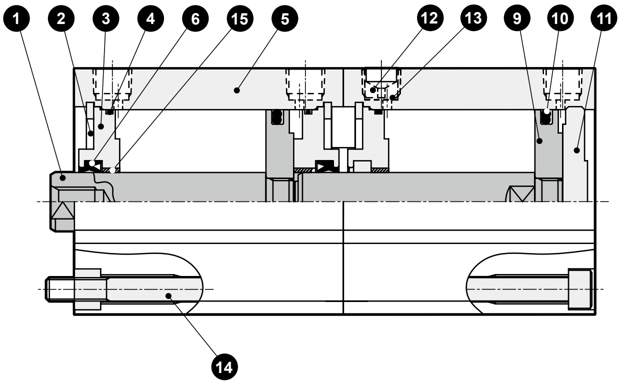
- SSD2-WL-63 to 100 (double acting/two-stage/with switch)



- SSD2-W-12 to 50 (double acting/two-stage)



- SSD2-W-63 to 100 (double acting/two-stage)



No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø100: Steel	ø16 to ø100 Industrial chrome plating
2	C type snap ring	Steel	Zinc phosphate
3	Rod metal	ø12 to ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø12 to ø50: Alumite ø63 to ø100: Chromate
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Nitrile rubber	
7	Spacer	Aluminum alloy	Chromate
8	Magnet	Plastic	
9	Piston	Aluminum alloy	Chromate
10	Piston packing	Nitrile rubber	
11	Cover	ø12 to 25: Stainless steel ø32 to ø100: Aluminum alloy	ø32 to ø100 Alumite
12	Plug	Stainless steel	
13	Stainless steel mesh	Stainless steel	
14	Hexagon socket head cap screw	Steel	Black finish
15	Bush	Oiles drymet	

Repair parts list

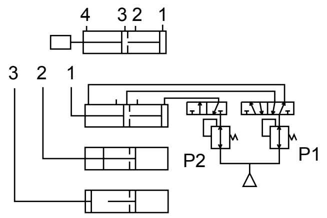
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-W-12K	④ ⑥ ⑩
ø16	SSD2-W-16K	
ø20	SSD2-W-20K	
ø25	SSD2-W-25K	
ø32	SSD2-W-32K	
ø40	SSD2-W-40K	
ø50	SSD2-W-50K	
ø63	SSD2-W-63K	
ø80	SSD2-W-80K	
ø100	SSD2-W-100K	

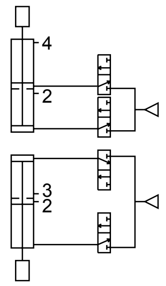
SSD2-W application examples

Pressure setting: P2 > P1

- 1st stage push
  Keeping port 4 pressurized, pressurize port 1.
- 2nd stage push
  Keeping port 1 pressurized, pressurize port 3.

It may not be P2 = P1 depending on the load direction. When using a single acting cylinder with free fall load, ports 2 and 4 in the upper figure and ports 2 and 3 in the lower figure are breathing holes. Port 2, which basically needs no piping as a rule, is plugged with a filter.

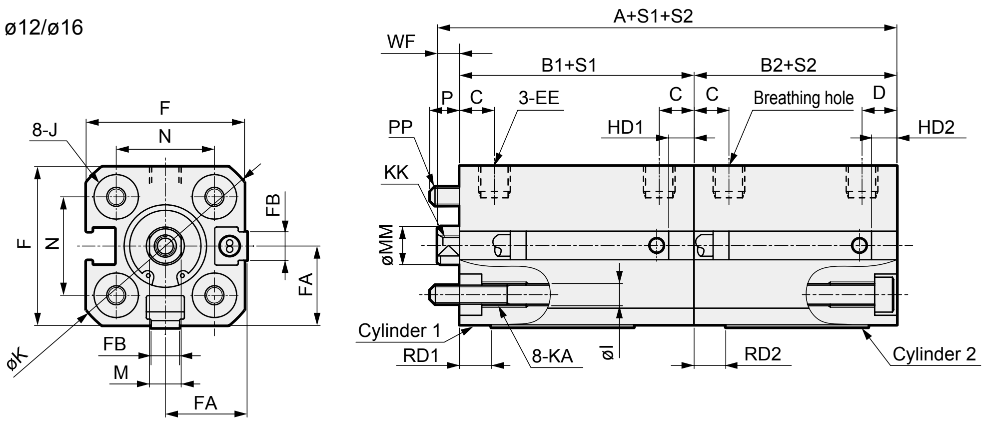




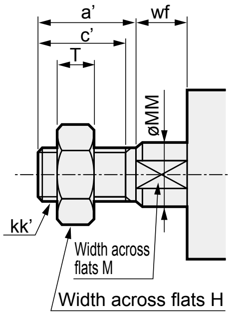
Dimensions

- SSD2-WL-12 to 25 (with switch T0H/V, T5H/V, T2H/V, T3H/V)

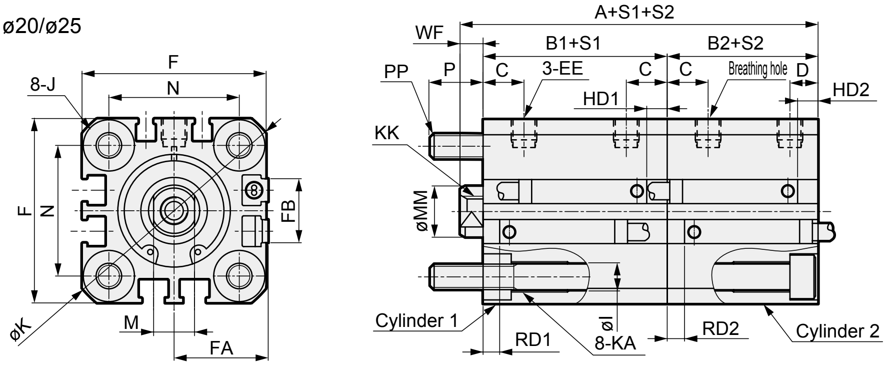
ø12/ø16



- Rod end male thread



ø20/ø25



Code Bore size (mm)	Common dimensions with switch																			
	A	B1	B2	C	D	EE	F	FA *3	FB	I	J	K	KA	KK	M	MM	N	WF	P	PP
ø12	52.5	27	22	5.5	5.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5	4.5	M3
ø16	52.5	27	22	5.5	5.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5	4.5	M3
ø20	70	36	29.5	8	5.5	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5	10	M5
ø25	76.5	39	32.5	11	6	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5	9	M5

Switch dimensions	Reed T0H/TOV, T5H/T5V			Proximity T2H/T2V, T3H/T3V			Proximity T2WH/T2WV, T3WH/T3WV			Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		
Bore size (mm)	RD1, RD2	HD1	HD2	RD1, RD2	HD1	HD2	RD1, RD2	HD1	HD2	RD1, RD2	HD1	HD2
ø12	1.5	6.5	1.5	1.5	6.5	1.5	3.5	8.5	3.5			
ø16	3.5	4.5	0	3.5	4.5	0	5.5	6.5	1.5			
ø20	7.5	9.5	3	7.5	9.5	3	9.5	11.5	5	12	14	7.5
ø25	9.5	10.5	4	9.5	10.5	4	11.5	12.5	6	14	15	8.5

Switch dimensions	Proximity F2S/F3S			Proximity T2YH/T2YV/ T3YH/T3YV/T2JH/T2JV			AC magnetic field proof T2YD/T2YDT/T1H/T1V		
Bore size (mm)	RD1, RD2	HD1	HD2	RD1, RD2	HD1	HD2	RD1, RD2	HD1	HD2
ø12				-	-	-	-	-	-
ø16				-	-	-	-	-	-
ø20	11	13	6.5	6.5	8.5	2	6.5	8.5	2
ø25	13	14	7.5	8.5	9.5	3	8.5	9.5	3

*1 : To calculate A + S1 + S2, B1 + S1 or B2 + S2 when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
*3 : Dimensions in ( ) of FA are for the radial lead wire.
*4 : For dimensions of individual accessories, refer to pages 1046 to 1049.
*5 : Only F type switch is available for the ø20 or ø25 piping port surface.

- Rod end male thread

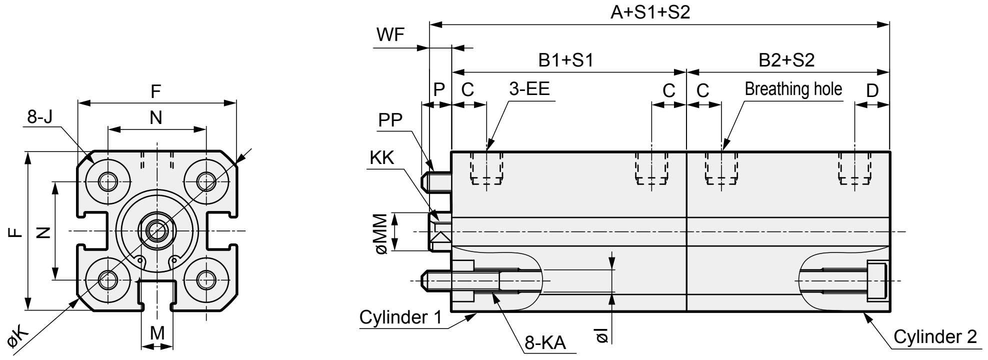
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

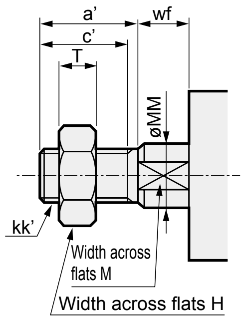
Dimensions

● SSD2-W-12 to 25 (without switch)

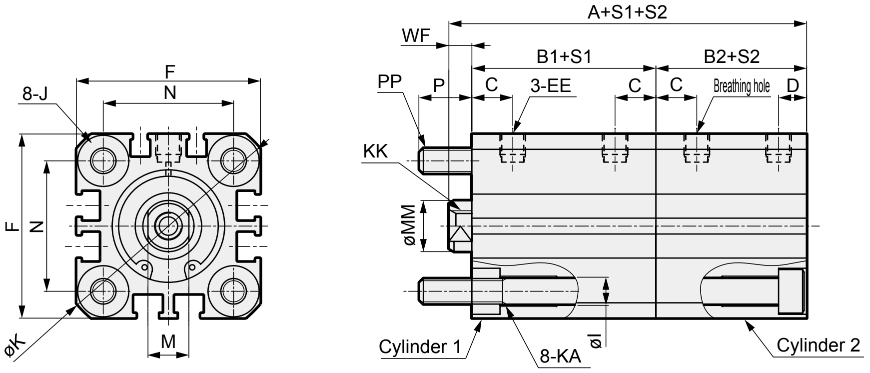
● Rod end male thread

ø12/ø16





ø20/ø25



Code Bore size (mm)	Dimensions without switch and common dimensions																	
	A	B1	B2	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF	P	PP
ø12	42.5	22	17	5.5	5.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5	4.5	M3
ø16	42.5	22	17	5.5	5.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5	4.5	M3
ø20	50	26	19.5	8	5.5	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5	10	M5
ø25	56.5	29	22.5	11	6	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5	9	M5

● Rod end male thread

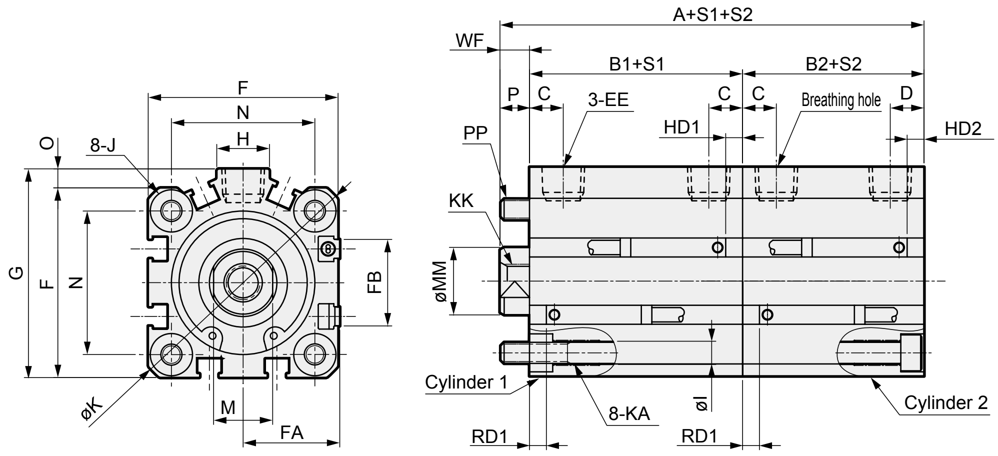
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

*1 : To calculate A + S1 + S2, B1 + S1 or B2 + S2 when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

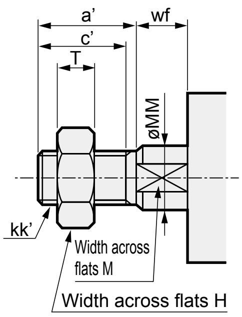
*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

Dimensions

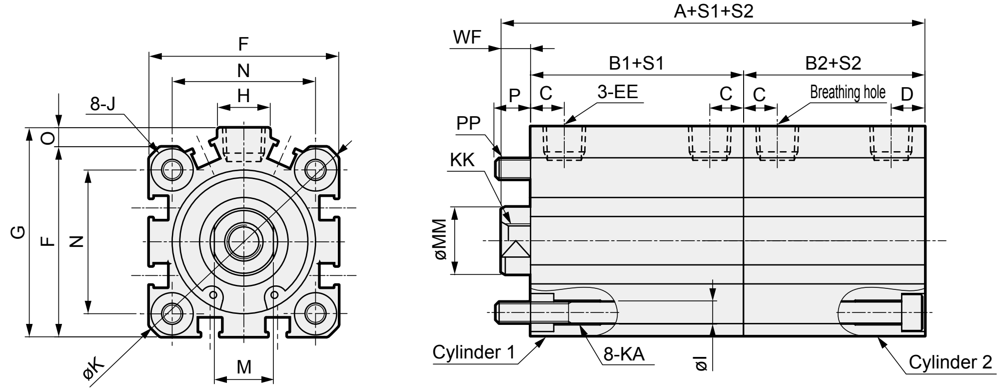
● SSD2-WL-32 to 100 (with switch T0H/V, T5H/V, T2H/V, T3H/V)



● Rod end male thread



● SSD2-W-32 to 100 (without switch)



Code	Without switch			Common dimensions with switch																					
Bore size (mm)	A	B1	B2	A	B1	B2	C *7	D *7	EE	F	FA *3	FB	G	H	I	J	K	KA	KK	M	MM	N	O	WF	P	PP
ø32	60.5	30.5	23	80.5	40.5	33	8(11)	8(5.5)	Rc1/8 *7	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7	7	M5
ø40	76.5	40	29.5	96.5	50	39.5	12(11.5)	8.5(8)	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7	6	M5
ø50	79	40.5	30.5	99	50.5	40.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8	10.5	M6
ø63	86	42	36	106	52	46	13	11	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	8	11	M8
ø80	104.5	51	43.5	124.5	61	53.5	16	13	Rc3/8	98	49.5(53)	28.5	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	10	11.5	M10
ø100	125.5	60.5	53	145.5	70.5	63	23	15	Rc3/8	117	59(62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12	12.5	M10

Switch dimensions	Reed T0H/TOV, T5H/T5V			Proximity T2H/T2V, T3H/T3V			Proximity T2WH/T2WV, T3WH/T3WV			Proximity T2YH/T2YV/ T3YH/T3YV/T2JH/T2JV			Reed T8H/T8V		
Bore size (mm)	RD1, RD2	HD1	HD2	RD1, RD2	HD1	HD2	RD1, RD2	HD1	HD2	RD1, RD2	HD1	HD2	RD1, RD2	HD1	HD2
ø32	10	11.5	4	10	11.5	4	12	13.5	6	8.5	11	3.5	-	-	-
ø40	13	18	7.5	13	18	7.5	15	20	9.5	10.5	16	5.5	6	11.5	1
ø50	13	18.5	8.5	13	18.5	8.5	15	20.5	10.5	11	16	6	6.5	11.5	1.5
ø63	13.5	19.5	13.5	13.5	19.5	13.5	15.5	21.5	15.5	11.5	17	11	7	12.5	6.5
ø80	16	26	18.5	16	26	18.5	18	28	20.5	14	23.5	16	9.5	19	11.5
ø100	20.5	31.5	24	20.5	31.5	24	22.5	33.5	26	18	29	21.5	13.5	24.5	17

Switch dimensions	AC magnetic field proof T2YD/T2YDT/T1H/T1V		
Bore size (mm)	RD1, RD2	HD1	HD2
ø32	8.5	11	3.5
ø40	10.5	16	5.5
ø50	11	16	6
ø63	11.5	17	11
ø80	14	23.5	16
ø100	18	29	21.5

*1 : To calculate A + S1 + S2, B1 + S1 or B2 + S2 when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

*3 : Dimensions in ( ) of FA are for the radial lead wire.

*4 : For dimensions of individual accessories, refer to pages 1046 to 1049.

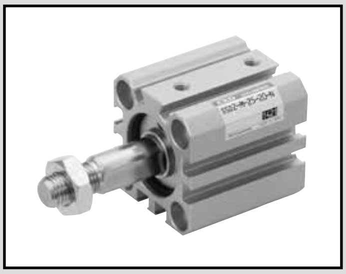
*5 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

*6 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

*7 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

● Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

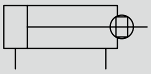


Compact cylinder double acting/rotation-stop

SSD2-M Series

● Bore size: ø12/ø16/ø20/ø25
ø32/ø40/ø50/ø63

JIS symbol



Specifications

1 MPa = 10 bar

Item	SSD2-M SSD2-ML (with switch)							
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)							
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)							0.05 (≈7.3 psi)
Proof pressure MPa	1.6 (≈230 psi, 16 bar)							
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)							
Port size	M5				Rc1/8 *1		Rc1/4	
Stroke tolerance mm	+1.0 0							
Working piston speed mm/s	50 to 500							50 to 300
Cushion	None							
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)							
Non-rotating accuracy (*2)	±1°		±0.7°		±0.8°			
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.
*2: Initial value at the pull end.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20	30	1
ø16	25/30		
ø20	5/10/15/20/25	50	
ø25	30/35/40/45/50		
ø32	5/10/15/20/25/30/	100	
ø40	35/40/45/50/75/100		
ø50	10/15/20/25/30		
ø63	35/40/45/50/75/100		

*1: When using the type with switch, refer to the table of the min. stroke length with switch.

Min. stroke length with switch (2 switches)

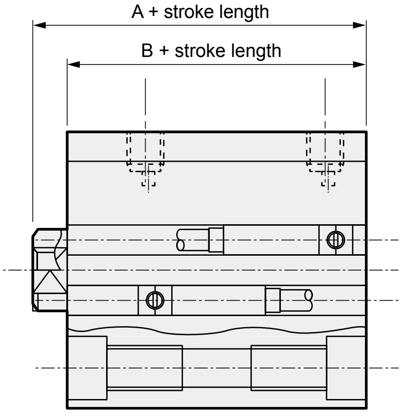
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø12	10(5)	5
ø16		
ø20	5	
ø25		
ø32		
ø40		
ø50		
ø63		

1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.
*2: Values in ( ) are for the type with 1 on rod side.

Custom stroke length

● SSD2-M Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	12/16	1 to 29
	20 to 25	1 to 49
	32 to 63	1 to 99
Example of model No.	Model No.: SSD2-M-32-38 A +2 mm spacer is added to the SSD2-M-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 72 mm.	



Switch specifications (F type switch)

- 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA			50 mA or less	
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T type switch)

- 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			Dedicated for programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table

(the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø12	44	94	52	94	61	103	69	11	78	120	80	122	-	-	-	-	-	-	-	-	-	-	-	-
ø16	58	114	69	114	79	124	90	135	101	146	112	157	-	-	-	-	-	-	-	-	-	-	-	-
ø20	76	131	88	163	101	176	114	189	126	201	139	214	152	227	165	240	178	253	191	266	-	-	-	-
ø25	102	193	117	208	133	224	149	240	165	256	180	271	196	287	212	303	228	319	243	334	-	-	-	-
ø32	166	280	188	302	210	324	232	346	253	367	275	389	297	411	319	433	341	455	362	476	575	583	682	691
ø40	-	-	210	353	237	380	263	406	290	433	317	460	343	486	370	513	396	539	423	566	683	698	815	831
ø50	-	-	341	535	383	577	425	619	467	661	509	703	552	746	594	788	636	830	678	872	1065	1082	1275	1292
ø63	-	-	507	786	562	841	617	896	672	951	727	1006	782	1061	837	1116	893	1172	948	1227	1478	1502	1753	1777

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^{2}	1.13×10^{2}
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	-	49.1	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	-	37.8	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	-	80.4	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	-	60.3	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	-	1.26×10^{2}	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.06×10^{2}	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	1.96×10^{2}	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	1.65×10^{2}	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	1.56×10^{2}	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	1.40×10^{2}	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}

How to order

Without switch (without magnet for switch)

SSD2-M - 12 ◯ - 5 ———— N - LB - I

With switch (built-in magnet for switch)

SSD2-ML - 12 ◯ - 5 - T0H - R - N - LB - I

Ⓐ Model No.
Ⓑ Bore size
Ⓒ Port thread
Ⓓ Stroke length
Ⓔ Switch model No. *1 *2 *3 *8 *9
Ⓕ Switch quantity
Ⓖ Option *4
Ⓗ Mounting bracket *5 *6
Ⓘ Accessory *7

Code	Description
Ⓐ Model No.	
SSD2-M	Double acting/rotation-stop
SSD2-ML	Double acting/rotation-stop/with switch
Ⓑ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
Ⓒ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)
Ⓓ Stroke length (mm)	
	Refer to the stroke length table on the following page.

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage		Display	Lead wire	Bore size							
			AC	DC			12	16	20	25	32	40	50	63
-	**F2S***	Proximity		●	1-color display	2-wire			●	●				
-	**F3S***			●		3-wire			●	●				
F2H*	**F2V***			●		2-wire			●	●				
F3H*	**F3V***			●		3-wire			●	●				
F3PH*	**F3PV***			●	1 color display (PNP output) (custom)	3-wire			●	●				
F2YH*	**F2YV***			●	2-color display	2-wire			●	●				
F3YH*	**F3YV***			●		3-wire			●	●				
T0H*	**T0V***	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●
T5H*	**T5V***		●	●	Without indicator lamp		●	●	●	●	●	●	●	●
T8H*	**T8V***		●	●	1-color display							●	●	●
T1H*	**T1V***	Proximity	●		1-color display	2-wire			●	●	●	●	●	●
T2H*	**T2V***			●			●	●	●	●	●	●	●	●
T3H*	**T3V***			●		3-wire	●	●	●	●	●	●	●	●
T3PH*	**T3PV***			●	1-color display (PNP output)		●	●	●	●	●	●	●	●
T2WH*	**T2WV***			●	2-color display	2-wire	●	●	●	●	●	●	●	●
T2YH*	**T2YV***			●					●	●	●	●	●	●
T3WH*	**T3WV***			●		3-wire	●	●	●	●	●	●	●	●
T3YH*	**T3YV***			●					●	●	●	●	●	●
T2YD*	**-**			●	2-color display	2-wire			●	●	●	●	●	●
T2YDT*	**-**			●	AC magnetic field				●	●	●	●	●	●
T2JH*	**T2JV***			●	1-color display off-delay	2-wire			●	●	●	●	●	●

*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *11
Ⓕ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓖ Option	
Blank	Rod end female thread
N	Rod end male thread
M *4	Piston rod material (stainless steel) (made to order (ø32 to ø63))
Ⓗ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange
Ⓘ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

- *1 : The T2YD* switch cannot be mounted on the ø12 and ø16 bore sizes.
- *2 : The T8* switch cannot be mounted on the ø12 to ø32 bore sizes.
- *3 : The F type switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.
- *4 : Piston rod of ø12 to ø25 is stainless steel as standard. C type snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.
- *5 : The mounting bracket is included at shipment.
- *6 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 917, 919, 921 and 922. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
- *7 : "I" and "Y" cannot be selected together.
- *8 : The F type switch with L type lead wire on ø20 models cannot be selected on stroke lengths 10 mm or under.
- *9 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
- *10: Refer to pages 750 and 751 for combinations of variations/options.
- *11 : F type switch cannot be selected.

[Example of model No.]

SSD2-ML-12-5-T0H-R-N-LB-I

Model: Compact cylinder rotation-stop

Ⓑ Bore size	: ø12 mm
Ⓒ Port thread	: Rc thread
Ⓓ Stroke length	: 5 mm
Ⓔ Switch model No.	: Reed T0H switch
Ⓕ Switch quantity	: 1 on rod side
Ⓖ Option	: Rod end male thread
Ⓗ Mounting bracket	: Axial foot
Ⓘ Accessory	: Rod eye

[Stroke length table]

Stroke length (mm)		Applicable bore size							
		12	16	20	25	32	40	50	63
Standard stroke length	5	●	●	●	●	●	●		
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●
	40			●	●	●	●	●	●
	45			●	●	●	●	●	●
	50			●	●	●	●	●	●
	75					●	●	●	●
	100					●	●	●	●
Min. stroke length (mm) *1		1							
Max. stroke length (mm)		30		50		100			
Custom stroke length *2		In 1 mm increments							

1: Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available. Refer to page 910 for the min. stroke length with switch.

*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

How to order switch

SW - **T0H**

Switch model No.
(Item Ⓔ on page 912)

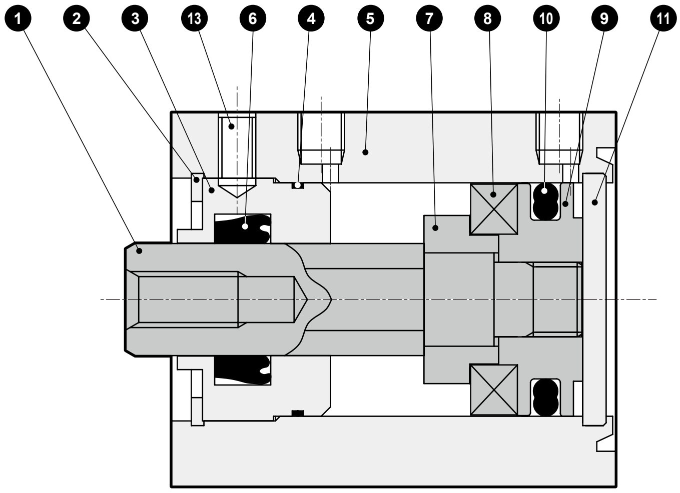
How to order mounting bracket

Bore size (mm) Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63
Clevis bracket (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63

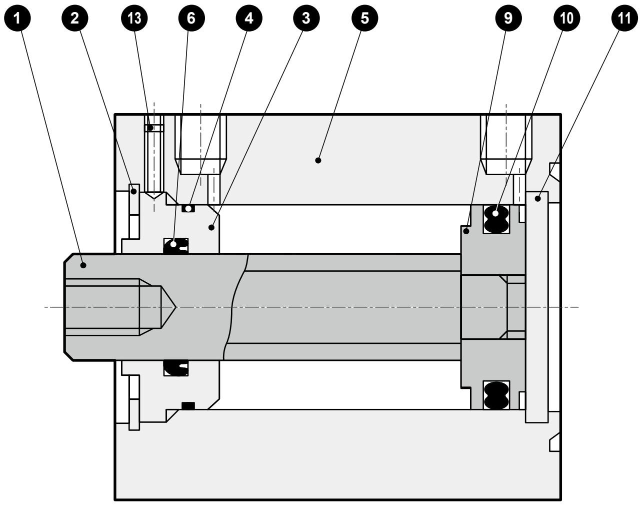
*1: The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list (ø12 to ø25)

- SSD2-ML-12 to 25 (double acting/rotation-stop/with switch)



- SSD2-M-12 to 25 (double acting/rotation-stop)



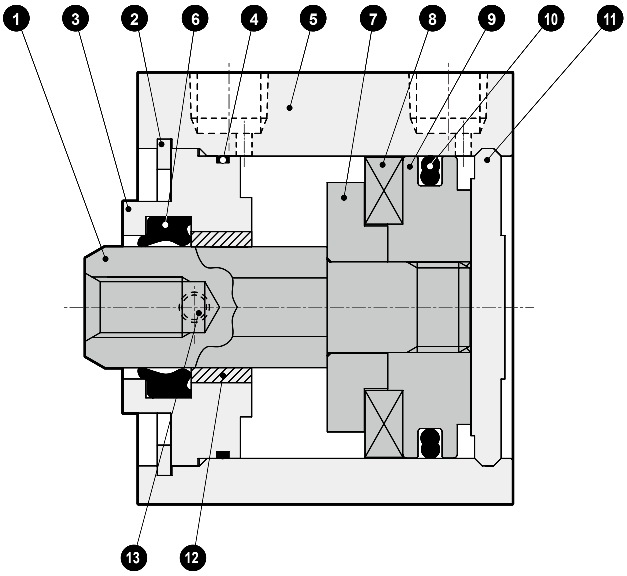
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Stainless steel		8	Magnet	Plastic	
2	C type snap ring	Steel	Zinc phosphate	9	Piston	Aluminum alloy	Chromate
3	Rod metal	Special aluminum	Alumite	10	Piston packing	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		11	Cover	Stainless steel	
5	Body	Aluminum alloy	Hard alumite	13	Hexagon socket set screw	Steel	
6	Rod packing	Nitrile rubber					
7	Spacer	Aluminum alloy	Chromate				

Repair parts list

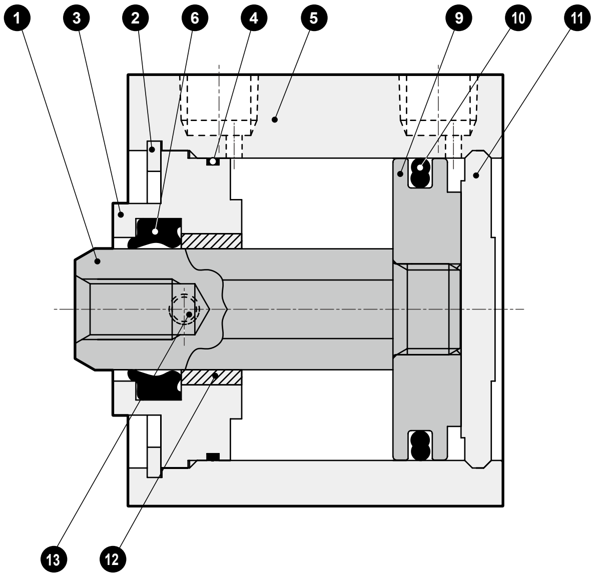
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-M-12K	❹❻❿
ø16	SSD2-M-16K	
ø20	SSD2-M-20K	
ø25	SSD2-M-25K	

Internal structure and parts list (ø32 to ø63)

- ● SSD2-ML-32 to 63 (double acting/rotation-stop/with switch)



- ● SSD2-M-32 to 63 (double acting/rotation-stop)



No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating
2	C type snap ring	Steel	Zinc phosphate
3	Rod metal	ø32 to ø50: Special aluminum ø63: Aluminum alloy	Alumite
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Nitrile rubber	
7	Spacer	Aluminum alloy	Chromate
8	Magnet	Plastic	
9	Piston	Aluminum alloy	Chromate
10	Piston packing	Nitrile rubber	
11	Cover	Aluminum alloy	Alumite
12	Bush	Oil impregnated bearing alloy	
13	Hexagon socket set screw	Steel	

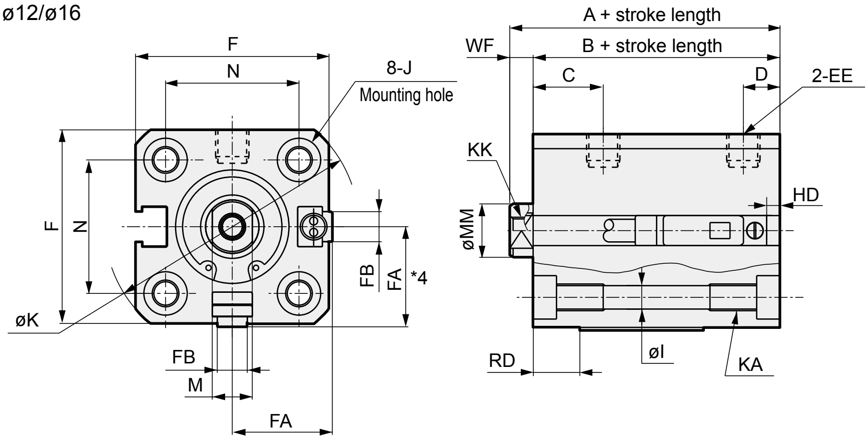
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø32	SSD2-M-32K	④ ⑥ ⑩
ø40	SSD2-M-40K	
ø50	SSD2-M-50K	
ø63	SSD2-M-63K	

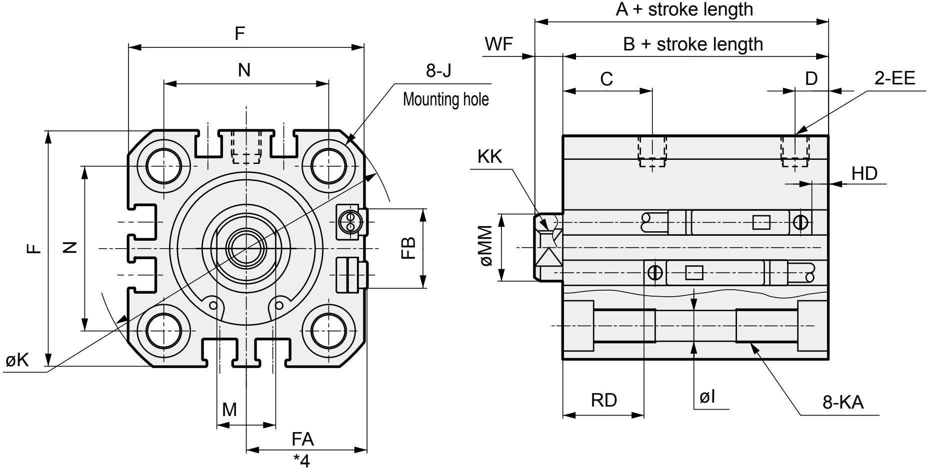
Dimensions

● SSD2-ML-12 to 25 (with switch)

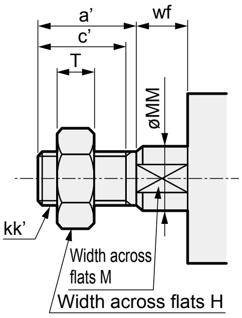
ø12/ø16



ø20/ø25



● Rod end male thread



Code Bore size (mm)	A *1	B *1	C	D	EE	F	FA *4	FB	I	J	K	KA	KK	M	MM	N	WF
	Common dimensions with switch																
ø12	30.5	27	10.5	5.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	30.5	27	10.5	5.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	39	34.5	13	5.5	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	42.5	37.5	16	6	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimensions	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
Bore size (mm)	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	0	7.5	0	7.5	2	9.5				
ø16	0	7	0	7	2.5	9.5				
ø20	3	11.5	3	11.5	5	13	7.5	15.5	6.5	14.5
ø25	3	14.5	3	14.5	6	16	8.5	18.5	7.5	17.5

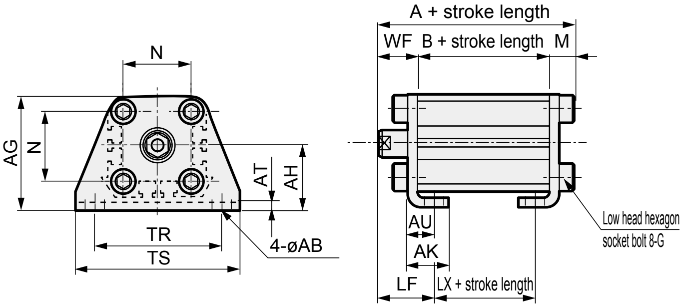
*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.
*4 : Dimensions in ( ) of FA are for the radial lead wire.
*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.
*6 : Only F type switch is available for the ø20 or ø25 piping port surface.

● Dimensions of rod end male thread part

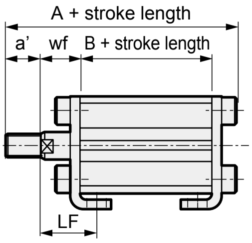
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

Dimensions with mounting bracket

● Axial foot (LB) with switch
SSD2-ML-12 to 25 -LB



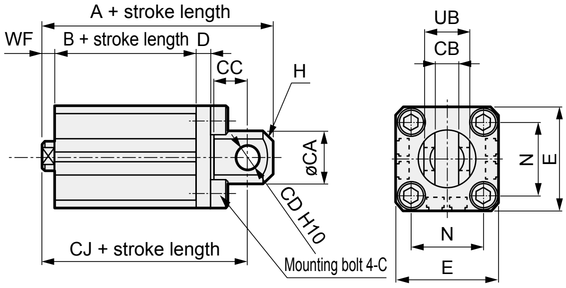
Rod end male thread



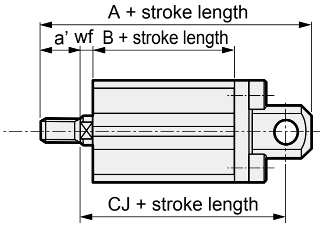
Code	Common dimensions						Female thread				
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

Code						Male thread					
Bore size (mm)	WF	LF	A	B	LX	a'	WF	LF	A	B	LX
ø12	13.5	19.5	45.3	27	15	10.5	13.5	19.5	55.8	27	15
ø16	13.5	19.5	45.3	27	15	12	13.5	19.5	57.3	27	15
ø20	14.5	20.5	56.2	34.5	22.5	14	14.5	20.5	70.2	34.5	22.5
ø25	15	22.5	59.7	37.5	22.5	17.5	15	22.5	77.2	37.5	22.5

● Clevis bracket (CB) with switch
SSD2-MY-12 to 25 -CB



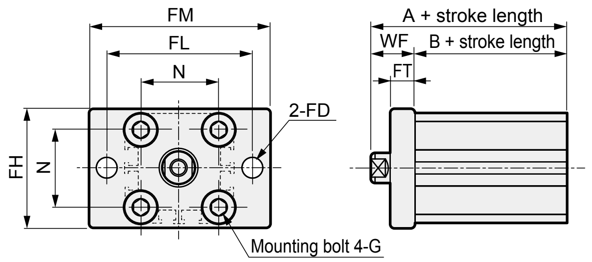
Rod end male thread



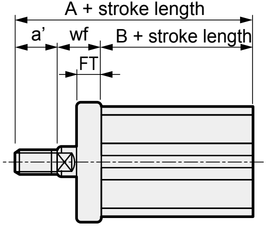
Code	Common dimensions									
Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	$5.2^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	$10^{-0.1}_{-0.3}$
ø16	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	$12^{-0.1}_{-0.4}$
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$

Code	Female thread				Male thread				
Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø12	3.5	50.5	27	44.5	10.5	8.5	61	27	44.5
ø16	3.5	51.5	27	45.5	12	8.5	63.5	27	45.5
ø20	4.5	66	34.5	57	14	9.5	80	34.5	57
ø25	5	72.5	37.5	62.5	17.5	10	90	37.5	62.5

● Rod side flange (FA) with switch
SSD2-ML-12 to 25 -FA



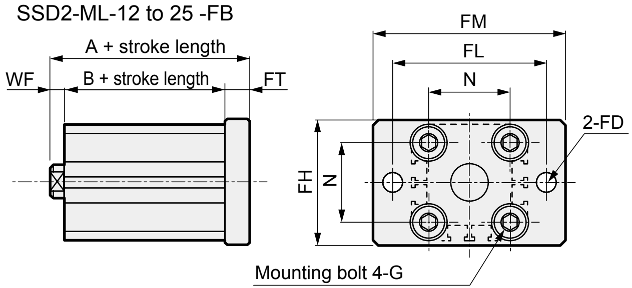
Rod end male thread



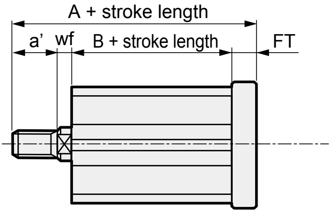
Code	Common dimensions						
Bore size (mm)	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code	Female thread			Male thread			
Bore size (mm)	WF	A	B	a'	wf	A	B
ø12	13.5	40.5	27	10.5	13.5	51	27
ø16	13.5	40.5	27	12	13.5	52.5	27
ø20	14.5	49	34.5	14	14.5	63	34.5
ø25	15	52.5	37.5	17.5	15	70	37.5

● Head side flange (FB) with switch
SSD2-ML-12 to 25 -FB



Rod end male thread



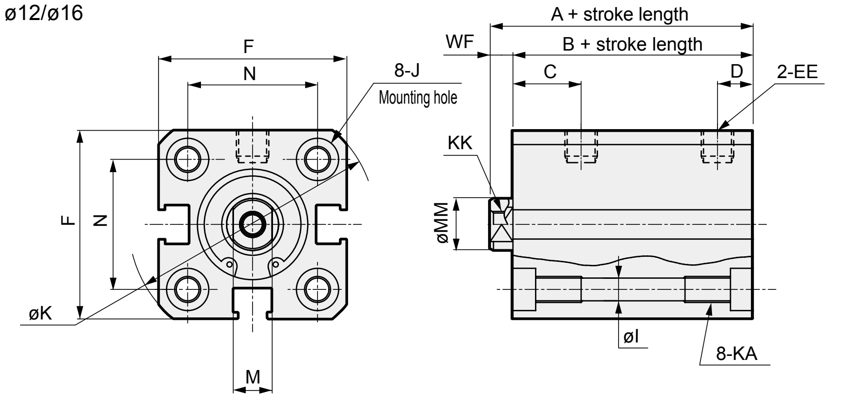
Code	Common dimensions						
Bore size (mm)	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code	Female thread			Male thread			
Bore size (mm)	WF	A	B	a'	wf	A	B
ø12	3.5	36	27	10.5	8.5	46.5	27
ø16	3.5	36	27	12	8.5	48	27
ø20	4.5	47	34.5	14	9.5	61	34.5
ø25	5	50.5	37.5	17.5	10	68	37.5

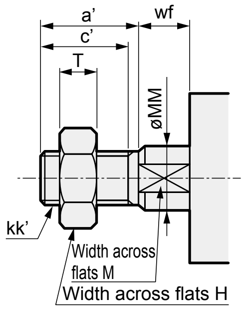
Dimensions CAD

● SSD2-M-12 to 25 (without switch)

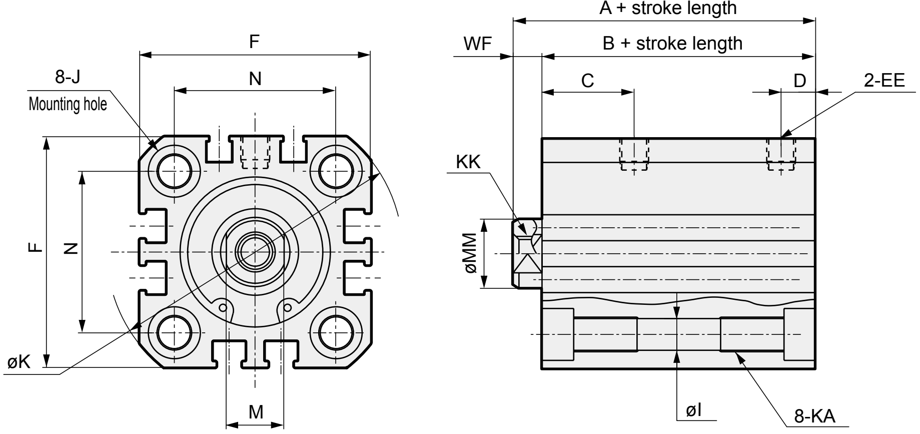
ø12/ø16



● Rod end male thread



ø20/ø25



Code	Without switch														
Bore size (mm)	A *1	B *1	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	25.5	22	10.5	5.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	25.5	22	10.5	5.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	29	24.5	13	5.5	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	32.5	27.5	16	6	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.
(Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

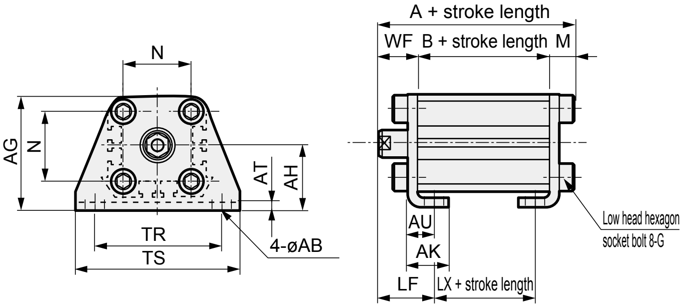
● Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

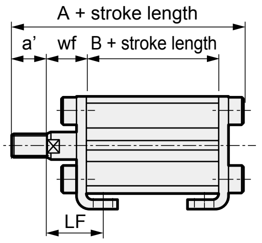
Dimensions with mounting bracket

CAD

● Axial foot (LB) without switch
SSD2-M-12 to 25 -LB



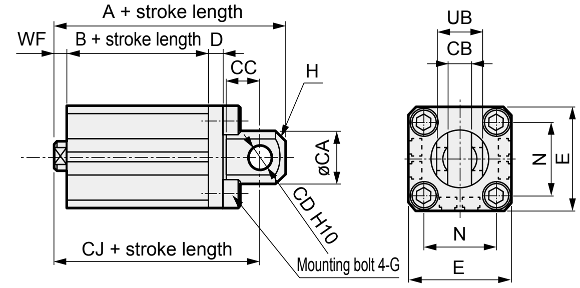
Rod end male thread



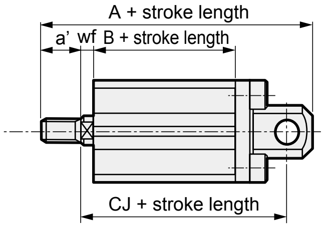
Code Bore size (mm)	Common dimensions						Female thread				
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

Code Bore size (mm)						Male thread					
	WF	LF	A	B	LX	a'	WF	LF	A	B	LX
ø12	13.5	19.5	40.3	22	10	10.5	13.5	19.5	50.8	22	10
ø16	13.5	19.5	40.3	22	10	12	13.5	19.5	52.3	22	10
ø20	14.5	20.5	46.2	24.5	12.5	14	14.5	20.5	60.2	24.5	12.5
ø25	15	22.5	49.7	27.5	12.5	17.5	15	22.5	67.2	27.5	12.5

● Clevis bracket (CB) without switch
SSD2-M-12 to 25 -CB



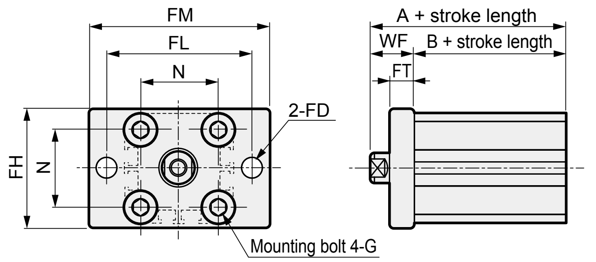
Rod end male thread



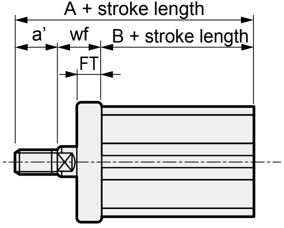
Code Bore size (mm)	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	$5.2^{+0.2}_{0}$	7	5	4	25	M4×12	C1.5	15.5	$10^{-0.1}_{-0.3}$
ø16	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	20	$12^{-0.1}_{-0.4}$
ø20	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	25.5	$16^{-0.1}_{-0.3}$
ø25	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	28	$20^{-0.1}_{-0.3}$

Code Bore size (mm)	Female thread				Male thread				
	WF	A	B	CJ	a'	wf	A	B	CJ
ø12	3.5	45.5	22	39.5	10.5	8.5	56	22	39.5
ø16	3.5	46.5	22	40.5	12	8.5	58.5	22	40.5
ø20	4.5	56	24.5	47	14	9.5	70	24.5	47
ø25	5	62.5	27.5	52.5	17.5	10	80	27.5	52.5

● Rod side flange (FA) without switch
SSD2-M-12 to 25 -FA



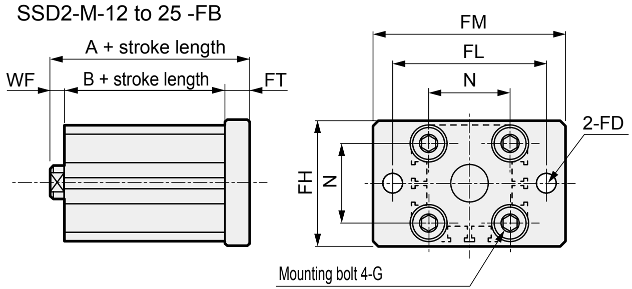
Rod end male thread



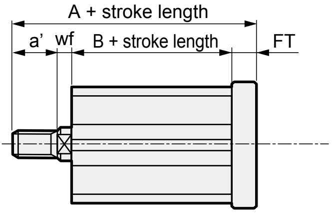
Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	13.5	35.5	22	10.5	13.5	46	22
ø16	13.5	35.5	22	12	13.5	47.5	22
ø20	14.5	39	24.5	14	14.5	53	24.5
ø25	15	42.5	27.5	17.5	15	60	27.5

● Head side flange (FB) without switch
SSD2-M-12 to 25 -FB



Rod end male thread

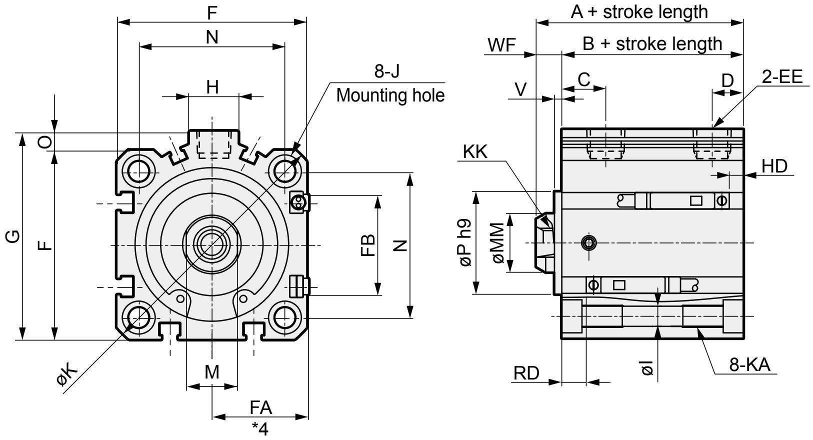


Code Bore size (mm)	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4×12
ø16	4.5	30	45	55	5.5	20	M4×12
ø20	6.6	39	48	60	8	25.5	M6×16
ø25	6.6	42	52	64	8	28	M6×16

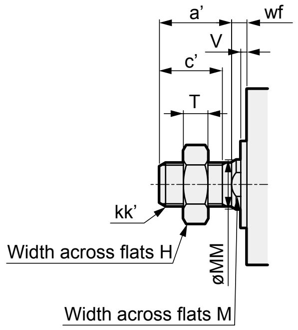
Code Bore size (mm)	Female thread			Male thread			
	WF	A	B	a'	wf	A	B
ø12	3.5	31	22	10.5	8.5	41.5	22
ø16	3.5	31	22	12	8.5	43	22
ø20	4.5	37	24.5	14	9.5	51	24.5
ø25	5	40.5	27.5	17.5	10	58	27.5

Dimensions

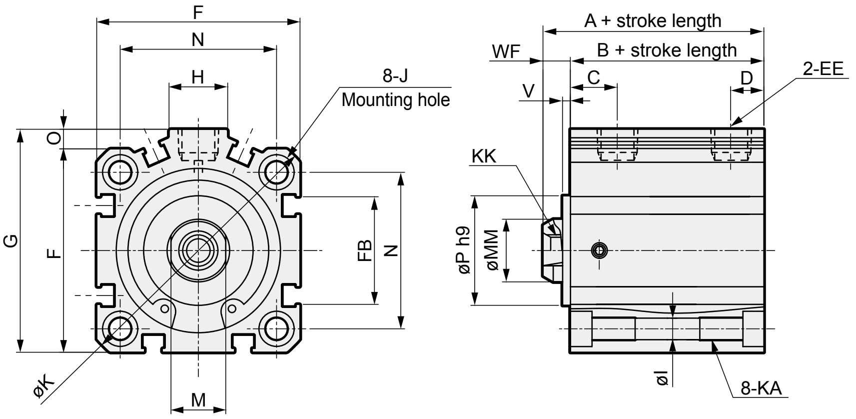
- SSD2-ML-32 to 63 (with switch)



- Rod end male thread



- SSD2-M-32 to 63 (without switch)



Code	Without switch		Common dimensions with switch														
Bore size (mm)	A *1/*6	B *1/*6	A *1	B *1	C *8	D *8	EE	F	FA *4	FB	G	H	I	J	K	KA
ø32	39(49)	32(42)	49	42	18(20)	8(5.5)	Rc1/8 *7	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11
ø40	36.5(46.5)	29.5(39.5)	46.5	39.5	12(11.5)	8.5(8)	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11
ø50	38.5(48.5)	30.5(40.5)	48.5	40.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13
ø63	44(54)	36(46)	54	46	13	11	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face depth 9	103	M10 depth 25

Code	Common dimensions with switch								Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/ T2WV, T3WH/T3WV	
Bore size (mm)	KK	M	MM	N	O	P	V	WF	HD *2	RD *2	HD *2	RD *2	HD	RD
ø32	M8 depth 13	14	16	34	4.5	21	2	7	4.5	19	4.5	19	5	20.5
ø40	M8 depth 13	14	16	40	5	28	2	7	7	12	7	12	8.5	13.5
ø50	M10 depth 15	18	20	50	7	35	2	8	7.5	12.5	7.5	12.5	9	14
ø63	M10 depth 15	18	20	60	7	35	2	8	12.5	13	12.5	13	14	14.5

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.

*4 : Dimensions in ( ) of FA are for the radial lead wire.

*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.

*6 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

*7 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

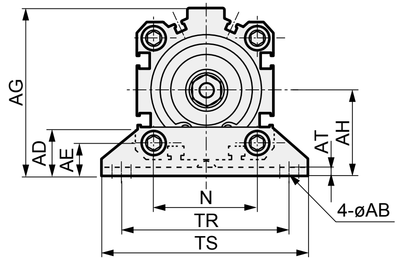
*8 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

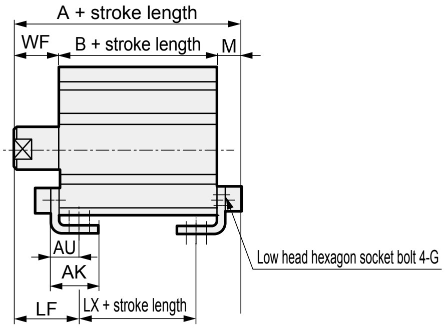
- Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	18	20	11	5
ø63	28.5	26	27	M18×1.5	18	20	11	5

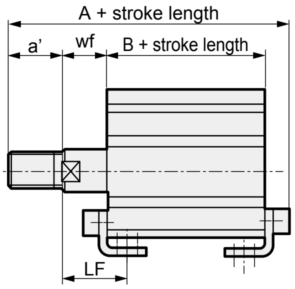
Dimensions with mounting bracket

- **Axial foot (LB)**
  SSD2-M(L)-32 to 63 -LB





Rod end male thread



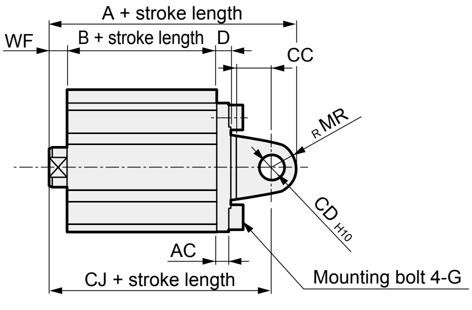
Code Bore size (mm)	Common dimensions AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	Female thread WF	LF	Without switch A	B	LX
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71	7.2	17	25	56.2(66.2)	32(42)	16(26)
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78	7.2	17	25	53.7(63.7)	29.5(39.5)	13.5(23.5)
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95	8.2	18	29.5	56.7(66.7)	30.5(40.5)	7.5(17.5)
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113	9.2	18	31	63.2(73.2)	36(46)	10(20)

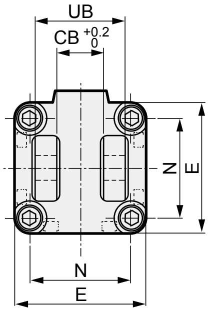
Code Bore size (mm)	Female thread With switch A	B	LX	Male thread a'	WF	LF	Without switch A	B	LX	With switch A	B	LX
ø32	66.2	42	26	23.5	15	23	77.7(87.7)	32(42)	16(26)	87.7	42	26
ø40	63.7	39.5	23.5	23.5	15	23	75.2(85.2)	29.5(39.5)	13.5(23.5)	85.2	39.5	23.5
ø50	66.7	40.5	17.5	28.5	15	26.5	82.2(92.2)	30.5(40.5)	7.5(17.5)	92.2	40.5	17.5
ø63	73.2	46	20	28.5	15	28	88.7(98.7)	36(46)	10(20)	98.7	46	20

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

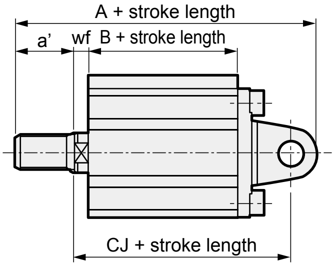
* A pin and a snap ring are included.

- **Clevis bracket (CB)**
  SSD2-M(L)-32 to 63 -CB





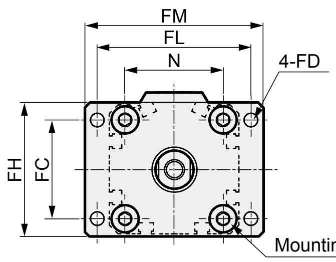
Rod end male thread



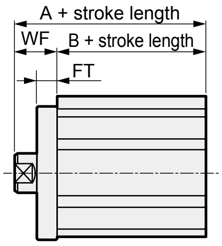
Code Bore size (mm)	Common dimensions AC	CB	CC	CD	D	E	G	MR	N	UB	Female thread WF	Without switch A	B	CJ	With switch A	B	CJ	Male thread a'	wf	Without switch A	B	CJ	With switch A	B	CJ
ø32	4.5	18.2	14	10	5	45	M6×16	10	34	36	7	69	32	59	79	42	69	23.5	14	90.5	32	57	100.5	42	67
ø40	5	18.2	14	10	6	52	M6×16	10	40	36	7	68.5	29.5	58.5	78.5	39.5	68.5	23.5	5	90	29.5	56.5	100	39.5	66.5
ø50	6	22.2	20	14	7	64	M8×20	14	50	44	8	80.5	30.5	66.5	90.5	40.5	76.5	28.5	5	106	30.5	63.5	116	40.5	73.5
ø63	7	22.2	20	14	8	77	M10×25	14	60	44	8	88	36	74	98	46	84	28.5	5	113.5	36	71	123.5	46	81

Dimensions with mounting bracket CAD

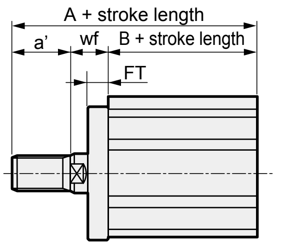
● Rod side flange (FA)
SSD2-M(L)-32 to 63 -FA



Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt



Rod end male thread

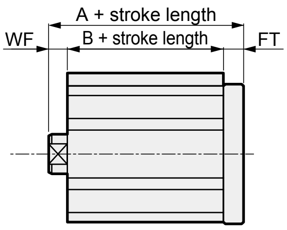


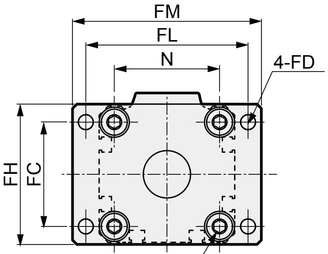
Code	Common dimensions								Female thread				
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch	
										A	B	A	B
ø32	34	5.5	48	56	65	8	34	M6×16	17	49(59)	32(42)	59	42
ø40	40	5.5	54	62	72	8	40	M6×16	17	46.5(56.5)	29.5(39.5)	56.5	39.5
ø50	50	6.6	67	76	89	9	50	M8×20	18	48.5(58.5)	30.5(40.5)	58.5	40.5
ø63	60	9	80	92	108	9	60	M10×25	18	54(64)	36(46)	64	46

Code	Male thread					
Bore size (mm)	a'	wf	Without switch		With switch	
			A	B	A	B
ø32	23.5	15	70.5(80.5)	32(42)	80.5	42
ø40	23.5	15	68(78)	29.5(39.5)	78	39.5
ø50	28.5	15	74(84)	30.5(40.5)	84	40.5
ø63	28.5	15	79.5(89.5)	36(46)	89.5	46

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

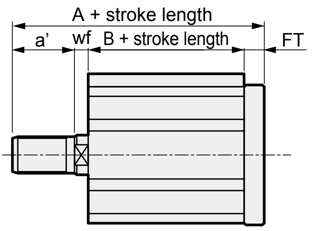
● Head side flange (FB)
SSD2-M(L)-32 to 63 -FB





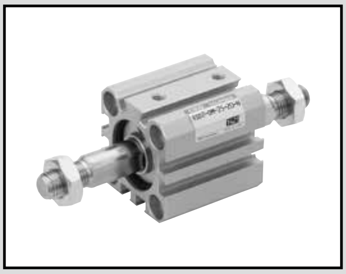
Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt

Rod end male thread



Code	Common dimensions								Female thread					Male thread					
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø32	34	5.5	48	56	65	8	34	M6×16	7	47	32	57	42	23.5	14	68.5	32	78.5	42
ø40	40	5.5	54	62	72	8	40	M6×16	7	44.5	29.5	54.5	39.5	23.5	5	66	29.5	76	39.5
ø50	50	6.6	67	76	89	9	50	M8×20	8	47.5	30.5	57.5	40.5	28.5	5	73	30.5	83	40.5
ø63	60	9	80	92	108	9	60	M10×25	8	53	36	63	46	28.5	5	78.5	36	88.5	46

MEMO

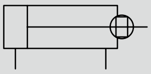


Compact cylinder double acting/double rod/rotation-stop

SSD2-DM Series

● Bore size: ø12/ø16/ø20/ø25
ø32/ø40/ø50/ø63

JIS symbol



Specifications

1 MPa = 10 bar

Item	SSD2-DM SSD2-DML (with switch)							
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)							
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)							0.1 (≈15 psi)
Proof pressure MPa	1.6 (≈230 psi, 16 bar)							
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)							
Port size	M5				Rc1/8 *1		Rc1/4	
Stroke tolerance mm	$^{+1.0}_{0}$							
Working piston speed mm/s	50 to 500							50 to 300
Cushion	None							
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)							
Non-rotating accuracy (*2)	±1°		±0.7°		±0.8°			
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.
*2: Initial value at the pull end.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20 25/30	30	5
ø16			
ø20	5/10/15/20/25 30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25/30 35/40/45/50/75/100		10
ø63			

*1: When using the type with switch, refer to the table of the min. stroke length with switch.

Min. stroke length with switch (2 switches)

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø12	10(5)	5
ø16		
ø20	5	
ø25		
ø32		
ø40		
ø50	10	10
ø63		

1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.
*2: Values in ( ) are for the type with 1 on rod side.

Switch specifications (F type switch)

- ● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T type switch)

- ● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			Dedicated for programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø12	52	105	60	105	69	115	77	124	86	134	95	147	-	-	-	-	-	-	-	-	-	-	-	-
ø16	74	133	85	133	95	144	106	156	117	168	128	177	-	-	-	-	-	-	-	-	-	-	-	-
ø20	131	187	143	222	161	238	179	254	196	269	214	285	232	301	249	316	267	332	284	347	-	-	-	-
ø25	147	238	162	253	178	269	194	285	210	301	226	316	242	332	257	348	275	364	288	379	-	-	-	-
ø32	184	299	230	344	275	390	322	436	366	481	413	527	459	573	469	612	485	628	522	665	776	785	1004	1012
ø40	283	426	310	453	336	479	363	506	390	533	416	569	443	601	507	617	553	663	601	707	1317	1333	1475	1490
ø50	-	-	508	702	558	751	608	803	658	851	708	901	758	950	808	1001	835	1033	911	1105	2007	2025	2252	2270
ø63	-	-	902	1266	977	1341	1052	1416	1127	1491	1202	1566	1278	1642	1353	1717	1428	1792	1503	1867	2218	2242	2593	2617

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push/Pull	-	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push/Pull	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push/Pull	-	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push/Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push/Pull	-	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push/Pull	-	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push/Pull	-	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push/Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3

How to order

Without switch (without magnet for switch)

SSD2-DM - 12 ◯ - 5 ——— N - LB - I

With switch (built-in magnet for switch)

SSD2-DML - 12 ◯ - 5 - T0H - R - N - LB - I

Ⓐ Model No.

Ⓑ Bore size

Ⓒ Port thread

Ⓓ Stroke length

Ⓔ Switch model No.
*1
*2
*3
*8
*9

Ⓕ Switch quantity

Ⓖ Option *4

Ⓗ Mounting bracket
*5
*6

Ⓘ Accessory
*7

Code	Description
Ⓐ Model No.	
SSD2-DM	Double acting/double rod/rotation-stop
SSD2-DML	Double acting/double rod/rotation-stop/with switch

Ⓑ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63

Ⓒ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)

Ⓓ Stroke length (mm)

Refer to the stroke length table on the following page.

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	Bore size 12	16	20	25	32	40	50	63
-	F2S*	Proximity		●	1-color display	2-wire			●	●				
-	F3S*			●		3-wire			●	●				
F2H*	F2V*			●		2-wire			●	●				
F3H*	F3V*			●		3-wire			●	●				
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire			●	●				
F2YH*	F2YV*			●	2-color display	2-wire			●	●				
F3YH*	F3YV*			●		3-wire			●	●				
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display							●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire			●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●					●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●					●	●	●	●	●	●
T2YD*	-			●	2-color display for AC magnetic field	2-wire			●	●	●	●	●	●
T2YDT*	-			●					●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire			●	●	●	●	●	●

*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *11

Ⓕ Switch quantity	
R	1 on rod side
H	1 on head side
D	2

Ⓖ Option	
Blank	Rod end female thread
N	Rod end male thread
M *4	Piston rod material (stainless steel) (made to order (ø32 to ø63))

Ⓗ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
FA	Rod side flange

Ⓘ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

1 : The T2YD switch cannot be mounted on the ø12 and ø16 bore sizes.
2 : The T8 switch cannot be mounted on the ø12 to ø32 bore sizes.
*3 : The F type switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.
*4 : Piston rod of ø12 to ø25 is stainless steel as standard. C type snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.
*5 : The mounting bracket is included at shipment.
*6 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 931, 933 and 935. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
*7 : "I" and "Y" cannot be selected together.
*8 : The F type switch with L type lead wire on ø20 models cannot be selected on stroke lengths 10 mm or under.
*9 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
*10: Refer to pages 750 and 751 for combinations of variations/options.
*11 : F type switch cannot be selected.

[Example of model No.]

SSD2-DML-12-5-T0H-R-N-LB-I

Model: Compact cylinder rotation-stop

Ⓑ Bore size : ø12 mm
Ⓒ Port thread : Rc thread
Ⓓ Stroke length : 5 mm
Ⓔ Switch model No. : Reed T0H switch
Ⓕ Switch quantity : 1 on rod side
Ⓖ Option : Rod end male thread
Ⓗ Mounting bracket : Axial foot
Ⓘ Accessory : Rod eye

[Stroke length table]

Stroke length (mm)		Applicable bore size							
		12	16	20	25	32	40	50	63
Standard stroke length	5	●	●	●	●	●	●		
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●
	40			●	●	●	●	●	●
	45			●	●	●	●	●	●
	50			●	●	●	●	●	●
	75					●	●	●	●
	100					●	●	●	●
Min. stroke length (mm) *1		5						10	
Max. stroke length (mm)		30		50		100			
Custom stroke length *2		-				By 5 mm increments			

1 : Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available. Refer to page 924 for the min. stroke length with switch.
*2 : Available only for more than 50 mm stroke length.

How to order switch

SW - **T0H**

Switch model No.
(Item Ⓔ on page 926)

How to order mounting bracket

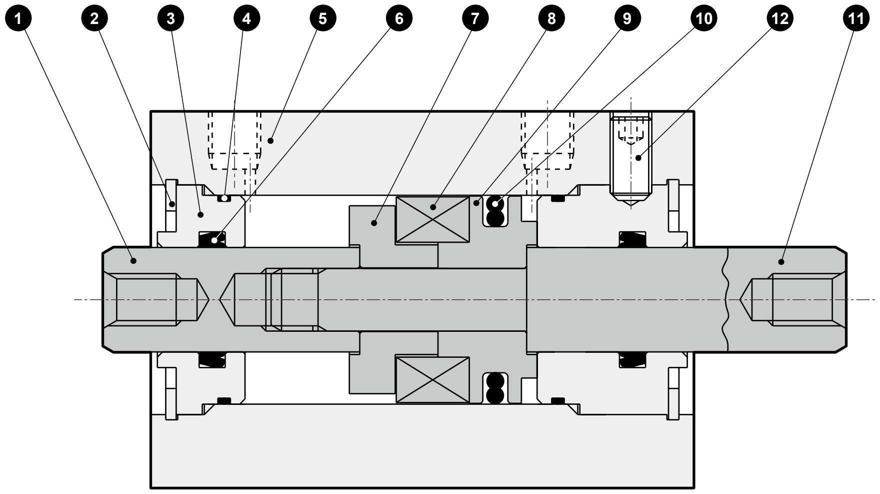
Bore size (mm) Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50
Flange (FA)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50

Bore size (mm) Mounting bracket	ø63
Foot (LB)	SSD2-LB-63
Flange (FA)	SSD2-FA-63

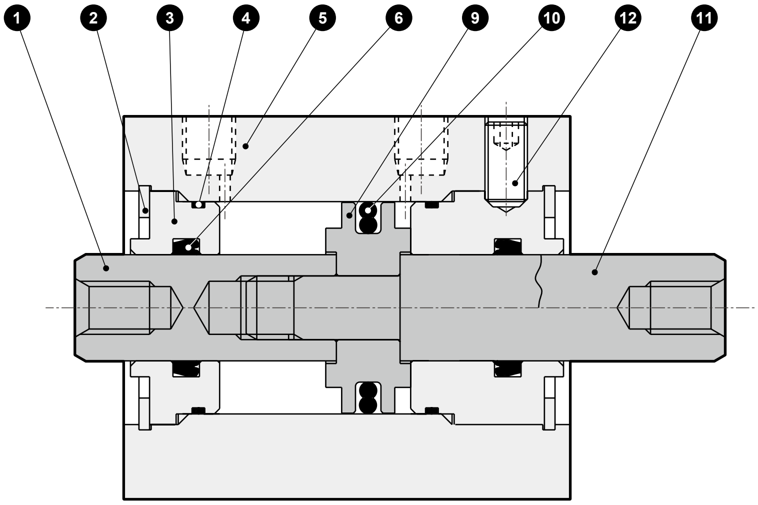
*1: The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list (ø12 to ø25)

- SSD2-DML-12 to 25 (double acting/double rod/rotation-stop/with switch)



- SSD2-DM-12 to 25 (double acting/double rod/rotation-stop)



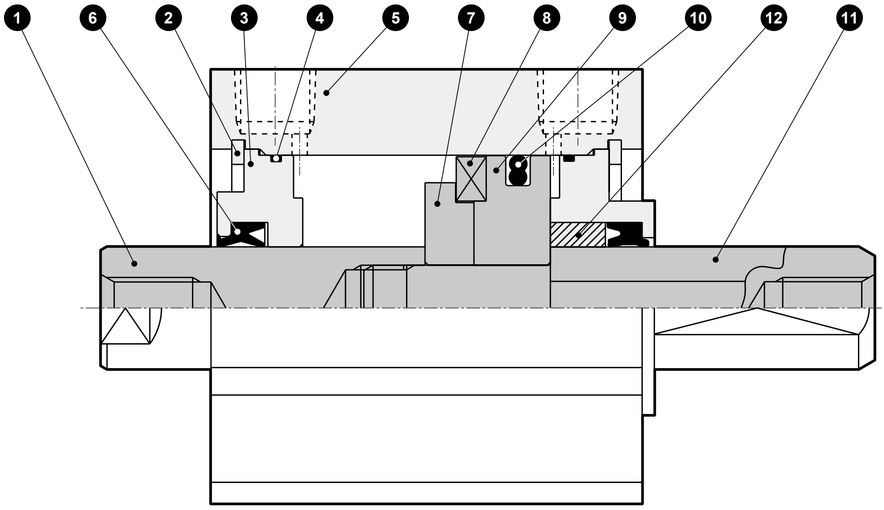
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod A	Stainless steel	Industrial chrome plating	7	Spacer	Aluminum alloy	Chromate
2	C type snap ring	Steel	Zinc phosphate	8	Magnet	Plastic	
3	Rod metal	Special aluminum	Alumite	9	Piston	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		10	Piston packing	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite	11	Piston rod B	Stainless steel	Industrial chrome plating
6	Rod packing	Nitrile rubber		12	Hexagon socket set screw	Steel	

Repair parts list

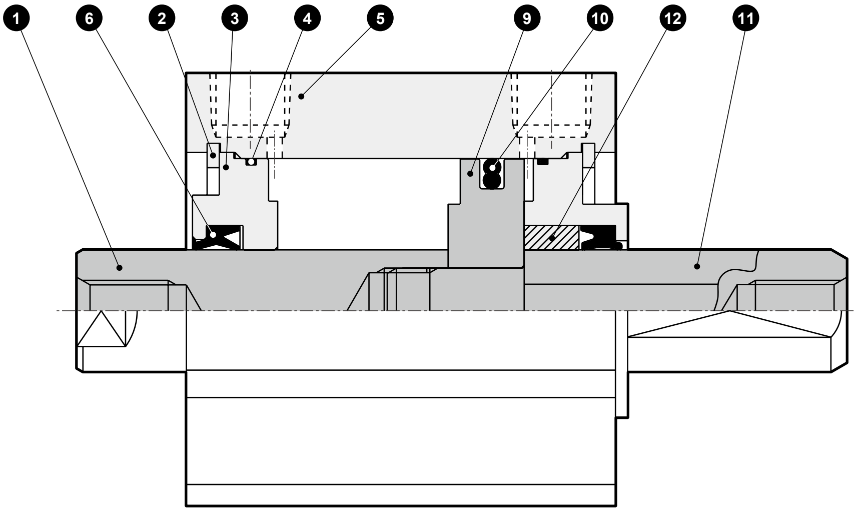
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-DM-12K	④⑥⑩
ø16	SSD2-DM-16K	
ø20	SSD2-DM-20K	
ø25	SSD2-DM-25K	

Internal structure and parts list (ø32 to ø63)

● SSD2-DML-32 to 63 (double acting/double rod/rotation-stop/with switch)



● SSD2-DM-32 to 63 (double acting/double rod/rotation-stop)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	7	Spacer	Aluminum alloy	ø32: Chromate
2	C type snap ring	Steel	Zinc phosphate	8	Magnet	Plastic	
3	Rod metal	Special aluminum	Chromate	9	Piston	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		10	Piston packing	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite	11	Piston rod B	Steel	Industrial chrome plating
6	Rod packing	Nitrile rubber		12	Bush	Oil impregnated bearing alloy	

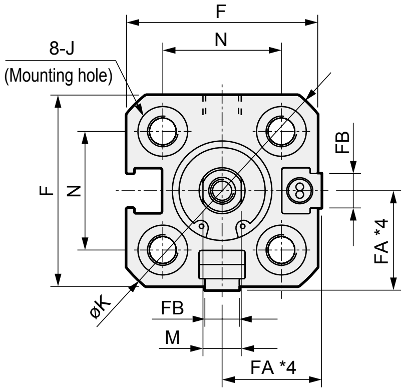
Repair parts list

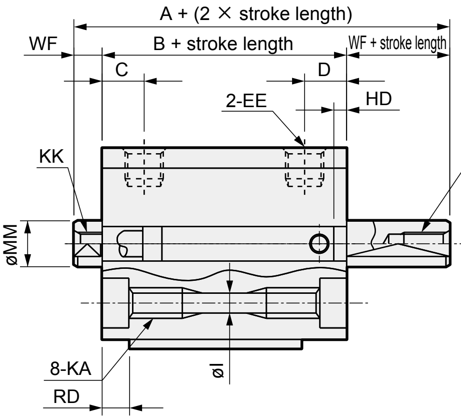
Bore size (mm)	Kit No.	Repair parts No.
ø32	SSD2-DM-32K	❹ ❻ ❿
ø40	SSD2-DM-40K	
ø50	SSD2-DM-50K	
ø63	SSD2-DM-63K	

Dimensions

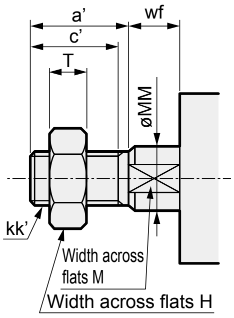
● SSD2-DML-12 to 25 (with switch)

ø12/ø16

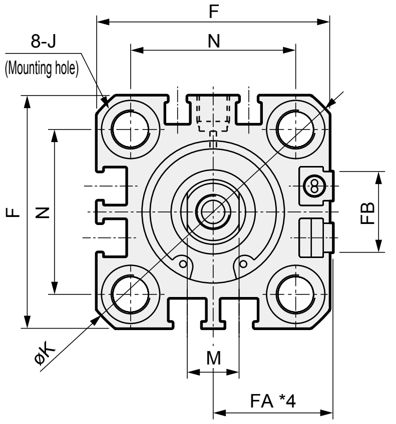


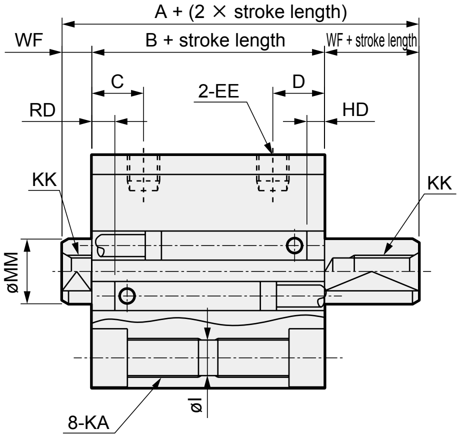


● Rod end male thread



ø20/ø25





Note: The positions for the left and right widths across flats are unspecified.

Code	Common dimensions with switch																
Bore size (mm)	A	B	C	D	EE	F	FA *4	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	39	32	5.5	10.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	39	32	5.5	10.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	50	41	8	13	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	54	44	11	16	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimensions	Reed T0H/T0V, T5H/T5V *6		Proximity T2H/T2V, T3H/T3V *6		Proximity T2WH/T2WV, T3WH/T3WV *6		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
Bore size (mm)	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	10	2.5	10	2.5	11.5	4				
ø16	10	2	10	2	11.5	3.5				
ø20	14.5	6.5	14.5	6.5	16	8	19	12	18	11
ø25	16.5	9.5	16.5	9.5	18	11	20	13	19	12

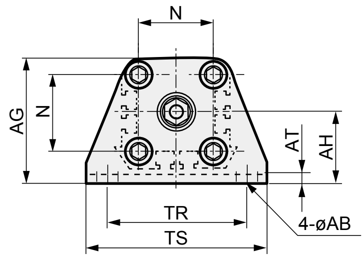
*1 : Only F type switch is available for the ø20 or ø25 piping port surface.
*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.
*4 : Dimensions in ( ) of FA are for the radial lead wire.
*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.
*6 : Dimensions in ( ) of codes HD and RD are for the type with rubber cushion.
*7 : The RD side can be identified with a mark on the port surface of the body.

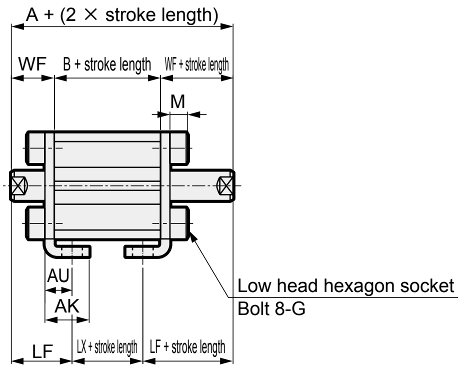
● Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

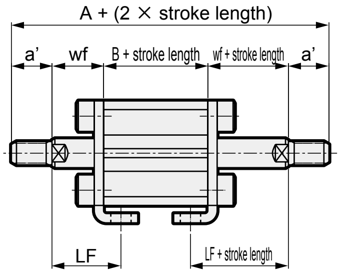
Dimensions with mounting bracket

● Axial foot (LB) with switch
SSD2-DML-12 to 25 -LB





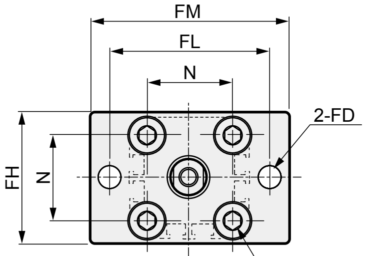
Rod end male thread

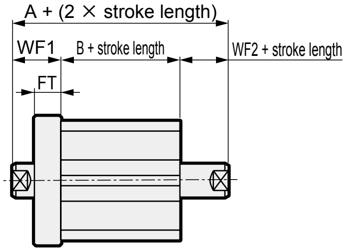


Code	Common dimensions									
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

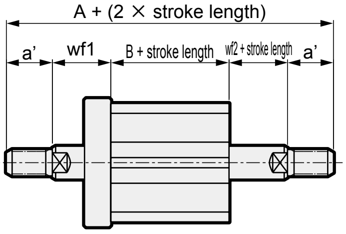
Code	Female thread					Male thread					
Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	59	32	15	10.5	13.5	19.5	80	32	15
ø16	13.5	19.5	59	32	15	12	13.5	19.5	83	32	15
ø20	14.5	20.5	70	41	19	14	14.5	20.5	98	41	19
ø25	15	22.5	74	44	19	17.5	15	22.5	109	44	19

● Rod side flange (FA) with switch
SSD2-DML-12 to 25 -FA





Rod end male thread

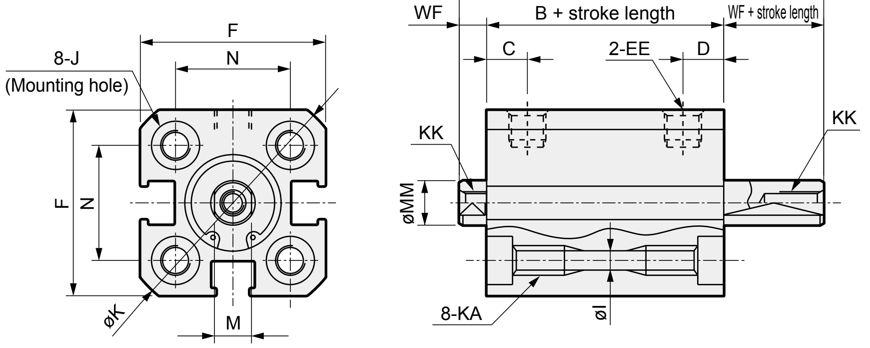


Code	Common dimensions							Female thread				Male thread				
Bore size (mm)	FD	FH	FL	FM	FT	N	G	WF1	WF2	A	B	a'	wf1	wf2	A	B
ø12	4.5	25	45	55	5.5	15.5	M4×12	13.5	3.5	49	32	10.5	13.5	3.5	70	32
ø16	4.5	30	45	55	5.5	20	M4×12	13.5	3.5	49	32	12	13.5	3.5	73	32
ø20	6.6	39	48	60	8	25.5	M6×16	14.5	4.5	60	41	14	14.5	4.5	88	41
ø25	6.6	42	52	64	8	28	M6×16	15	5	64	44	17.5	15	5	99	44

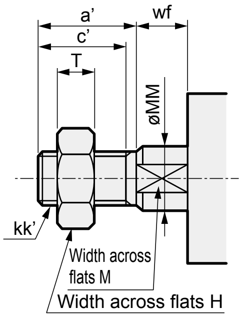
Dimensions

- SSD2-DM-12 to 25 (without switch)

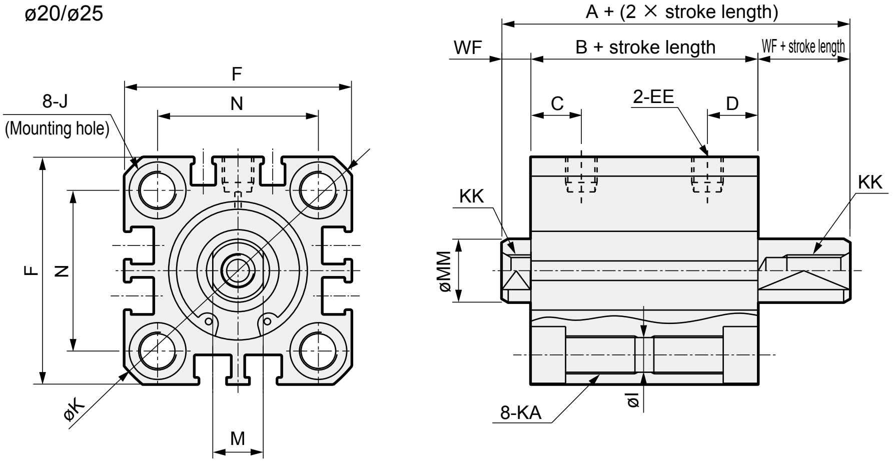
ø12/ø16



- Rod end male thread



ø20/ø25



Note: The positions for the left and right widths across flats are unspecified.

Code	Dimensions without switch and common dimensions													
Bore size (mm)	A	B	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	34	27	5.5	10.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	34	27	5.5	10.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	40	31	8	13	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	44	34	11	16	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

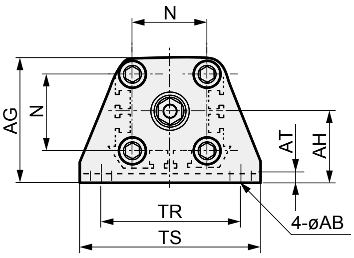
- Dimensions of rod end male thread part

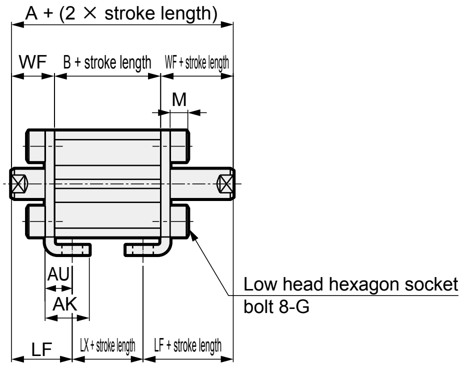
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

*1: For dimensions of individual accessories, refer to pages 1046 to 1049.

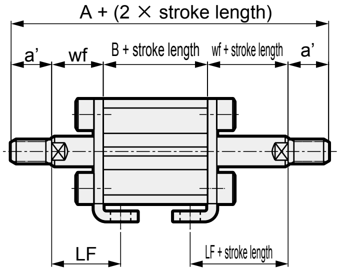
Dimensions with mounting bracket

● Axial foot (LB) without switch
SSD2-DM-12 to 25 -LB





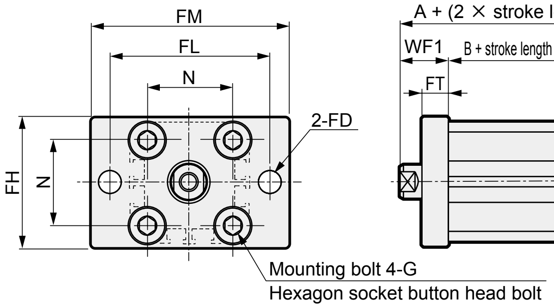
Rod end male thread

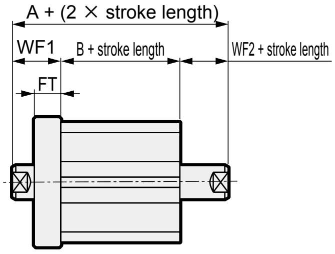


Code	Common dimensions									
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4×10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4×10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2

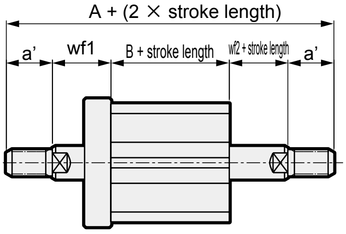
Code	Female thread					Male thread					
Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	54	27	15	10.5	13.5	19.5	75	27	15
ø16	13.5	19.5	54	27	15	12	13.5	19.5	78	27	15
ø20	14.5	20.5	60	31	19	14	14.5	20.5	88	31	19
ø25	15	22.5	64	34	19	17.5	15	22.5	99	34	19

● Rod side flange (FA) without switch
SSD2-DM-12 to 25 -FA





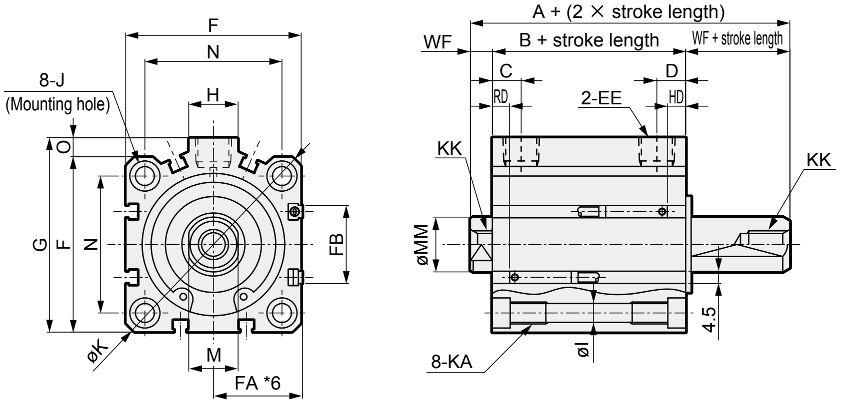
Rod end male thread



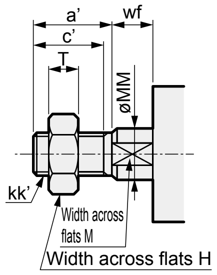
Code	Common dimensions							Female thread				Male thread				
Bore size (mm)	FD	FH	FL	FM	FT	N	G	WF1	WF2	A	B	a'	wf1	wf2	A	B
ø12	4.5	25	45	55	5.5	15.5	M4×12	13.5	3.5	44	27	10.5	13.5	3.5	65	27
ø16	4.5	30	45	55	5.5	20	M4×12	13.5	3.5	44	27	12	13.5	3.5	68	27
ø20	6.6	39	48	60	8	25.5	M6×16	14.5	4.5	50	31	14	14.5	4.5	78	31
ø25	6.6	42	52	64	8	28	M6×16	15	5	54	34	17.5	15	5	89	34

Dimensions CAD

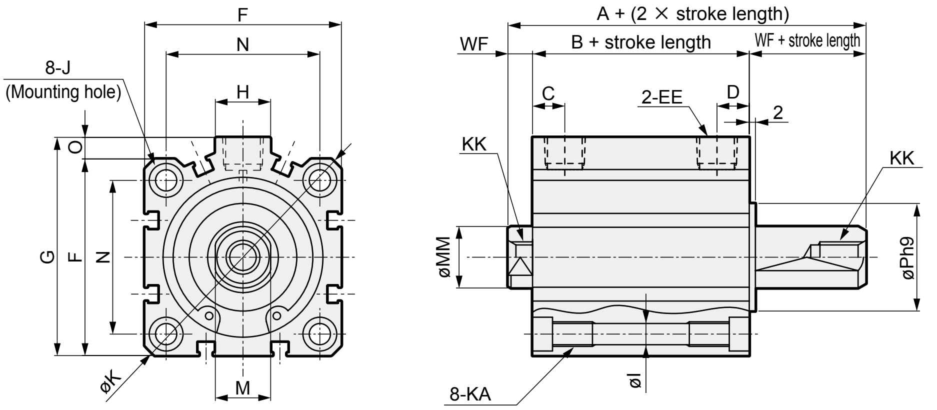
- SSD2-DML-32 to 63 (with switch)



- Rod end male thread



- SSD2-DM-32 to 63 (without switch)



Note: The positions for the left and right widths across flats are unspecified.

Code	Without switch		Common dimensions with switch														
Bore size (mm)	A *2, *8	B *3, *8	A *2	B *3	C *10	D *10	EE *9	F	FA *6	FB	G	H	I	J	K	KA	KK
ø32	53.5(63.5)	39.5(49.5)	63.5	49.5	8(5.5)	18(20)	Rc1/8	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13
ø40	54(64)	40(50)	64	50	12	12	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13
ø50	56.5(66.5)	40.5(50.5)	66.5	50.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15
ø63	58(68)	42(52)	68	52	13	13	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15

Code	Common dimensions with switch						Switch dimensions					
							Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size (mm)	M	MM	N	O	P	WF	HD *4	RD *4	HD *4	RD *4	HD	RD
ø32	14	16	34	4.5	21	7	20	9	20	9	21.5	10.5
ø40	14	16	40	5	28	7	16.5	12	16.5	12	18	13.5
ø50	17	20	50	7	35	8	16.5	12.5	16.5	12.5	18	14
ø63	17	20	60	7	35	8	18	13	18	13	19.5	14.5

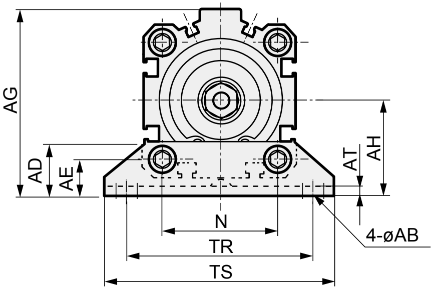
*1 : Custom stroke length is available only for more than 50 mm stroke lengths.
*2 : To calculate A + (2 x stroke length) when using a custom stroke length, apply "A + next longer standard stroke length + custom stroke length". (Example) If the custom stroke length is 70 mm, apply "A + standard stroke length 75 mm + custom stroke length 70 mm".
*3 : To calculate B + stroke length when using custom stroke length, apply the next longer standard stroke length instead of the custom stroke length. (Example) If the custom stroke length is 70 mm, apply the standard stroke length 75 mm.
*4 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
5 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.
*6 : Dimensions in ( ) of FA are for the radial lead wire.
*7 : For dimensions of individual accessories, refer to pages 1046 to 1049.
*8 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.
*9 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.
*10 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.
*11 : The RD side can be identified with a mark on the port surface of the body.

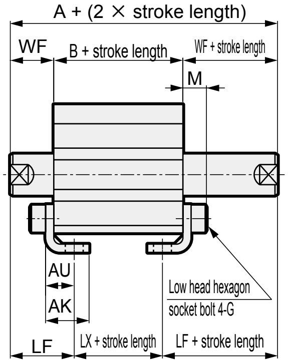
- Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5

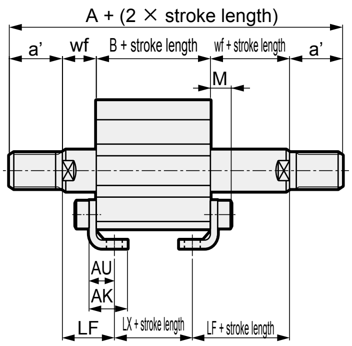
Dimensions with mounting bracket

● Axial foot (LB)
SSD2-DM(L)-32 to 63-LB





Rod end male thread

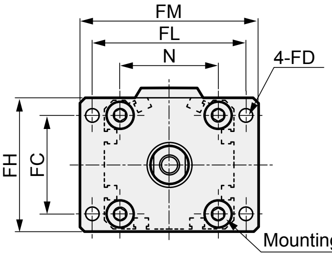


Code Bore size (mm)	Common dimensions											
	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71	7.2
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78	7.2
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95	8.2
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113	9.2

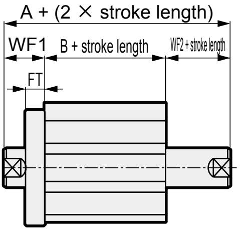
Code	Female thread								Male thread								
Bore size (mm)	WF	LF	Without switch			With switch			a'	wf	LF	Without switch			With switch		
			A	B	LX	A	B	LX				A	B	LX	A	B	LX
ø32	17	25	64.5(74.5)	30.5(40.5)	14.5(24.5)	74.5	40.5	24.5	23.5	15	23	107.5(117.5)	30.5(40.5)	14.5(24.5)	117.5	40.5	24.5
ø40	17	25	74(84)	40(50)	24(34)	84	50	34	23.5	15	23	117(127)	40(50)	24(34)	127	50	34
ø50	18	29.5	76.5(86.5)	40.5(50.5)	17.5(27.5)	86.5	50.5	27.5	28.5	15	26.5	127.5(137.59)	40.5(50.5)	17.5(27.5)	137.5	50.5	27.5
ø63	18	31	78(88)	42(52)	16(26)	88	52	26	28.5	15	28	129(139)	42(52)	16(26)	139	52	26

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

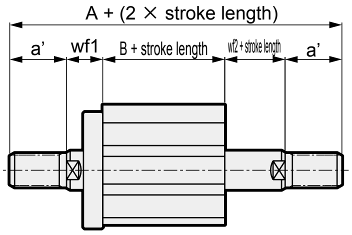
● Rod side flange (FA)
SSD2-DM(L)-32 to 63-FA



Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt



Rod end male thread

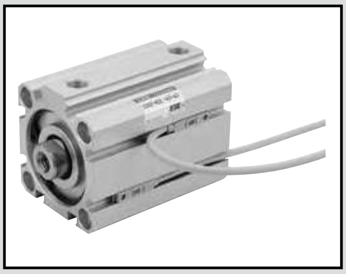


Code Bore size (mm)	Common dimensions							
	FC	FD	FH	FL	FM	FT	N	G
ø32	34	5.5	48	56	65	8	34	M6×16
ø40	40	5.5	54	62	72	8	40	M6×16
ø50	50	6.6	67	76	89	9	50	M8×20
ø63	60	9	80	92	108	9	60	M10×25

Code	Female thread						Male thread						
Bore size (mm)	WF1	WF2	Without switch		With switch		a'	wf1	wf2	Without switch		With switch	
			A	B	A	B				A	B	A	B
ø32	17	7	54.5(64.5)	30.5(40.5)	64.5	40.5	23.5	15	5	97.5(107.5)	30.5(40.5)	107.5	40.5
ø40	17	7	64(74)	40(50)	74	50	23.5	15	5	107(117)	40(50)	117	50
ø50	18	8	66.5(76.5)	40.5(50.5)	76.5	50.5	28.5	15	5	117.5(127.5)	40.5(50.5)	127.5	50.5
ø63	18	8	68(78)	42(52)	78	52	28.5	15	5	119(129)	42(52)	129	52

* Dimensions in ( ) are for stroke lengths of more than 50 mm.

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

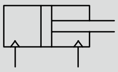


Compact cylinder double acting/single rod/rubber scraper

SSD2-G Series

● Bore size: ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-G SSD2-GL (with switch)							
Bore size mm	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)							
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)					0.1 (≈15 psi, 1 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)							
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)							
Port size	M5		Rc1/8 *1		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$							
Working piston speed mm/s	50 to 500					50 to 300		
Cushion	None							
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)							
Allowable absorbed energy J	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø20	5/10/15/20/25 30/35/40/45/50	50	1
ø25			
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

*1: When using the type with switch, refer to the table of the min. stroke length with switch.

Min. stroke length with switch (2 switches)

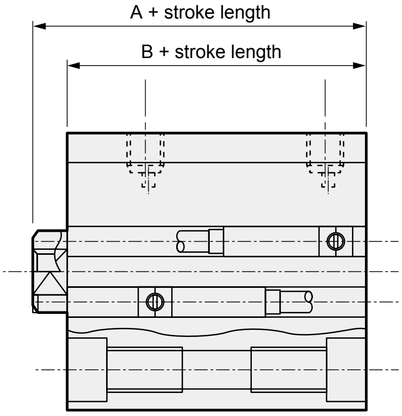
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø20	5	5
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

1: Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.

Custom stroke length

● SSD2 Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-G-32-38 A +2 mm spacer is added to the SSD2-G-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 63 mm.	



Switch specifications (F type switch)

- 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 µA or less	1 mA or less		10 µA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T type switch)

- 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			Dedicated for programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 µA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table

(the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø20	108	163	120	195	133	208	146	221	158	233	171	246	184	259	197	272	210	285	223	298	-	-	-	-
ø25	151	242	166	257	182	273	198	289	214	305	229	320	245	336	261	352	293	384	292	383	-	-	-	-
ø32	230	344	252	366	274	388	296	410	317	431	339	453	361	475	383	497	427	519	426	540	487	648	707	755
ø40	301	444	328	471	354	497	381	524	408	551	434	577	461	604	487	630	540	657	540	683	625	816	890	948
ø50	-	-	513	707	555	749	597	791	639	833	682	876	734	918	766	960	890	1002	850	1044	787	1254	1307	1464
ø63	-	-	733	1012	788	1067	843	1122	898	1177	953	1232	1009	1288	1064	1343	1175	1398	1174	1453	1384	1728	1939	2003
ø80	-	-	1532	1945	1619	2032	1705	2118	1792	2203	1878	2288	1965	2377	2052	2465	2226	2552	2225	2638	2564	3071	3434	3503
ø100	-	-	2212	2779	2326	2893	2439	3006	2553	3120	2667	3234	2781	3348	2894	3461	3121	3575	3122	3689	3622	4259	4757	4829

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	-	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

How to order

Without switch (without magnet for switch)

SSD2-G - 32 - 5 ——— N - LB - I

With switch (built-in magnet for switch)

SSD2-GL - 32 - 10 - T0H - R - N - LB - I

Ⓐ Model No.

Ⓑ Bore size

Ⓒ Stroke length

Ⓓ Switch model No.
*1
*2
*5
*6

Ⓔ Switch quantity

Ⓕ Option

Ⓖ Mounting bracket
*3
*8

Ⓗ Accessory
*4

Code	Description
Ⓐ Model No.	
SSD2-G	Double acting/single rod/rubber scraper
SSD2-GL	Double acting/single rod/rubber scraper/with switch
Ⓑ Bore size (mm)	
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

Ⓒ Stroke length (mm)

Refer to the stroke length table on the following page.

Ⓓ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage		Display	Lead wire	Bore size							
			AC	DC			20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire	●	●						
-	F3S*			●		3-wire	●	●						
F2H*	F2V*			●		2-wire	●	●						
F3H*	F3V*			●		3-wire	●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire	●	●						
F2YH*	F2YV*			●	2-color display	2-wire	●	●						
F3YH*	F3YV*			●		3-wire	●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display					●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire	●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●			●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●			●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display AC magnetic field	2-wire	●	●	●	●	●	●	●	●
T2YDT*	-			●			●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire	●	●	●	●	●	●	●	●

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *7
Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread
Ⓖ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot (made-to-order product)
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange (made-to-order product)
FB	Head side flange
Ⓗ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

1 : The T8 switch cannot be mounted on the ø20 to ø32 bore sizes.
*2 : The F type switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.
*3 : The mounting bracket is included at shipment.
*4 : "I" and "Y" cannot be selected together.
*5 : The F type switch with L type lead wire on ø20 models cannot be selected on stroke lengths of 15 mm or under.
*6 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
*7 : F type switch cannot be selected.
*8 : The structure of bore sizes ø20 to ø32 does not permit retrofitting of the foot bracket (LB) or flange bracket (FA) on the rod side. Assembly before shipment is available as made to order.

[Example of model No.]

SSD2-GL-20-10-T0H-R-N-LB-I

Model: Compact cylinder rubber scraper

Ⓑ Bore size	: ø20 mm
Ⓒ Stroke length	: 10 mm
Ⓓ Switch model No.	: Reed T0H switch/ Lead wire length 1 m
Ⓔ Switch quantity	: 1 on rod side
Ⓕ Option	: Rod end male thread
Ⓖ Mounting bracket	: Axial foot
Ⓗ Accessory	: Rod eye

[Stroke length table]

Stroke length (mm)		Applicable bore size							
		20	25	32	40	50	63	80	100
Standard stroke length	5	●	●	●	●				
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●
	35	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●
	45	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
	75			●	●	●	●	●	●
	100			●	●	●	●	●	●
Min. stroke length (mm) *1		1							
Max. stroke length (mm)		50		100					
Custom stroke length *2		In 1 mm increments							

1 : Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available.
Refer to page 936 for the min. stroke length with switch.

*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

How to order switch

SW - **T0H**

↓

Switch model No.
(Item Ⓓ on page 938)

How to order mounting bracket

Bore size (mm) / Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80
Foot (LB)				SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80
Flange (FA/FB)				SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80
Clevis bracket (CB)	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80

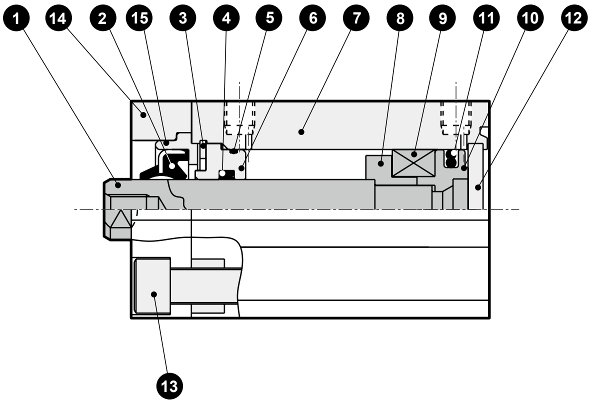
Bore size (mm) / Mounting bracket	ø100
Foot (LB)	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-100

*1: The foot mounting bracket is provided as 2 pcs./set.

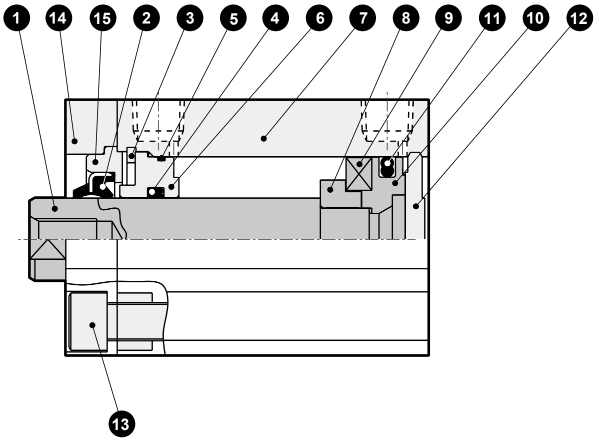
*2: The structure of bore sizes ø20 to ø32 does not permit retrofitting of the foot bracket (LB) or flange bracket (FA) on the rod side. Contact CKD for details.

Internal structure and parts list

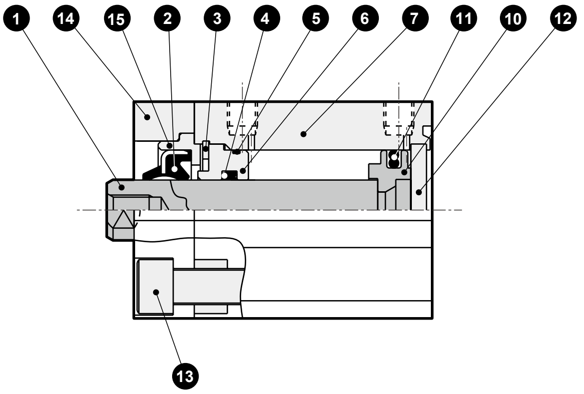
● SSD2-GL-20, 25 (double acting/single rod/rubber scraper/ with switch)



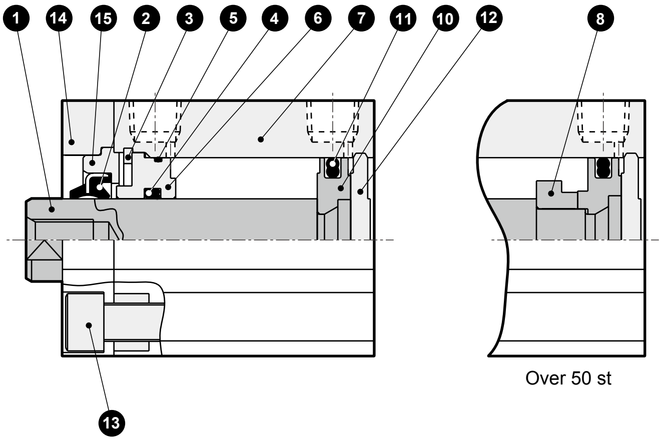
● SSD2-GL-32 (double acting/single rod/rubber scraper/ with switch)



● SSD2-G-20, 25 (double acting/single rod/rubber scraper)



● SSD2-G-32 (double acting/single rod/rubber scraper)



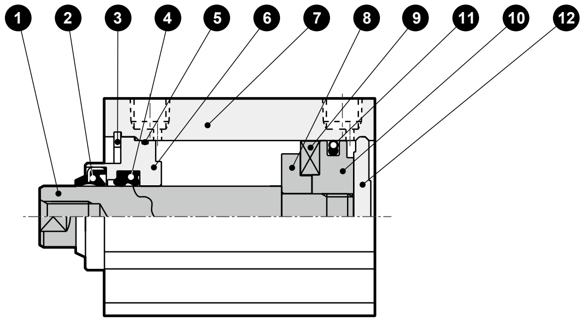
No.	Part name	Material	Remarks
1	Piston rod	ø20, ø25: Stainless steel ø32: Steel	Industrial chrome plating
2	Scraper	Nitrile rubber	
3	C type snap ring	Stainless steel	
4	Rod packing	Nitrile rubber	
5	Rod metal gasket	Nitrile rubber	
6	Rod metal	Special aluminum	Alumite
7	Body	Aluminum alloy	Hard alumite
8	Spacer	Aluminum alloy	Chromate
9	Magnet	Plastic	
10	Piston	Aluminum alloy	Chromate
11	Piston packing	Nitrile rubber	
12	Cover	ø20 to ø25: Stainless steel ø32: Aluminum alloy	ø32: Alumite
13	Hexagon socket head cap screw	Stainless steel	
14	Adaptor (A)	Aluminum alloy	Alumite
15	Adaptor (B)	Aluminum alloy	Alumite

Repair parts list

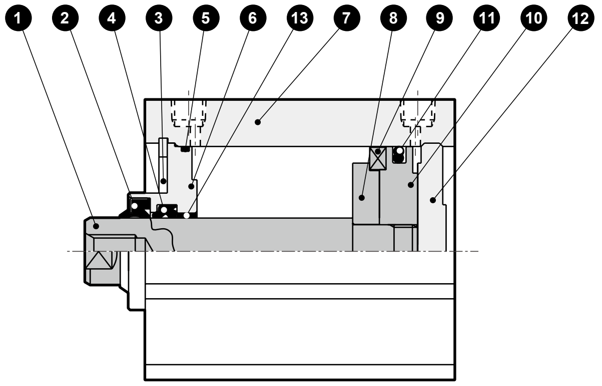
Part name / Bore size (mm)	Kit No.	Repair parts No.
ø20	SSD2-G-20K	②④⑤⑪
ø25	SSD2-G-25K	
ø32	SSD2-G-32K	

Internal structure and parts list

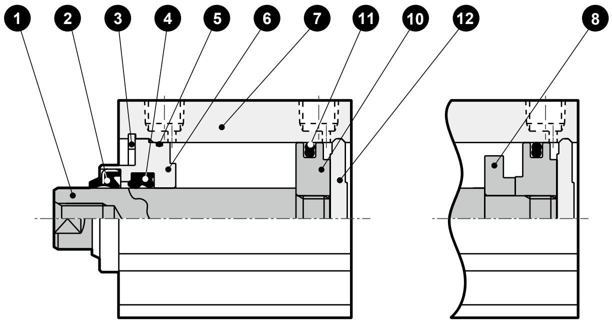
- SSD2-GL-40, 50 (double acting/single rod/rubber scraper/ with switch)



- SSD2-GL-63 to 100 (double acting/single rod/rubber scraper/ with switch)

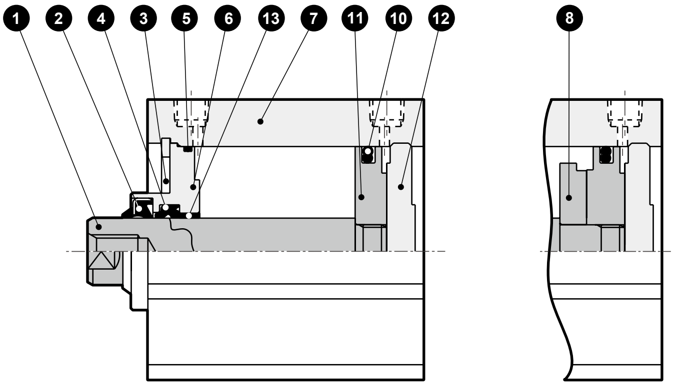


- SSD2-G-40, 50 (double acting/single rod/rubber scraper)



Over 50 st

- SSD2-G-63 to 100 (double acting/single rod/rubber scraper)



Over 50 st

No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating
2	Scraper	Nitrile rubber	
3	C type snap ring	Stainless steel	
4	Rod packing	Nitrile rubber	
5	Rod metal gasket	Nitrile rubber	
6	Rod metal	ø40, ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø40, ø50: Alumite ø63 to ø100: Chromate
7	Body	Aluminum alloy	Hard alumite
8	Spacer	Aluminum alloy	Chromate
9	Magnet	Plastic	
10	Piston	Aluminum alloy	Chromate
11	Piston packing	Nitrile rubber	
12	Cover	Aluminum alloy	Alumite
13	Bush	Oiles drymet	ø63 to ø100 only

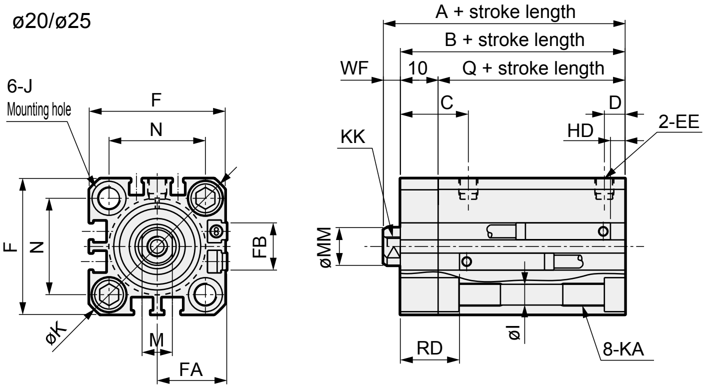
Repair parts list

Part name Bore size (mm)	Kit No.	Repair parts No.
ø40	SSD2-G-40K	② ④ ⑤ ⑪
ø50	SSD2-G-50K	
ø63	SSD2-G-63K	
ø80	SSD2-G-80K	
ø100	SSD2-G-100K	

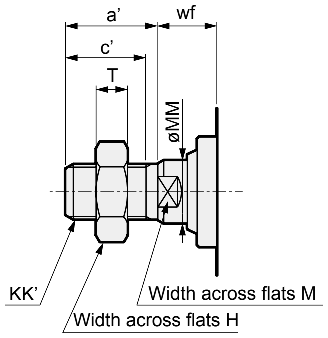
Dimensions

● SSD2-G(L)

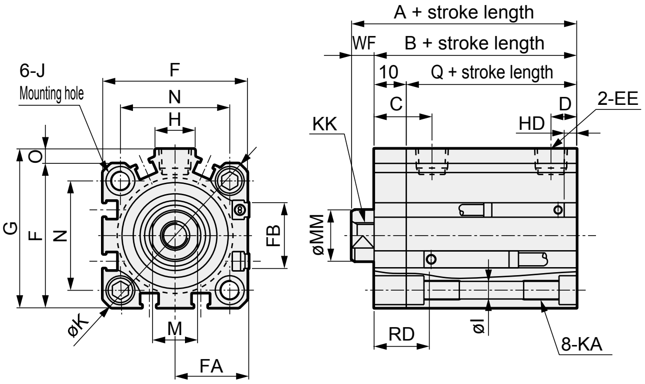
ø20/ø25



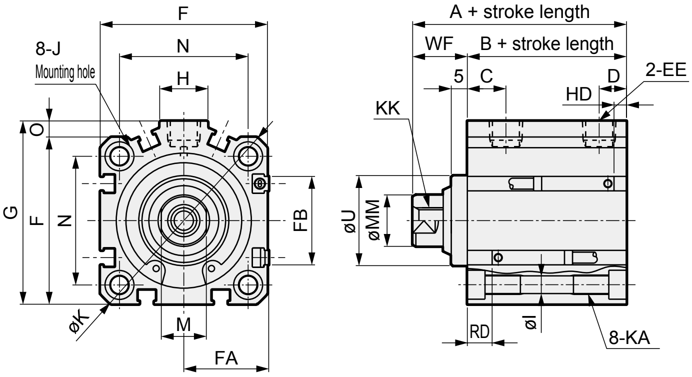
● Rod end male thread



ø32



ø40 to ø100



*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

*4 : Dimensions in ( ) of codes A, B and Q are for stroke lengths of more than 50 mm.

*5 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

*6 : Dimensions in ( ) of FA are for the radial lead wire.

*7 : Dimensions in ( ) of code J are for the rod side mounting hole.

Code	Dimensions without switch			Common dimensions with switch															
Bore size (mm)	A *1, *4	B *1, *4	Q	A *1	B *1	Q	C	D	EE *5	F	FA *6	FB	G	H	I	J	K	KA	KK
ø20	34	29.5	19.5	44	39.5	29.5	18	5.5	M5	36	18.5(22)	12.5	-	-	5.5	9 spot face depth 5.5 (15.5)	47	M6 depth 11	M5 depth 7
ø25	37.5	32.5	22.5	47.5	42.5	32.5	21	6	M5	40	20.5(24)	13.5	-	-	5.5	9 spot face depth 5.5 (15.5)	51	M6 depth 11	M6 depth 12
ø32	40(50)	33(43)	23(33)	50	43	33	18	8	Rc1/8	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5 (15.5)	60	M6 depth 11	M8 depth 13
ø40	46.5(56.5)	29.5(39.5)	-	56.5	39.5	-	12	8.5	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13
ø50	48.5(58.5)	30.5(40.5)	-	58.5	40.5	-	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15
ø63	54(64)	36(46)	-	64	46	-	13	11	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15
ø80	63.5(73.5)	43.5(53.5)	-	73.5	53.5	-	16	13	Rc3/8	98	49.5(53)	28.5	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21
ø100	75(85)	53(63)	-	85	63	-	23	15	Rc3/8	117	59(62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27

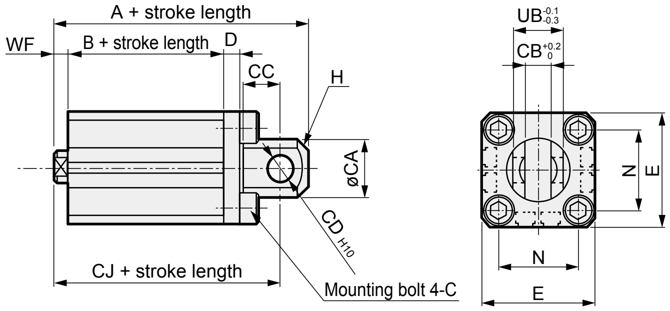
Code	Common dimensions with switch						Reed T0H/ T0V, T5H/T5V		Proximity T2H/ T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV		Proximity F2H/F2V, F3H/F3V, F2YH / F2YV, F3YH F3YV		Proximity F2S/F3S		Dimensions of rod end male thread part							
Bore size (mm)	M	MM	N	O	U	WF	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	a'	c'	H	KK'	M	MM	T	wf
ø20	8	10	25.5	-	-	4.5	3	17.5	3	17.5	5	19.5	7.5	22	6.5	21	14	12	13	M8	8	10	5	4.5
ø25	10	12	28	-	-	5	4	19.5	4	19.5	6	21.5	8.5	24	7.5	23	17.5	15	17	M10×1.25	10	12	6	5
ø32	14	16	34	4.5	-	7	4	19.5	4	19.5	6	21.5					23.5	20.5	22	M14×1.5	14	16	8	5
ø40	14	16	40	5	28	17	7	12	7	12	8.5	13.5					23.5	20.5	22	M14×1.5	14	16	8	15
ø50	17	20	50	7	35	18	7.5	12.5	7.5	12.5	9	14					28.5	26	27	M18×1.5	17	20	11	15
ø63	17	20	60	7	35	18	12.5	13	12.5	13	14	14.5					28.5	26	27	M18×1.5	17	20	1	15
ø80	22	25	77	6	43	20	17.5	15.5	17.5	15.5	19	17					35.5	32.5	32	M22×1.5	22	25	13	18
ø100	27	30	94	6.5	59	22	23	19.5	23	19.5	24.5	21					35.5	32.5	41	M26×1.5	27	30	16	18

MEMO

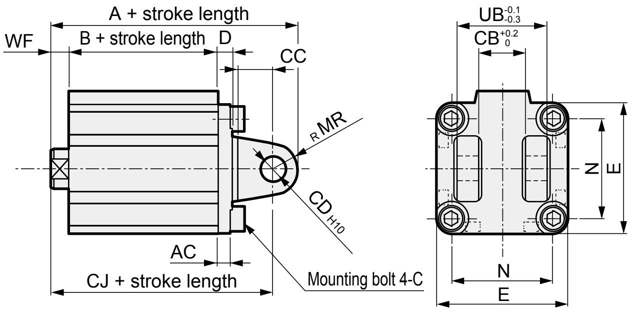
Dimensions with mounting bracket

- Clevis bracket (CB)
  SSD2-G(L)-20 to 100 -CB

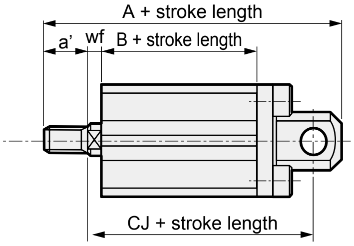
· ø20/ø25



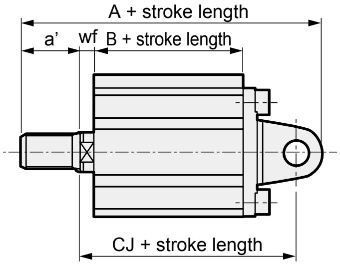
· ø32 to ø100



Rod end male thread



Rod end male thread



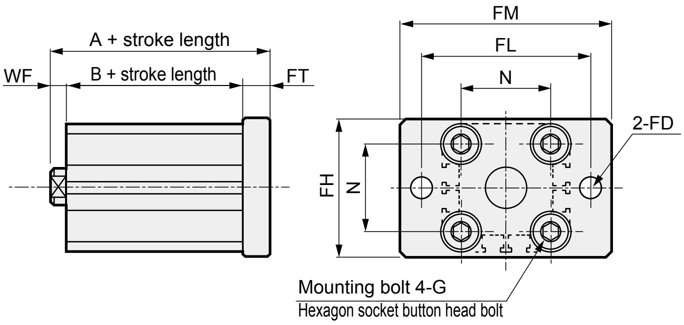
Code	Common dimensions									
Bore size (mm)	AC	CA	CB	CC	CD	D	E	G	MR	N	UB
ø20	-	20	8.2	12	8	5	36	M6×16	-	25.5	16
ø25	-	24	10.2	14	10	5	40	M6×16	-	28	20
ø32	4.5	-	18.2	14	10	5	45	M6×16	10	34	36
ø40	5	-	18.2	14	10	6	52	M6×16	10	40	36
ø50	6	-	22.2	20	14	7	64	M8×20	14	50	44
ø63	7	-	22.2	20	14	8	77	M10×25	14	60	44
ø80	9	-	28.2	27	18	10	98	M12×40	18	77	56
ø100	12	-	32.2	31	22	13	117	M12×40	22	94	64

Code	Female thread							Male thread							
Bore size (mm)	WF	Without switch			With switch			a'	wf	Without switch			With switch		
		A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø20	4.5	61	29.5	52	71	39.5	62	14	4.5	75	29.5	52	85	39.5	62
ø25	5	67.5	32.5	57.5	77.5	42.5	67.5	17.5	5	85	32.5	57.5	95	42.5	67.5
ø32	7	70	33	60	80	43	70	23.5	5	91.5	33	58	101.5	43	68
ø40	17	78.5	29.5	68.5	88.5	39.5	78.5	23.5	15	100	29.5	66.5	110	39.5	76.5
ø50	18	90.5	30.5	76.5	100.5	40.5	86.5	28.5	15	116	30.5	73.5	126	40.5	83.5
ø63	18	98	36	84	108	46	94	28.5	15	123.5	36	81	133.5	46	91
ø80	20	119.5	43.5	101.5	129.5	53.5	111.5	35.5	18	153	43.5	99.5	163	53.5	109.5
ø100	22	142	53	120	152	63	130	35.5	18	173.5	53	116	183.5	63	126

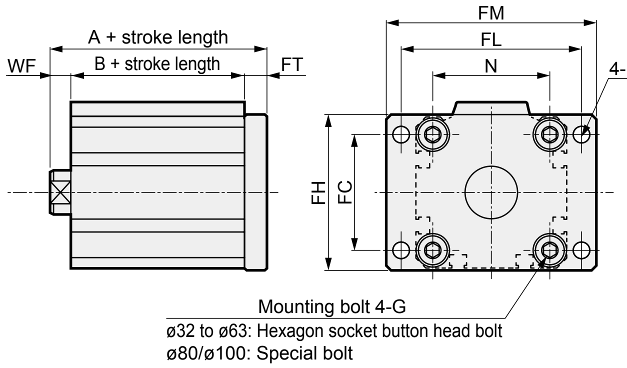
Dimensions with mounting bracket

- Head side flange (FB)
  SSD2-G(L)-20 to 100 -FB

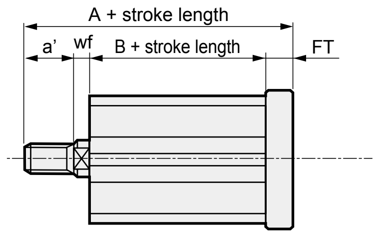
· ø20/ø25



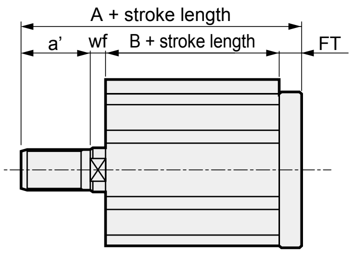
· ø32 to ø100



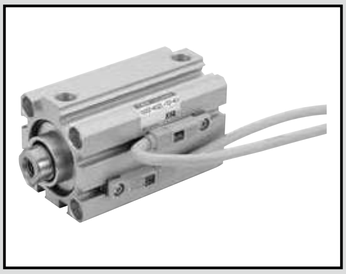
Rod end male thread



Rod end male thread



Code	Common dimensions								Female thread					Male thread						
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø20	-	6.6	39	48	60	8	25.5	M6×16	4.5	42	29.5	52	39.5	14	4.5	56	29.5	66	39.5
ø25	-	6.6	42	52	64	8	28	M6×16	5	45.5	32.5	55.5	42.5	17.5	5	63	32.5	73	42.5
ø32	34	5.5	48	56	65	8	34	M6×16	7	48	33	58	43	23.5	5	69.5	33	79.5	43
ø40	40	5.5	54	62	72	8	40	M6×16	17	54.5	29.5	64.5	39.5	23.5	15	76	29.5	86	39.5
ø50	50	6.6	67	76	89	9	50	M8×20	18	57.5	30.5	67.5	40.5	28.5	15	83	30.5	93	40.5
ø63	60	9	80	92	108	9	60	M10×25	18	63	36	73	46	28.5	15	88.5	36	98.5	46
ø80	77	11	99	116	134	11	77	M12×40	20	74.5	43.5	84.5	53.5	35.5	18	108	43.5	118	53.5
ø100	94	11	117	136	154	11	94	M12×40	22	86	53	96	63	35.5	18	117.5	53	127.5	63

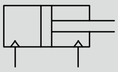


Compact cylinder Double acting/coolant proof

SSD2-G2/G3 Series

● Bore size: ø16/ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



RoHS

Specifications

Item	SSD2-G2/G3 SSD2-G2L/G3L (with switch)								
Bore size mm	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting								
Working fluid	Compressed air								
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)								
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)						0.1 (≈15 psi, 1 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)								
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)								
Port size	M5			Rc1/8 (*1)		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$								
Working piston speed mm/s	50 to 500						50 to 300		
Cushion	None								
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)								

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

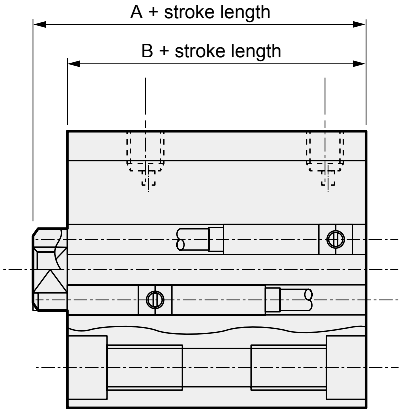
Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø16	5/10/15/20/25/30	30	1(10) The value in ( ) is for types with one or two switches.
ø20	5/10/15/20/25/30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30/35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25/30/35/40/45/50/75/100	100	
ø63			
ø80			
ø100			

Custom stroke length

● SSD2-G2/G3 Series

Item	Standard products Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	16	1 to 29
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-G2-32-38 A +2 mm spacer is added to the SSD2-G2-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 73 mm.	



Switch specifications

● Proximity switch

Model No. / Item	Proximity/2-wire T2YLH/T2YLV	Proximity/3-wire T3YLH/T3YLV
Applications	Dedicated for programmable controller	Programmable controller, relay
Power supply voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20 mA *1	30 VDC or less, 50 mA or less
Indicator lamp	Red/green LED (Lit when ON)	
Leakage current	1 mA or less	10 μA or less
Max. shock resistance	980 m/S^{2}	
Weight g	1 m:33 3 m:87 5 m:142	

*1 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60˚C)

*2 : Refer to Ending Page 1 for other switch specifications.

Cylinder weight table

(the weight of the switches is when there are 2 cylinder switches.) (Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø16	62	118	73	118	83	158	94	139	105	150	116	161	-	-	-	-	-	-	-	-	-	-	-	-
ø20	108	163	120	195	133	208	146	221	158	233	171	246	184	259	197	272	210	285	223	298	-	-	-	-
ø25	151	242	166	257	182	273	198	289	214	305	229	320	245	336	261	352	293	384	292	383	-	-	-	-
ø32	230	344	252	366	274	388	296	410	317	431	339	453	361	475	383	497	427	519	426	540	487	648	707	755
ø40	301	444	328	471	354	497	381	524	408	551	434	577	461	604	487	630	540	657	540	683	625	816	890	948
ø50	-	-	513	707	555	749	597	791	639	833	682	876	734	918	766	960	890	1002	850	1044	787	1254	1307	1464
ø63	-	-	733	1012	788	1067	843	1122	898	1177	953	1232	1009	1288	1064	1343	1175	1398	1174	1453	1384	1728	1939	2003
ø80	-	-	1532	1945	1619	2032	1705	2118	1792	2203	1878	2288	1965	2377	2052	2465	2226	2552	2225	2638	2564	3071	3434	3503
ø100	-	-	2212	2779	2326	2893	2439	3006	2553	3120	2667	3234	2781	3348	2894	3461	3121	3575	3122	3689	3622	4259	4757	4829

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø16	Push	-	30.2	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	-	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	-	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	-	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	-	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	-	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	-	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	-	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

How to order

Without switch (without magnet for switch)

SSD2 - G2 - 20 - ◯ - 30 - N - LB - I

With switch (built-in magnet for switch)

SSD2 - G2L - 20 - ◯ - 30 - T2YLH - R - N - LB - I

Ⓐ Degree of protection level

Ⓑ Bore size

Ⓒ Port thread

Ⓓ Stroke length

Ⓔ Switch model No. *1 *6

Ⓕ Switch quantity

Ⓖ Option

Ⓗ Mounting bracket *2 *3

Ⓘ Accessory *4

Code	Description
Ⓐ Degree of protection level	
G2	Coolant proof scraper + packing NBR
G3	Coolant proof scraper + packing FKM
G2L	Coolant proof scraper + packing NBR, with switch
G3L	Coolant proof scraper + packing FKM, with switch
Ⓑ Bore size (mm)	
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓒ Port thread	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)
Ⓓ Stroke length (mm)	
Refer to the stroke length table on the following page.	

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage	Display	Lead wire
T2YLH*	**T2YLV***	Proximity	DC	2-color display	2-wire
T3YLH*	**T3YLV***				3-wire

Code	Description
*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)
Ⓕ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓖ Option	
Blank	Rod end female thread
N	Rod end male thread
Ⓗ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot (made-to-order product)
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange (made-to-order product)
FB	Head side flange
Ⓘ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : The F type switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.
*2 : The mounting bracket is included at shipment.
*3 : The structure of bore sizes ø16 to ø32 does not permit retrofitting of the foot bracket (LB) or flange bracket (FA) on the rod side. Assembly before shipment is available as made to order.
*4 : "I" and "Y" cannot be selected together.
*5 : Refer to pages 750 and 751 for combinations of variations/options.
*6 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

SSD2-G2L-32-30-T2YLH-R-N

Model: Compact cylinder

Ⓐ Degree of protection level	: Coolant proof scraper + packing NBR, with switch
Ⓑ Bore size	: ø32 mm
Ⓒ Port thread	: Rc thread
Ⓓ Stroke length	: 30 mm
Ⓔ Switch model No.	: Proximity switch T2YLH, lead wire 1 m
Ⓕ Switch quantity	: 1 on rod side
Ⓖ Option	: Rod end male thread
Ⓗ Mounting bracket	: Axial foot

[Stroke length table]

Stroke length (mm)		Applicable bore size								
		16	20	25	32	40	50	63	80	100
Standard stroke length	5	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●
	35		●	●	●	●	●	●	●	●
	40		●	●	●	●	●	●	●	●
	45		●	●	●	●	●	●	●	●
	50		●	●	●	●	●	●	●	●
	75				●	●	●	●	●	●
	100				●	●	●	●	●	●
Min. stroke length (mm) *1		1								
Max. stroke length (mm)		30	50		100					
Custom stroke length *2										

*1 : Less than 10 mm stroke length is not available.
Refer to page 946 for the min. stroke length with switch.
*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

How to order switch

SW - T2YLH

Switch model No.
(Item Ⓔ on page 948)

How to order mounting bracket

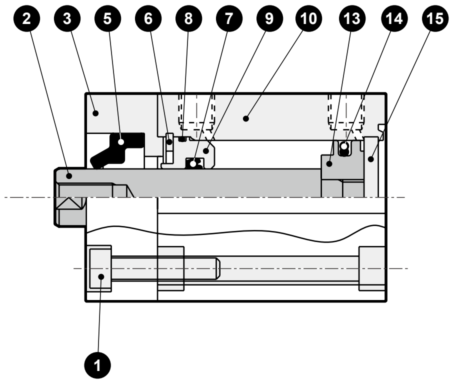
Bore size (mm) Mounting bracket	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)					SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)					SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

*1: The foot mounting bracket is provided as 2 pcs./set.
*2: The structure of bore sizes ø16 to ø32 does not permit retrofitting of the foot bracket (LB) or flange bracket (FA) on the rod side. Contact CKD for details.

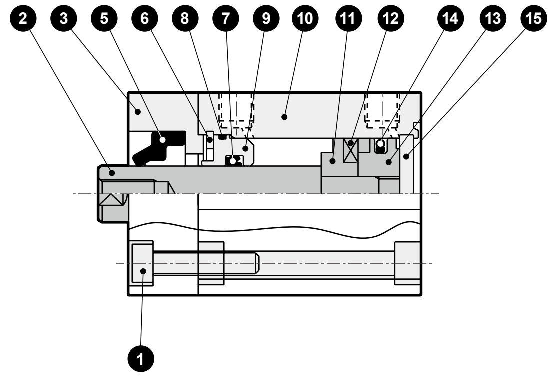
Internal structure and parts list

- Degree of protection: Packing NBR SSD2-G2/G2L
  Packing FKM SSD2-G3/G3L

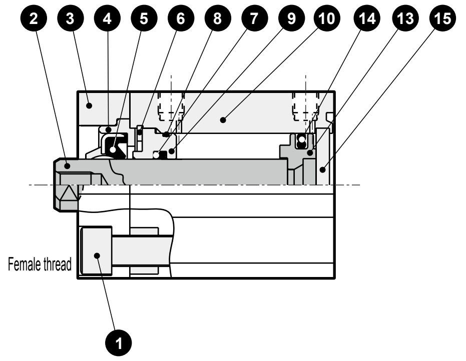
- SSD2-G$^{2}_{3}$-16 (without switch)



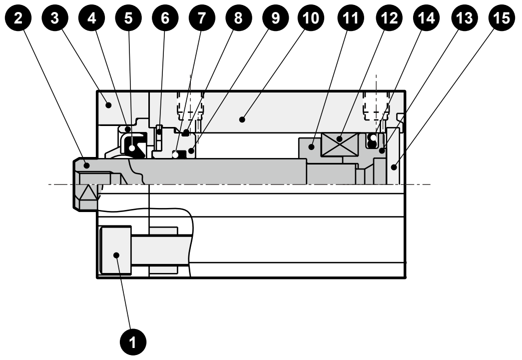
- SSD2-G$^{2}_{3}$ L-16 (with switch)



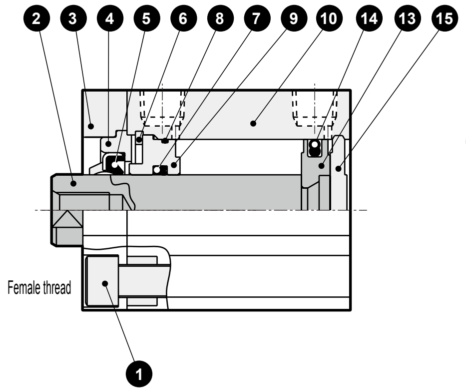
- SSD2-G$^{2}_{3}$ -20, 25 (without switch)

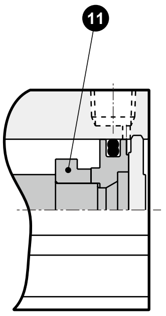


- SSD2-G$^{2}_{3}$ L-20, 25 (with switch)



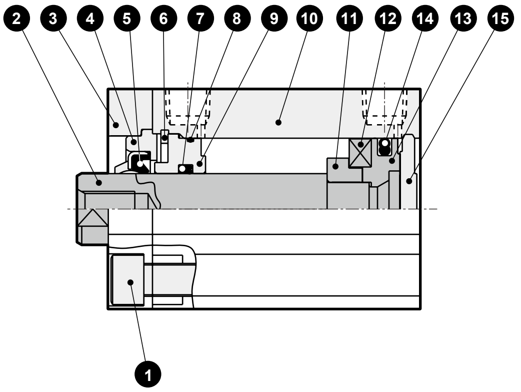
- SSD2-G$^{2}_{3}$ -32 (without switch)



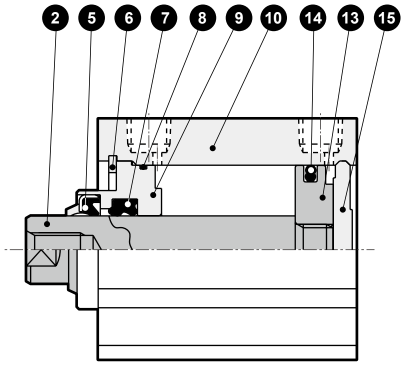


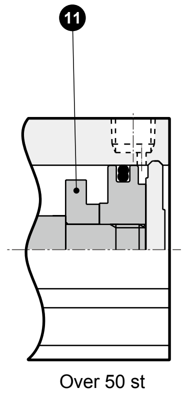
Over 50 st

- SSD2-G$^{2}_{3}$ L-32 (with switch)



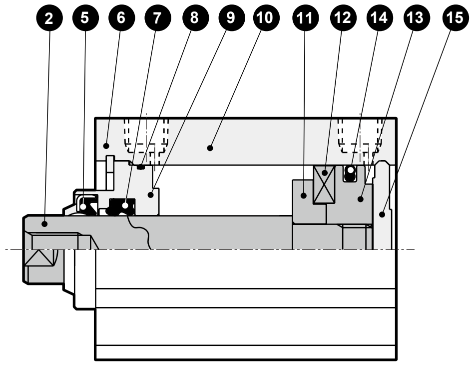
- SSD2-G$^{2}_{3}$ -40, 50 (without switch)





Over 50 st

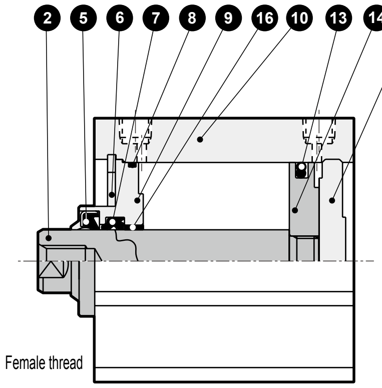
- SSD2-G$^{2}_{3}$ L-40, 50 (with switch)

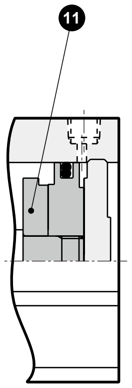


Internal structure and parts list

- Degree of protection: Packing NBR SSD2-G2/G2L
  Packing FKM SSD2-G3/G3L

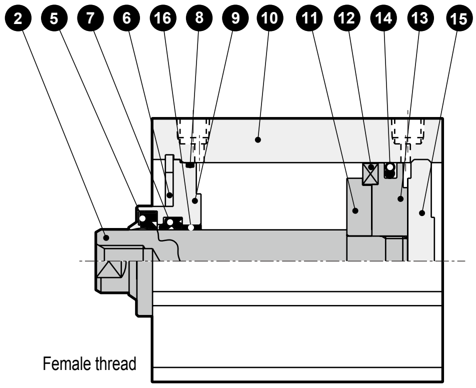
- SSD2-G^{2}_{3}-63 to 100 (without switch)





Over 50 st

- SSD2-G^{2}_{3}L-63 to 100 (with switch)



Main parts list

No.	Part name		Material	Remarks
1	Hexagon socket head cap screw		Stainless steel	ø16 to ø32 only
2	Piston rod		Stainless steel	Industrial chrome plating
3	Adaptor (A)		Aluminum alloy	Alumite: ø16 to ø32 only
4	Adaptor (B)		Aluminum alloy	Alumite: ø16 to ø32 only
5	Scraper	G2	Nitrile rubber	
		G3	Fluoro rubber	
6	C type snap ring		Stainless steel	
7	Rod packing	G2	Nitrile rubber	
		G3	Fluoro rubber	
8	Rod metal gasket	G2	Nitrile rubber	
		G3	Fluoro rubber	
9	Rod metal		ø16 to ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø16 to ø50: Alumite ø63 to ø100: Chromate
10	Body		Aluminum alloy	Hard alumite
11	Spacer		Aluminum alloy	Chromate
12	Magnet		Plastic	
13	Piston		Aluminum alloy	Chromate
14	Piston packing	G2	Nitrile rubber	
		G3	Fluoro rubber	
15	Cover		ø16 to ø25: Stainless steel	Alumite: ø32 to ø100
			ø32 to ø100: Aluminum alloy	
16	Bush		Oiles drymet	ø63 to ø100 only

Repair parts list

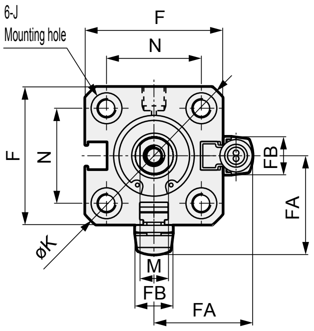
Part name Bore size (mm)	Kit No.	Repair parts No.
ø16	SSD2-G2-16K	⑤⑦⑧⑭
	SSD2-G3-16K	
ø20	SSD2-G2-20K	
	SSD2-G3-20K	
ø25	SSD2-G2-25K	
	SSD2-G3-25K	
ø32	SSD2-G2-32K	
	SSD2-G3-32K	
ø40	SSD2-G2-40K	
	SSD2-G3-40K	
ø50	SSD2-G2-50K	
	SSD2-G3-50K	
ø63	SSD2-G2-63K	
	SSD2-G3-63K	
ø80	SSD2-G2-80K	
	SSD2-G3-80K	
ø100	SSD2-G2-100K	
	SSD2-G3-100K	

Note: Specify the kit No. when placing an order.

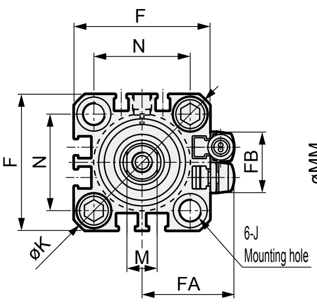
Dimensions

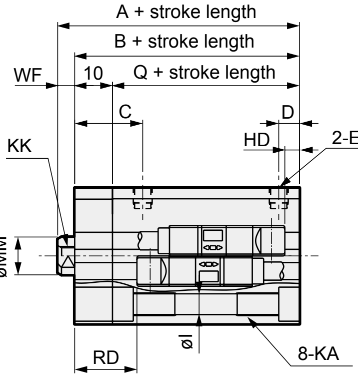
- Degree of protection: Packing NBR
  SSD2-G2/G2L
- Degree of protection: Packing FKM
  SSD2-G3/G3L

ø16

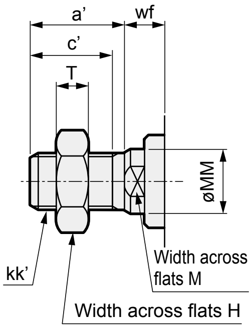


ø20/ø25

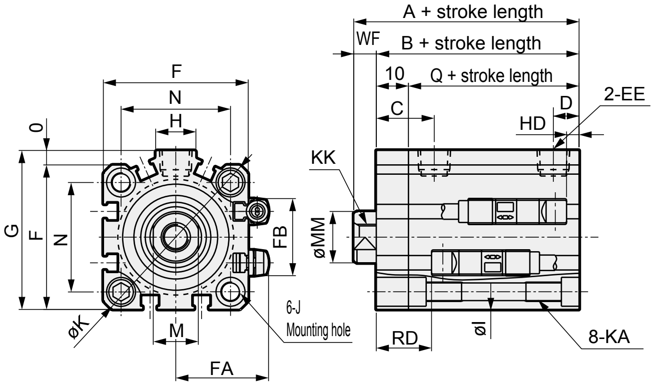




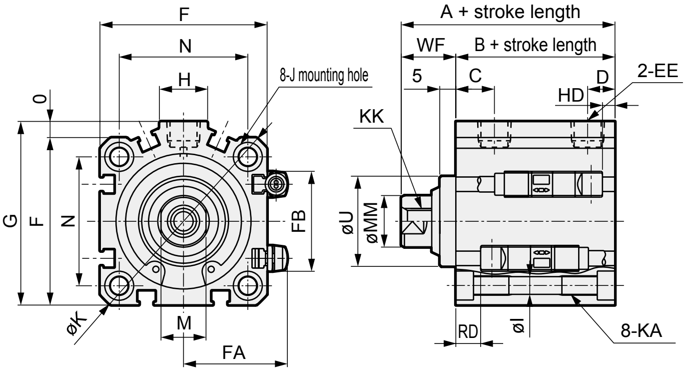
- Rod end male thread



ø32



ø40 to ø100



*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

*4 : Dimensions in ( ) of codes A, B and Q are for stroke lengths of more than 50 mm.

*5 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

*6 : Dimensions in ( ) of code J are for the spot face of rod side mounting hole.

Code	Dimensions without switch			Common dimensions with switch																
Bore size (mm)	A [*1, *4]	B [*1, *4]	Q	A [*1]	B [*1]	Q	C	D	EE [*5]	F	FA	FB	G	H	I	J	K	KA	KK
ø16	35.5	27	17	40.5	32	22	15.5	5.5	M5	29	20.5	8	-	-	3.5	6.5 spot face depth 3.5 (13.4)	38	M4 depth 7	M4 depth 8
ø20	39	29.5	19.5	49	39.5	29.5	18	5.5	M5	36	24.5	16	-	-	5.5	9 spot face depth 5.5 (15.5)	47	M6 depth 11	M5 depth 7
ø25	42.5	32.5	22.5	52.5	42.5	32.5	21	6	M5	40	26.5	17	-	-	5.5	9 spot face depth 5.5 (15.5)	51	M6 depth 11	M6 depth 12
ø32	45(55)	33(43)	23(33)	55	43	33	18	8	Rc1/8	45	29	24	49.5	12.5	5.5	9 spot face depth 5.5 (15.5)	60	M6 depth 11	M8 depth 13
ø40	46.5(56.5)	29.5(39.5)	-	56.5	39.5	-	12	8.5	Rc1/8	52	32.5	31	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13
ø50	48.5(58.5)	30.5(40.5)	-	58.5	40.5	-	10.5	10.5	Rc1/4	64	38.5	32	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15
ø63	54(64)	36(46)	-	64	46	-	13	11	Rc1/4	77	45	32	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15
ø80	63.5(73.5)	43.5(53.5)	-	73.5	53.5	-	16	13	Rc3/8	98	55.5	32	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21
ø100	75(85)	53(63)	-	85	63	-	23	15	Rc3/8	117	65	32	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27

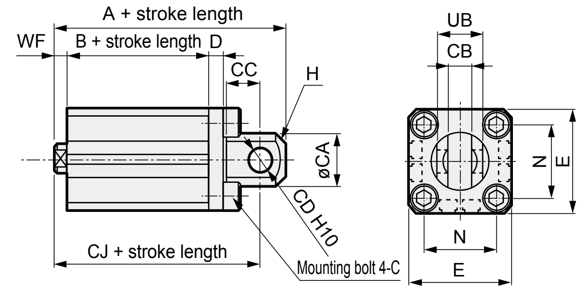
Code	Common dimensions with switch						Proximity T2YLH, T2YLV, T3YLH, T3YLV		Dimensions of rod end male thread part							
Bore size (mm)	M	MM	N	O	U	WF	RD	HD	a'	c'	H	KK'	M	MM	T	wf
ø16	6	8	20	-	-	8.5	1.5	0	12	10	10	M6	6	8	3.6	8.5
ø20	8	10	25.5	-	-	9.5	16.5	2	14	12	13	M8	8	10	5	9.5
ø25	10	12	28	-	-	10	18.5	3	17.5	15	17	M10×1.25	10	12	6	10
ø32	14	16	34	4.5	-	12	19	3	23.5	20.5	22	M14×1.5	14	16	8	10
ø40	14	16	40	5	28	17	12	6.5	23.5	20.5	22	M14×1.5	14	16	8	15
ø50	17	20	50	7	35	18	12	7.5	28.5	26	27	M18×1.5	17	20	11	15
ø63	17	20	60	7	35	18	12.5	12.5	28.5	26	27	M18×1.5	17	20	11	15
ø80	22	25	77	6	43	20	15	17.5	35.5	32.5	32	M22×1.5	22	25	13	18
ø100	27	30	94	6.5	59	22	19	23	35.5	32.5	41	M26×1.5	27	30	16	18

MEMO

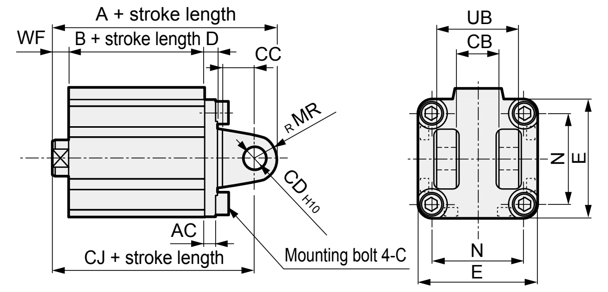
Dimensions with mounting bracket

● Clevis bracket (CB)
SSD2-G2(L)/G3(L)-16 to 100 -CB

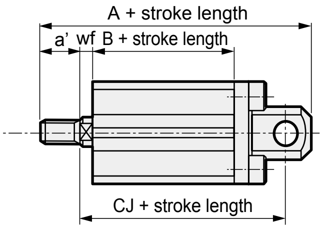
· ø16 to ø25



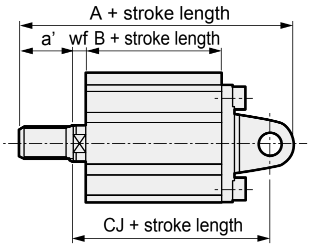
· ø32 to ø100



Rod end male thread



Rod end male thread



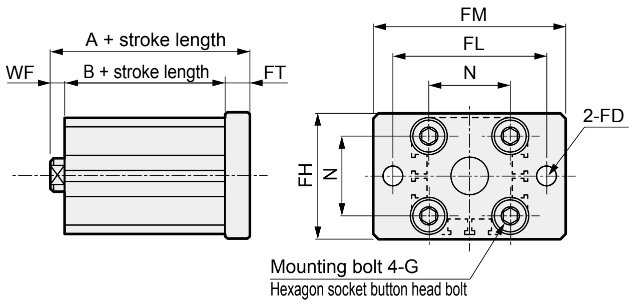
Code	Common dimensions										
Bore size (mm)	AC	CA	CB	CC	CD	D	E	G	H	MR	N	UB
ø16	-	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	-	20	12
ø20	-	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	-	25.5	16
ø25	-	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	-	28	20
ø32	4.5	-	$18.2^{+0.2}_{0}$	14	10	5	45	M6×16	-	10	34	36
ø40	5	-	$18.2^{+0.2}_{0}$	14	10	6	52	M6×16	-	10	40	36
ø50	6	-	$22.2^{+0.2}_{0}$	20	14	7	64	M8×20	-	14	50	44
ø63	7	-	$22.2^{+0.2}_{0}$	20	14	8	77	M10×25	-	14	60	44
ø80	9	-	$28.2^{+0.2}_{0}$	27	18	10	98	M12×40	-	18	77	56
ø100	12	-	$32.2^{+0.2}_{0}$	31	22	13	117	M12×40	-	22	94	64

Code	Female thread							Male thread							
Bore size (mm)	WF	Without switch			With switch			a'	wf	Without switch			With switch		
		A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø16	8.5	56.5	27	50.5	61.5	32	55.5	12	8.5	68.5	27	50.5	73.5	32	55.5
ø20	9.5	66	29.5	57	76	39.5	67	14	9.5	80	29.5	57	90	39.5	67
ø25	10	72.5	32.5	62.5	82.5	42.5	72.5	17.5	10	90	32.5	62.5	100	42.5	72.5
ø32	12	75	33	65	85	43	75	23.5	10	96.5	33	63	106.5	43	73
ø40	17	78.5	29.5	68.5	88.5	39.5	78.5	23.5	15	100	29.5	66.5	110	39.5	76.5
ø50	18	90.5	30.5	76.5	100.5	40.5	86.5	28.5	15	116	30.5	73.5	126	40.5	83.5
ø63	18	98	36	84	108	46	94	28.5	15	123.5	36	81	133.5	46	91
ø80	20	119.5	43.5	101.5	129.5	53.5	111.5	35.5	18	153	43.5	99.5	163	53.5	109.5
ø100	22	142	53	120	152	63	130	35.5	18	173.5	53	116	183.5	63	126

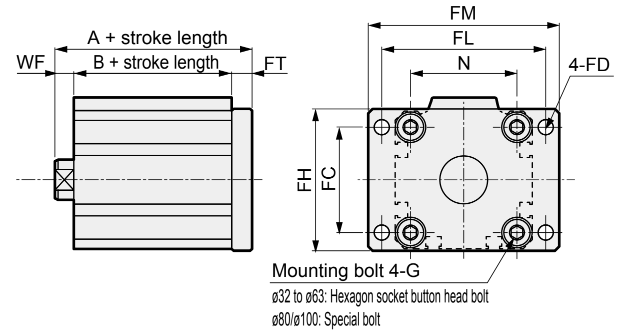
Dimensions with mounting bracket

- Head side flange (FB)
  SSD2-G2(L)/G3 (L)-20 to 100-FB

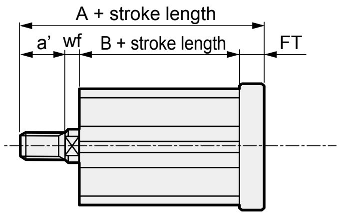
· ø16 to ø25



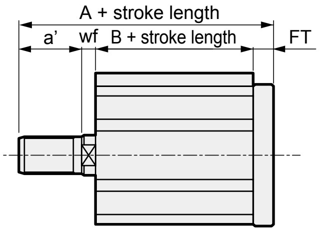
· ø32 to ø100



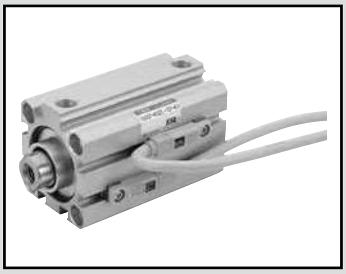
Rod end male thread



Rod end male thread



Code	Common dimensions								Female thread					Male thread					
Bore size (mm)	FC	FD	FH	FL	FM	FT	G	N	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø16	-	4.5	30	45	55	5.5	M4×12	20	8.5	41	27	46	32	12	8.5	53	27	58	32
ø20	-	6.6	39	48	60	8	M6×16	25.5	9.5	47	29.5	57	39.5	14	9.5	61	29.5	71	39.5
ø25	-	6.6	42	52	64	8	M6×16	28	10	50.5	32.5	60.5	42.5	17.5	10	68	32.5	78	42.5
ø32	34	5.5	48	56	65	8	M6×16	34	12	53	33	63	43	23.5	10	74.5	33	84.5	43
ø40	40	5.5	54	62	72	8	M6×16	40	17	54.5	29.5	64.5	39.5	23.5	15	76	29.5	86	39.5
ø50	50	6.6	67	76	89	9	M8×20	50	18	57.5	30.5	67.5	40.5	28.5	15	83	30.5	93	40.5
ø63	60	9	80	92	108	9	M10×25	60	18	63	36	73	46	28.5	15	88.5	36	98.5	46
ø80	77	11	99	116	134	11	M12×40	77	20	74.5	43.5	84.5	53.5	35.5	18	108	43.5	118	53.5
ø100	94	11	117	136	154	11	M12×40	94	22	86	53	96	63	35.5	18	117.5	53	127.5	63

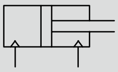


Compact cylinder double acting/high load/coolant proof

SSD2-KG2/KG3 Series

● Bore size: ø16/ø20/ø25/ø32/ø40/ø50
ø63/ø80/ø100

JIS symbol



RoHS

Specifications

Item	SSD2-KG2/KG3 SSD2-KG2L/KG3L (with switch)								
Bore size mm	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting								
Working fluid	Compressed air								
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)								
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)						0.1 (≈15 psi, 1 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)								
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)								
Port size	M5×0.8			Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$								
Working piston speed mm/s	50 to 500						50 to 300		
Cushion	Rubber cushion								
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)								
Allowable absorbed energy J	0.09	0.16	0.16	0.4	0.63	0.98	1.56	2.51	3.92

Stroke length

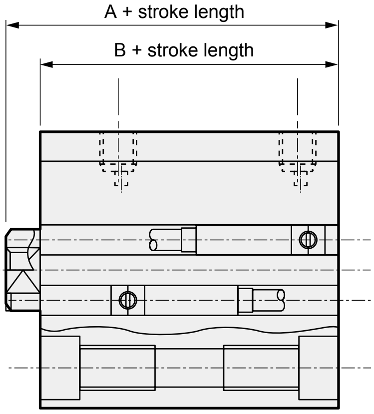
Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø16	5/10/15/20/25/30	30	1(10) The value in ( ) is for types with one or two switches.
ø20	5/10/15/20/25/30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30/35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25/30/35/40/45/50/75/100	100	
ø63			
ø80			
ø100			

*1: The custom stroke length is available in 1 mm increments. (Less than 10 mm with switch is not available.)
However, the total length is the same as that of the next longer standard stroke length.

Custom stroke length

● SSD2-KG2/KG3 Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	16	1 to 29
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-KG2-32-41 A +4 mm spacer is added to the SSD2-KG2-32-45 standard cylinder to create 41 mm stroke length. B + stroke length is 88 mm.	



Switch specifications

● Proximity switch

Type/model No.	Proximity/2-wire	Proximity/3-wire
Item	T2YLH/T2YLV	T3YLH/T3YLV
Applications	Dedicated for programmable controller	Programmable controller, relay
Power supply voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20 mA *1	30 VDC or less, 50 mA or less
Indicator lamp	Red/green LED (Lit when ON)	
Leakage current	1 mA or less	10 μA or less
Max. shock resistance	980 m/S^2	
Weight g	1 m:33 3 m:87 5 m:142	

*1 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60˚C)

*2 : Refer to Ending Page 1 for other switch specifications.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø16	69	114	79	124	90	135	101	146	112	157	123	168	-	-	-	-	-	-	-	-	-	-	-	-
ø20	68	163	101	176	114	189	126	201	139	214	151	226	164	239	176	251	189	264	201	276	-	-	-	-
ø25	118	209	134	225	150	241	166	257	181	272	198	289	214	305	230	321	246	337	262	353	-	-	-	-
ø32	211	325	232	346	253	367	275	389	297	411	319	433	341	455	362	476	384	498	405	519	513	627	620	734
ø40	289	432	316	459	343	486	369	512	395	538	422	565	449	592	475	618	502	645	528	671	661	804	793	936
ø50	-	-	509	703	551	745	594	788	637	831	678	872	720	914	762	956	804	998	846	1040	1056	1250	1266	1460
ø63	-	-	727	1006	782	1061	837	1116	893	1172	948	1227	1003	1282	1058	1337	1113	1392	1168	1447	1443	1722	1718	1997
ø80	-	-	1274	1687	1361	1774	1447	1860	1534	1947	1621	2034	1708	2121	1794	2207	1881	2294	1967	2380	2400	2813	2832	3245
ø100	-	-	1887	2454	2001	2568	2115	2682	2229	2796	2342	2909	2456	3023	2570	3137	2684	3251	2798	3365	3368	3935	3938	4505

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø16	Push	-	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	-	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

SSD2-KG2/KG3 Series

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

How to order

Without switch (without magnet for switch)

SSD2-KG2 - 16 - 30 - N - LB - I

With switch (built-in magnet for switch)

SSD2-KG2L - 16 - 30 - T2YLH - R - N - LB - I

Ⓐ Degree of protection level

Ⓑ Bore size

Ⓒ Stroke length

Ⓓ Switch model No. *5

Ⓔ Switch quantity

Ⓕ Option

Ⓖ Mounting bracket *1 *2

Ⓗ Accessory *3

Code	Description
Ⓐ Degree of protection level	
KG2	High load + coolant proof scraper + packing NBR
KG3	High load + coolant proof scraper + packing FKM
KG2L	High load + coolant proof scraper + packing NBR, with switch
KG3L	High load + coolant proof scraper + packing FKM, with switch
Ⓑ Bore size (mm)	
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓒ Stroke length (mm)	
Refer to the stroke length table on the following page.	

Ⓓ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage	Display	Lead wire
T2YLH*	**T2YLV***	Proximity	DC	2-color display	2-wire
T3YLH*	**T2YLV***				3-wire

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

Code	Description
Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread
Ⓖ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot (made-to-order product)
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange (made-to-order product)
FB	Head side flange
Ⓗ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : The mounting bracket is included at shipment.

*2 : The structure of bore sizes ø16 to ø25 does not permit retrofitting of the foot bracket (LB) or flange bracket (FA) on the rod side. Assembly before shipment is available as made to order.

*3 : "I" and "Y" cannot be selected together.

*4 : Refer to pages 750 and 751 for combinations of variations/options.

*5 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

SSD2-KG2L-32-30-T2YLH-R-N-LB

Model: Compact cylinder, high load

Ⓐ Degree of protection level : Coolant proof scraper + packing NBR, with switch
Ⓑ Bore size : ø32 mm
Ⓒ Stroke length : 30 mm
Ⓓ Switch model No. : Proximity switch T2YLH, lead wire 1 m
Ⓔ Switch quantity : 1 on rod side
Ⓕ Option : Rod end male thread
Ⓖ Mounting bracket : Axial foot

How to order switch

SW - **T2YLH**

Switch model No.
(Item Ⓓ on page 958)

[Stroke length table]

Stroke length (mm)		Applicable bore size								
		16	20	25	32	40	50	63	80	100
Standard stroke length	5	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●
	35		●	●	●	●	●	●	●	●
	40		●	●	●	●	●	●	●	●
	45		●	●	●	●	●	●	●	●
	50		●	●	●	●	●	●	●	●
	75				●	●	●	●	●	●
	100				●	●	●	●	●	●
Min. stroke length (mm) *1		1								
Max. stroke length (mm)		30	50		100					
Custom stroke length *2										

*1 : Less than 10 mm stroke length is not available.
Refer to page 956 for the number of installed switches and the min. stroke length.
*2 : The total length is the same as that of the next longer standard stroke length.

How to order mounting bracket

Bore size (mm) / Mounting bracket	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)					SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)					SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

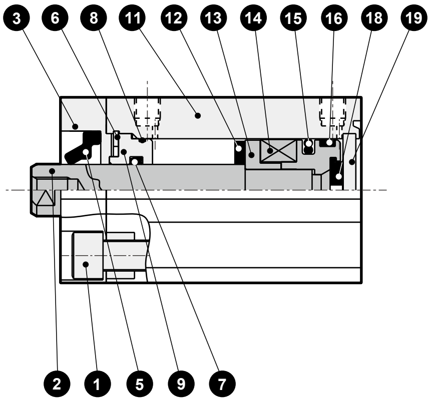
*1: The foot mounting bracket is provided as 2 pcs./set.
*2: The structure of bore sizes ø16 to ø25 does not permit retrofitting of the foot bracket (LB) or flange bracket (FA) on the rod side. Contact CKD for details.

SSD2-KG2/KG3 Series

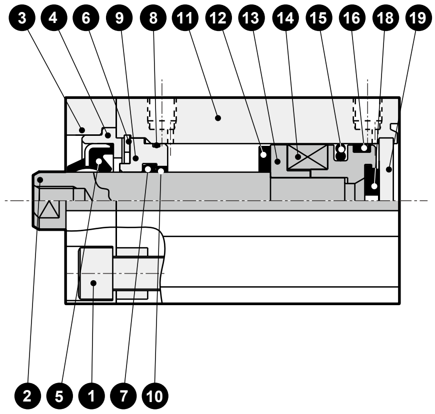
Internal structure and parts list

- ● Degree of protection: Packing NBR SSD2-KG2/KG2L
- ● Degree of protection: Packing FKM SSD2-KG3/KG3L

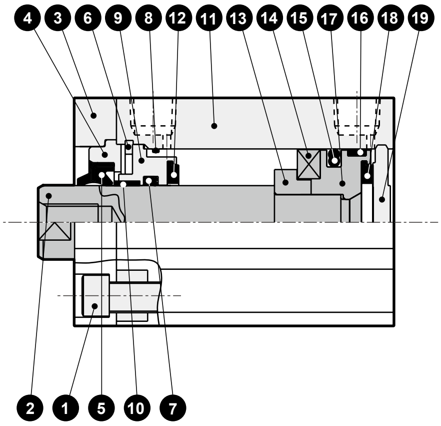
● SSD2-KG$^2_3$ L-16 (with switch)



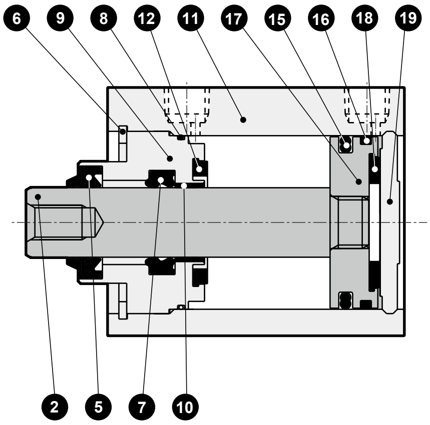
● SSD2-KG$^2_3$ L-20, 25 (with switch)



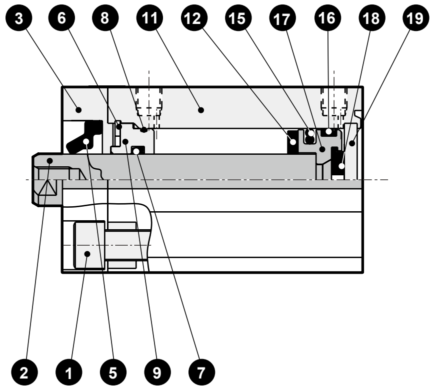
● SSD2-KG$^2_3$ L-32 to 50 (with switch)



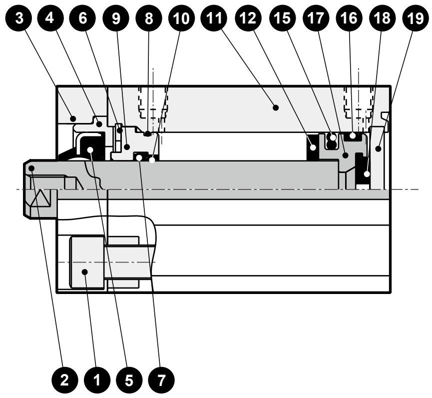
● SSD2-KG$^2_3$ L-63 to 100 (with switch)



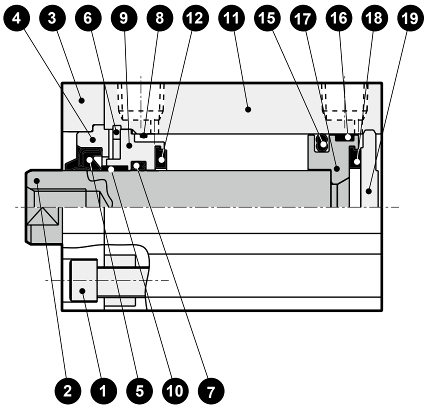
● SSD2-KG$^2_3$ -16 (without switch)



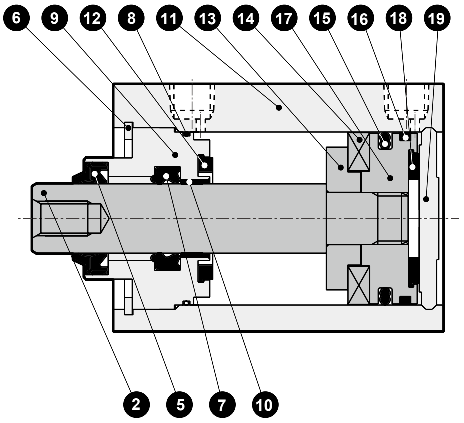
● SSD2-KG$^2_3$ -20, 25 (without switch)



● SSD2-KG$^2_3$ -32 to 50 (without switch)



● SSD2-KG$^2_3$ -63 to 100 (without switch)



Main parts list

No.	Part name		Material	Remarks
1	Hexagon socket head cap screw		Stainless steel	ø16 to ø25 only
2	Piston rod		Stainless steel	Industrial chrome plating
3	Adaptor (A)		Aluminum alloy	Alumite: ø16 to ø25 only
4	Adaptor (B)		Aluminum alloy	Alumite: ø20/ø25 only
5	Scraper	G2	Nitrile rubber	
		G3	Fluoro rubber	
6	C type snap ring (for hole)		Stainless steel	
7	Rod packing	G2	Nitrile rubber	
		G3	Fluoro rubber	
8	Rod metal gasket	G2	Nitrile rubber	
		G3	Fluoro rubber	
9	Rod metal		Aluminum alloy	Alumite
10	Bush		Oiles drymet	ø20 to ø100 only
11	Body		Aluminum alloy	Hard alumite
12	Cushion rubber R		Urethane rubber	
13	Spacer		Aluminum alloy	ø16 to ø32: Chromate
14	Magnet		Plastic	
15	Piston packing	G2	Nitrile rubber	
		G3	Fluoro rubber	
16	Wear ring		Polyacetal resin	
17	Piston		Aluminum alloy	Chromate
18	Cushion rubber H		Urethane rubber	
19	Cover		ø16 to ø25: Stainless steel ø32 to ø100: Aluminum alloy	Alumite

Repair parts list

Part name / Bore size (mm)	Kit No.	Repair parts No.
ø16	SSD2-KG2-16K	⑤⑦⑧⑫ ⑮⑯⑱
	SSD2-KG3-16K	
ø20	SSD2-KG2-20K	
	SSD2-KG3-20K	
ø25	SSD2-KG2-25K	
	SSD2-KG3-25K	
ø32	SSD2-KG2-32K	
	SSD2-KG3-32K	
ø40	SSD2-KG2-40K	
	SSD2-KG3-40K	
ø50	SSD2-KG2-50K	
	SSD2-KG3-50K	
ø63	SSD2-KG2-63K	
	SSD2-KG3-63K	
ø80	SSD2-KG2-80K	
	SSD2-KG3-80K	
ø100	SSD2-KG2-100K	
	SSD2-KG3-100K	

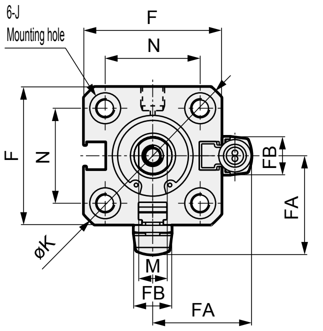
Note: Specify the kit No. when placing an order.

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

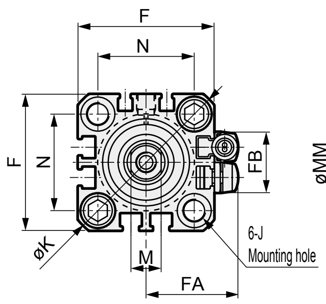
Dimensions

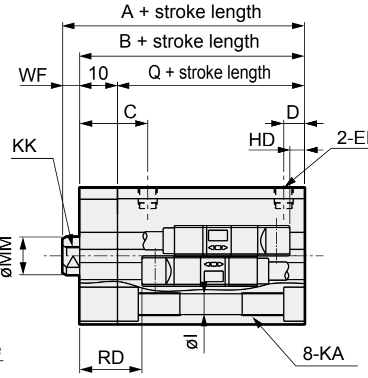
- Degree of protection: Packing NBR
  SSD2-KG/KG2L
- Degree of protection: Packing FKM
  SSD2-KG3/KG3L

ø16

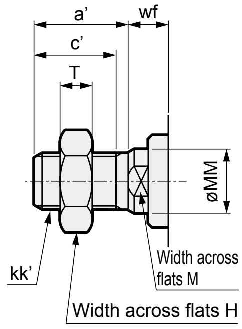


ø20/ø25

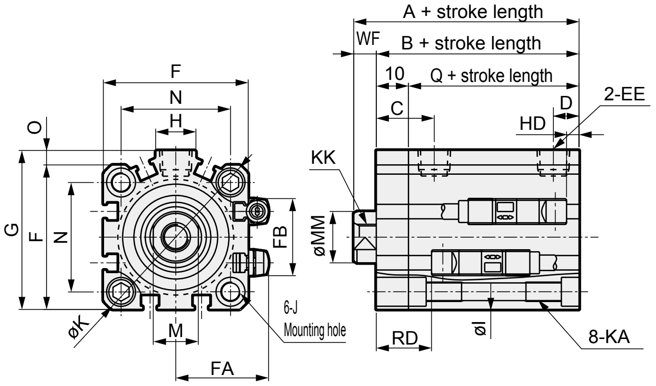




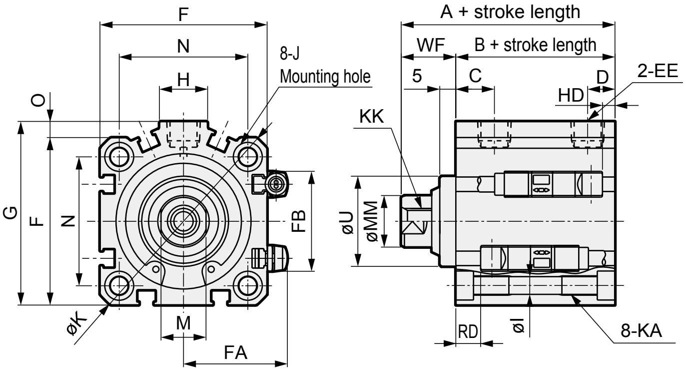
- Rod end male thread



ø32



ø40 to ø100



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*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

*4 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

*5 : Dimensions in ( ) of code J are for the spot face of rod side mounting hole.

Code	Dimensions without switch			Common dimensions with switch																
Bore size (mm)	A *1	B *1	Q *1	A *1	B *1	Q *1	C	D	EE	F	FA	FB	G	H	I	J	K	KA	KK
ø16	40.5	32	22	45.5	37	27	15.5	5.5	M5	29	21	8	-	-	3.5	6.5 spot face depth 3.5 (13.4)	38	M4 depth 7	M4 depth 8
ø20	44	34.5	24.5	54	44.5	34.5	18	5.5	M5	36	24.5	16	-	-	5.5	9 spot face depth 5.5 (15.5)	47	M6 depth 11	M5 depth 7
ø25	47.5	37.5	27.5	57.5	47.5	37.5	21	6	M5	40	26.5	17	-	-	5.5	9 spot face depth 5.5 (15.5)	51	M6 depth 11	M6 depth 12
ø32	55(65)	43(53)	33(43)	65	53	43	18	8	Rc1/8	45	29	24	49.5	12.5	5.5	9 spot face depth 5.5 (15.5)	60	M6 depth 11	M8 depth 13
ø40	56.5(66.5)	39.5(49.5)	-	66.5	49.5	-	12	8.5	Rc1/8	52	32.5	31	57	15	5.5	ø9 spot face depth 5.5	69	M6 depth 11	M8 depth 13
ø50	58.5(68.5)	40.5(50.5)	-	68.5	50.5	-	10.5	10.5	Rc1/4	64	38.5	32	71	18	6.9	ø11 spot face depth 6.5	86	M8 depth 13	M10 depth 15
ø63	64(74)	46(56)	-	74	56	-	13	11	Rc1/4	77	45	32	84	23	8.7	ø14 spot face depth 9	103	M10 depth 25	M10 depth 15
ø80	73.5(83.5)	53.5(63.5)	-	83.5	63.5	-	16	13	Rc3/8	98	55.5	32	104	31	10.5	ø17.5 spot face depth 11	132	M12 depth 28	M16 depth 21
ø100	85(95)	63(73)	-	95	73	-	23	15	Rc3/8	117	65	32	123.5	38	10.5	ø17.5 spot face depth 11	156	M12 depth 28	M20 depth 27

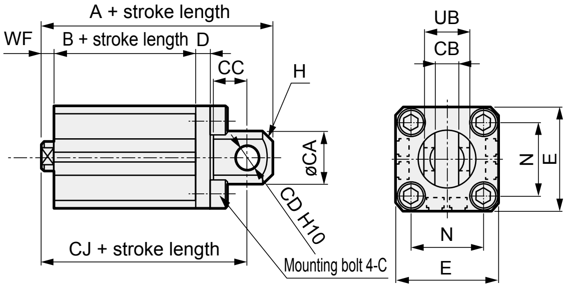
Code	Common dimensions with switch						Proximity T2YLH, T2YLV, T3YLH, T3YLV		Dimensions of rod end male thread part							
Bore size (mm)	M	MM	N	O	U	WF	HD	RD	a'	c'	H	KK'	M	MM	T	wf
ø16	6	8	20	-	-	8.5	2.5	14.5	12	10	10	M6	6	8	3.6	8.5
ø20	8	10	25.5	-	-	9.5	4.5	20.0	14	12	13	M8	8	10	5	9.5
ø25	10	12	28	-	-	10	4.5	22.5	17.5	15	17	M10×1.25	10	12	6	10
ø32	14	16	34	4.5	-	12	9.5	25.5	23.5	20.5	22	M14×1.5	14	16	8	10
ø40	14	16	40	5	28	17	10.5	31.0	23.5	20.5	22	M14×1.5	14	16	8	15
ø50	17	20	50	7	35	18	11.5	31.0	28.5	26	27	M18×1.5	17	20	11	15
ø63	17	20	60	7	35	18	18.0	29.0	28.5	26	27	M18×1.5	17	20	11	15
ø80	22	25	77	6	43	20	24.0	31.5	35.5	32.5	32	M22×1.5	22	25	13	18
ø100	27	30	94	6.5	59	22	29.5	35.5	35.5	32.5	41	M26×1.5	27	30	16	18

MEMO

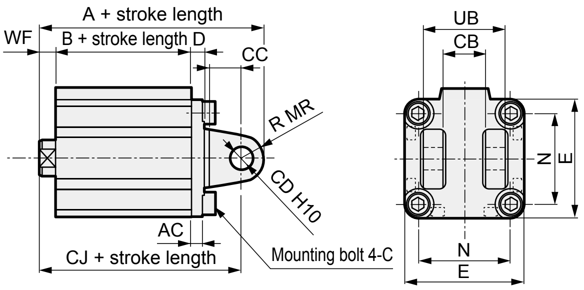
Dimensions with mounting bracket

● Clevis bracket (CB)
SSD2-KG2(L)/KG3(L)-20 to 100 -CB

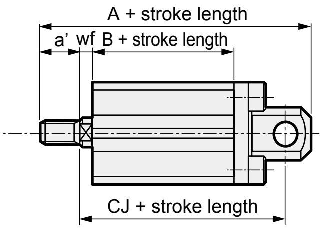
· ø16 to ø25



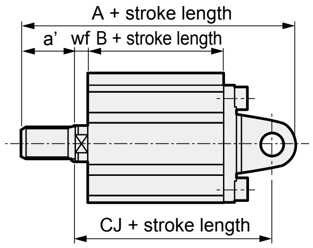
· ø32 to ø100



Rod end male thread



Rod end male thread



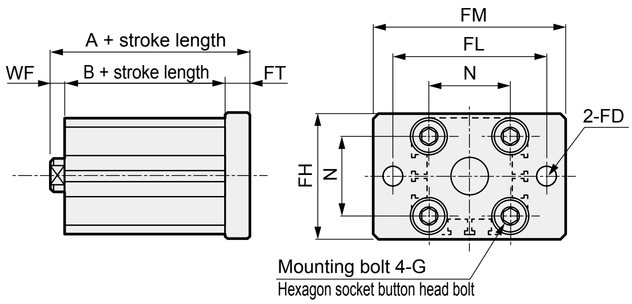
Code	Common dimensions										
Bore size (mm)	AC	CA	CB	CC	CD	D	E	G	H	MR	N	UB
ø16	-	15	$6.6^{+0.3}_{0}$	8	5	5	29	M4×12	C2	-	20	12
ø20	-	20	$8.2^{+0.2}_{0}$	12	8	5	36	M6×16	C4	-	25.5	16
ø25	-	24	$10.2^{+0.2}_{0}$	14	10	5	40	M6×16	C5	-	28	20
ø32	4.5	-	$18.2^{+0.2}_{0}$	14	10	5	45	M6×16	-	10	34	36
ø40	5	-	$18.2^{+0.2}_{0}$	14	10	6	52	M6×16	-	10	40	36
ø50	6	-	$22.2^{+0.2}_{0}$	20	14	7	64	M8×20	-	14	50	44
ø63	7	-	$22.2^{+0.2}_{0}$	20	14	8	77	M10×25	-	14	60	44
ø80	9	-	$28.2^{+0.2}_{0}$	27	18	10	98	M12×40	-	18	77	56
ø100	12	-	$32.2^{+0.2}_{0}$	31	22	13	117	M12×40	-	22	94	64

Code	Female thread							Male thread							
Bore size (mm)	WF	Without switch			With switch			a'	wf	Without switch			With switch		
		A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø16	8.5	61.5	32	55.5	66.5	37	60.5	12	8.5	73.5	32	55.5	78.5	37	60.5
ø20	9.5	71	34.5	62	81	44.5	72	14	9.5	85	34.5	62	95	44.5	72
ø25	10	77.5	37.5	67.5	87.5	47.5	77.5	17.5	10	95	37.5	67.5	105	47.5	77.5
ø32	12	85	43	75	95	53	85	23.5	10	106.5	43	73	116.5	53	83
ø40	17	88.5	39.5	78.5	98.5	49.5	88.5	23.5	15	110	39.5	76.5	120	49.5	86.5
ø50	18	100.5	40.5	86.5	110.5	50.5	96.5	28.5	15	126	40.5	83.5	136	50.5	93.5
ø63	18	108	46	94	118	56	104	28.5	15	133.5	46	91	143.5	56	101
ø80	20	129.5	53.5	111.5	139.5	63.5	121.5	35.5	18	163	53.5	109.5	173	63.5	119.5
ø100	22	152	63	130	162	73	140	35.5	18	183.5	63	126	193.5	73	136

Dimensions with mounting bracket

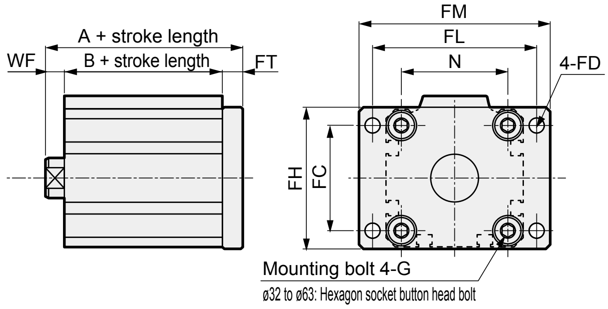
- Head side flange (FB)
  SSD2-KG2(L)/KG3(L)-20 to 100 -FB

· ø16 to ø25



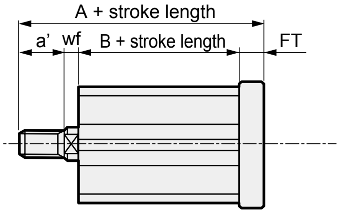
Mounting bolt 4-G
Hexagon socket button head bolt

· ø32 to ø100

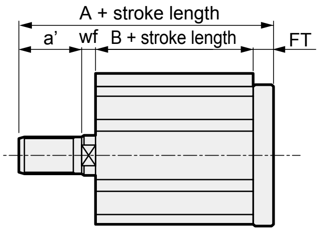


Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt

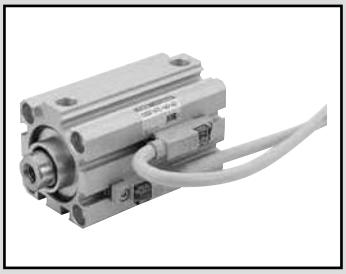
Rod end male thread



Rod end male thread



Code	Common dimensions								Female thread					Male thread					
Bore size (mm)	FC	FD	FH	FL	FM	FT	G	N	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø16	-	4.5	30	45	55	5.5	M4×12	20	8.5	46	32	51	37	12	8.5	58	32	63	37
ø20	-	6.6	39	48	60	8	M6×16	25.5	9.5	52	34.5	62	44.5	14	9.5	66	34.5	76	44.5
ø25	-	6.6	42	52	64	8	M6×16	28	10	55.5	37.5	65.5	47.5	17.5	10	73	37.5	83	47.5
ø32	34	5.5	48	56	65	8	M6×16	34	12	63	43	73	53	23.5	10	84.5	43	94.5	53
ø40	40	5.5	54	62	72	8	M6×16	40	17	64.5	39.5	74.5	49.5	23.5	15	86	39.5	96	49.5
ø50	50	6.6	67	76	89	9	M8×20	50	18	67.5	40.5	77.5	50.5	28.5	15	93	40.5	103	50.5
ø63	60	9	80	92	108	9	M10×25	60	18	73	46	83	56	28.5	15	98.5	46	108.5	56
ø80	77	11	99	116	134	11	M12×40	77	20	84.5	53.5	94.5	63.5	35.5	18	118	53.5	128	63.5
ø100	94	11	117	136	154	11	M12×40	94	22	96	63	106	73	35.5	18	127.5	63	137.5	73



Compact cylinder
double acting/single rod/coil scraper

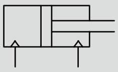
SSD2-G1 Series

Compact cylinder
double acting/single rod/anti-spatter adherence

SSD2-G4 Series

● Bore size: ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



RoHS CAD

Specifications

Item	SSD2-G1/G4 SSD2-G1L/G4L (with switch)						
Bore size mm	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting						
Working fluid	Compressed air						
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)						
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)				0.1 (≈15 psi, 1 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)						
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)						
Port size	M5	Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$						
Working piston speed mm/s	50 to 500				50 to 300		
Cushion	None						
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)						
Allowable absorbed energy J	0.021	0.025	0.092	0.1	0.12	0.27	0.56

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

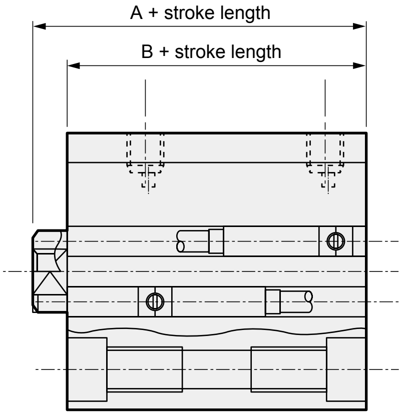
Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø25	5/10/15/20/25/ 30/35/40/45/50	50	1(10) The value in ( ) is for types with one or two switches.
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

Custom stroke length

● SSD2-G1, G4 Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-G1-32-38 A +2 mm spacer is added to the SSD2-G1-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 63mm.	



Switch specifications

Item	Proximity 2-wire
	T2YD/T2YDT
Applications	Dedicated for programmable controller
Indicator lamp	Red/green LED (Lit when ON)
Load voltage	24 VDC ±10%
Load current	5 to 20 VDC
Internal voltage drop	6V or less
Leakage current	1.0 mA or less
Output delay time *1 (Delay ON, delay OFF)	60 ms or less
Lead wire length	1 m (oil resistant vinyl cabtyre cable ø 6, 0.5 mm^2 x 2-conductor) *2, *3
Insulation resistance	100 MΩ and over with 500 VDC megger
Withstand voltage	No failure after 1 minute of 1,000 VAC application.
Max. shock resistance	980 m/s^2
Ambient temperature	-10 to +60°C
Degree of protection	JIS C0920 (water-tight), IEC standards IP67, oil resistance
Weight g	1 m:61 3 m:166 5 m:272

*1: Indicates the time from magnetic sensor detection of the piston magnet until switch output.
*2: 3 m and 5 m lead wires are available as options.
*3: Flame-resistant lead wires are available as options.
*4: This switch cannot be used in DC environments.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø25	131	222	146	237	162	253	178	269	194	285	209	300	225	600	241	332	257	166	272	363	-	-	-	-
ø32	184	298	206	320	228	342	250	364	271	385	293	407	315	429	337	451	359	473	380	494	553	602	661	709
ø40	265	408	292	435	318	461	345	488	372	515	398	541	425	568	451	594	478	621	504	647	722	780	854	912
ø50	-	-	460	654	502	696	544	738	586	780	629	823	671	865	713	907	755	949	797	991	1144	1201	1354	1411
ø63	-	-	658	937	713	992	768	1047	823	1102	878	1157	934	1213	989	1268	1044	1323	1099	1378	1589	1653	1864	1928
ø80	-	-	1180	1593	1267	1680	1353	1765	1440	1853	1526	1939	1613	2026	1700	2113	1787	2200	1873	2286	2650	2719	3082	3151
ø100	-	-	1768	2335	1882	2449	1995	2562	2109	2676	2223	2790	2337	2904	2450	3017	2564	3131	2678	3245	3743	3815	4313	4385

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø25	Push	-	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

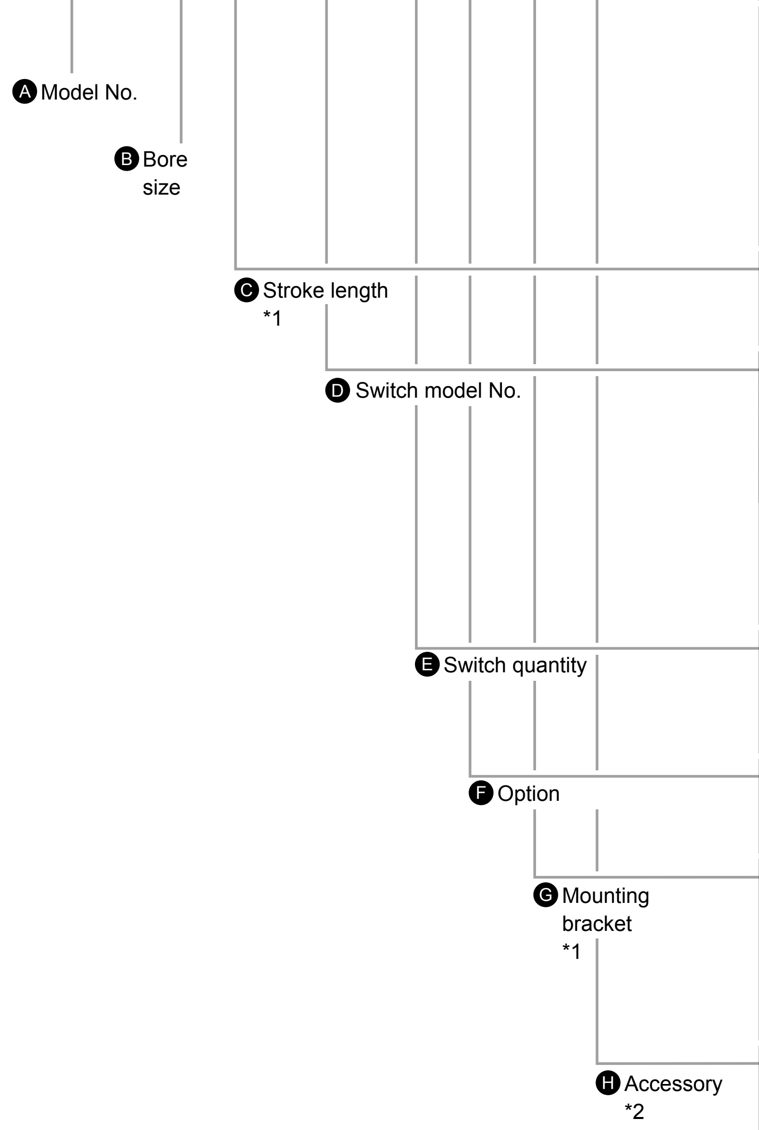
How to order

Without switch (without magnet for switch)

SSD2-G4 - 32 - 10 - N - LB - I

With switch (built-in magnet for switch)

SSD2-G4L - 32 - 10 - T2YD - R - N - LB - I



Code	Description
Ⓐ Model No.	
SSD2-G1	Double acting/single rod/coil scraper
SSD2-G1L	Double acting/single rod/coil scraper/with switch
SSD2-G4	Double acting/single rod/anti-spatter adherence
SSD2-G4L	Double acting/single rod/anti-spatter adherence/with switch
Ⓑ Bore size (mm)	
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓒ Stroke length (mm)	
Refer to the stroke length table on the following page.	

Ⓓ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage	Display	Lead wire
T2YD*	-	Proximity	DC	2-color display for AC magnetic field	2-wire
T2YDT*	-				

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

Code	Description
Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread
Ⓖ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot (made to order)
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange (made to order)
FB	Head side flange
Ⓗ Accessory (available when rod end male thread “N” is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1: The mounting bracket is included at shipment.
*2: “I” and “Y” cannot be selected together.

[Example of model No.]

SSD2-G4L-32-10-T2YD-R-N

Model: Compact cylinder
Double acting/anti-spatter adherence
Ⓑ Bore size : ø32 mm
Ⓒ Stroke length : 10 mm
Ⓓ Switch model No.: Proximity switch for AC magnetic field T2YD, lead wire length 1 m
Ⓔ Switch quantity : 1 on rod side
Ⓕ Option : Rod end male thread

[Stroke length table]

Stroke length (mm)		Applicable bore size						
		25	32	40	50	63	80	100
Standard stroke length	5	●	●	●				
	10	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●
	35	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●
	45	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●
	75		●	●	●	●	●	●
	100		●	●	●	●	●	●
Min. stroke length (mm) *1		1						
Max. stroke length (mm)		50	100					
Custom stroke length *2		In 1 mm increments						

*1 : Less than 10 mm stroke length is not available.
Refer to page 966 for the min. stroke length with switch.

*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

How to order switch

SW - **T2YD***

Switch model No.
(Item Ⓓ on page 968)

How to order mounting bracket

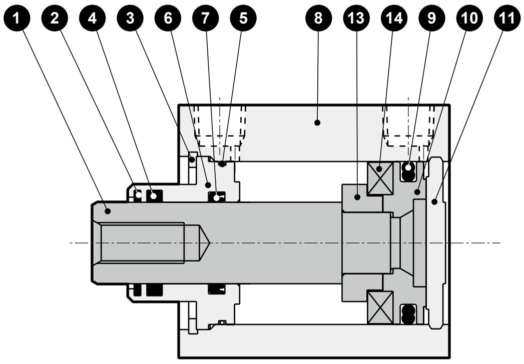
Bore size (mm) / Mounting bracket	ø25	ø32	ø40	ø50	ø63	ø80
Flange (FB)	SSD2-FA-25	SSD2-G1-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80
Clevis bracket (CB)	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80

Bore size (mm) / Mounting bracket	ø100
Flange (FB)	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-100

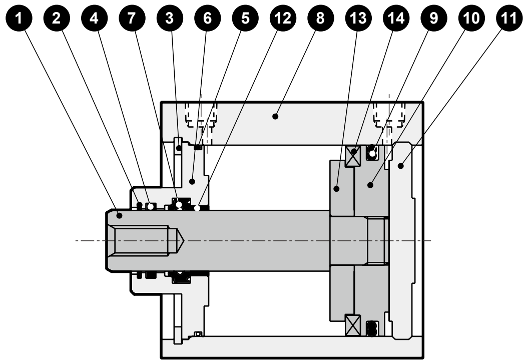
*1: The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list

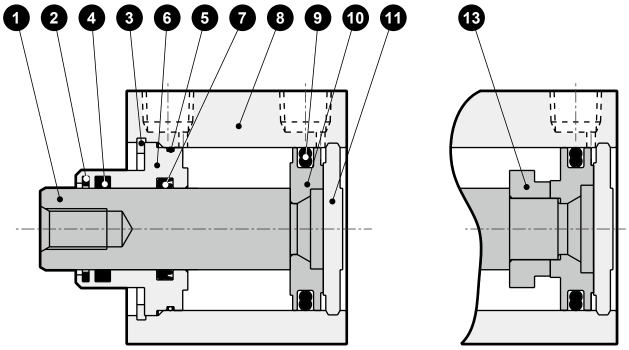
- SSD2-G1L, G4L-25 to 50 (double acting/anti-spatter adherence/ with switch)



- SSD2-G1L, G4L-63 to 100 (double acting/anti-spatter adherence/ with switch)

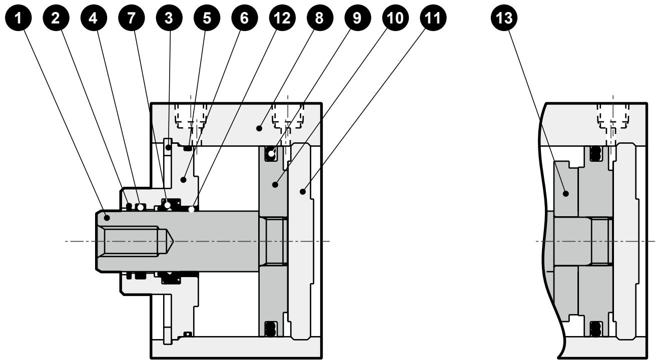


- SSD2-G1, G4-25 to 50 (double acting/anti-spatter adherence)



Over 50 st

- SSD2-G1, G4-63 to 100 (double acting/anti-spatter adherence)



Over 50 st

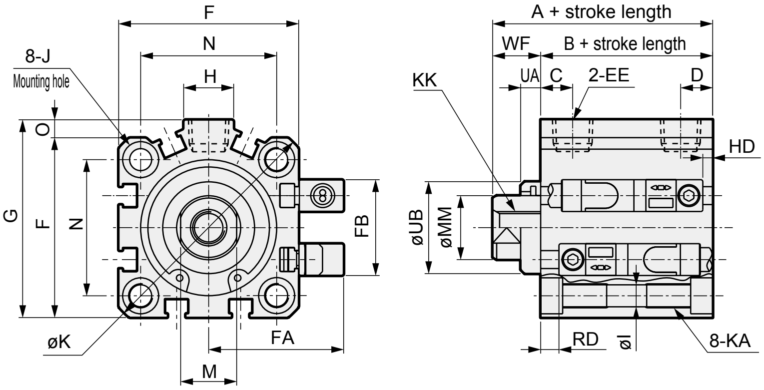
No.	Part name	Material	Remarks
1	Piston rod	ø25: Stainless steel ø32 to ø100: Steel	Industrial chrome plating
2	Coil scraper	Phosphor bronze	
3	C type snap ring	Steel	Zinc phosphate
4	Lube keeping structure	Special rubber	G4 only
5	Rod metal gasket	Nitrile rubber	
6	Rod metal	ø25 to ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø25 to ø50: Alumite ø63 to ø100: Chromate
7	Rod packing	Nitrile rubber	
8	Body	Aluminum alloy	Hard alumite
9	Piston packing	Nitrile rubber	
10	Piston	Aluminum alloy	Chromate
11	Cover	ø25: Stainless steel ø32 to ø100: Aluminum alloy	ø32 to ø100: Alumite
12	Bush	Oiles drymet	
13	Spacer	Aluminum alloy	Chromate
14	Magnet	Plastic	

Repair parts list

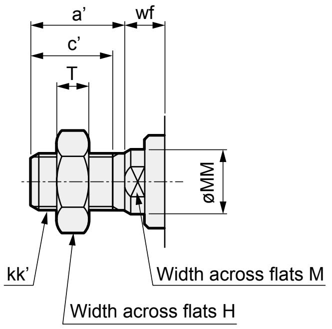
Part name Bore size (mm)	Kit No.	Repair parts No.
ø25	SSD2-G1-25K	❷❺❼❾
ø32	SSD2-G1-32K	
ø40	SSD2-G1-40K	
ø50	SSD2-G1-50K	
ø63	SSD2-G1-63K	
ø80	SSD2-G1-80K	
ø100	SSD2-G1-100K	

Dimensions CAD

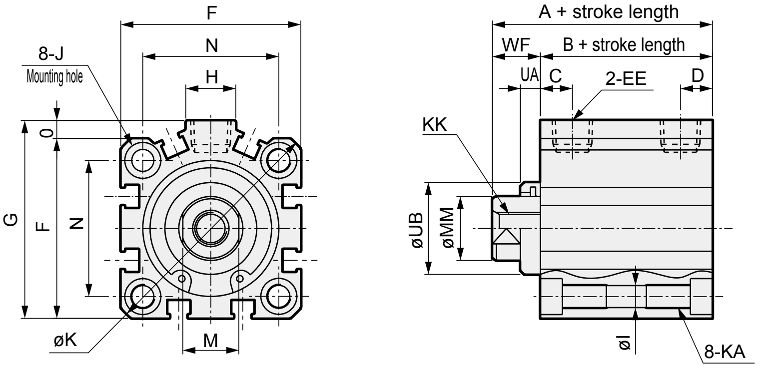
- SSD2-G1L/G4L-25 to 100 (with switch/T0H/V, T5H/V, T2H/V, T3H/V)



- Rod end male thread



- SSD2-G1/G4-25 to 100 (without switch)



Code Bore size (mm)	Without switch			Common dimensions with switch											
	A *1		B *6	A *1		B *1	C *6	D *6	EE	F	FA	FB	G	H	I
	G1	G4		G1	G4										
ø25	37.5	37.5	32.5	47.5	47.5	42.5	11	6	M5	40	31.5	17	-	-	5.5
ø32	35(45)	40(50)	23(33)	45	50	33	8(10)	8(5.5)	Rc1/8 *5	45	33.5	24	49.5	12.5	5.5
ø40	41.5(51.5)	46.5(56.5)	29.5(39.5)	51.5	56.5	39.5	12(11.5)	8.5(8)	Rc1/8	52	37	31	57	15	5.5
ø50	43.5(53.5)	48.5(58.5)	30.5(40.5)	53.5	58.5	40.5	10.5	10.5	Rc1/4	64	43	32	71	18	6.9
ø63	49(59)	54(64)	36(46)	59	64	46	13	11	Rc1/4	77	49.5	32	84	23	8.7
ø80	58.5(68.5)	63.5(73.5)	43.5(53.5)	68.5	73.5	53.5	16	13	Rc3/8	98	60	32	104	31	10.5
ø100	70(80)	75(85)	53(63)	80	85	63	23	15	Rc3/8	117	69.5	32	123.5	38	10.5

Code Bore size (mm)	Common dimensions with switch													Proximity T2YD	
	J	K	KA	KK	M	MM	N	O	UA		UB	WF		HD	RD *2
									G1	G4		G1	G4		
ø25	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	-	-	-	-	5	5	3	8.5
ø32	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	5	10	23 h9	12	17	3.5	8.5
ø40	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	5	10	28 h9	12	17	5.5	10.5
ø50	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	5	10	35 h9	13	18	6	11
ø63	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	5	10	35 h9	13	18	11	11.5
ø80	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	5	10	43 h9	15	20	16	14
ø100	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	5	10	59 h9	17	22	21.5	18

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

*4 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

*5 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

*6 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

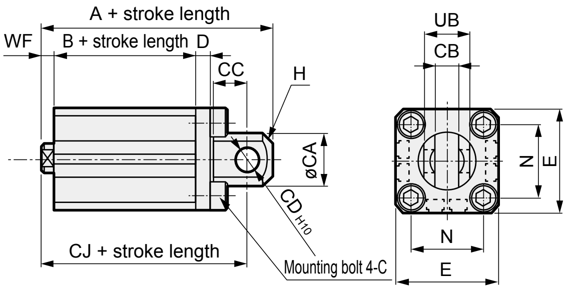
- Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf	
								G1	G4
ø25	17.5	15	17	M10×1.25	10	12	6	5	5
ø32	23.5	20.5	22	M14×1.5	14	16	8	10	15
ø40	23.5	20.5	22	M14×1.5	14	16	8	10	15
ø50	28.5	26	27	M18×1.5	17	20	11	10	15
ø63	28.5	26	27	M18×1.5	17	20	11	10	15
ø80	35.5	32.5	32	M22×1.5	22	25	13	13	18
ø100	35.5	32.5	41	M26×1.5	27	30	16	13	18

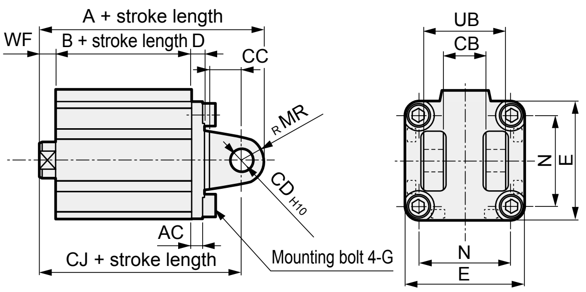
Dimensions with mounting bracket CAD

- Clevis bracket (CB)
  SSD2-G1(L)/G4(L)-25 to 100 -CB

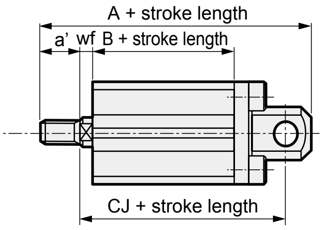
· ø25



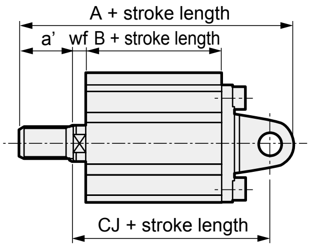
· ø32 to ø100



Rod end male thread



Rod end male thread



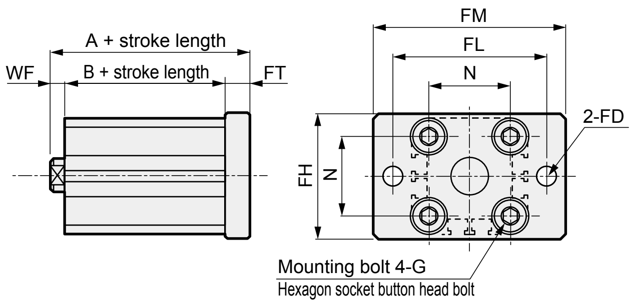
Code	Common dimensions												Female thread											
Bore size (mm)	AC	CA	CB	CC	CD	D	E	G	H	MR	N	UB	WF		Without switch					With switch				
															A		B	CJ		A		B	CJ	
													G1	G4	G1	G4		G1	G4	G1	G4		G1	G4
ø25	-	24	10.2	14	10	5	40	M6×16	C2	-	28	20	5	5	67.5	67.5	32.5	57.5	57.5	77.5	77.5	42.5	67.5	67.5
ø32	4.5	-	18.2	14	10	5	45	M6×16	C4	10	34	36	12	17	65	70	23	55	60	75	80	33	65	70
ø40	5	-	18.2	14	10	6	52	M6×16	C5	10	40	36	12	17	73.5	78.5	29.5	63.5	68.5	83.5	88.5	39.5	73.5	78.5
ø50	6	-	22.2	20	14	7	64	M8×20	-	14	50	44	13	18	85.5	90.5	30.5	71.5	76.5	95.5	100.5	40.5	81.5	86.5
ø63	7	-	22.2	20	14	8	77	M10×25	-	14	60	44	13	18	93	98	36	79	84	103	108	46	89	94
ø80	9	-	28.2	27	18	10	98	M12×40	-	18	77	56	15	20	114.5	119.5	43.5	96.5	101.5	124.5	129.5	53.5	106.5	111.5
ø100	12	-	32.2	31	22	13	117	M12×40	-	22	94	64	17	22	137	142	53	115	120	147	152	63	125	130

Code	Male thread											
Bore size (mm)	a'	wf		Without switch					With switch				
				A		B	CJ		A		B	CJ	
		G1	G4	G1	G4		G1	G4	G1	G4		G1	G4
ø25	17.5	5	5	85	85	32.5	57.5	57.5	95	95	42.5	67.5	67.5
ø32	23.5	10	15	86.5	91.5	23	53	58	96.5	101.5	33	63	68
ø40	23.5	15	20	95	100	29.5	61.5	66.5	105	110	39.5	71.5	76.5
ø50	28.5	15	20	111	116	30.5	68.5	73.5	121	126	40.5	78.5	83.5
ø63	28.5	15	20	118.5	123.5	36	76	81	128.5	133.5	46	86	91
ø80	35.5	18	23	148	153	43.5	94.5	99.5	158	163	53.5	104.5	109.5
ø100	35.5	18	23	168.5	173.5	53	111	116	178.5	183.5	63	121	126

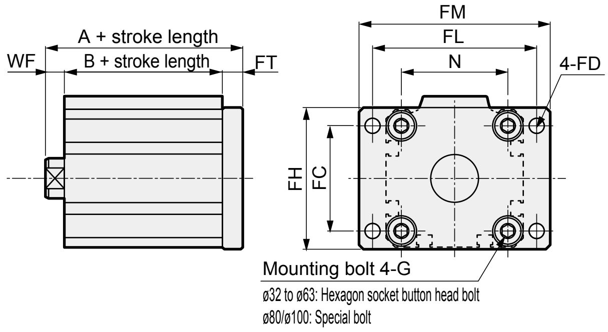
Dimensions with mounting bracket

- Head side flange (FB)
  SSD2-G1(L)/G4(L)-25 to 100 -FB

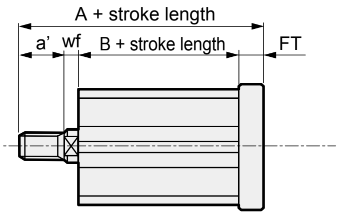
· ø25



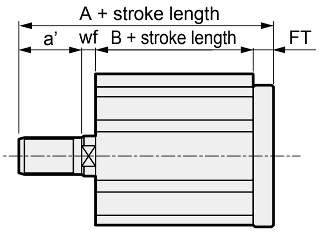
· ø32 to ø100



Rod end male thread

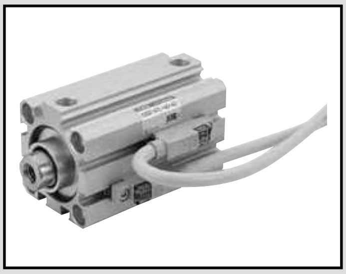


Rod end male thread



Code	Common dimensions								Female thread								
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF		Without switch			With switch		
											A		B	A		B
									G1	G4	G1	G4		G1	G4	
ø25	-	6.6	42	52	64	8	28	M6×16	5	5	45.5	45.5	32.5	55.5	55.5	42.5
ø32	34	5.5	48	56	65	8	34	M6×16	12	17	43	48	23	53	58	33
ø40	40	5.5	54	62	72	8	40	M6×16	12	17	49.5	54.5	29.5	59.5	64.5	39.5
ø50	50	6.6	67	76	89	9	50	M8×20	13	18	52.5	57.5	30.5	62.5	67.5	40.5
ø63	60	9	80	92	108	9	60	M10×25	13	18	58	63	36	68	73	46
ø80	77	11	99	116	134	11	77	M12×40	15	20	69.5	74.5	43.5	79.5	84.5	53.5
ø100	94	11	117	136	154	11	94	M12×40	17	22	81	86	53	91	96	63

Code	Male thread								
Bore size (mm)	a'	wf		Without switch			With switch		
				A		B	A		B
		G1	G4	G1	G4		G1	G4	
ø25	17.5	5	5	63	63	32.5	73	73	42.5
ø32	23.5	10	15	64.5	69.5	23	74.5	79.5	33
ø40	23.5	15	20	71	76	29.5	81	86	39.5
ø50	28.5	15	20	78	83	30.5	88	93	40.5
ø63	28.5	15	20	83.5	88.5	36	93.5	98.5	46
ø80	35.5	18	23	103	108	43.5	113	118	53.5
ø100	35.5	18	23	112.5	117.5	53	122.5	127.5	63



Compact cylinder
double acting/single rod/high load/coil scraper

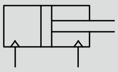
SSD2-KG1 Series

Compact cylinder
double acting/single rod/high load/anti-spatter adherence

SSD2-KG4 Series

● Bore size: ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-KG1/KG4 SSD2-KG1L/KG4L (with switch)						
Bore size mm	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting						
Working fluid	Compressed air						
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)						
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)				0.1 (≈15 psi, 1 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)						
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)						
Port size	M5	Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$						
Working piston speed mm/s	50 to 500				50 to 300		
Cushion	Rubber cushion						
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)						
Allowable absorbed energy J	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke length

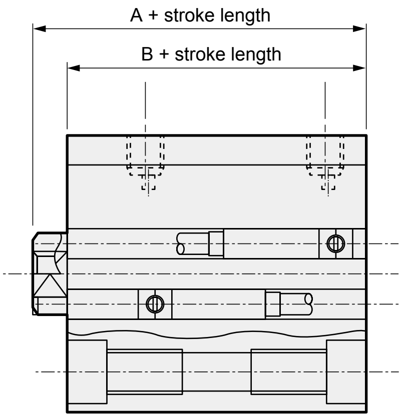
Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø25	5/10/15/20/25/ 30/35/40/45/50	50	1(10) The value in ( ) is for types with one or two switches.
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

*1: The custom stroke is available in 1 mm increments.
*2: Dimensions of custom stroke length (example: 64 mm stroke length) are the same as the next stroke length up (example: 75 mm stroke length).

Custom stroke length

● SSD2-KG1, KG4 Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-KG1-32-38 A +2 mm spacer is added to the SSD2-KG1-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 83mm.	



Switch specifications

Item	Proximity 2-wire
	T2YD/T2YDT
Applications	Dedicated for programmable controller
Indicator lamp	Red/green LED (Lit when ON)
Load voltage	24 VDC ±10%
Load current	5 to 20 mA
Internal voltage drop	6 V or less
Leakage current	1.0 mA or less
Output delay time *1 (Delay ON, delay OFF)	30 to 60 ms
Lead wire length	1 m (oil resistant vinyl cabtyre cable ø 6, 0.5 mm^2 x 2-conductor) *2, *3
Insulation resistance	100 MΩ and over at 500 VDC megger
Withstand voltage	No failure after 1 minute of 1,000 VAC application.
Max. shock resistance	980 m/s^2
Ambient temperature	-10 to +60°C
Degree of protection	JIS C0920 (water-tight), IEC standards IP67, oil resistance
Weight g	1 m:61 3 m:166 5 m:272

*1: Indicates the time from magnetic sensor detection of the piston magnet until switch output.
*2: 3 m and 5 m lead wires are available as options.
*3: Flame-resistant lead wires are available as options.
*4: This switch cannot be used in DC environments.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø25	146	237	162	253	178	269	194	285	209	300	226	317	242	333	258	349	274	365	290	381	-	-	-	-
ø32	228	342	249	363	270	384	292	406	314	428	336	450	358	472	379	493	401	515	422	536	530	644	637	751
ø40	318	461	345	488	372	515	398	541	424	567	451	594	478	621	504	647	531	674	557	700	690	833	822	965
ø50	-	-	549	743	591	785	634	828	677	871	718	912	760	954	802	996	844	1038	886	1080	1096	1290	1306	1500
ø63	-	-	782	1061	837	1116	892	1171	948	1227	1003	1282	1058	1337	1113	1392	1168	1447	1223	1502	1498	1777	1773	2052
ø80	-	-	1382	1795	1469	1882	1555	1968	1642	2055	1729	2142	1816	2229	1902	2315	1989	2402	2075	2488	2508	2921	2940	3353
ø100	-	-	2029	2596	2143	2710	2257	2824	2371	2938	2484	3051	2598	3165	2712	3279	2826	3393	2940	3507	3510	4077	4080	4647

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø25	Push	-	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

How to order

Without switch (without magnet for switch)

SSD2-KG4 - 32 - 10 ——————— N - LB - I

With switch (built-in magnet for switch)

SSD2-KG4L - 32 - 10 - T2YD - R - N - LB - I

Ⓐ Model No.

Ⓑ Bore size

Ⓒ Stroke length

Ⓓ Switch model No.

Ⓔ Switch quantity

Ⓕ Option

Ⓖ Mounting bracket *1

Ⓗ Accessory *2

Code	Description
Ⓐ Model No.	
SSD2-KG1	Double acting/single rod/high load/coil scraper
SSD2-KG1L	Double acting/single rod/high load/coil scraper/with switch
SSD2-KG4	Double acting/single rod/high load/anti-spatter adherence
SSD2-KG4L	Double acting/single rod/high load/anti-spatter adherence/with switch
Ⓑ Bore size (mm)	
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓒ Stroke length (mm)	
Refer to the stroke length table on the following page.	

Ⓓ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage	Display	Lead wire
T2YD*	-	Proximity	DC	2-color display for AC magnetic field	2-wire
T2YDT*	-				

*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread
Ⓖ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot (made-to-order product)
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange (made-to-order product)
FB	Head side flange
Ⓗ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1: The mounting bracket is included at shipment.
*2: "I" and "Y" cannot be selected together.

[Example of model No.]

SSD2-KG4L-32-10-T2YD-R-N

Model: Compact cylinder
Double acting, high load, anti-spatter adherence
Ⓑ Bore size : ø32 mm
Ⓒ Stroke length : 10 mm
Ⓓ Switch model No.: Proximity switch for AC magnetic field T2YD, lead wire length 1 m
Ⓔ Switch quantity : 1 on rod side
Ⓕ Option : Rod end male thread

How to order switch

SW - **T2YD**

Switch model No.
(Item Ⓓ on page 976)

[Stroke length table]

Stroke length (mm)		Applicable bore size						
		25	32	40	50	63	80	100
Standard stroke length	5	●	●	●				
	10	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●
	35	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●
	45	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●
	75		●	●	●	●	●	●
	100		●	●	●	●	●	●
Min. stroke length (mm) *1		1						
Max. stroke length (mm)		50	100					
Custom stroke length *2		In 1 mm increments						

*1: Less than 10 mm stroke length is not available.
*2: The total length is the same as that of the next longer standard stroke length.

How to order mounting bracket

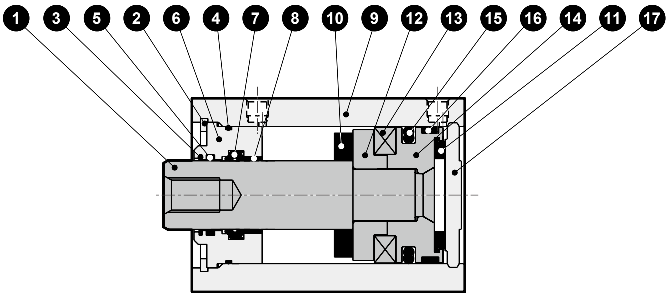
Bore size (mm) / Mounting bracket	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Flange (FB)	SSD2-FA-25	SSD2-G1-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

*1: The foot mounting bracket is provided as 2 pcs./set.

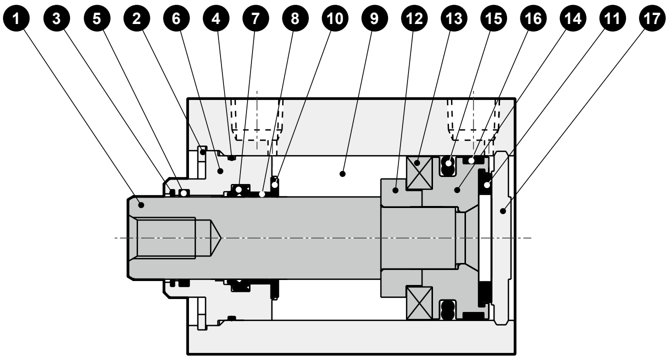
SSD2-KG1/KG4 Series

Internal structure and parts list

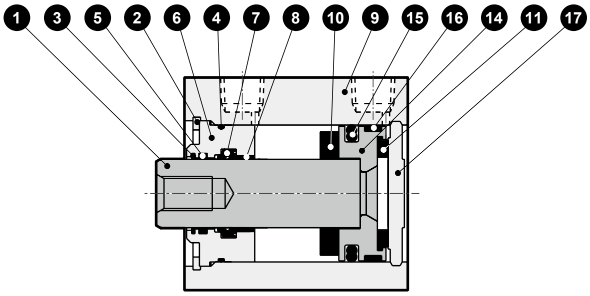
- SSD2-KG1L/KG4L-25
(double acting/single rod high load/anti-spatter adherence/with switch)



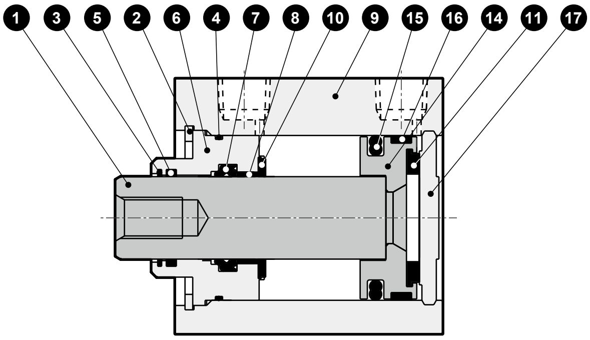
- SSD2-KG1L/KG4L-32 to 50
(double acting/single rod high load/anti-spatter adherence/with switch)



- SSD2-KG1/KG4-25
(double acting/single rod/high load/anti-spatter adherence)



- SSD2-KG1/KG4-32 to 50
(double acting/single rod/high load/anti-spatter adherence)



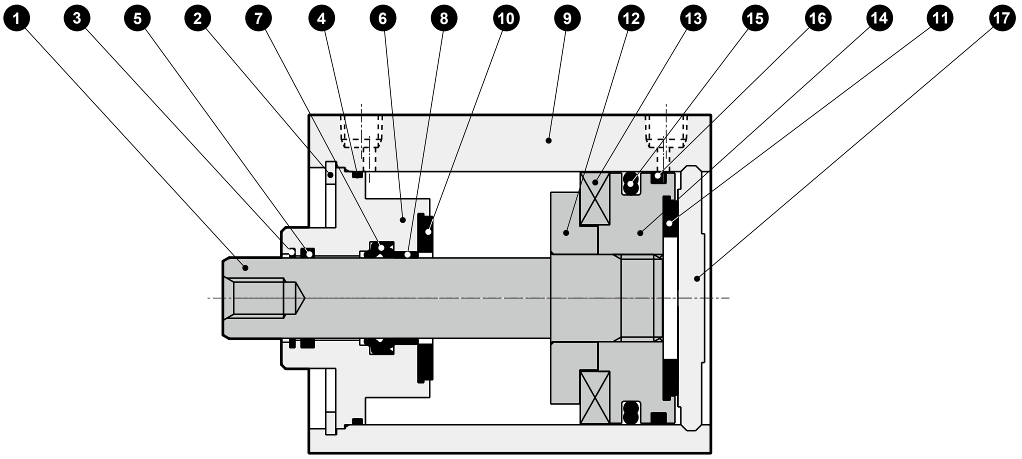
No.	Part name	Material	Remarks
1	Piston rod	ø25: Stainless steel ø32 to ø50: Steel	Industrial chrome plating
2	C type snap ring for hole	Steel	Zinc phosphate
3	Coil scraper	Phosphor bronze	
4	Rod metal gasket	Nitrile rubber	
5	Lube keeping structure	Special rubber	G4 only
6	Rod metal	Special aluminum	Alumite
7	Rod packing	Nitrile rubber	
8	Bush	Oiles drymet	
9	Body	Aluminum alloy	Hard alumite
10	Cushion rubber R	Urethane rubber	
11	Cushion rubber H	Urethane rubber	
12	Spacer	Aluminum alloy	ø25, ø32: Chromate
13	Magnet	Plastic	
14	Piston	Aluminum alloy	Chromate
15	Piston packing	Nitrile rubber	
16	Wear ring	Polyacetal resin	
17	Cover	ø25: Stainless steel ø32 to 50: Aluminum alloy	ø32 to ø50: Alumite

Repair parts list

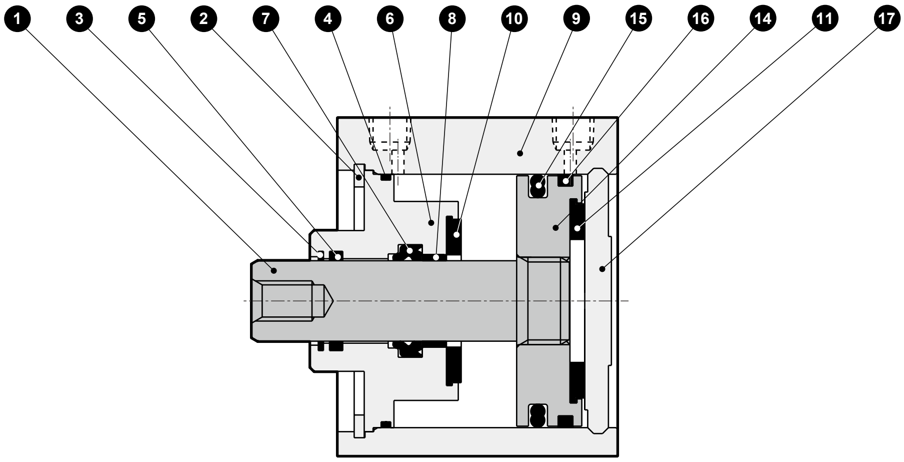
Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø25	SSD2-KG1-25K	③④⑦⑩⑪⑮⑯
ø32	SSD2-KG1-32K	
ø40	SSD2-KG1-40K	
ø50	SSD2-KG1-50K	

Internal structure and parts list

● SSD2-KG1L/KG4L-63 to 100 (double acting/single rod high load/anti-spatter adherence/with switch)



● SSD2-KG1/KG4-63 to 100 (double acting/single rod high load/anti-spatter adherence)



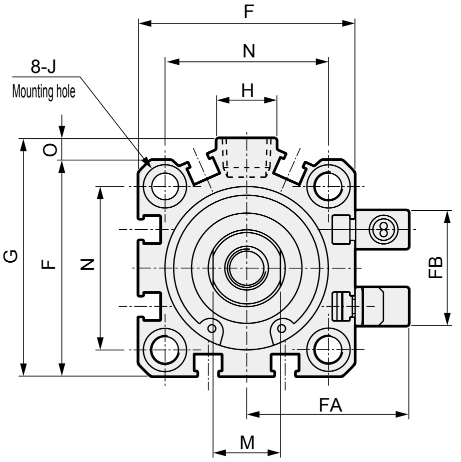
No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating
2	C type snap ring for hole	Steel	Zinc phosphate
3	Coil scraper	Phosphor bronze	
4	Rod metal gasket	Nitrile rubber	
5	Lube keeping structure	Special rubber	G4 only
6	Rod metal	Aluminum alloy	Chromate
7	Rod packing	Nitrile rubber	
8	Bush	Oiles drymet	
9	Body	Aluminum alloy	Hard alumite
10	Cushion rubber R	Urethane rubber	
11	Cushion rubber H	Urethane rubber	
12	Spacer	Aluminum alloy	Chromate
13	Magnet	Plastic	
14	Piston	Aluminum alloy	Chromate
15	Piston packing	Nitrile rubber	
16	Wear ring	Polyacetal resin	
17	Cover	Aluminum alloy	Alumite

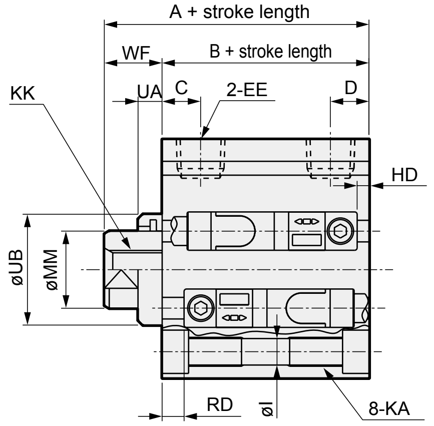
Repair parts list

Part name / Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-KG1-63K	③④⑦⑩ ⑪⑮⑯
ø80	SSD2-KG1-80K	
ø100	SSD2-KG1-100K	

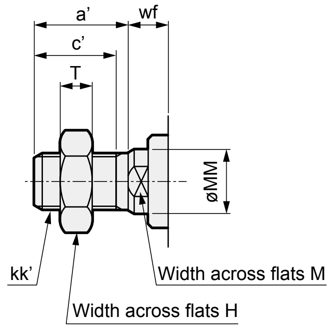
Dimensions

- SSD2-KG1L/KG4L-25 to 100 (with switch/T0H/V, T5H/V, T2H/V, T3H/V)





- Rod end male thread



Code	Dimensions with switch														
Bore size (mm)	A *1		B *1	C	D	EE	F	FA	FB	G	H	I	J	K	KA
	G1	G4													
ø25	52.5	52.5	47.5	11	6	M5	40	31.5	17	-	-	5.5	9 spot face depth 5.5	51	M6 depth 11
ø32	55	60	43	8	8	Rc1/8	45	33.5	24	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11
ø40	61.5	66.5	49.5	12	8.5	Rc1/8	52	37	31	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11
ø50	63.5	68.5	50.5	10.5	10.5	Rc1/4	64	43	32	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13
ø63	69	74	56	13	11	Rc1/4	77	49.5	32	84	23	8.7	14 spot face depth 9	103	M10 depth 25
ø80	78.5	83.5	63.5	16	13	Rc3/8	98	60	32	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28
ø100	90	95	73	23	15	Rc3/8	117	69.5	32	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28

Code	Dimensions with switch										Proximity T2YD	
Bore size (mm)	KK	M	MM	N	O	UA		UB	WF		HD	RD *2
						G1	G4		G1	G4		
ø25	M6 depth 12	10	12	28	-	-	-	-	5	5	2	20
ø32	M8 depth 13	14	16	34	4.5	5	10	23 h9	12	17	4.5	20.5
ø40	M8 depth 13	14	16	40	5	5	10	28 h9	12	17	8	23.5
ø50	M10 depth 15	17	20	50	7	5	10	35 h9	13	18	9	23.5
ø63	M10 depth 15	17	20	60	7	5	10	35 h9	13	18	13	24
ø80	M16 depth 21	22	25	77	6	5	10	43 h9	15	20	19	26.5
ø100	M20 depth 27	27	30	94	6.5	5	10	59 h9	17	22	24.5	30.5

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

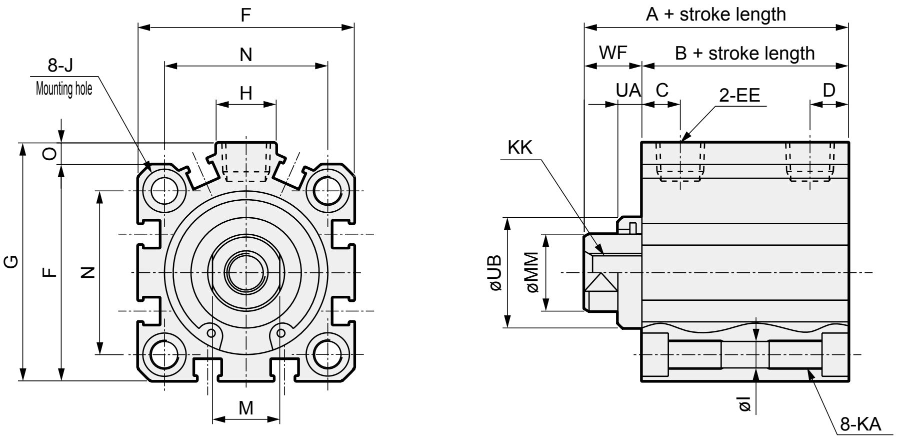
*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

- Rod end male thread

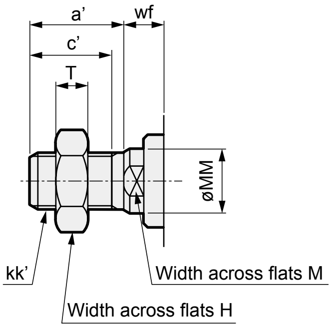
Code	a'	c'	H	kk'	M	MM	T	wf	
Bore size (mm)								G1	G4
ø25	17.5	15	17	M10×1.25	10	12	6	5	5
ø32	23.5	20.5	22	M14×1.5	14	16	8	10	15
ø40	23.5	20.5	22	M14×1.5	14	16	8	10	15
ø50	28.5	26	27	M18×1.5	17	20	11	10	15
ø63	28.5	26	27	M18×1.5	17	20	11	10	15
ø80	35.5	32.5	32	M22×1.5	22	25	13	13	18
ø100	35.5	32.5	41	M26×1.5	27	30	16	13	18

Dimensions

- SSD2-KG1/KG4-25 to 100 (without switch)



- Rod end male thread



Code Bore size (mm)	Dimensions without switch													
	A *1, *4		B *1, *4	C	D	EE *5	F	G	H	I	J	K	KA
	G1	G4												
ø25	42.5	42.5	37.5	11	6	M5	40	-	-	5.5	9 spot face depth 5.5	51	M6 depth 11
ø32	45(55)	50(60)	33(43)	10	5.5	Rc1/8	45	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11
ø40	51.5(61.5)	56.5(66.5)	39.5(49.5)	11.5	8	Rc1/8	52	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11
ø50	53.5(63.5)	58.5(68.5)	40.5(50.5)	10.5	10.5	Rc1/4	64	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13
ø63	59(69)	64(74)	46(56)	13	11	Rc1/4	77	84	23	8.7	14 spot face depth 9	103	M10 depth 25
ø80	68.5(78.5)	73.5(83.5)	53.5(63.5)	16	13	Rc3/8	98	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28
ø100	80(90)	85(95)	63(73)	23	15	Rc3/8	117	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28

Code Bore size (mm)	Dimensions without switch									
	KK	M	MM	N	O	UA		UB	WF	
						G1	G4		G1	G4
ø25	M6 depth 12	10	12	28	-	-	-	-	5	5
ø32	M8 depth 13	14	16	34	4.5	5	10	23 h9	12	17
ø40	M8 depth 13	14	16	40	5	5	10	28 h9	12	17
ø50	M10 depth 15	17	20	50	7	5	10	35 h9	13	18
ø63	M10 depth 15	17	20	60	7	5	10	35 h9	13	18
ø80	M16 depth 21	22	25	77	6	5	10	43 h9	15	20
ø100	M20 depth 27	27	30	94	6.5	5	10	59 h9	17	22

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.
*4 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.
*5 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

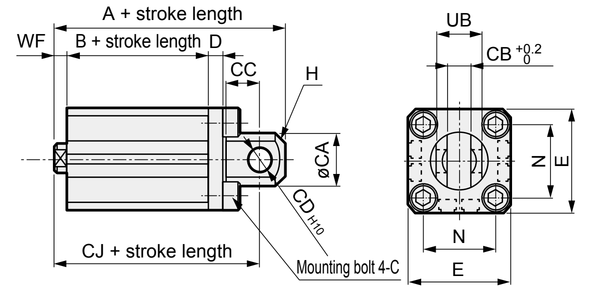
- Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf	
								G1	G4
ø25	17.5	15	17	M10×1.25	10	12	6	5	5
ø32	23.5	20.5	22	M14×1.5	14	16	8	10	15
ø40	23.5	20.5	22	M14×1.5	14	16	8	10	15
ø50	28.5	26	27	M18×1.5	17	20	11	10	15
ø63	28.5	26	27	M18×1.5	17	20	11	10	15
ø80	35.5	32.5	32	M22×1.5	22	25	13	13	18
ø100	35.5	32.5	41	M26×1.5	27	30	16	13	18

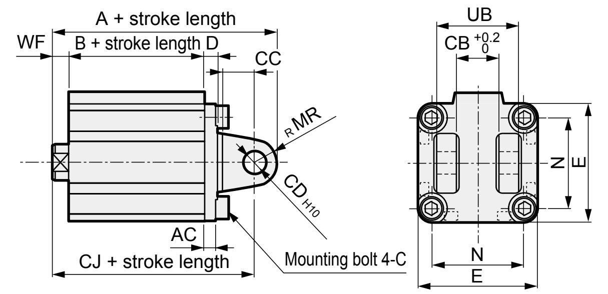
Dimensions with mounting bracket

- Clevis bracket (CB)
  SSD2-KG1(L)/KG4(L)-25 to 100 -CB

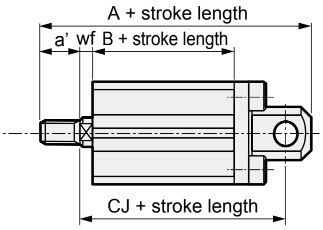
· ø25



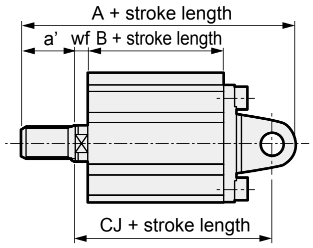
· ø32 to ø100



Rod end male thread



Rod end male thread



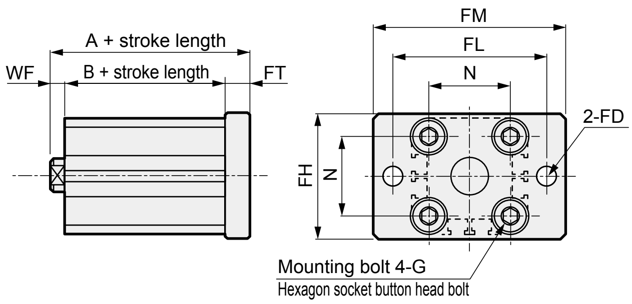
Code	Common dimensions												Female thread											
Bore size (mm)	AC	CA	CB	CC	CD	D	E	G	H	MR	N	UB	WF		Without switch					With switch				
															A		B	CJ		A		B	CJ	
													G1	G4	G1	G4		G1	G4	G1	G4		G1	G4
ø25	-	24	10.2	14	10	5	40	M6×16	C5	-	28	20	5	5	72.5	72.5	37.5	62.5	62.5	82.5	82.5	47.5	72.5	72.5
ø32	4.5	-	18.2	14	10	5	45	M6×16	-	10	34	36	12	17	75	80	33	65	70	85	90	43	75	80
ø40	5	-	18.2	14	10	6	52	M6×16	-	10	40	36	12	17	83.5	88.5	39.5	73.5	78.5	93.5	98.5	49.5	83.5	88.5
ø50	6	-	22.2	20	14	7	64	M8×20	-	14	50	44	13	18	95.5	100.5	40.5	81.5	86.5	105.5	110.5	50.5	91.5	96.5
ø63	7	-	22.2	20	14	8	77	M10×25	-	14	60	44	13	18	103	108	46	89	94	113	118	56	99	104
ø80	9	-	28.2	27	18	10	98	M12×40	-	18	77	56	15	20	124.5	129.5	53.5	106.5	111.5	134.5	139.5	63.5	116.5	121.5
ø100	12	-	32.2	31	22	13	117	M12×40	-	22	94	64	17	22	147	152	63	125	130	157	162	73	135	140

Code	Male thread												
Bore size (mm)	a'	wf		Without switch					With switch				
				A		B	CJ		A		B	CJ	
		G1	G4	G1	G4		G1	G4	G1	G4		G1	G4
ø25	17.5	5	5	90	90	37.5	62.5	62.5	100	100	47.5	72.5	72.5
ø32	23.5	10	15	96.5	101.5	33	63	68	106.5	111.5	43	73	78
ø40	23.5	15	20	105	110	39.5	71.5	76.5	115	120	49.5	81.5	86.5
ø50	28.5	15	20	121	126	40.5	78.5	83.5	131	136	50.5	88.5	93.5
ø63	28.5	15	20	128.5	133.5	46	86	91	138.5	143.5	56	96	101
ø80	35.5	18	23	158	163	53.5	104.5	109.5	168	173	63.5	114.5	119.5
ø100	35.5	18	23	178.5	183.5	63	121	126	188.5	193.5	73	131	136

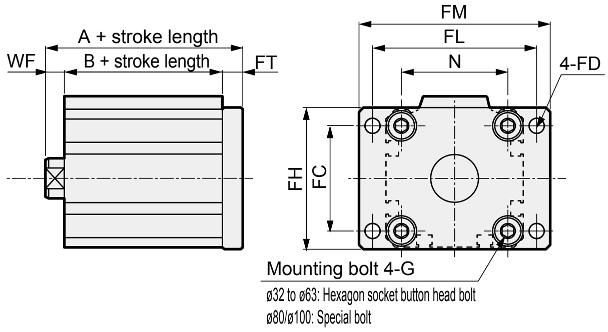
Dimensions with mounting bracket

- Head side flange (FB)
  SSD2-KG1(L)/KG4(L)-20 to 100 -FB

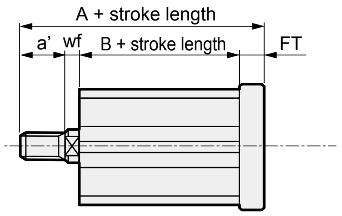
· ø25



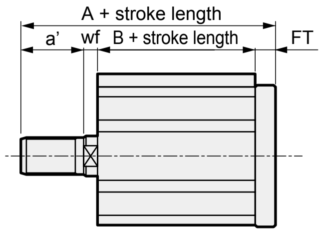
· ø32 to ø100



Rod end male thread

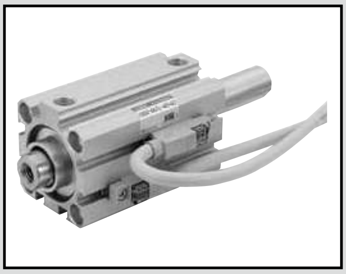


Rod end male thread



Code	Common dimensions								Female thread							
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF		Without switch			With switch		
											A		B	A		B
									G1	G4	G1	G4		G1	G4	
ø25	-	6.6	42	52	64	8	28	M6×16	5	5	50.5	50.5	37.5	60.5	60.5	47.5
ø32	34	5.5	48	56	65	8	34	M6×16	12	17	53	58	33	63	68	43
ø40	40	5.5	54	62	72	8	40	M6×16	12	17	59.5	64.5	39.5	69.5	74.5	49.5
ø50	50	6.6	67	76	89	9	50	M8×20	13	18	62.5	67.5	40.5	72.5	77.5	50.5
ø63	60	9	80	92	108	9	60	M10×25	13	18	68	73	46	78	83	56
ø80	77	11	99	116	134	11	77	M12×40	15	20	79.5	84.5	53.5	89.5	94.5	63.5
ø100	94	11	117	136	154	11	94	M12×40	17	22	91	96	63	101	106	73

Code	Male thread								
Bore size (mm)	a'	wf		Without switch			With switch		
				A		B	A		B
		G1	G4	G1	G4		G1	G4	
ø25	17.5	5	5	68	68	37.5	78	78	47.5
ø32	23.5	10	15	74.5	79.5	33	84.5	89.5	43
ø40	23.5	15	20	81	86	39.5	91	96	49.5
ø50	28.5	15	20	88	93	40.5	98	103	50.5
ø63	28.5	15	20	93.5	98.5	46	103.5	108.5	56
ø80	35.5	18	23	113	118	53.5	123	128	63.5
ø100	35.5	18	23	122.5	127.5	63	132.5	137.5	73



Compact cylinder double acting/
double rod/coil scraper

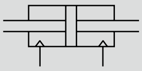
SSD2-DG1 Series

Compact cylinder double acting/
double rod/anti-spatter adherence

SSD2-DG4 Series

● Bore size: ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



RoHS

Specifications

Item	SSD2-DG1/DG4 SSD2-DG1L/DG4L (with switch)						
Bore size mm	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting						
Working fluid	Compressed air						
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)						
Min. working pressure MPa	0.2 (≈29 psi, 2 bar)				0.15 (≈22 psi, 1.5 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)						
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)						
Port size	Rc1/8			Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$						
Working piston speed mm/s	50 to 500					50 to 300	
Cushion	None						
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)						
Allowable absorbed energy J	0.021	0.025	0.092	0.1	0.12	0.27	0.56

Stroke length

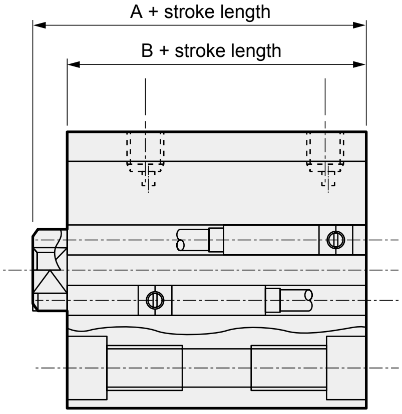
Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø25	5/10/15/20/25/ 30/35/40/45/50	50	1(10) The value in ( ) is for types with one or two switches.
ø32	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

*1: The custom stroke is available in 1 mm increments.

Custom stroke length

● SSD2-DG1, DG4 Series

Item	Standard products Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-DG1-32-38 A +2 mm spacer is added to the SSD2-DG1-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 90.5mm.	



Switch specifications

● Proximity switch for AC magnetic field

Item	Proximity 2-wire
	T2YD/T2YDT
Applications	Dedicated for programmable controller
Indicator lamp	Red/green LED (Lit when ON)
Load voltage	24 VDC ±10%
Load current	5 to 20 mA
Internal voltage drop	6 V or less
Leakage current	1.0 mA or less
Output delay time *1 (Delay ON, delay OFF)	60 ms or less
Lead wire length	1m (oil resistant vinyl cabtyre cable ø 6, 0.5 mm^2 x 2-conductor) *2, *3
Insulation resistance	100 MΩ and over at 500 VDC megger
Withstand voltage	No failure after 1 minute of 1,000 VAC application.
Max. shock resistance	980 m/s^2
Ambient temperature	-10 to +60°C
Degree of protection	JIS C0920 (water-tight), IEC standards IP67, oil resistance
Weight g	1 m:61 3 m:166 5 m:272

*1: Indicates the time from magnetic sensor detection of the piston magnet until switch output.
*2: 3 m and 5 m lead wires are available as options.
*3: Flame-resistant lead wires are available as options.
*4: This switch cannot be used in DC environments.

Cylinder weight table

(the weight of the switches is when there are 2 cylinder switches.) (Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø25	234	325	249	340	265	356	281	372	297	388	313	403	329	419	344	435	360	461	375	486	-	-	-	-
ø32	308	423	354	468	399	514	446	560	490	605	537	651	584	696	631	741	678	786	725	831	960	1056	1195	1281
ø40	446	589	473	616	499	642	526	669	553	696	579	732	606	754	632	775	659	802	685	828	818	961	950	1093
ø50	-	-	746	940	796	989	846	1041	896	1089	946	1139	996	1189	1046	1239	1098	1291	1149	1343	1407	1603	1664	1863
ø63	-	-	1203	1567	1278	1642	1353	1717	1428	1792	1503	1867	1579	1943	1654	2018	1729	2093	1804	2168	2179	2543	2554	2918
ø80	-	-	2112	2042	2229	2420	2345	2798	2462	2915	2578	3031	2695	3153	2812	3275	2929	3392	3045	3508	3628	4091	4210	4673
ø100	-	-	3153	3775	3322	3924	3490	4072	3659	4256	3828	4440	3997	4604	4165	4767	4334	4931	4503	5095	5348	5915	6193	6735

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø25	Push/Pull	-	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push/Pull	-	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push/Pull	-	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push/Pull	-	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push/Pull	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push/Pull	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push/Pull	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

SSD2-DG1/DG4 Series

How to order

Without switch (without magnet for switch)

SSD2-DG4 - 32 - 10 —— N - LB - I

With switch (built-in magnet for switch)

SSD2-DG4L - 32 - 10 - T2YD - R - N - LB - I

Ⓐ Model No.

Ⓑ Bore size

Ⓒ Stroke length

Ⓓ Switch model No.

Ⓔ Switch quantity

Ⓕ Option

Ⓖ Mounting bracket *1

Ⓗ Accessory *2

Code	Description
Ⓐ Model No.	
SSD2-DG1	Double acting/double rod/coil scraper
SSD2-DG1L	Double acting/double rod/coil scraper/with switch
SSD2-DG4	Double acting/double rod/anti-spatter adherence
SSD2-DG4L	Double acting/double rod/anti-spatter adherence/with switch

Ⓑ Bore size (mm)	
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

Ⓒ Stroke length (mm)

Refer to the stroke length table on the following page.

Ⓓ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage	Display	Lead wire
T2YD*	**-**	Proximity	DC	2-color display for AC magnetic field	2-wire
T2YDT*	**-**				
T2YDU (Made-to-order product)				2-color display (AC magnetic field) Cable connect SW	

*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2

Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread

Ⓖ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot (made-to-order product)
FA	Rod side flange (made-to-order product)

Ⓗ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

How to order switch

SW - T2YD

Switch model No.
(Item Ⓓ above)

⚠ Precautions for model No. selection

*1: The mounting bracket is included at shipment.
*2: "I" and "Y" cannot be selected together.

[Example of model No.]

SSD2-DG4L-32-10-T2YD-R-N

Model: Compact cylinder
Double acting, double rod, anti-spatter adherence

Ⓑ Bore size : ø32 mm
Ⓒ Stroke length : 10 mm
Ⓓ Switch model No.: Proximity switch for AC magnetic field T2YD, lead wire length 1 m
Ⓔ Switch quantity : 1 on rod side
Ⓕ Option : Rod end male thread

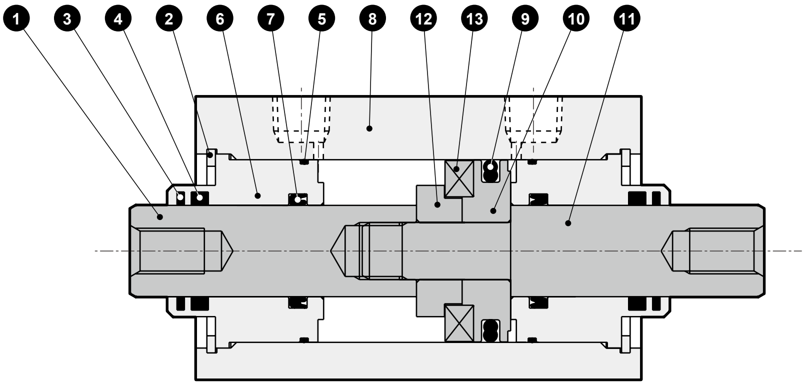
[Stroke length table]

Stroke length (mm)		**Applicable bore size**						
		25	**32**	**40**	**50**	**63**	**80**	**100**
Standard stroke length	5	●	●	●				
	10	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●
	35	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●
	45	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●
	75		●	●	●	●	●	●
	100		●	●	●	●	●	●
Min. stroke length (mm) *1		1						
Max. stroke length (mm)		50	100					
Custom stroke length *2		In 1 mm increments						

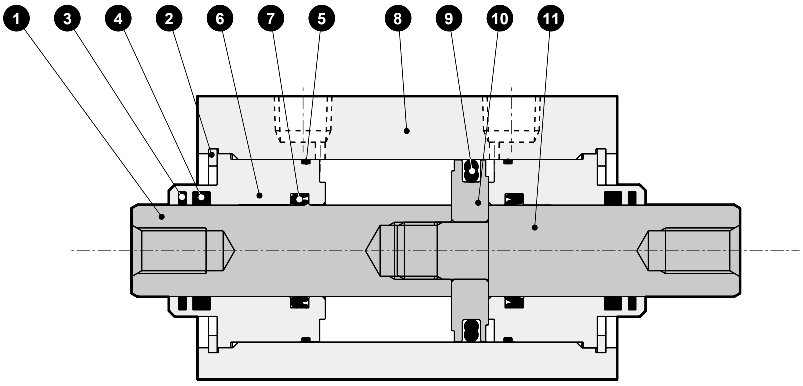
*1: Less than 10 mm stroke length is not available.
*2: The total length is the same as that of the next longer standard stroke length.

Internal structure and parts list

● SSD2-DG1L/DG4L-25 to 50 (double acting/double rod/anti-spatter adherence/with switch)



● SSD2-DG1/DG4-25 to 50 (double acting/double rod/anti-spatter adherence)



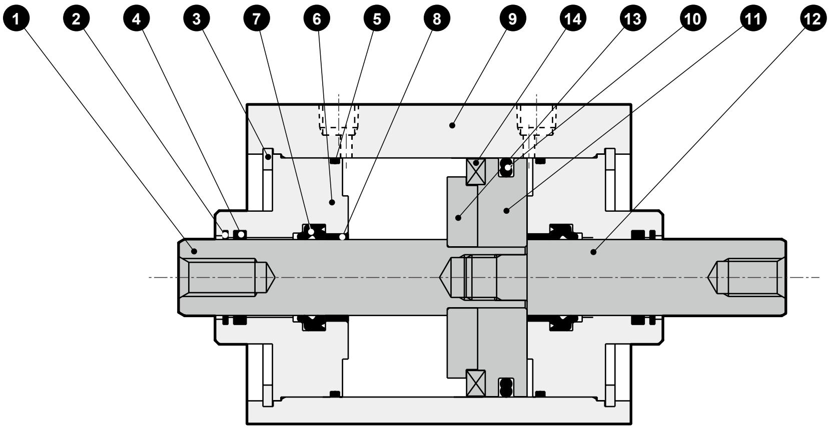
No.	Part name	Material	Remarks
1	Piston rod A	ø25: Stainless steel ø32 to ø50: Steel	Industrial chrome plating
2	C type snap ring for hole	Steel	Zinc phosphate
3	Coil scraper	Phosphor bronze	
4	Lube keeping structure	Special rubber	G4 only
5	Rod metal gasket	Nitrile rubber	
6	Rod metal	Aluminum alloy	Alumite
7	Rod packing	Nitrile rubber	
8	Body	Aluminum alloy	Hard alumite
9	Piston packing	Nitrile rubber	
10	Piston	Aluminum alloy	Chromate
11	Piston rod B	ø25: Stainless steel ø32 to ø50: Steel	Industrial chrome plating
12	Spacer	Aluminum alloy	ø25, ø32: Chromate
13	Magnet	Plastic	

Repair parts list

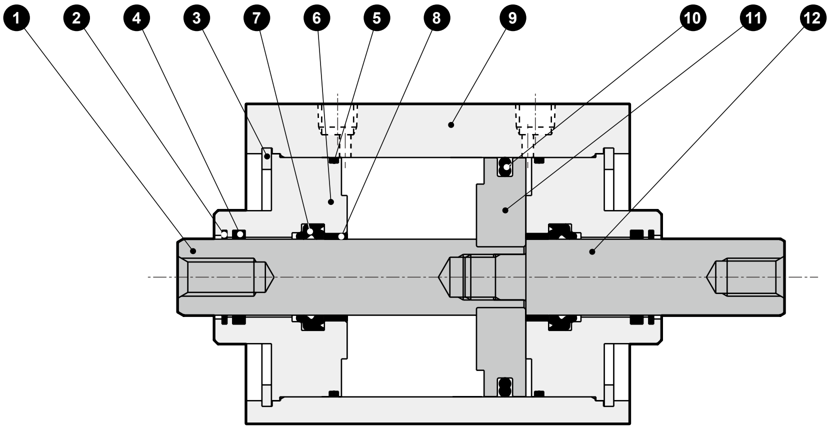
Part name / Bore size (mm)	Kit No.	Repair parts No.
ø25	SSD2-DG1-25K	❸❺❼❾
ø32	SSD2-DG1-32K	
ø40	SSD2-DG1-40K	
ø50	SSD2-DG1-50K	

Internal structure and parts list

- SSD2-DG1L/DG4L-63 to 100 (double acting/double rod/anti-spatter adherence/with switch)



- SSD2-DG1/DG4-63 to 100 (double acting/double rod/anti-spatter adherence)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod A	Steel	Industrial chrome plating	8	Bush	Oiles drymet	
2	Coil scraper	Phosphor bronze		9	Body	Aluminum alloy	Hard alumite
3	C type snap ring for hole	Steel	Zinc phosphate	10	Piston packing	Nitrile rubber	Chromate
4	Lube keeping structure	Special rubber	G4 only	11	Piston	Aluminum alloy	Chromate
5	Rod metal gasket	Nitrile rubber		12	Piston rod B	Steel	Industrial chrome plating
6	Rod metal	Aluminum alloy	Chromate	13	Spacer	Aluminum alloy	Chromate
7	Rod packing	Nitrile rubber		14	Magnet	Plastic	

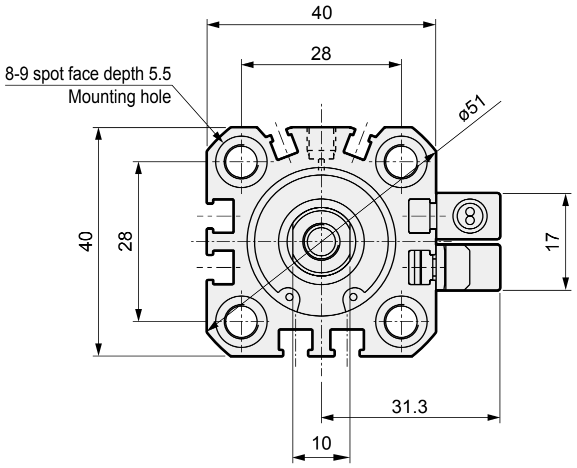
Repair parts list

Part name / Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-DG1-63K	②⑤⑦⑩
ø80	SSD2-DG1-80K	
ø100	SSD2-DG1-100K	

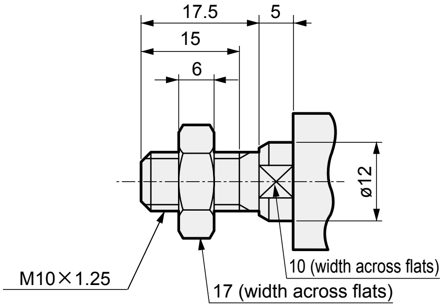
SSD2-DG1/DG4 Series

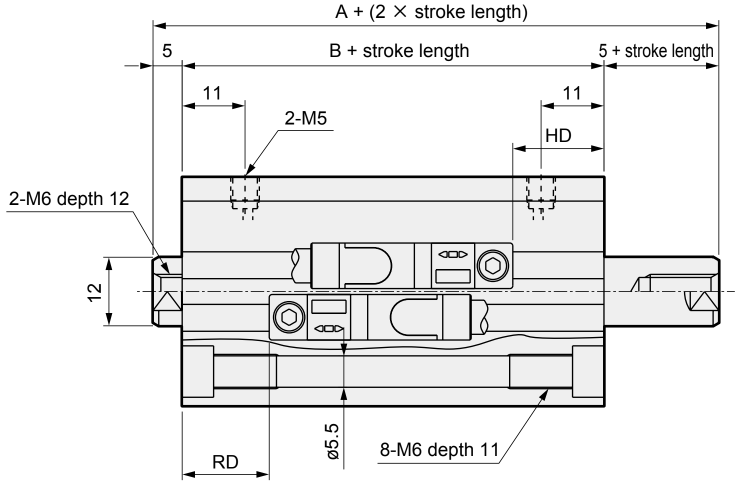
Dimensions

- SSD2-DG1L/DG4L-25 (with switch)

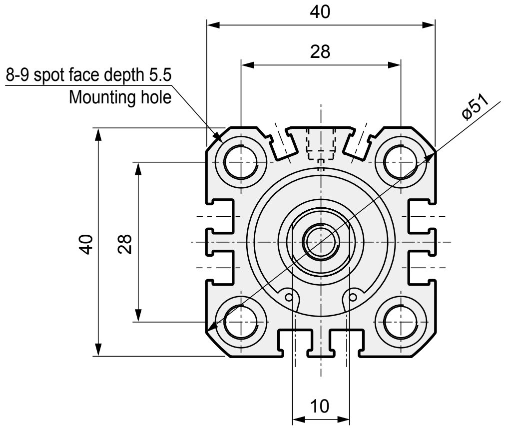


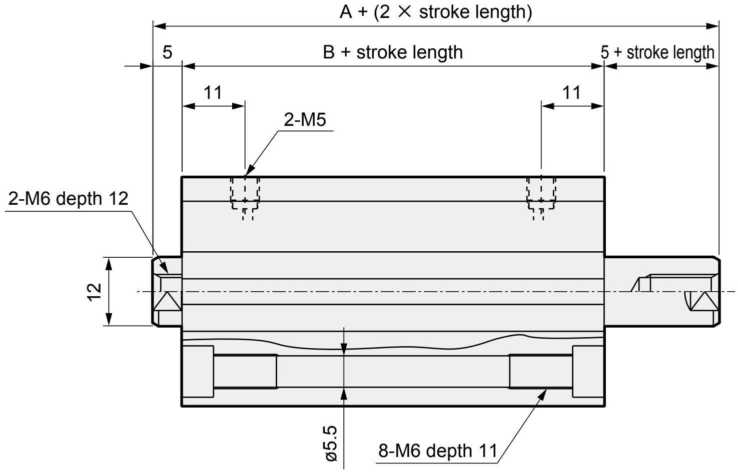
- Rod end male thread





- SSD2-DG1/DG4-25 (without switch)





Code	Without switch		Dimensions with switch					
Bore size (mm)	A [*1]	B [*1]	A [*1]	B [*1]	FA	FB	RD [*2]	HD
ø25	59	49	69	59	31.5	17	20	21.5

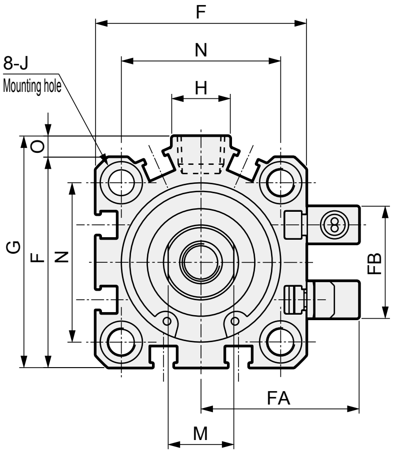
[*1] : To calculate A+ (2 x stroke length), B+ stroke length or 5+ stroke length when using a custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. Left and right projection dimensions of rod differ.
(Example) If the custom stroke length is 17 mm, apply the standard stroke length 20 mm.

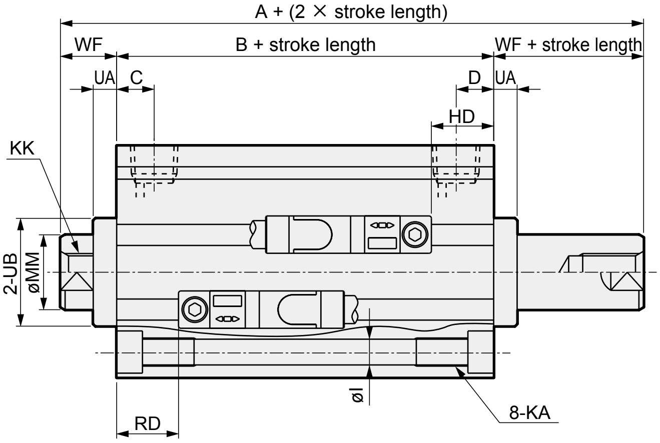
[*2] : RD dimensions for custom stroke length differ from these dimensions according to the setting.

[*3] : For dimensions of individual accessories, refer to pages 1046 to 1049.

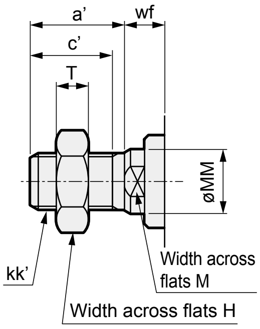
Dimensions

- SSD2-DG1L/DG4L-32 to 100 (with switch)

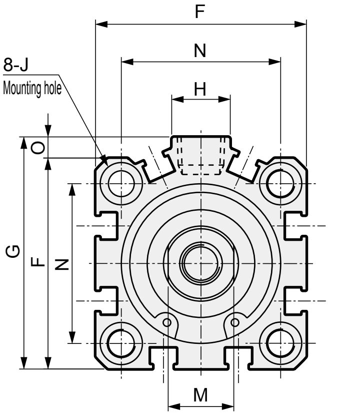


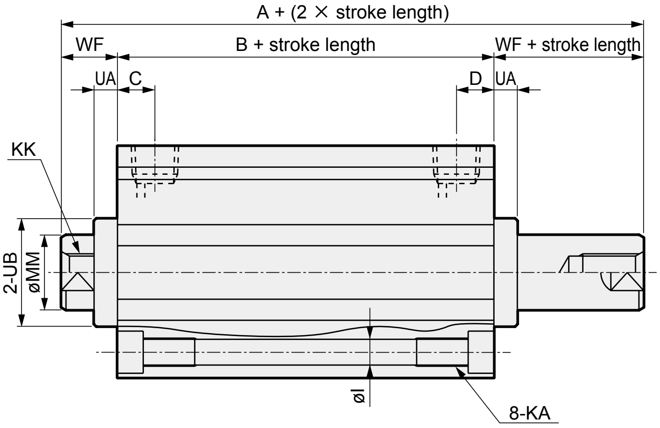


- Rod end male thread



- SSD2-DG1/DG4-32 to 100 (without switch)





Code	Without switch			Common dimensions with switch															
Bore size (mm)	A [*1, *4]		B [*1, *4]	A [*1]		B [*1]	C	D	EE	F	FA	FB	G	H	I	J	KA	KK
	G1	G4		G1	G4													
ø32	54.5(64.5)	64.5(74.5)	30.5(40.5)	64.5	74.5	40.5	8	8	Rc1/8	45	33.5	24	49.5	12.5	5.5	9 spot face depth 5.5	M6 depth 11	M8 depth 13
ø40	64(74)	74(84)	40(50)	74	84	50	12	12	Rc1/8	52	37	31	57	15	5.5	9 spot face depth 5.5	M6 depth 11	M8 depth 13
ø50	66.5(76.5)	76.5(86.5)	40.5(50.5)	76.5	86.5	50.5	10.5	10.5	Rc1/4	64	43	32	71	18	6.9	11 spot face depth 6.5	M8 depth 13	M10 depth 15
ø63	68(78)	78(88)	42(52)	78	88	52	13	13	Rc1/4	77	49.5	32	84	23	8.7	14 spot face depth 9	M10 depth 25	M10 depth 15
ø80	81(91)	91(101)	51(61)	91	101	61	16	16	Rc3/8	98	60	32	104	31	10.5	17 spot face depth 11	M12 depth 28	M16 depth 21
ø100	94.5(104.5)	104.5(114.5)	60.5(70.5)	104.5	114.5	70.5	23	23	Rc3/8	117	69.5	32	123.5	38	10.5	17.5 spot face depth 11	M12 depth 28	M20 depth 27

Code	Common dimensions with switch									With T2YD switch	
Bore size (mm)	M	MM	N	O	UA		UB	WF		RD [*2]	HD
					G1	G4		G1	G4		
ø32	14	16	34	4.5	5	10	23 h9	12	17	20.5	22
ø40	14	16	40	5	5	10	28 h9	12	17	23.5	27.5
ø50	17	20	50	7	5	10	35 h9	13	18	23.5	27.5
ø63	17	20	60	7	5	10	35 h9	13	18	24	28.5
ø80	22	25	77	6	5	10	43 h9	15	20	26.5	35
ø100	27	30	94	6.5	5	10	59 h9	17	22	30.5	40.5

*1 : To calculate A+ (2 x stroke length), B+ stroke length or WF+ stroke length when using a custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. Left and right projection dimensions of rod differ.
(Example) If the custom stroke length is 17 mm, apply the standard stroke length 20 mm.

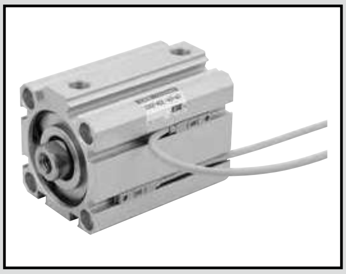
*2 : RD dimensions for custom stroke length differ from these dimensions according to the setting.

*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

*4 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

- Dimensions of rod end male thread part

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf	
								G1	G4
ø32	23.5	20.5	22	M14×1.5	14	16	8	10	15
ø40	23.5	20.5	22	M14×1.5	14	16	8	10	15
ø50	28.5	26	27	M18×1.5	17	20	11	10	15
ø63	28.5	26	27	M18×1.5	17	20	11	10	15
ø80	35.5	32.5	32	M22×1.5	22	25	13	13	18
ø100	35.5	32.5	41	M26×1.5	27	30	16	13	18

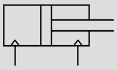


Compact cylinder double acting single rod/environment-resistant scraper

SSD2-G5 Series

● Bore size: ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-G5 SSD2-G5L (with switch)							
Bore size mm	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)							
Min. working pressure MPa	0.2 (≈29 psi, 2 bar)					0.15 (≈22 psi, 1.5 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)							
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)							
Port size	M5		Rc1/8 (*1)		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$							
Working piston speed mm/s	50 to 500					50 to 300		
Cushion	None							
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)							
Allowable absorbed energy J	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø20	5/10/15/20/25/30/35/40/45/50	50	1
ø25			
ø32	5/10/15/20/25/30/35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25/30/35/40/45/50/75/100		
ø63			
ø80			
ø100			

*1 : For the type with switch, refer to the table of switch mounting quantity and minimum stroke length.
*2 : The custom stroke length is available in 1 mm increments. The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

Min. stroke length with switch (2 switches)

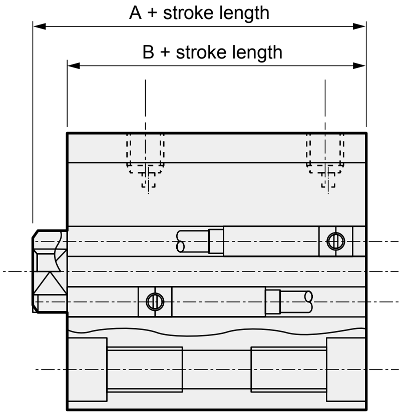
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø20	5	5
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

1 : Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.
*2 : Values in ( ) are for the type with 1 on rod side.

Custom stroke length

● SSD2-G5 Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-G5-32-38 A +2 mm spacer is added to the SSD2-G5-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 73mm.	



Switch specifications (F type switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μA or less	1 mA or less		10 μA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T type switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			Dedicated for programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø20	95	150	107	182	120	195	133	208	145	220	158	233	171	246	184	259	197	272	210	285	-	-	-	-
ø25	131	222	146	237	162	253	178	269	194	285	209	300	225	316	241	332	257	348	272	363	-	-	-	-
ø32	185	299	207	321	229	343	251	365	272	386	294	408	316	430	338	452	360	474	381	495	552	600	662	710
ø40	269	412	296	439	322	465	349	492	376	519	402	545	429	572	455	598	482	625	508	651	726	784	858	916
ø50	-	-	476	670	518	712	560	754	602	796	645	839	687	881	729	923	771	965	813	1007	1160	1217	1370	1427
ø63	-	-	703	982	758	1037	813	1092	868	1147	923	1202	999	1258	1074	1313	1150	1369	1144	1423	1332	1696	1709	1973
ø80	-	-	1240	1653	1327	1740	1413	1826	1500	1908	1586	1990	1673	2082	1760	2173	1847	2265	1933	2346	2701	2754	3136	3211
ø100	-	-	1879	2446	1993	2560	2106	2673	2220	2787	2334	2901	2448	3015	2561	3128	2675	3242	2789	3356	3857	3929	4424	4496

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	-	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

How to order

Without switch (without magnet for switch)

SSD2-G5 - **20** ○ - **5** ——— **N** - **LB** - **I**

With switch (built-in magnet for switch)

SSD2-G5L - **20** ○ - **5** - **T0H** - **R** - **N** - **LB** - **I**

Ⓐ Model No.

Ⓑ Bore size

Ⓒ Port thread

Ⓓ Stroke length

Ⓔ Switch model No.
*1
*4

Ⓕ Switch quantity

Ⓖ Option

Ⓗ Mounting bracket
*2

Ⓘ Accessory
*3

Precautions for model No. selection

1 : The T8 switch cannot be mounted on the ø20 to ø32 bore sizes.

*2 : The mounting bracket is included at shipment. The WF/wf dimension of the cylinder for "LB" and "FA" is set 10 mm longer than that of standard products. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.

*3 : "I" and "Y" cannot be selected together.

*4 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

*5 : F type switch cannot be selected.

[Example of model No.]

SSD2-G5L-32-5-T0H-R-N-LB-I

Model: Compact cylinder
Double acting/single rod/environment-resistant scraper

Ⓑ Bore size	: ø32 mm
Ⓒ Port thread	: Type of Rc thread
Ⓓ Stroke length	: 5 mm
Ⓔ Switch model No.	: Reed switch T0H Lead wire length 1 m
Ⓕ Switch quantity	: 1 on rod side
Ⓖ Option	: Rod end male thread
Ⓗ Mounting bracket	: Axial foot
Ⓘ Accessory	: Rod eye

Code	Description
Ⓐ Model No.	
SSD2-G5	Double acting/single rod/environment-resistant scraper (made-to-order product)
SSD2-G5L	Double acting/single rod/environment-resistant scraper/switch (MTO)
Ⓑ Bore size (mm)	
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓒ Port thread	
Blank	Rc thread/M5 thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)
Ⓓ Stroke length (mm)	
Refer to the stroke length table on the following page.	

Ⓔ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage		Display	Lead Line	Bore size							
			AC	DC			20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire	●	●						
-	F3S*			●		3-wire	●	●						
F2H*	F2V*			●		2-wire	●	●						
F3H*	F3V*			●		3-wire	●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire	●	●						
F2YH*	F2YV*			●	2-color display	2-wire	●	●						
F3YH*	F3YV*			●		3-wire	●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display					●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire	●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●			●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●			●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display for AC magnetic field	2-wire	●	●	●	●	●	●	●	●
T2YDT*	-			●			●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire	●	●	●	●	●	●	●	●

Code	Description
*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *5
Ⓕ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓖ Option	
Blank	Rod end female thread
N	Rod end male thread
Ⓗ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange
Ⓘ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

[Stroke length table]

Stroke length (mm)		**Applicable bore size**							
		20	**25**	**32**	**40**	**50**	**63**	**80**	**100**
Standard stroke length	5	●	●	●	●				
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●
	35	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●
	45	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
	75			●	●	●	●	●	●
	100			●	●	●	●	●	●
Min. stroke length (mm) *1		1							
Max. stroke length (mm)		50		100					
Custom stroke length *2		In 1 mm increments							

1 : Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available.
Refer to page 992 for the min. stroke length with switch.

*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

How to order switch

SW - T0H

Switch model No.
(Item Ⓔ on page 994)

How to order mounting bracket

Bore size (mm) / **Mounting bracket**	**ø20**	**ø25**	**ø32**	**ø40**	**ø50**	**ø63**	**ø80**
Foot (LB)	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80
Flange (FA/FB)	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80
Clevis bracket (CB)	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80

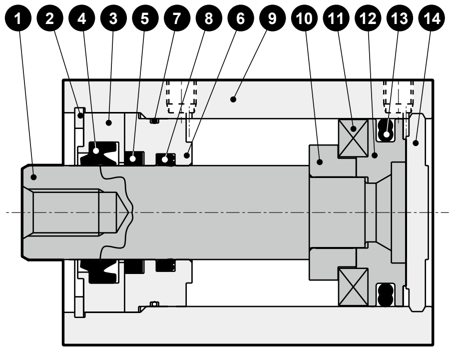
Bore size (mm) / **Mounting bracket**	**ø100**
Foot (LB)	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-100

*1: The foot mounting bracket is provided as 2 pcs./set.

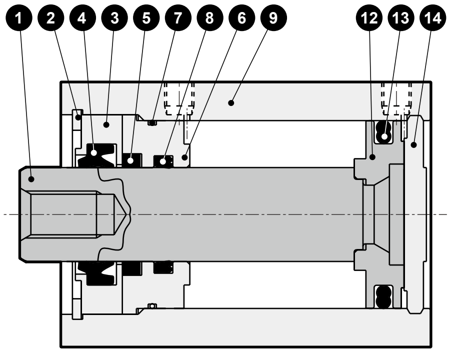
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/
COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/
MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd
Contr
Ending

Internal structure and parts list (ø20 to ø50)

- SSD2-G5L-20, 25
  (double acting/environment-resistant scraper/with switch)



- SSD2-G5-20, 25
  (double acting/environment-resistant scraper)



Main parts list

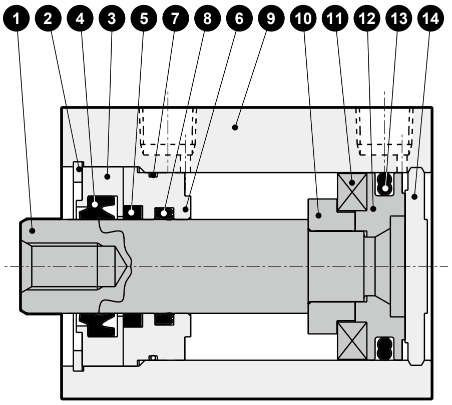
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Stainless steel	Industrial chrome plating	9	Body	Aluminum alloy	Hard alumite
2	C type snap ring	Steel	Zinc phosphate	10	Spacer	Aluminum alloy	Chromate
3	Rod metal 1	Special aluminum	Alumite	11	Magnet	Plastic	
4	Scraper	Nitrile rubber		12	Piston	Aluminum alloy	Chromate
5	Lube keeping structure	Special rubber		13	Piston packing	Nitrile rubber	
6	Rod metal	Special aluminum	Alumite	14	Cover	Stainless steel	
7	Rod metal gasket	Nitrile rubber					
8	Rod packing	Nitrile rubber					

Repair parts list

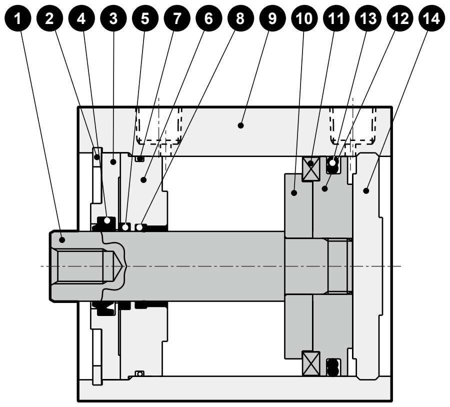
Part name Bore size (mm)	Kit No.	Repair parts No.
ø20	SSD2-G5-20K	④⑤⑦⑧⑬
ø25	SSD2-G5-25K	

Internal structure and parts list (ø63 to ø100)

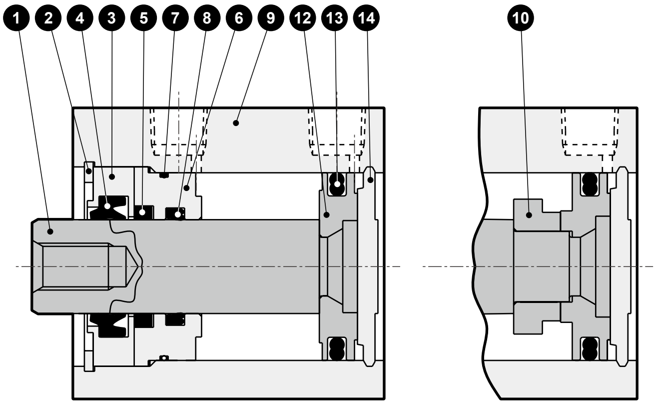
- SSD2-G5L-32 to 50
(double acting/environment-resistant scraper/with switch)



- SSD2-G5L-63 to 100
(double acting/environment-resistant scraper/with switch)



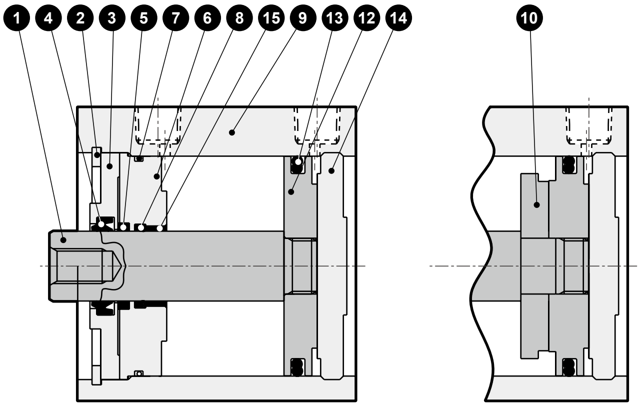
- SSD2-G5-32 to 50
(double acting/environment-resistant scraper)



50 st or less

Over 50 st

- SSD2-G5-63 to 100
(double acting/environment-resistant scraper)



50 st or less

Over 50 st

Main parts list

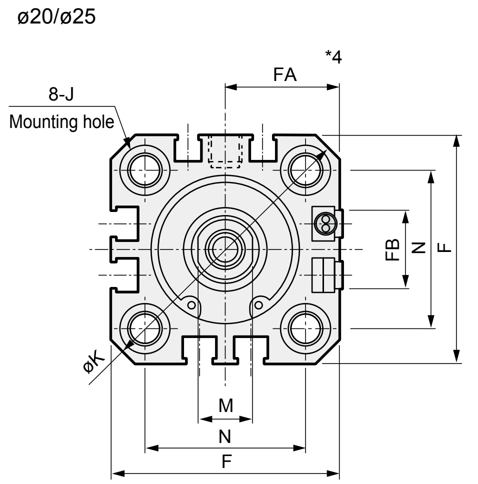
No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating
2	C type snap ring	Steel	Zinc phosphate
3	Rod metal 1	ø32 to ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø32 to ø50: Alumite ø63 to ø100: Chromate
4	Scraper	Nitrile rubber	
5	Lube keeping structure	Special rubber	
6	Rod metal	ø32 to ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø32 to ø50: Alumite ø63 to ø100: Chromate
7	Rod metal gasket	Nitrile rubber	
8	Rod packing	Nitrile rubber	
9	Body	Aluminum alloy	Hard alumite
10	Spacer	Aluminum alloy	Chromate
11	Magnet	Plastic	
12	Piston	Aluminum alloy	Chromate
13	Piston packing	Nitrile rubber	
14	Cover	Aluminum alloy	Alumite
15	Bush	Oiles drymet	

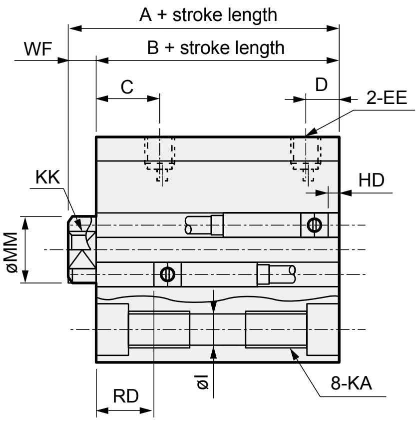
Repair parts list

Part name Bore size (mm)	Kit No.	Repair parts No.
ø32	SSD2-G5-32K	④⑤⑦⑧⑬
ø40	SSD2-G5-40K	
ø50	SSD2-G5-50K	
ø63	SSD2-G5-63K	
ø80	SSD2-G5-80K	
ø100	SSD2-G5-100K	

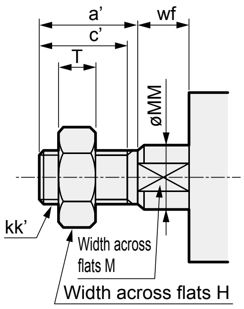
Dimensions (ø20, ø25)

● SSD2-G5L-20, 25 (with switch/TOH/V, T5H/V, T2H/V, T3H/V)

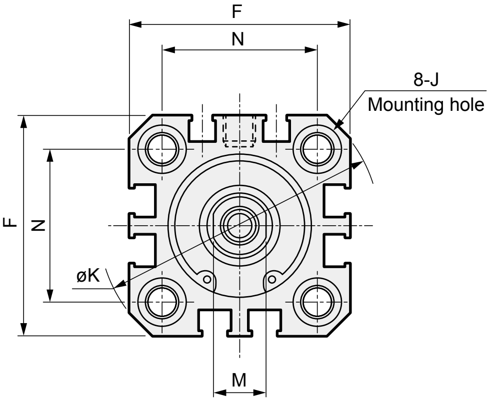


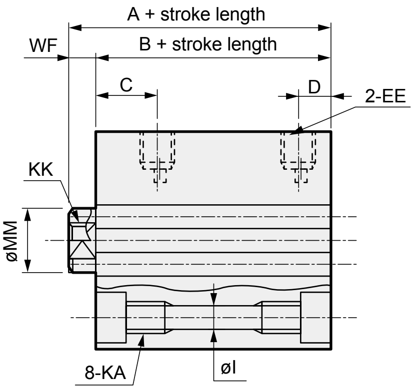


● Rod end male thread



● SSD2-G5-20, 25 (without switch)





Code	Without switch		Common dimensions with switch							
Bore size	A *1	B *1	A *1	B *1	C	D	EE	F	FA *4	FB
ø20	34	29.5	44	39.5	18	5.5	M5	36	18.5(22)	12.5
ø25	37.5	32.5	47.5	42.5	21	6	M5	40	20.5(24)	13.5

Code	Common dimensions with switch								
Bore size	I	J	K	KA	KK	M	MM	N	WF
ø20	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimensions	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
Bore size	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø20	3	17.5	3	17.5	5	19.5	7.5	22	6.5	21
ø25	4	19.5	4	19.5	6	21.5	8.5	24	7.5	23

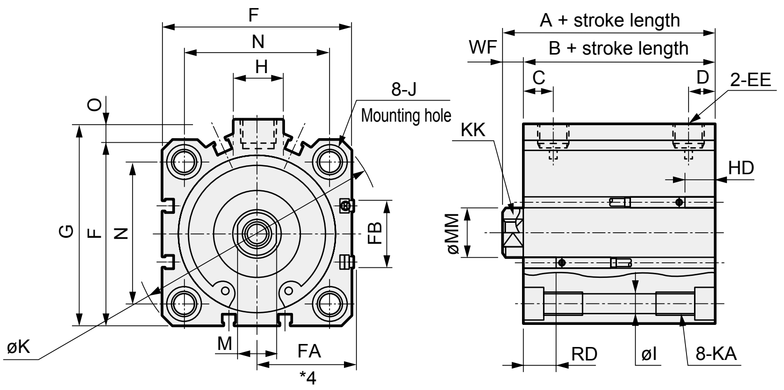
*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.
*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.
3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.
*4 : Dimensions in ( ) of FA are for the radial lead wire.
*5 : For dimensions with individual accessories, refer to pages 1046 to 1049.

Rod end male thread

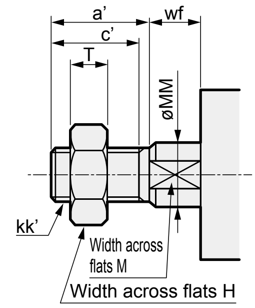
Code Bore size	a'	c'	H	kk'	M	MM	T	wf
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

Dimensions

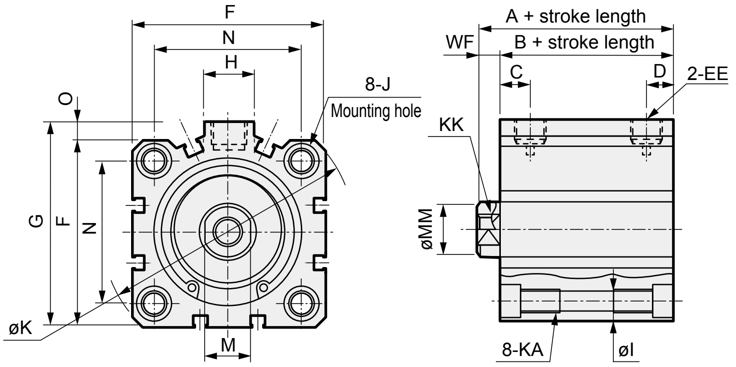
- SSD2-G5L-32 to 100 (with switch/TOH/V, T5H/V, T2H/V, T3H/V)



- Rod end male thread



- SSD2-G5-32 to 100 (without switch)



Code	Without switch		Common dimensions with switch									
Bore size	A *1	B *1	A *1	B *1	C *7	D *7	EE *8	F	FA *4	FB	G	H
ø32	40(50)	33(43)	50	43	18(20)	8(5.5)	Rc1/8	45	23(26.5)	20.5	49.5	12.5
ø40	46.5(56.5)	39.5(49.5)	56.5	49.5	22(21.5)	8.5(8)	Rc1/8	52	26.5(30)	27.5	57	15
ø50	48.5(58.5)	40.5(50.5)	58.5	50.5	20.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18
ø63	54(64)	46(56)	64	56	23	11	Rc1/4	77	39(42.5)	28.5	84	23
ø80	63.5(73.5)	53.5(63.5)	73.5	63.5	26	13	Rc3/8	98	49.5(53)	28.5	104	31
ø100	75(85)	63(73)	85	73	33	15	Rc3/8	117	59(62.5)	28.5	123.5	38

Code	Common dimensions with switch								
Bore size	I	J	K	KA	KK	M	MM	N	O	WF
ø32	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7
ø40	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7
ø50	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8
ø63	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	8
ø80	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	10
ø100	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12

Switch dimensions	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size	HD	RD	HD	RD	HD	RD
ø32	4	19.5	4	19.5	6	21.5
ø40	7	22	7	22	8.5	23.5
ø50	7.5	22.5	7.5	22.5	9	24
ø63	12.5	23	12.5	23	14	24.5
ø80	17.5	25.5	17.5	25.5	19	27
ø100	23	29.5	23	29.5	24.5	31

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.

*4: Dimensions in ( ) of FA are for the radial lead wire.

*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.

*6 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

*7 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

*8: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Rod end male thread

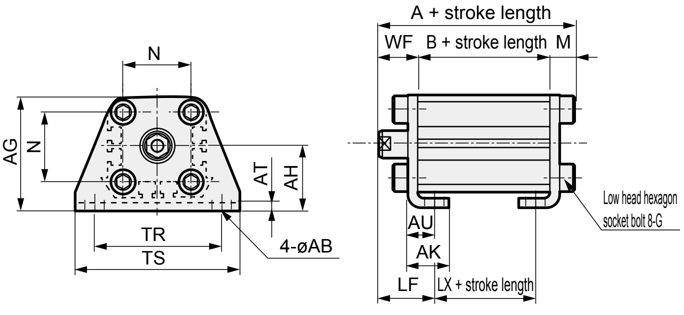
Code Bore size	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
SSD2
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

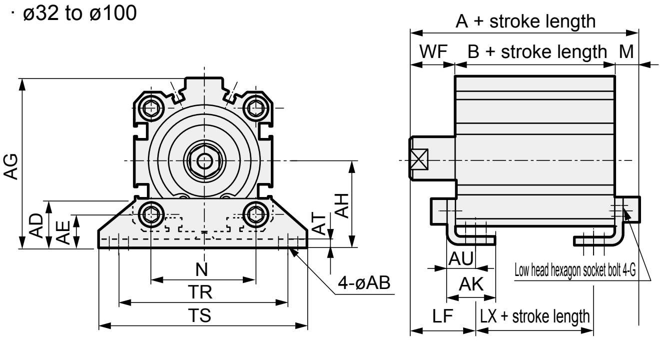
Dimensions with mounting bracket

● Axial foot (LB)
SSD2-G5(L)-20 to 100 -LB

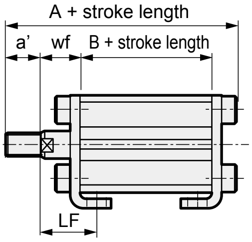
· ø20/ø25



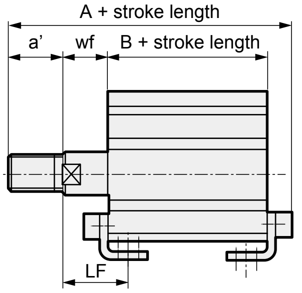
· ø32 to ø100



Rod end male thread



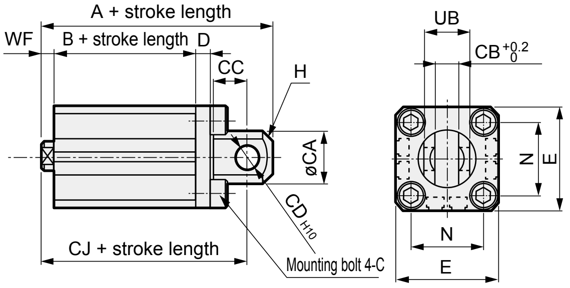
Rod end male thread



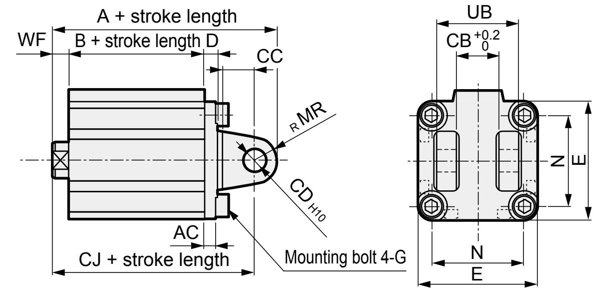
Code	Common dimensions														Female thread							Male thread							
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	LF	WF	Without switch			With switch			a'	wf	Without switch			With switch		
																A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø20	7	-	-	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2	20.5	14.5	51.2	29.5	17.5	61.2	39.5	27.5	14	14.5	65.2	29.5	17.5	75.2	39.5	27.5
ø25	7	-	-	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2	22.5	15	54.7	32.5	17.5	64.7	42.5	27.5	17.5	15	72.2	32.5	17.5	82.2	42.5	27.5
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71	7.2	25	17	57.2	33	17	67.2	43	27	23.5	15	78.7	33	17	88.7	43	27
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78	7.2	25	17	63.7	39.5	23.5	73.7	49.5	33.5	23.5	15	85.2	39.5	23.5	95.2	49.5	33.5
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95	8.2	29.5	18	66.7	40.5	17.5	76.7	50.5	27.5	28.5	15	92.2	40.5	17.5	102.2	50.5	27.5
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113	9.2	31	18	73.2	46	20	83.2	56	30	28.5	15	98.7	46	20	108.7	56	30
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	77	118	140	11.5	35	20	85	53.5	23.5	95	63.5	33.5	35.5	18	118.5	53.5	23.5	128.5	63.5	33.5
ø100	13	35	24	136	71	35.5	6	23	M12×40	94	137	162	13	39	22	98	63	29	108	73	39	35.5	18	129.5	63	29	139.5	73	39

● Clevis bracket (CB)
SSD2-G5(L)-20 to 100 -CB

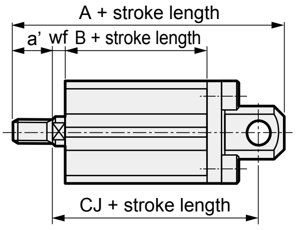
· ø20/ø25



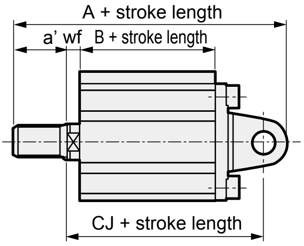
· ø32 to ø100



Rod end male thread



Rod end male thread

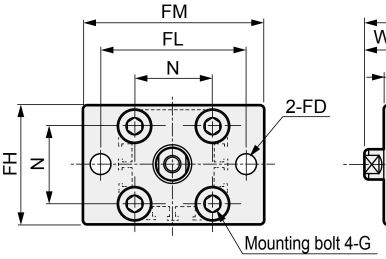


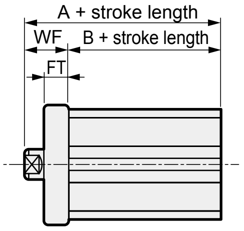
Code	Common dimensions												Female thread							Male thread							
Bore size (mm)	AC	CA	CB	CC	CD	D	E	G	H	MR	N	UB	WF	Without switch			With switch			a'	wf	Without switch			With switch		
														A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø20	-	20	8.2	12	8	5	36	M6×16	C4	-	25.5	16	4.5	61	29.5	52	71	39.5	62	14	4.5	75	29.5	52	85	39.5	62
ø25	-	24	10.2	14	10	5	40	M6×16	C5	-	28	20	5	67.5	32.5	57.5	77.5	42.5	67.5	17.5	5	85	32.5	57.5	95	42.5	67.5
ø32	4.5	-	18.2	14	10	5	45	M6×16	-	10	34	36	7	70	33	60	80	43	70	23.5	5	91.5	33	58	101.5	43	68
ø40	5	-	18.2	14	10	6	52	M6×16	-	10	40	36	7	78.5	39.5	68.5	88.5	49.5	78.5	23.5	5	100	39.5	66.5	110	49.5	76.5
ø50	6	-	22.2	20	14	7	64	M8×20	-	14	50	44	8	90.5	40.5	76.5	100.5	50.5	86.5	28.5	5	116	40.5	73.5	126	50.5	83.5
ø63	7	-	22.2	20	14	8	77	M10×25	-	14	60	44	8	98	46	84	108	56	94	28.5	5	123.5	46	81	133.5	56	91
ø80	9	-	28.2	27	18	10	98	M12×40	-	18	77	56	10	119.5	53.5	101.5	129.5	63.5	111.5	35.5	8	153	53.5	99.5	163	63.5	109.5
ø100	12	-	32.2	31	22	13	117	M12×40	-	22	94	64	12	142	63	120	152	73	130	35.5	8	173.5	63	116	183.5	73	126

Dimensions with mounting bracket

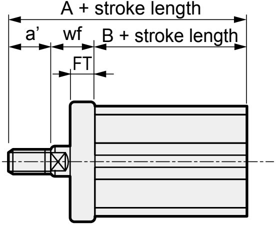
● Rod side flange (FA)
SSD2-G5(L)-20 to 100 -FA

· ø20/ø25

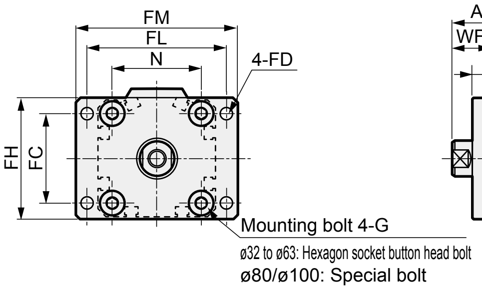


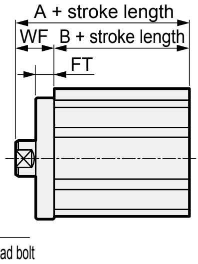


Rod end male thread

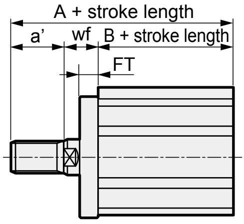


· ø32 to ø100





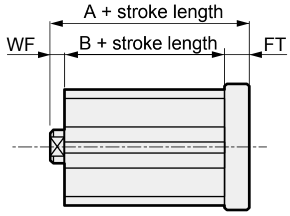
Rod end male thread

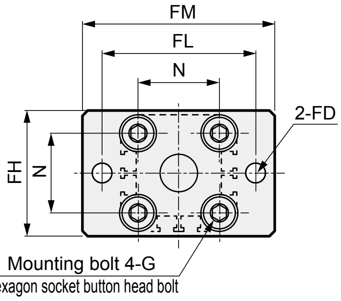


Code	Common dimensions								Female thread					Male thread					
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø20	-	6.6	39	48	60	8	25.5	M6×16	14.5	44	29.5	54	39.5	14	14.5	58	29.5	68	39.5
ø25	-	6.6	42	52	64	8	28	M6×16	15	47.5	32.5	57.5	42.5	17.5	15	65	32.5	75	42.5
ø32	34	5.5	48	56	65	8	34	M6×16	17	50	33	60	43	23.5	15	71.5	33	81.5	43
ø40	40	5.5	54	62	72	8	40	M6×16	17	56.5	39.5	66.5	49.5	23.5	15	78	39.5	88	49.5
ø50	50	6.6	67	76	89	9	50	M8×20	18	58.5	40.5	68.5	50.5	28.5	15	84	40.5	94	50.5
ø63	60	9	80	92	108	9	60	M10×25	18	64	46	74	56	28.5	15	89.5	46	99.5	56
ø80	77	11	99	116	134	11	77	M12×40	20	73.5	53.5	83.5	63.5	35.5	18	107	53.5	117	63.5
ø100	94	11	117	136	154	11	94	M12×40	22	85	63	95	73	35.5	18	116.5	63	126.5	73

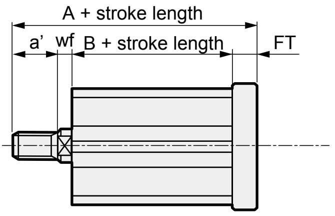
● Head side flange (FB)
SSD2-G5(L)-20 to 100 -FB

· ø20/ø25

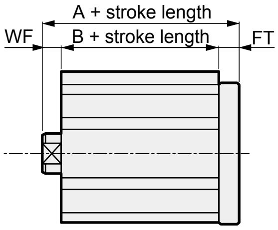


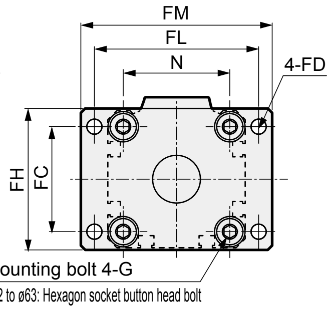


Rod end male thread

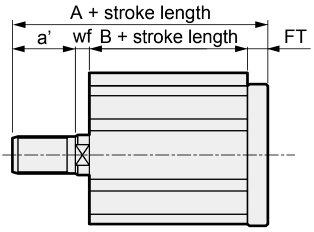


· ø32 to ø100

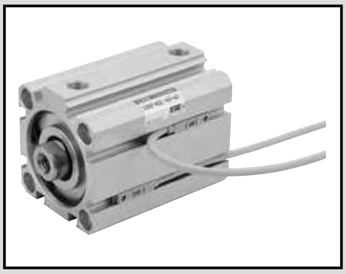




Rod end male thread



Code	Common dimensions								Female thread					Male thread					
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø20	-	6.6	39	48	60	8	25.5	M6×16	4.5	42	29.5	52	39.5	14	4.5	56	29.5	66	39.5
ø25	-	6.6	42	52	64	8	28	M6×16	5	45.5	32.5	55.5	42.5	17.5	5	63	32.5	73	42.5
ø32	34	5.5	48	56	65	8	34	M6×16	7	48	33	58	43	23.5	5	69.5	33	79.5	43
ø40	40	5.5	54	62	72	8	40	M6×16	7	54.5	39.5	64.5	49.5	23.5	5	76	39.5	86	49.5
ø50	50	6.6	67	76	89	9	50	M8×20	8	57.5	40.5	67.5	50.5	28.5	5	83	40.5	93	50.5
ø63	60	9	80	92	108	9	60	M10×25	8	63	46	73	56	28.5	5	88.5	46	98.5	56
ø80	77	11	99	116	134	11	77	M12×40	10	74.5	53.5	84.5	63.5	35.5	8	108	53.5	118	63.5
ø100	94	11	117	136	154	11	94	M12×40	12	86	63	96	73	35.5	8	117.5	63	127.5	73

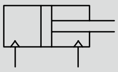


Compact cylinder double acting/single rod/high load/environment-resistant scraper

SSD2-KG5 Series

● Bore size: ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-KG5 SSD2-KG5L (with switch)							
Bore size mm	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)							
Min. working pressure MPa	0.2 (≈29 psi, 2 bar)					0.15 (≈22 psi, 2 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)							
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)							
Port size	M5		Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$							
Working piston speed mm/s	50 to 500					50 to 300		
Cushion	Rubber cushion							
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)							
Allowable absorbed energy J	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø20	5/10/15/20/25/30/35/40/45/50	50	1
ø25			
ø32	5/10/15/20/25/30/35/40/45/50/75/100	100	
ø40			
ø50	10/15/20/25/30/35/40/45/50/75/100		
ø63			
ø80			
ø100			

*4 : When using the type with switch, refer to the table of the min. stroke length with switch.

Min. stroke length with switch (2 switches)

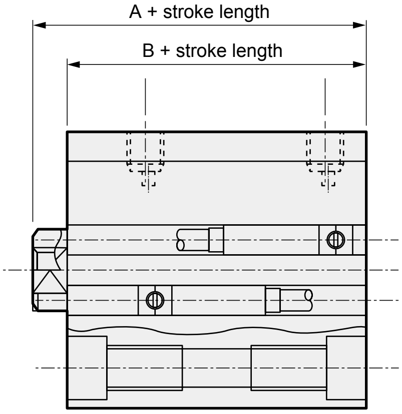
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
ø20	5	5
ø25		
ø32		
ø40		
ø50		
ø63		
ø80		
ø100		

1 : Less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch is not available.

Custom stroke length

● SSD2-KG5 Series

Item	Standard products Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-KG5-32-38 A +2 mm spacer is added to the SSD2-KG5-32-40 standard cylinder to create 38 mm stroke length. B + stroke length is 83mm.	



Switch specifications (F type switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 µA or less	1 mA or less		10 µA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T type switch)

● 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	T2H/T2V/T2JH/T2JV	T2YH/T2YV	T2WH/T2WV	T3H/T3V	T3PH/T3PV	T3YH/T3YV	T3WH/T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD(*4) T2YDT
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			Dedicated for programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 µA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)
*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.
*5 : The F type switch uses a bend-resistant lead wire.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	-	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

SSD2-KG5 Series

How to order

Without switch (without magnet for switch)

SSD2-KG5 - 20 ◯ - 5 —— N - LB - I

With switch (built-in magnet for switch)

SSD2-KG5L - 20 ◯ - 5 - T0H - R - N - LB - I

- Ⓐ Model No.
- Ⓑ Bore size
- Ⓒ Port thread
- Ⓓ Stroke length
- Ⓔ Switch model No. *4
- Ⓕ Switch quantity
- Ⓖ Option
- Ⓗ Mounting bracket *1 *2
- Ⓘ Accessory *3

Code	Description
Ⓐ Model No.	
SSD2-KG5	Double acting/single rod/high load/environment-resistant scraper (made-to-order product)
SSD2-KG5L	Double acting/single rod/high load/environment-resistant scraper/switch (MTO)
Ⓑ Bore size (mm)	
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
Ⓒ Port thread	
Blank	Rc thread/M5 thread
N	NPT thread (ø32 and over)
G	G thread (ø32 and over)
Ⓓ Stroke length (mm)	
Refer to the stroke length table on the following page.	

Ⓔ Switch model No.

Lead wire	Lead wire	Contact	Voltage		Display	Lead	Bore size							
Straight	L-shaped		AC	DC		wire	20	25	32	40	50	63	80	100
-	F2S*	Proximity		●	1-color display	2-wire	●	●						
-	F3S*			●		3-wire	●	●						
F2H*	F2V*			●		2-wire	●	●						
F3H*	F3V*			●		3-wire	●	●						
F3PH*	F3PV*			●	1 color display (PNP output) (custom)	3-wire	●	●						
F2YH*	F2YV*			●	2-color display	2-wire	●	●						
F3YH*	F3YV*			●		3-wire	●	●						
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display					●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire	●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output)		●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●			●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●			●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display AC magnetic field	2-wire	●	●	●	●	●	●	●	●
T2YDT*	-			●			●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire	●	●	●	●	●	●	●	●

Code	Description
*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *5
Ⓕ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓖ Option	
Blank	Rod end female thread
N	Rod end male thread
Ⓗ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange
Ⓘ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : The mounting bracket is included at shipment.
*2 : "I" and "Y" cannot be selected together. The WF/wf dimension of the cylinder for "LB" and "FA" is set 10 mm longer than that of standard products. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
*3 : "I" and "Y" cannot be selected together.
*4 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
*5 : F type switch cannot be selected.

[Example of model No.]

SSD2-KG5L-32-5-T0H-R-N

Model: Compact cylinder
Double acting/single rod/high load/environment-resistant scraper
Ⓑ Bore size : ø32 mm
Ⓒ Port thread : Rc thread
Ⓓ Stroke length : 5 mm
Ⓔ Switch model No.: Reed T0H switch
Lead wire 1 m
Ⓕ Switch quantity : 1 on rod side
Ⓖ Option : Rod end male thread

[Stroke length table]

Stroke length (mm)		Applicable bore size							
		20	25	32	40	50	63	80	100
Standard stroke length	5	●	●	●	●				
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●
	35	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●
	45	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
	75			●	●	●	●	●	●
	100			●	●	●	●	●	●
Min. stroke length (mm) *1		1							
Max. stroke length (mm)		50		100					
Custom stroke length *2		In 1 mm increments							

1: Less than 5 mm for 1-color display switch and less than 10 mm for the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available.
Refer to page 1002 for the number of installed switches and the min. stroke length.

*2 : The total length is the same as that of the next longer standard stroke length.

How to order switch

SW - **T0H**

Switch model No.
(Item Ⓔ on page 1004)

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch	No switch	Switch
ø20	107	182	120	195	133	208	145	220	158	233	170	245	182	257	195	270	206	281	220	295	-	-	-	-
ø25	146	237	162	253	178	269	194	285	209	300	226	317	242	333	258	349	274	365	290	381	-	-	-	-
ø32	230	344	251	365	272	386	294	408	316	430	338	452	360	474	381	495	403	517	424	538	597	646	705	753
ø40	323	466	349	492	376	519	402	545	428	571	455	598	482	625	508	651	535	678	561	704	779	837	911	969
ø50	-	-	560	754	602	796	645	839	688	882	729	923	771	965	813	1007	855	1049	897	1091	1244	1301	1454	1511
ø63	-	-	813	1092	868	1147	923	1202	979	1258	1034	1313	1089	1368	1144	1423	1199	1478	1254	1533	1744	1808	2019	2083
ø80	-	-	1413	1826	1500	1913	1586	1999	1673	2086	1760	2173	1847	2260	1933	2346	2020	2433	2106	2519	2886	2952	3318	3384
ø100	-	-	2106	2673	2220	2787	2334	2901	2448	3015	2561	3128	2675	3242	2789	3356	2903	3470	3017	3584	4082	4154	4652	4724

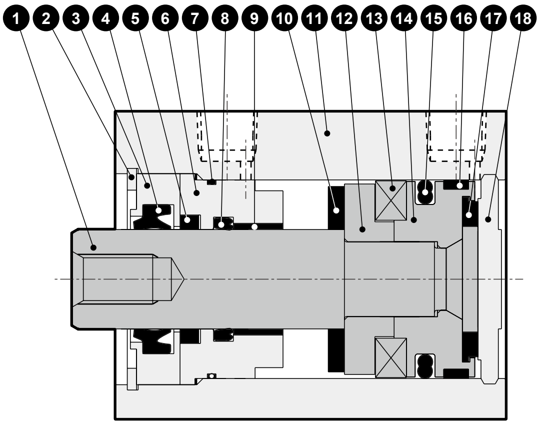
How to order mounting bracket

Bore size (mm) / Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

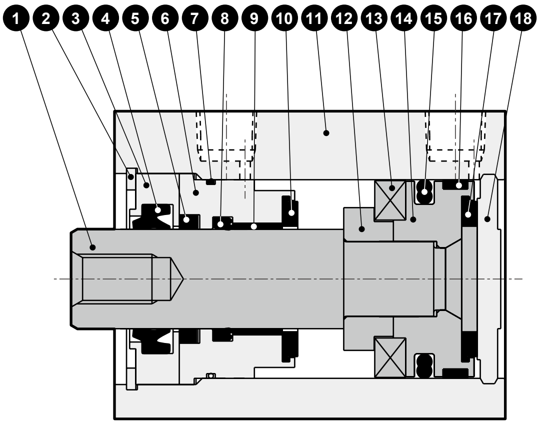
*1:The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list (ø20 to ø50)

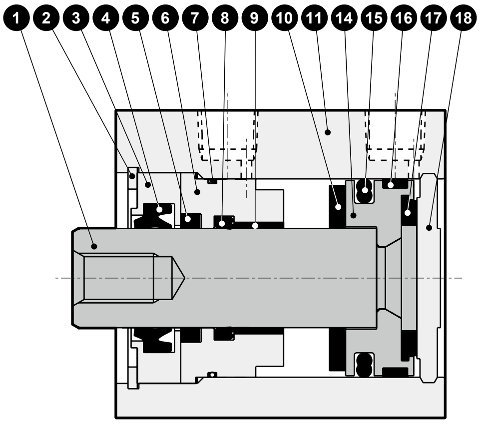
● SSD2-KG5L-20/25
(double acting/high load/environment-resistant scraper/with switch)



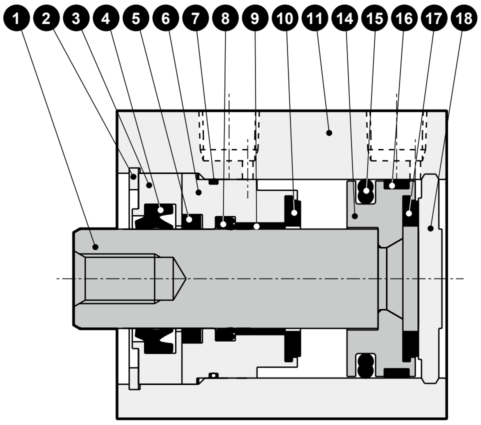
● SSD2-KG5L-32 to 50
(double acting/high load/environment-resistant scraper/with switch)



● SSD2-KG5-20/25
(double acting/high load/environment-resistant scraper)



● SSD2-KG5-32 to 50
(double acting/high load/environment-resistant scraper)



Main parts list

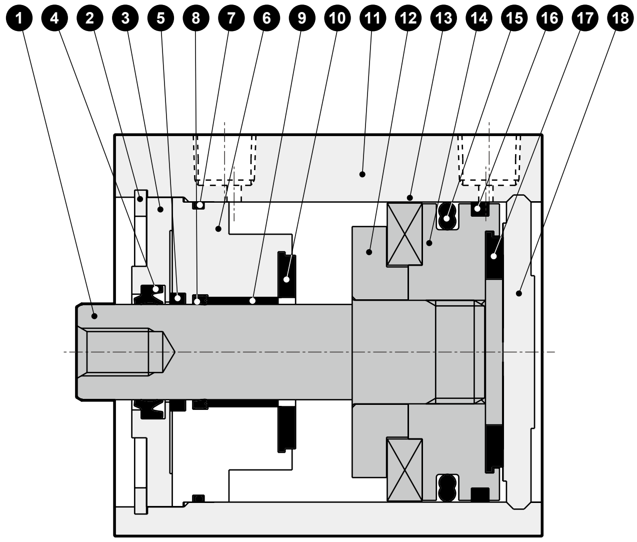
No.	Part name	Material	Remarks
1	Piston rod	ø20/ø25: Stainless steel ø32 to ø50: Steel	Industrial chrome plating
2	C type snap ring	Steel	Zinc phosphate
3	Rod metal 1	Special aluminum	Chromate
4	Scraper	Nitrile rubber	
5	Lube keeping structure	Special rubber	
6	Rod metal 2	Special aluminum	Alumite
7	Rod metal gasket	Nitrile rubber	
8	Rod packing	Nitrile rubber	
9	Bush	Oiles drymet	
10	Cushion rubber R	Urethane rubber	
11	Body	Aluminum alloy	Hard alumite
12	Spacer	Special resin	
13	Magnet	Plastic	
14	Piston	Aluminum alloy	Chromate
15	Piston packing	Nitrile rubber	
16	Wear ring	Polyacetal resin	
17	Cushion rubber H	Urethane rubber	
18	Cover	ø20/ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite

Repair parts list

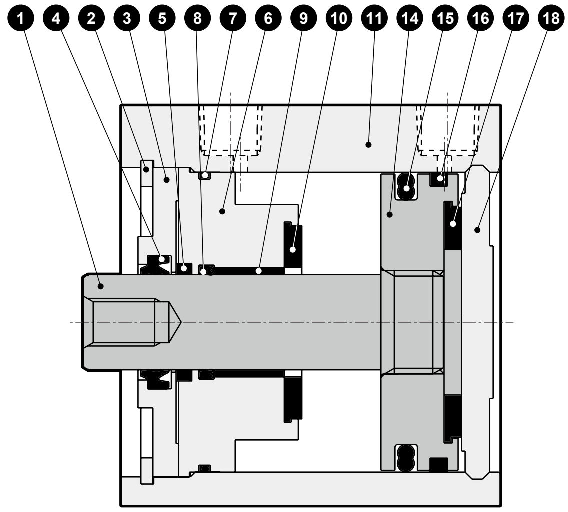
Part name / Bore size (mm)	Kit No.	Repair parts No.
ø20	SSD2-KG5-20K	④ ⑤ ⑦ ⑧ ⑩ ⑮ ⑯ ⑰
ø25	SSD2-KG5-25K	
ø32	SSD2-KG5-32K	
ø40	SSD2-KG5-40K	
ø50	SSD2-KG5-50K	

Internal structure and parts list

- SSD2-KG5L-63 to 100 (double acting/high load/environment-resistant scraper/with switch)



- SSD2-KG5-63 to 100 (double acting/high load/environment-resistant scraper)



Main parts list

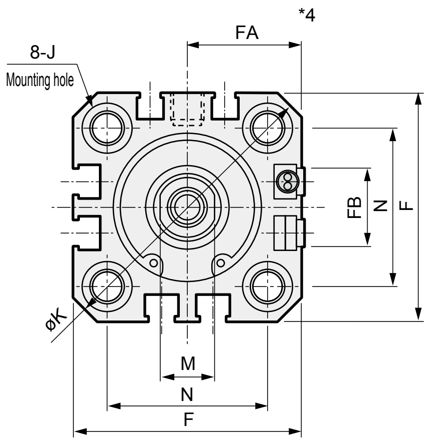
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	10	Cushion rubber R	Urethane rubber	
2	C type snap ring	Steel	Zinc phosphate	11	Body	Aluminum alloy	Hard alumite
3	Rod metal 1	Aluminum alloy	Chromate	12	Spacer	Aluminum alloy	Chromate
4	Scraper	Nitrile rubber		13	Magnet	Plastic	
5	Lube keeping structure	Special rubber		14	Piston	Aluminum alloy	Chromate
6	Rod metal 2	Aluminum alloy	Chromate	15	Piston packing	Nitrile rubber	
7	Rod metal gasket	Nitrile rubber		16	Wear ring	Polyacetal resin	
8	Rod packing	Nitrile rubber		17	Cushion rubber H	Urethane rubber	
9	Bush	Oiles drymet		18	Cover	Aluminum alloy	Alumite

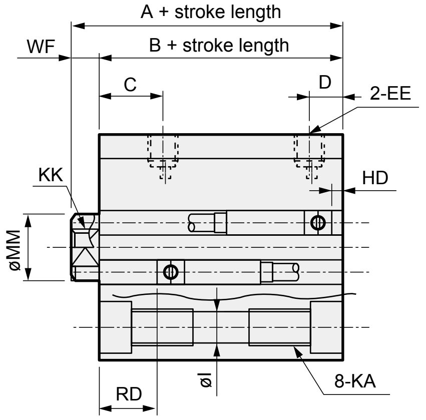
Repair parts list

Part name Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-KG5-63K	④⑤⑦⑧ ⑩⑮⑯⑰
ø80	SSD2-KG5-80K	
ø100	SSD2-KG5-100K	

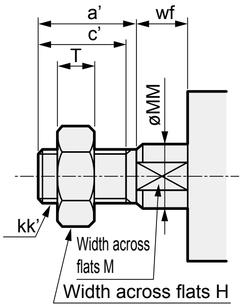
Dimensions (ø20, ø25)

- SSD2-KG5L-20, 25 (with switch/TOH/V, T5H/V, T2H/V, T3H/V)

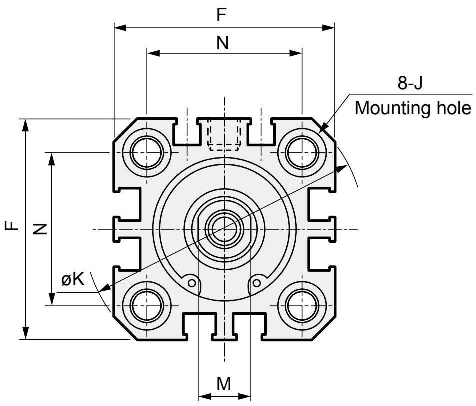


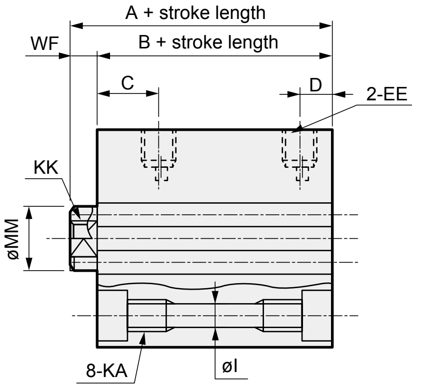


- Rod end male thread



- SSD2-KG5-20, 25 (without switch)





Code	Without switch		Common dimensions with switch							
Bore size	A *1	B *1	A *1	B *1	C	D	EE	F	FA *4	FB
ø20	39	34.5	49	44.5	18	5.5	M5	36	18.5(22)	12.5
ø25	42.5	37.5	52.5	47.5	21	6	M5	40	20.5(24)	13.5

Code	Common dimensions with switch								
Bore size	I	J	K	KA	KK	M	MM	N	WF
ø20	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimensions	Reed/proximity 1-color		Proximity 2-color	
Bore size	HD	RD	HD	RD
ø20	6	18.5	4.5	18.5
ø25	5.5	22	4	22

Switch dimensions	Proximity F2H/V, F3H/V F2YH/V, F3YH/V		Proximity F2S/F3S	
Bore size	HD	RD	HD	RD
ø20	10.5	23	9	23
ø25	10	26.5	8.5	26.5

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

3 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1 and T8* switches.

*4 : Dimensions in ( ) of FA are for the radial lead wire.

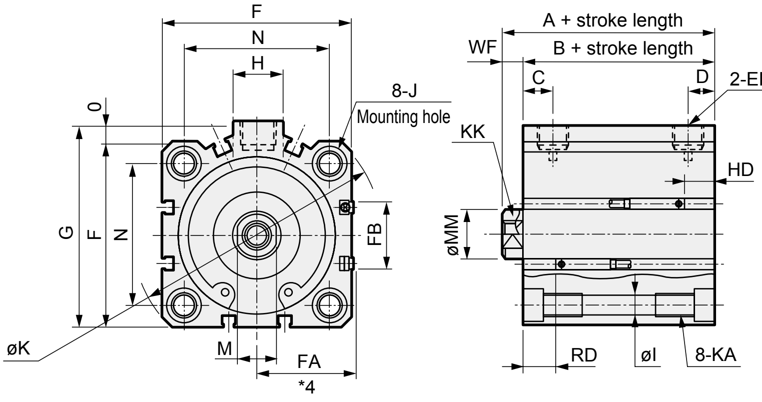
*5 : For dimensions of individual accessories, refer to pages 1046 to 1049.

Rod end male thread

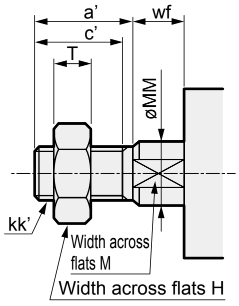
Code / Bore size	a'	c'	H	kk'	M	MM	T	wf
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

Dimensions

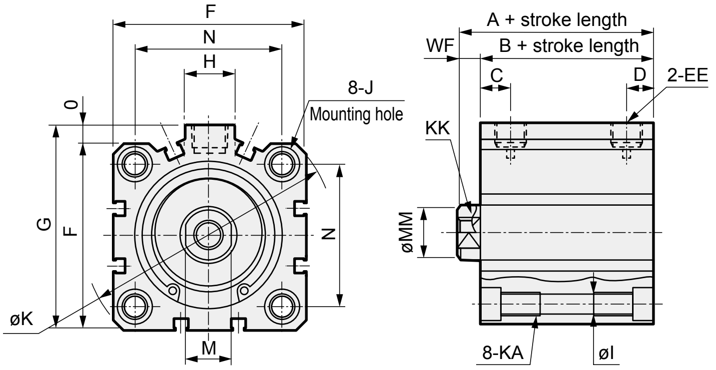
- SSD2-KG5L-32 to 100 (with switch/TOH/V, T5H/V, T2H/V, T3H/V)



- Rod end male thread



- SSD2-32 to 100 (without switch)



Code	Without switch		Common dimensions with switch									
Bore size	A *1	B *1	A *1	B *1	C	D	EE	F	FA *3	FB	G	H
ø32	50(60)	43(53)	60	53	18	8	Rc1/8	45	23(26.5)	20.5	49.5	12.5
ø40	56.5(66.5)	49.5(59.5)	66.5	59.5	22	8.5	Rc1/8	52	26.5(30)	27.5	57	15
ø50	58.5(68.5)	50.5(60.5)	68.5	60.5	20.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18
ø63	64(74)	56(66)	74	66	23	11	Rc1/4	77	39(42.5)	28.5	84	23
ø80	73.5(83.5)	63.5(73.5)	83.5	73.5	26	13	Rc3/8	98	49.5(53)	28.5	104	31
ø100	85(95)	73(83)	95	83	33	15	Rc3/8	117	59(62.5)	28.5	123.5	38

Code	Common dimensions with switch									
Bore size	I	J	K	KA	KK	M	MM	N	O	WF
ø32	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7
ø40	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7
ø50	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8
ø63	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	8
ø80	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	10
ø100	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12

Switch dimensions	Reed/proximity 1-color		Proximity 2-color		T8H/V switch	
Bore size	HD	RD	HD	RD	HD	RD
ø32	8.5	24	7	22.5	-	-
ø40	9.5	29.5	8	28	3.5	23.5
ø50	10	30	8.5	28.5	4	24
ø63	17.5	28	16	26.5	11.5	22
ø80	22	30.5	20.5	29	16	24.5
ø100	28	34.5	26.5	33	22	28.5

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

*3 : Dimensions in ( ) of FA are for the radial lead wire.

*4 : For dimensions of individual accessories, refer to pages 1046 to 1049.

*5 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

Rod end male thread

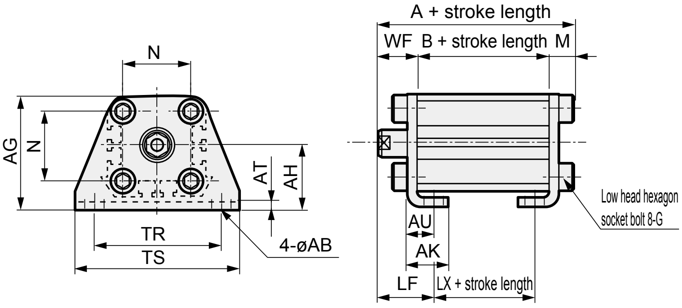
Code Bore size	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14x1.5	14	16	8	5
ø40	23.5	20.5	22	M14x1.5	14	16	8	5
ø50	28.5	26	27	M18x1.5	17	20	11	5
ø63	28.5	26	27	M18x1.5	17	20	11	5
ø80	35.5	32.5	32	M22x1.5	22	25	13	8
ø100	35.5	32.5	41	M26x1.5	27	30	16	8

Dimensions with mounting bracket

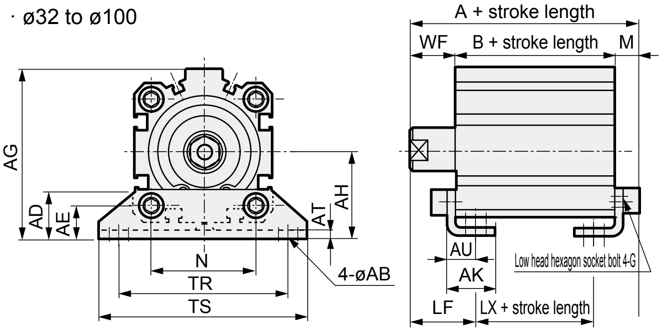
● Axial foot (LB)

SSD2-KG5(L)-20 to 100 -LB

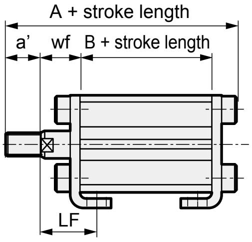
· ø20/ø25



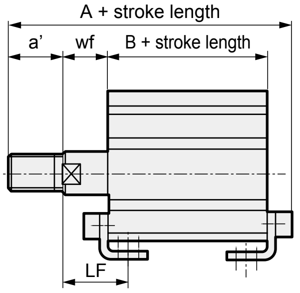
· ø32 to ø100



Rod end male thread



Rod end male thread

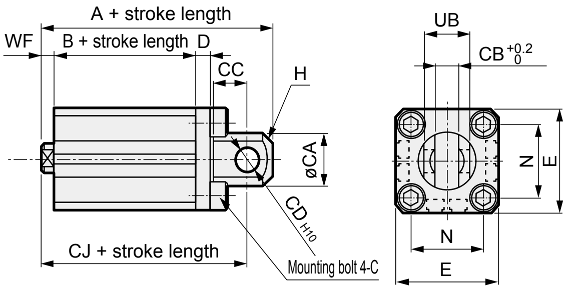


Code	Common dimensions														Female thread							Male thread							
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	LF	WF	Without switch			With switch			a'	wf	Without switch			With switch		
																A	B	LX	A	B	LX			A	B	LX	A	B	LX
ø20	7	-	-	42	24	15	3.2	9.2	M6×16	25.5	48	62	7.2	20.5	14.5	56.2	34.5	22.5	66.2	44.5	32.5	14	14.5	70.2	34.5	22.5	80.2	44.5	32.5
ø25	7	-	-	46	26	16.5	3.2	10.7	M6×16	28	52	66	7.2	22.5	15	59.7	37.5	22.5	69.7	47.5	32.5	17.5	15	77.2	37.5	22.5	87.2	47.5	32.5
ø32	7	18.5	13	57	30	17	3.2	11.2	M6×16	34	57	71	7.2	25	17	67.2	43	27	77.2	53	37	23.5	15	88.7	43	27	98.7	53	37
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78	7.2	25	17	73.7	49.5	33.5	83.7	59.5	43.5	23.5	15	95.2	49.5	33.5	105.2	59.5	43.5
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95	8.2	29.5	18	76.7	50.5	27.5	86.7	60.5	37.5	28.5	15	102.2	50.5	27.5	112.2	60.5	37.5
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113	9.2	31	18	83.2	56	30	93.2	66	40	28.5	15	108.7	56	30	118.7	66	40
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	77	118	140	11.5	35	20	95	63.5	33.5	105	73.5	43.5	35.5	18	128.5	63.5	33.5	138.5	73.5	43.5
ø100	13	35	24	136	71	35.5	6	23	M12×40	94	137	162	13	39	22	108	73	39	118	83	49	35.5	18	139.5	73	39	149.5	83	49

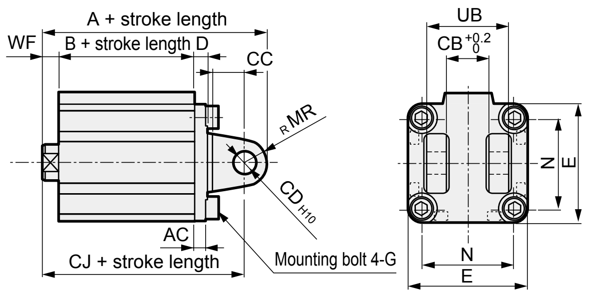
● Clevis bracket (CB)

SSD2-KG5(L)-20 to 100 -CB

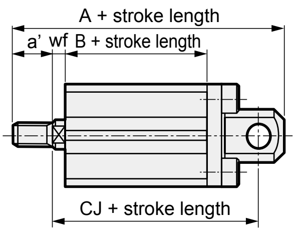
· ø20/ø25



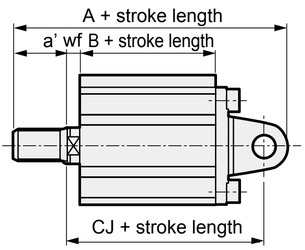
· ø32 to ø100



Rod end male thread



Rod end male thread



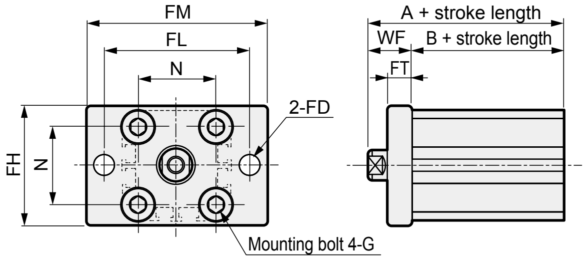
Code	Common dimensions												Female thread							Male thread							
Bore size (mm)	AC	CA	CB	CC	CD	D	E	G	H	MR	N	UB	WF	Without switch			With switch			a'	wf	Without switch			With switch		
														A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø20	-	20	8.2	12	8	5	36	M6×16	C4	-	25.5	16	4.5	66	34.5	57	76	44.5	67	14	4.5	80	34.5	57	90	44.5	67
ø25	-	24	10.2	14	10	5	40	M6×16	C5	-	28	20	5	72.5	37.5	62.5	82.5	47.5	72.5	17.5	5	90	37.5	62.5	100	47.5	72.5
ø32	4.5	-	18.2	14	10	5	45	M6×16	-	10	34	36	7	80	43	70	90	53	80	23.5	5	101.5	43	68	111.5	53	78
ø40	5	-	18.2	14	10	6	52	M6×16	-	10	40	36	7	88.5	49.5	78.5	98.5	59.5	88.5	23.5	5	110	49.5	76.5	120	59.5	86.5
ø50	6	-	22.2	20	14	7	64	M8×20	-	14	50	44	8	100.5	50.5	86.5	110.5	60.5	96.5	28.5	5	126	50.5	83.5	136	60.5	93.5
ø63	7	-	22.2	20	14	8	77	M10×25	-	14	60	44	8	108	56	94	118	66	104	28.5	5	133.5	56	91	143.5	66	101
ø80	9	-	28.2	27	18	10	98	M12×40	-	18	77	56	10	129.5	63.5	111.5	139.5	73.5	121.5	35.5	8	163	63.5	109.5	173	73.5	119.5
ø100	12	-	32.2	31	22	13	117	M12×40	-	22	94	64	12	152	73	130	162	83	140	35.5	8	183.5	73	126	193.5	83	136

Dimensions with mounting bracket

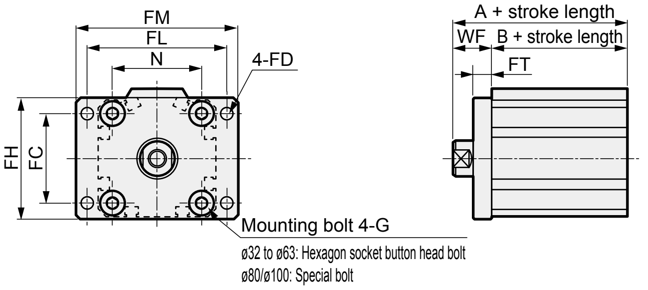
● Rod side flange (FA)

SSD2-KG5(L)-20 to 100 -FA

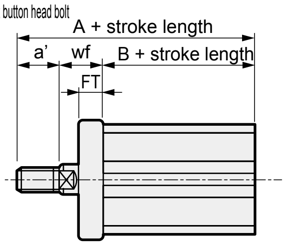
· ø20/ø25



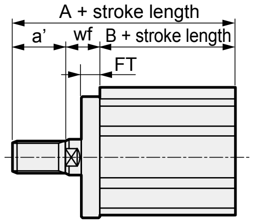
· ø32 to ø100



Rod end male thread



Rod end male thread

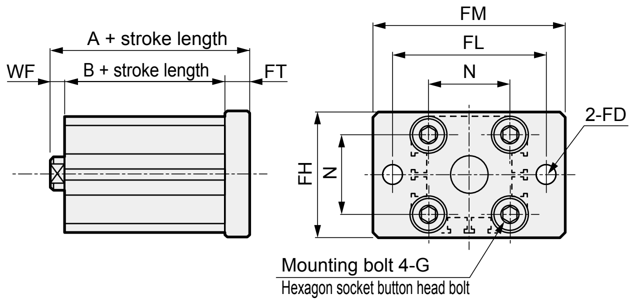


Code Bore size (mm)	Common dimensions								Female thread					Male thread					
	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø20	-	6.6	39	48	60	8	25.5	M6×16	14.5	49	34.5	59	44.5	14	14.5	63	34.5	73	44.5
ø25	-	6.6	42	52	64	8	28	M6×16	15	52.5	37.5	62.5	47.5	17.5	15	70	37.5	80	47.5
ø32	34	5.5	48	56	65	8	34	M6×16	17	60	43	70	53	23.5	15	81.5	43	91.5	53
ø40	40	5.5	54	62	72	8	40	M6×16	17	66.5	49.5	76.5	59.5	23.5	15	88	49.5	98	59.5
ø50	50	6.6	67	76	89	9	50	M8×20	18	68.5	50.5	78.5	60.5	28.5	15	94	50.5	104	60.5
ø63	60	9	80	92	108	9	60	M10×25	18	74	56	84	66	28.5	15	99.5	56	109.5	66
ø80	77	11	99	116	134	11	77	M12×40	20	83.5	63.5	93.5	73.5	35.5	18	117	63.5	127	73.5
ø100	94	11	117	136	154	11	94	M12×40	22	95	73	105	83	35.5	18	126.5	73	136.5	83

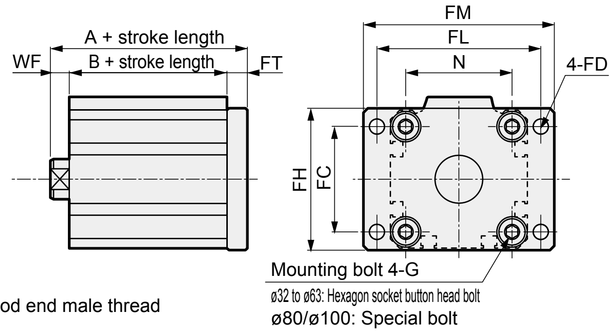
● Head side flange (FB)

SSD2-KG5(L)-20 to 100 -FB

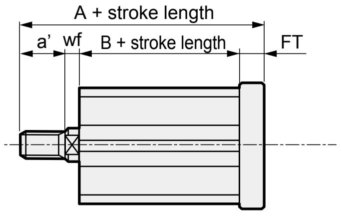
· ø20/ø25



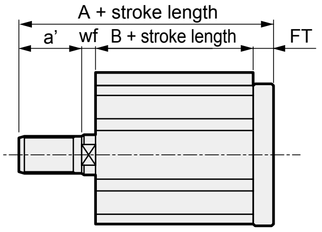
· ø32 to ø100



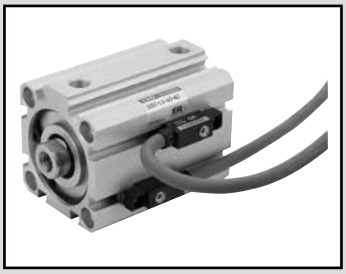
Rod end male thread



Rod end male thread



Code Bore size (mm)	Common dimensions								Female thread					Male thread					
	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø20	-	6.6	39	48	60	8	25.5	M6×16	4.5	47	34.5	57	44.5	14	4.5	61	34.5	71	44.5
ø25	-	6.6	42	52	64	8	28	M6×16	5	50.5	37.5	60.5	47.5	17.5	5	68	37.5	78	47.5
ø32	34	5.5	48	56	65	8	34	M6×16	7	58	43	68	53	23.5	5	79.5	43	89.5	53
ø40	40	5.5	54	62	72	8	40	M6×16	7	64.5	49.5	74.5	59.5	23.5	5	86	49.5	96	59.5
ø50	50	6.6	67	76	89	9	50	M8×20	8	67.5	50.5	77.5	60.5	28.5	5	93	50.5	103	60.5
ø63	60	9	80	92	108	9	60	M10×25	8	73	56	83	66	28.5	5	98.5	56	108.5	66
ø80	77	11	99	116	134	11	77	M12×40	10	84.5	63.5	94.5	73.5	35.5	8	118	63.5	128	73.5
ø100	94	11	117	136	154	11	94	M12×40	12	96	73	106	83	35.5	8	127.5	73	137.5	83

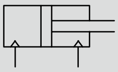


Compact cylinder double acting/single rod/with strong magnetic field proof switch

SSD2-L4 Series

● Bore size: ø40/ø50/ø63/ø80/ø100

JIS symbol



RoHS

Specifications

Item	SSD2-L4				
Bore size mm	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting				
Working fluid	Compressed air				
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)				
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)		0.05 (≈7.3 psi, 0.5 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)				
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)				
Port size	Rc1/8	Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$				
Working piston speed mm/s	50 to 500		50 to 300		
Cushion	None				
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)				
Allowable absorbed energy J	0.092	0.1	0.12	0.27	0.56

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø40	20/25/30/35 40/45/50/75/100	100	20
ø50			
ø63			
ø80			
ø100			

*1: The custom stroke length is available in 1 mm increments. However, the total length is the same as that of the next longer standard stroke length.

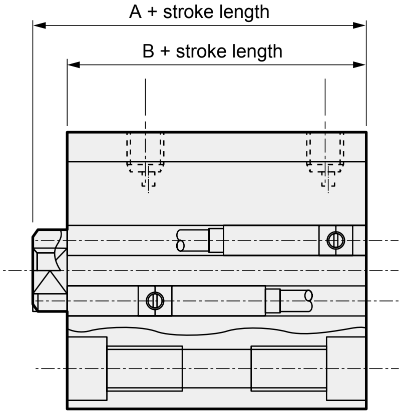
Number of installed switches and min. stroke length (mm)

Switch quantity	1	2
Switch model No. / Bore size (mm)	V0	
ø40	20	20
ø50	20	20
ø63	20	20
ø80	20	20
ø100	20	20

Custom stroke length

● SSD2-L4 Series

Item	Standard products Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	40 to 100	1 to 99
Example of model No.	Model No.: SSD2-L4-40-38 A +2 mm spacer is added to the SSD2-L4-40-40 standard cylinder to create 38 mm stroke length. B + stroke length is 89.5mm.	



Switch specifications

Item	Reed 2-wire	
	V0	
Applications	For relay, programmable controller	
Load voltage	12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA
Internal voltage drop	3.0 V or less (with 40 mA load current)	
Indicator lamp	LED (Lit when ON)	
Leakage current	0 mA	
Weight g	1 m:63 3 m:170 5 m:277	

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm) Bore size (mm)	20	25	30	35	40	45	50	75	100
ø40	493	520	546	573	599	626	652	785	917
ø50	757	799	841	883	925	967	1009	1219	1429
ø63	1089	1145	1200	1256	1311	1367	1422	1700	1977
ø80	1822	1909	1996	2083	2170	2257	2344	2779	3214
ø100	2665	2779	2892	3006	3119	3233	3346	3914	4481

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	1.56×10^2	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	1.40×10^2	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	2.51×10^2	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	2.27×10^2	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	3.93×10^2	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	3.57×10^2	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

How to order

SSD2-L4 - 50 - 40 - V0 - D - N - LB - I

Model No.

Ⓐ Bore size

Ⓑ Stroke length

Ⓒ Switch model No.

Ⓓ Switch quantity

Ⓔ Option

Ⓕ Mounting bracket *1 *2

Ⓖ Accessory *3

Code	Description
Ⓐ Bore size (mm)	
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

Ⓑ Stroke length (mm)

Bore size	Stroke length *1	Custom stroke length *2
ø40 to ø100	20 to 100	In 1 mm increments

*1 : Refer to page 1012 for the number of installed switches and the min. stroke length.
*2 : The total length when using a custom stroke length is the same as that when using the next longer standard stroke length.

Ⓒ Switch model No.

Lead wire Straight	Contact	Voltage		Display	Lead wire
		AC	DC		
V0*	Reed	●	●	1-color display	2-wire

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

Ⓓ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
T	3

Ⓔ Option	
Blank	Rod end female thread
N	Rod end male thread

Ⓕ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange

Ⓖ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : The mounting bracket is included at shipment.
*2 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on page 1017. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
*3 : "I" and "Y" cannot be selected together.

[Example of model No.]

SSD2-L4-50-40-V0-D-N-LB-I

Model: Compact cylinder
Double acting/single rod/with strong magnetic field proof switch

Ⓐ Bore size : ø50 mm
Ⓑ Stroke length : 40 mm
Ⓒ Switch model No.: Reed V0 switch, Lead wire length 1 m
Ⓓ Switch quantity : 2 pcs. included
Ⓔ Option : Rod end male thread
Ⓕ Mounting bracket: Axial foot
Ⓖ Accessory : Rod eye

How to order switch

SW - V0

Switch model No.
(Item Ⓒ above)

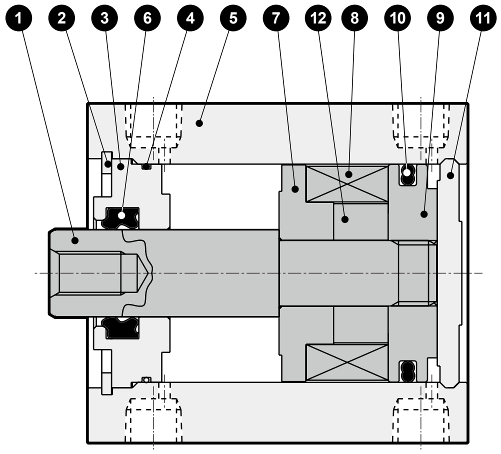
How to order mounting bracket

Bore size (mm) / Mounting bracket	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

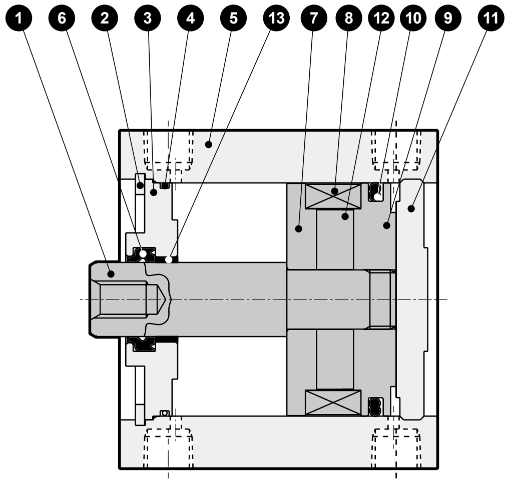
*1: The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list

- SSD2-L4-40, 50



- SSD2-L4-63 to 100



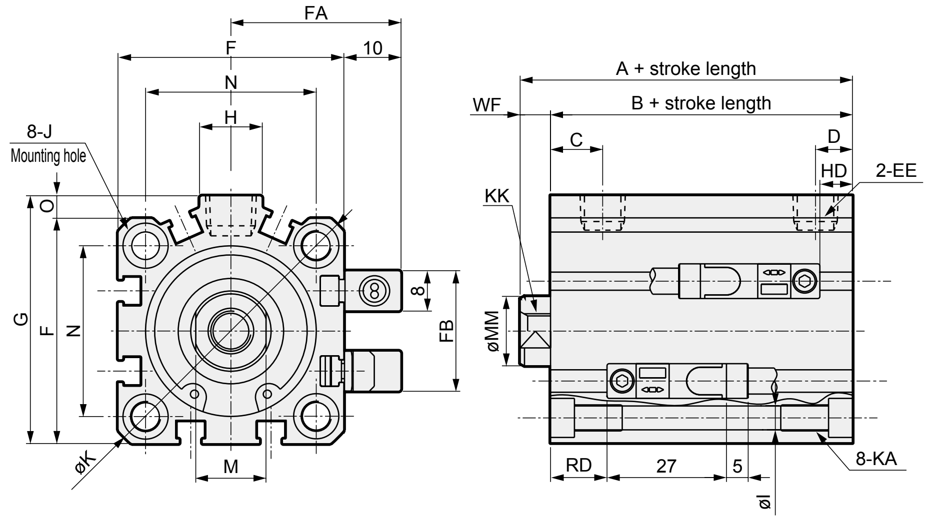
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	7	Spacer	Aluminum alloy	Chromate
2	C type snap ring	Stainless steel		8	Magnet	Plastic	
3	Rod metal	ø40, ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø40, ø50: Alumite ø63 to ø100: Chromate	9	Piston	Aluminum alloy	Chromate
				10	Piston packing	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		11	Cover	Aluminum alloy	Alumite
5	Body	Aluminum alloy	Hard alumite	12	Collar	Aluminum alloy	
6	Rod packing	Nitrile rubber		13	Bush	Oiles drymet	ø63 to ø100 only

Repair parts list

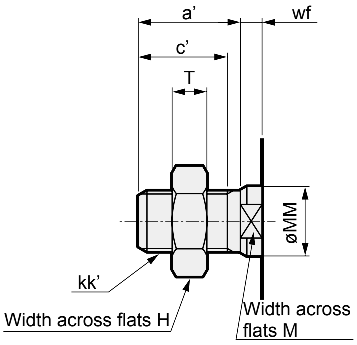
Bore size (mm)	Kit No.	Repair parts No.
ø40	SSD2-40K	④⑥⑩
ø50	SSD2-50K	
ø63	SSD2-63K	
ø80	SSD2-80K	
ø100	SSD2-100K	

Dimensions

● SSD2-L4-40 to 100



● Rod end male thread



Code Bore size (mm)	A	B	C	D	EE	F	FA	FB	G	H	I	J
ø40	56.5	49.5	12	8.5	Rc1/8	52	36	31	57	15	5.5	Spot face ø9 depth 5.5
ø50	58.5	50.5	10.5	10.5	Rc1/4	64	42	32	71	18	6.9	Spot face ø11 depth 6.5
ø63	64	56	13	11	Rc1/4	77	48.5	32	84	23	8.7	Spot face ø14 depth 9
ø80	73.5	63.5	16	13	Rc3/8	98	59	32	104	31	10.5	Spot face ø17.5 depth 11
ø100	85	73	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	Spot face ø17.5 depth 11

Code Bore size (mm)	K	KA	KK	M	MM	N	O	WF	HD	RD
ø40	69	M6 depth 11	M8 depth 13	14	16	40	5	7	7.5	13
ø50	86	M8 depth 13	M10 depth 15	17	20	50	7	8	8.5	13
ø63	103	M10 depth 25	M10 depth 15	17	20	60	7	8	13.5	13.5
ø80	132	M12 depth 28	M16 depth 21	22	25	77	6	10	18.5	16
ø100	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12	24	20

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value.
(Example) If the custom stroke length is 23 mm, apply the standard stroke length 25 mm.

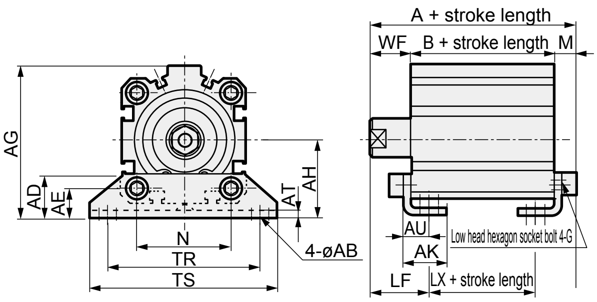
*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

● Rod end male thread

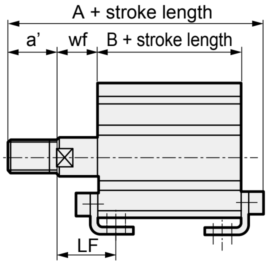
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

Dimensions with mounting bracket

- Axial foot (LB)
  SSD2-L4-40 to 100 -LB



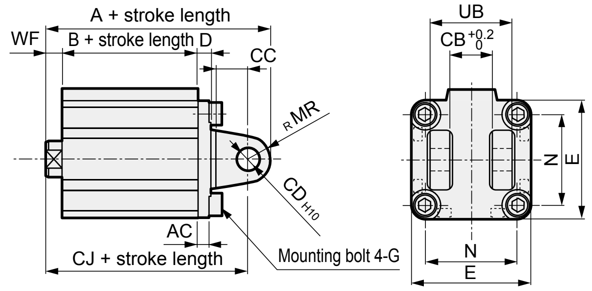
Rod end male thread



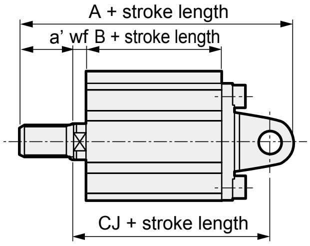
Code	Common dimensions													
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	LF
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78	7.2	25
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95	8.2	29.5
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113	9.2	31
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	77	118	140	11.5	35
ø100	13	35	24	136	71	35.5	6	23	M12×40	94	137	162	13	39

Code	Female thread				Male thread				
Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø40	17	73.7	49.5	33.5	23.5	15	95.2	49.5	33.5
ø50	18	76.7	50.5	27.5	28.5	15	102.7	50.5	27.5
ø63	18	83.2	56	30	28.5	15	108.7	56	30
ø80	20	95	63.5	33.5	35.5	18	128.5	63.5	33.5
ø100	22	108	73	39	35.5	18	139.5	73	39

- Clevis bracket (CB)
  SSD2-L4-40 to 100 -CB



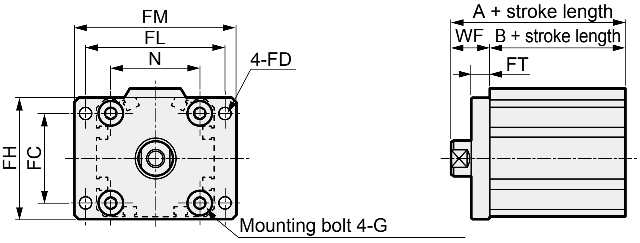
Rod end male thread



Code	Common dimensions									
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB
ø40	5	18.2	14	10	6	52	M6×16	10	40	36
ø50	6	22.2	20	14	7	64	M8×20	14	50	44
ø63	7	22.2	20	14	8	77	M10×25	14	60	44
ø80	9	28.2	27	18	10	98	M12×40	18	77	56
ø100	12	32.2	31	22	13	117	M12×40	22	94	64

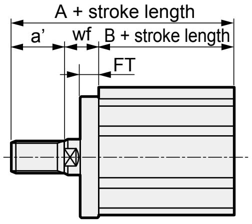
Code	Female thread				Male thread				
Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø40	7	88.5	49.5	78.5	23.5	5	110	49.5	76.5
ø50	8	100.5	50.5	86.5	28.5	5	126	50.5	83.5
ø63	8	108	56	94	28.5	5	133.5	56	91
ø80	10	129.5	63.5	111.5	35.5	8	163	63.5	109.5
ø100	12	152	73	130	35.5	8	183.5	73	126

- Rod side flange (FA)
  SSD2-L4-40 to 100 -FA

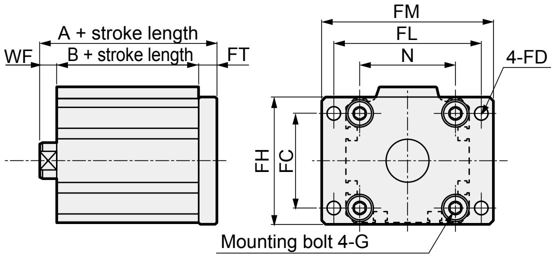


Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt

Rod end male thread

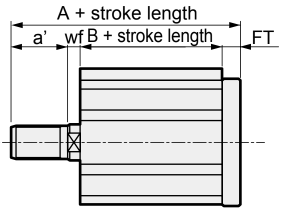


- Head side flange (FB)
  SSD2-L4-40 to 100 -FB



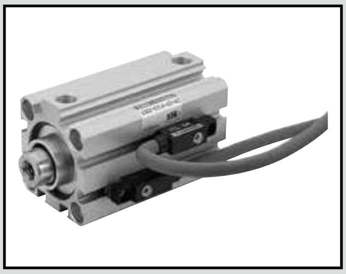
Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt

Rod end male thread



Code	Common dimensions								Female thread			Male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø40	40	5.5	54	62	72	8	40	M6×16	17	66.5	49.5	23.5	15	88	49.5
ø50	50	6.6	67	76	89	9	50	M8×20	18	68.5	50.5	28.5	15	94	50.5
ø63	60	9	80	92	108	9	60	M10×25	18	74	56	28.5	15	99.5	56
ø80	77	11	99	116	134	11	77	M12×40	20	83.5	63.5	35.5	18	117	63.5
ø100	94	11	117	136	154	11	94	M12×40	22	95	73	35.5	18	126.5	73

Code	Common dimensions								Female thread			Male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø40	40	5.5	54	62	72	8	40	M6×16	7	64.5	49.5	23.5	5	86	49.5
ø50	50	6.6	67	76	89	9	50	M8×20	8	67.5	50.5	28.5	5	93	50.5
ø63	60	9	80	92	108	9	60	M10×25	8	73	56	28.5	5	98.5	56
ø80	77	11	99	116	134	11	77	M12×40	10	84.5	63.5	35.5	8	118	63.5
ø100	94	11	117	136	154	11	94	M12×40	12	96	73	35.5	8	127.5	73

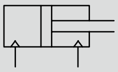


Compact cylinder double acting/single rod
with strong magnetic field proof switch/coil scraper

SSD2-G1L4 Series

● Bore size: ø40/ø50/ø63/ø80/ø100

JIS symbol



RoHS

Specifications

Item	SSD2-G1L4				
Bore size mm	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting				
Working fluid	Compressed air				
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)				
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)		0.1 (≈15 psi, 1 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)				
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)				
Port size	Rc1/8	Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$				
Working piston speed mm/s	50 to 500		50 to 300		
Cushion	None				
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)				
Allowable absorbed energy J	0.092	0.1	0.12	0.27	0.56

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø40	20/25/30/35/ 40/45/50/75/100	100	20
ø50			
ø63			
ø80			
ø100			

*1: The custom stroke length is available in 1 mm increments. However, the total length is the same as that of the next longer standard stroke length.

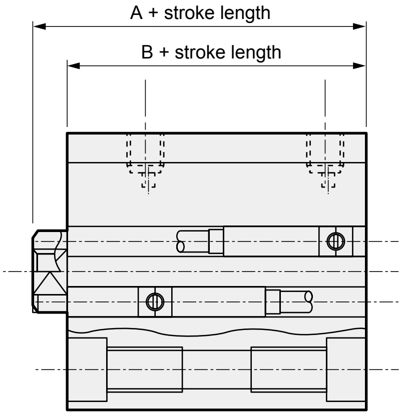
Number of installed switches and min. stroke length (mm)

Switch quantity	1	2	3
Switch model No. / Bore size (mm)	V0		
ø40	20	20	35
ø50	20	20	35
ø63	20	20	35
ø80	20	20	35
ø100	20	20	35

Custom stroke length

● SSD2-G1L4 Series

<table>
<tr><th rowspan="2">Item</th><th colspan="2">Standard products</th></tr>
<tr><th colspan="2">Standard stroke length body with spacer</th></tr>
<tr><td>Model No.</td><td colspan="2">Refer to How to order.</td></tr>
<tr><td>Description</td><td colspan="2">A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.</td></tr>
<tr><td rowspan="2">Stroke range</td><td>Bore size</td><td>Stroke range</td></tr>
<tr><td>40 to 100</td><td>1 to 99</td></tr>
<tr><td>Example of model No.</td><td colspan="2">Model No.: SSD2-G1L4-40-38
A +2 mm spacer is added to the SSD2-G1L4-40-40 standard cylinder to create 38 mm stroke length.
B + stroke length is 89.5mm.</td></tr>
</table>



Switch specifications

Item	Reed 2-wire	
	V0	
Applications	For relay, programmable controller	
Load voltage	12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA
Internal voltage drop	3.0 V or less (with 40 mA load current)	
Indicator lamp	LED (Lit when ON)	
Leakage current	0 mA	
Weight g	1 m:63 3 m:170 5 m:277	

Cylinder weight table

(the weight of the switches is when there are 2 cylinder switches.) (Unit: g)

Stroke length (mm) / Bore size (mm)	20	25	30	35	40	45	50	75	100
ø40	575	602	628	655	681	708	734	867	999
ø50	876	918	960	1002	1044	1086	1128	1338	1548
ø63	1240	1296	1351	1407	1462	1518	1573	1851	2128
ø80	2074	2161	2248	2335	2422	2509	2596	3031	3466
ø100	3000	3114	3227	3341	3454	3568	3681	4249	4816

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

SSD2-G1L4 Series

How to order

SSD2-G1L4 - 50 - 40 - V0 - D - N - LB - I

Model No.

Ⓐ Bore size

Ⓑ Stroke length

Ⓒ Switch model No.

Ⓓ Switch quantity

Ⓔ Option

Ⓕ Mounting bracket *1

Ⓖ Accessory *2

Code	Description
Ⓐ Bore size (mm)	
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

Ⓑ Stroke length (mm)

Bore size	Stroke length *1	Custom stroke length *2
ø40 to ø100	20 to 100	In 1 mm increments

*1 : Refer to page 1018 for the number of installed switches and the min. stroke length.
*2 : The total length is the same as that of the next longer standard stroke length.

Ⓒ Switch model No.

Lead wire Straight	Contact	Voltage		Display	Lead wire
		AC	DC		
V0*	Reed	●	●	1-color display	2-wire

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

Ⓓ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
T	3

Ⓔ Option	
Blank	Rod end female thread
N	Rod end male thread

Ⓕ Mounting bracket	
Blank	Without mounting bracket
LB	Axial foot (made-to-order product)
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange (made-to-order product)
FB	Head side flange

Ⓖ Accessory (available when rod end male thread "N" is selected)	
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : The mounting bracket is included at shipment.
*2 : "I" and "Y" cannot be selected together.

[Example of model No.]

SSD2-G1L4-50-40-V0-D-N-LB-I

Model: Compact cylinder
Double acting/with coil scraper/with
strong magnetic field proof switch

Ⓐ Bore size : ø50 mm
Ⓑ Stroke length : 40 mm
Ⓒ Switch model No. : Reed V0 switch, Lead wire length 1 m
Ⓓ Switch quantity : 2 pcs. included
Ⓔ Option : Rod end male thread
Ⓕ Mounting bracket : Axial foot
Ⓖ Accessory : Rod eye

How to order switch

SW - V0

Switch model No.
(Item Ⓒ above)

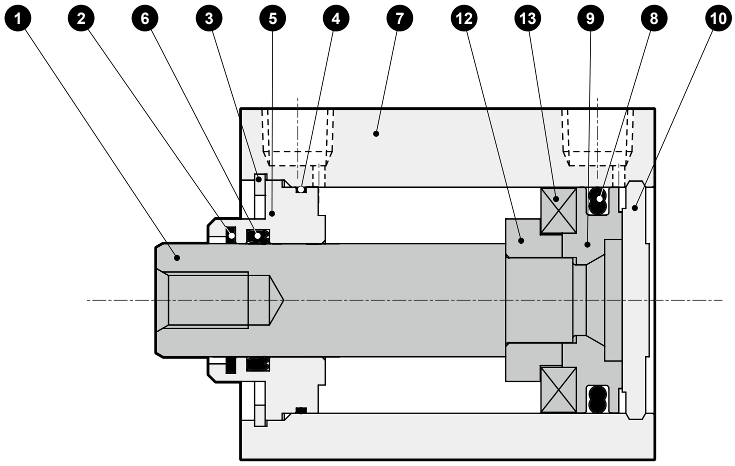
How to order mounting bracket

Bore size (mm) / Mounting bracket	ø40	ø50	ø63	ø80	ø100
Flange (FB)	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

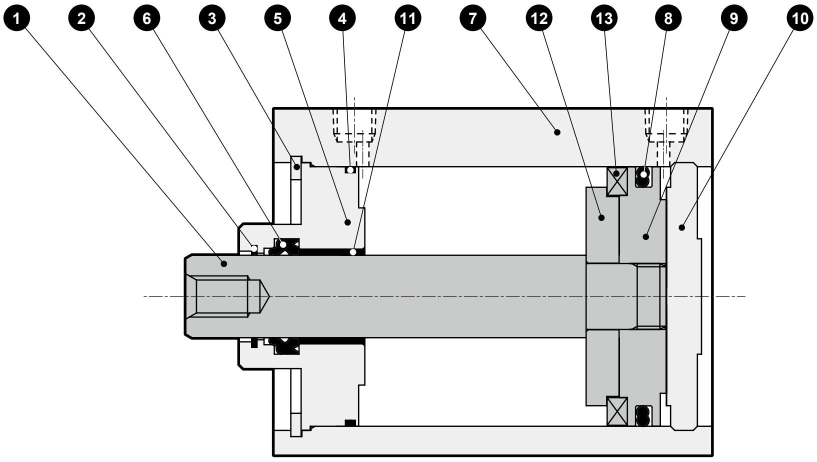
*1: The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list

- SSD2-G1L4-40, 50



- SSD2-G1L4-63 to 100



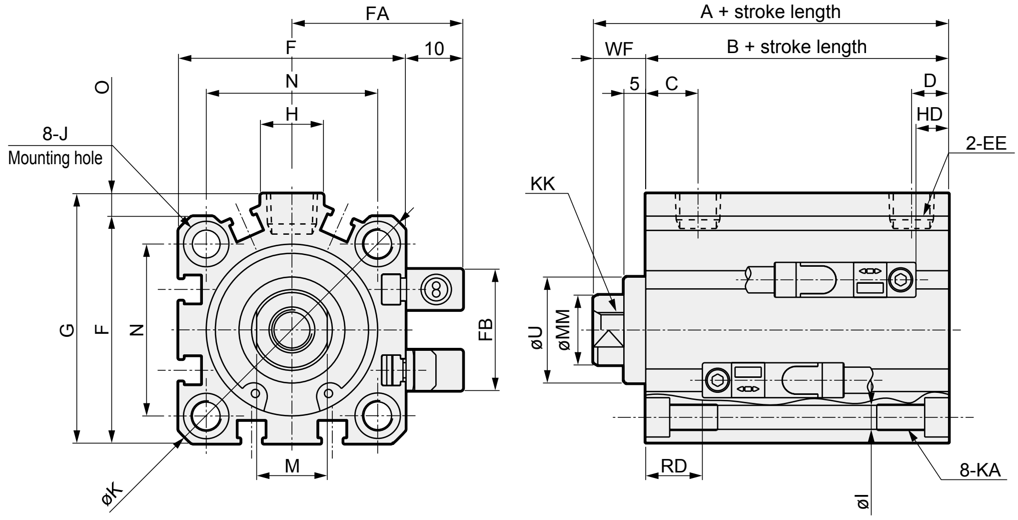
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	8	Piston packing	Nitrile rubber	
2	Coil scraper	Phosphor bronze		9	Piston	Aluminum alloy	Chromate
3	C type snap ring for hole	Steel	Zinc phosphate	10	Cover	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		11	Bush	Oiles drymet	ø63 to ø100
5	Rod metal	Aluminum alloy	Chromate	12	Spacer	Aluminum alloy	
6	Rod packing	Nitrile rubber		13	Magnet	Plastic	
7	Body	Aluminum alloy	Hard alumite				

Repair parts list

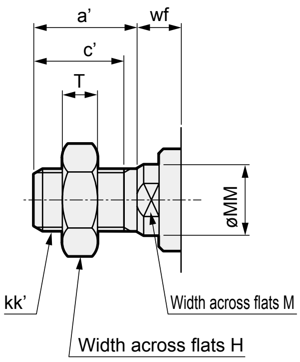
Part name Bore size (mm)	Kit No.	Repair parts No.
ø40	SSD2-G1-40K	❷❹❻❽
ø50	SSD2-G1-50K	
ø63	SSD2-G1-63K	
ø80	SSD2-G1-80K	
ø100	SSD2-G1-100K	

Dimensions

- SSD2-G1L4-40 to 100



- Rod end male thread



Code Bore size (mm)	A	B	C	D	EE	F	FA	FB	G	H	I	J
ø40	61.5	49.5	12	8.5	Rc1/8	52	36	31	57	15	5.5	9 spot face depth 5.5
ø50	63.5	50.5	10.5	10.5	Rc1/4	64	42	32	71	18	6.9	11 spot face depth 6.5
ø63	69	56	13	11	Rc1/4	77	48.5	32	84	23	8.7	14 spot face depth 9
ø80	78.5	63.5	16	13	Rc3/8	98	59	32	104	31	10.5	17.5 spot face depth 11
ø100	90	73	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	17.5 spot face depth 11

Code Bore size (mm)	K	KA	KK	M	MM	N	O	U	WF	HD	RD
ø40	69	M6 depth 11	M8 depth 13	14	16	40	5	28 h9	12	7.5	13
ø50	86	M8 depth 13	M10 depth 15	17	20	50	7	35 h9	13	8.5	13
ø63	103	M10 depth 25	M10 depth 15	17	20	60	7	35 h9	13	13.5	13.5
ø80	132	M12 depth 28	M16 depth 21	22	25	77	6	43 h9	15	18.5	16
ø100	156	M12 depth 28	M20 depth 27	27	30	94	6.5	59 h9	17	24	20

*1 : The A + stroke length and B + stroke length when using a custom stroke length are the same as those when using the next longer standard stroke length.

*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

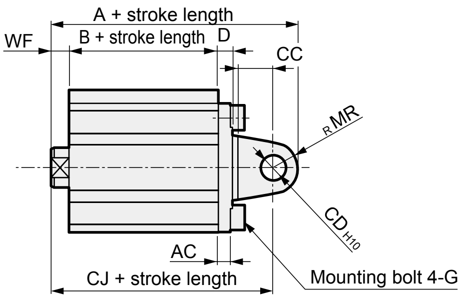
- Rod end male thread

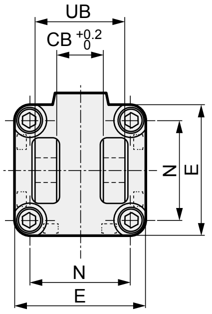
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø40	23.5	20.5	22	M14×1.5	14	16	8	10
ø50	28.5	26	27	M18×1.5	17	20	11	10
ø63	28.5	26	27	M18×1.5	17	20	11	10
ø80	35.5	32.5	32	M22×1.5	22	25	13	13
ø100	35.5	32.5	41	M26×1.5	27	30	16	13

Double acting/single rod/with AC magnetic field proof switch/coil scraper

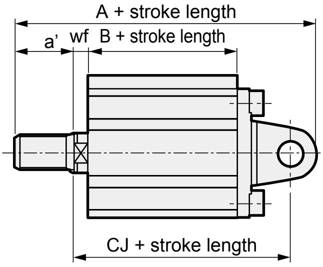
Dimensions with mounting bracket

- Clevis bracket (CB)
  SSD2-G1L4-40 to 100 -CB



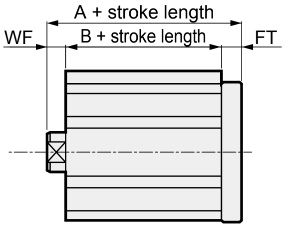


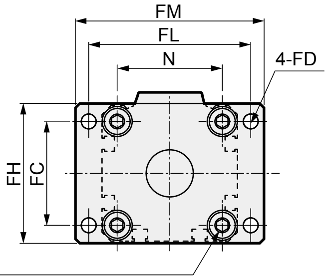
Rod end male thread



Code	Common dimensions										Female thread				Male thread				
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB	WF	A	B	CJ	a'	wf	A	B	CJ
ø40	5	18.2	14	10	6	52	M6×16	10	40	36	7	93.5	49.5	83.5	23.5	5	115	49.5	81.5
ø50	6	22.2	20	14	7	64	M8×20	14	50	44	8	105.5	50.5	91.5	28.5	5	131	50.5	88.5
ø63	7	22.2	20	14	8	77	M10×25	14	60	44	8	113	56	99	28.5	5	138.5	56	96
ø80	9	28.2	27	18	10	98	M12×40	18	77	56	10	134.5	63.5	116.5	35.5	8	168	63.5	114.5
ø100	12	32.2	31	22	13	117	M12×40	22	94	64	12	157	73	135	35.5	8	188.5	73	131

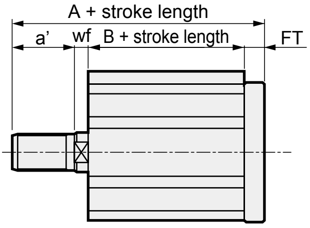
- Head side flange (FB)
  SSD2-G1L4-40 to 100 -FB



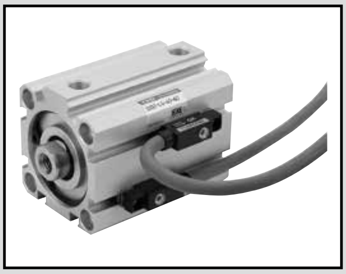


Mounting bolt 4-G
ø32 to ø63: Hexagon socket button head bolt
ø80/ø100: Special bolt

Rod end male thread



Code	Common dimensions								Female thread			Male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø40	40	5.5	54	62	72	8	40	M6×16	7	69.5	49.5	23.5	5	91	49.5
ø50	50	6.6	67	76	89	9	50	M8×20	8	72.5	50.5	28.5	5	98	50.5
ø63	60	9	80	92	108	9	60	M10×25	8	78	56	28.5	5	103.5	56
ø80	77	11	99	116	134	11	77	M12×40	10	89.5	63.5	35.5	8	123	63.5
ø100	94	11	117	136	154	11	94	M12×40	12	101	73	35.5	8	132.5	73

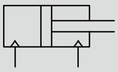


Compact cylinder double acting/high load/ with strong magnetic field proof switch

SSD2-KL4 Series

● Bore size: ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-KL4				
Bore size mm	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting				
Working fluid	Compressed air				
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)				
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)		0.05 (≈7.3 psi, 0.5 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)				
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)				
Port size	Rc1/8	Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$				
Working piston speed mm/s	50 to 500		50 to 300		
Cushion	Rubber cushion				
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)				
Allowable absorbed energy J	0.63	0.98	1.56	2.51	3.92

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø40	20/25/30/35/40 45/50/75/100	100	20
ø50			
ø63			
ø80			
ø100			

*1:The custom stroke length is available in 1 mm increments. However, the total length is the same as that of the next longer standard stroke length.

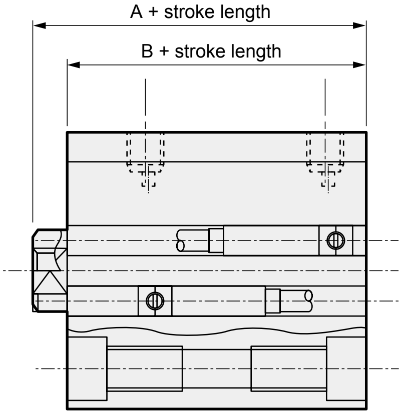
Number of installed switches and min. stroke length (mm)

Switch quantity	1	2	3
Switch model No.	V0		
Bore size (mm)			
ø40	20	20	35
ø50	20	20	35
ø63	20	20	35
ø80	20	20	35
ø100	20	20	35

Custom stroke length

● SSD2-KL4 Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	40 to 100	1 to 99
Example of model No.	Model No.: SSD2-KL4-40-38 A +2 mm spacer is added to the SSD2-KL4-40-40 standard cylinder to create 38 mm stroke length. B + stroke length is 99.5mm.	



Switch specifications

Item	Reed 2-wire	
	V0	
Applications	For relay, programmable controller	
Load voltage	12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA
Internal voltage drop	3.0 V or less (with 40 mA load current)	
Indicator lamp	LED (Lit when ON)	
Leakage current	0 mA	
Weight g	1 m:63 3 m:170 5 m:277	

Cylinder weight table

(the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm) Bore size (mm)	20	25	30	35	40	45	50	75	100
ø40	546	573	599	626	652	679	705	838	970
ø50	841	883	925	967	1009	1051	1093	1303	1513
ø63	1199	1254	1309	1364	1419	1474	1529	1804	2079
ø80	1995	2082	2169	2256	2343	2430	2517	2952	3387
ø100	2893	3007	3120	3234	3347	3461	3574	4142	4709

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	1.56×10^2	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	1.40×10^2	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	2.51×10^2	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	2.27×10^2	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	3.93×10^2	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	3.57×10^2	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

How to order

SSD2-KL4 - 50 - 40 - V0 - D - N - LB - I

Model No.

Ⓐ Bore size

Ⓑ Stroke length

Ⓒ Switch model No.

Ⓓ Switch quantity

Ⓔ Option

Ⓕ Mounting bracket *1 *2

Ⓖ Accessory *3

Code	Description
Ⓐ Bore size (mm)	
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

Ⓑ Stroke length (mm)

Bore size	Stroke length *1	Custom stroke length *2
ø40 to ø100	20 to 100	In 1 mm increments

*1 : Refer to page 1024 for the number of installed switches and the min. stroke length.
*2 : The total length is the same as that of the next longer standard stroke length.

Ⓒ Switch model No.

Lead wire Straight	Contact	Voltage		Display	Lead wire
		AC	DC		
V0*	Reed	●	●	1-color display	2-wire

*** Lead wire length**

Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

Ⓓ Switch quantity

R	1 on rod side
H	1 on head side
D	2
T	3

Ⓔ Option

Blank	Rod end female thread
N	Rod end male thread

Ⓕ Mounting bracket

Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange

Ⓖ Accessory (available when rod end male thread "N" is selected)

I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : The mounting bracket is included at shipment.
*2 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on page 1029. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
*3 : "I" and "Y" cannot be selected together.

[Example of model No.]

SSD2-KL4-50-40-V0-D-N-LB-I

Model: Compact cylinder
Double acting/single high load/
with strong magnetic field proof switch

Ⓐ Bore size : ø50 mm
Ⓑ Stroke length : 40 mm
Ⓒ Switch model No. : Reed V0 switch, Lead wire length 1 m
Ⓓ Switch quantity : 2 pcs. included
Ⓔ Option : Rod end male thread
Ⓕ Mounting bracket : Axial foot
Ⓖ Accessory : Rod eye

How to order switch

SW - V0

Switch model No.
(Item Ⓒ above)

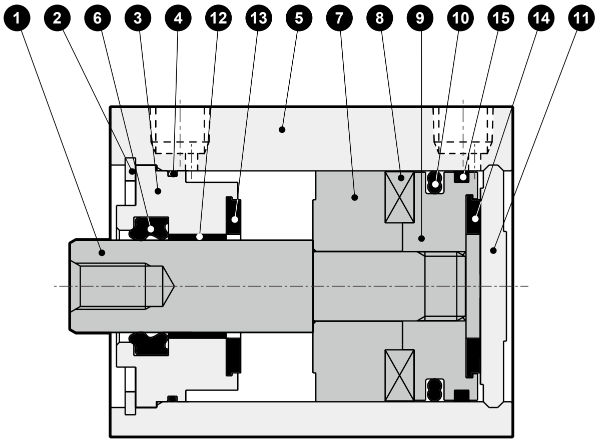
How to order mounting bracket

Bore size (mm) / Mounting bracket	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

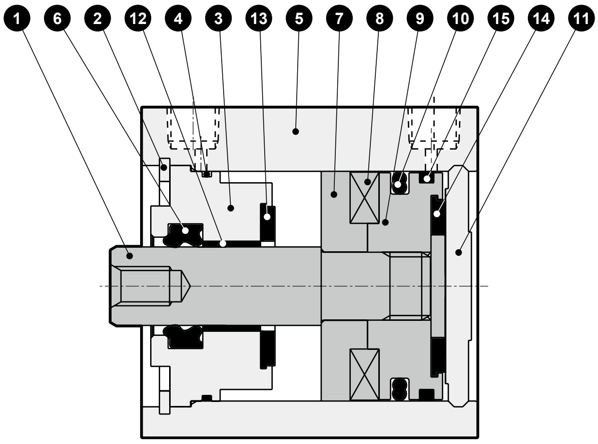
*1:The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list

- SSD2-KL4-40, 50



- SSD2-KL4-63 to 100



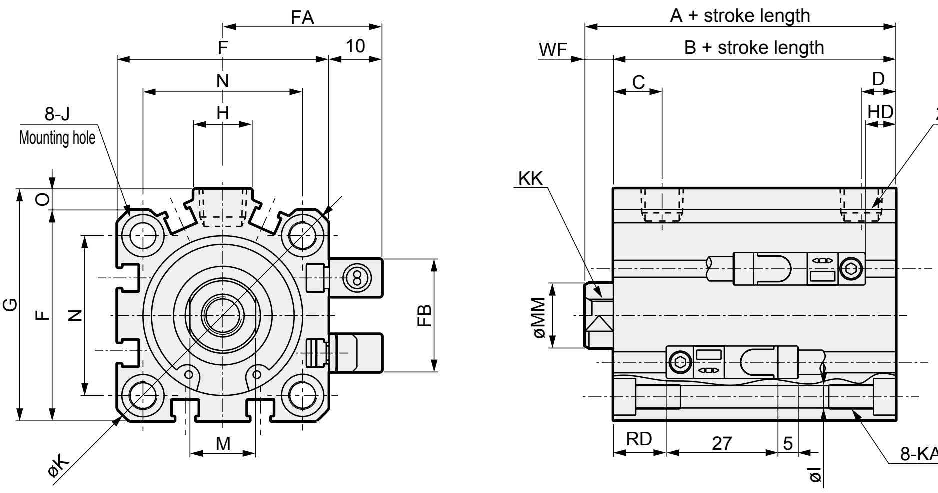
No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating
2	C type snap ring	Steel	Zinc phosphate
3	Rod metal	ø40, ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø40, ø50: Alumite ø63 to ø100: Chromate
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing	Nitrile rubber	
7	Spacer	ø40, ø50: Special resin ø63 to ø100: Aluminum alloy	ø63 to ø100: Chromate
8	Magnet	Plastic	
9	Piston	Aluminum alloy	
10	Piston packing	Nitrile rubber	
11	Cover	Aluminum alloy	Alumite
12	Bush	Oiles drymet	
13	Cushion rubber (R)	Urethane rubber	
14	Cushion rubber (H)	Urethane rubber	
15	Wear ring	Polyacetal resin	

Repair parts list

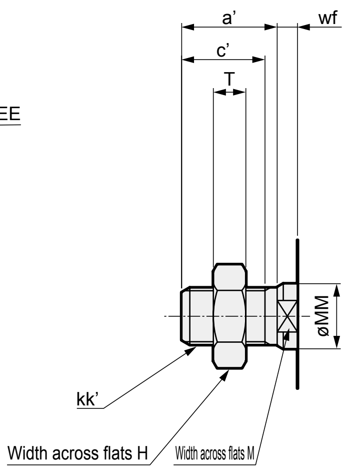
Bore size (mm)	Kit No.	Repair parts No.
ø40	SSD2-K-40K	④ ⑥ ⑩ ⑬ ⑭ ⑮
ø50	SSD2-K-50K	
ø63	SSD2-K-63K	
ø80	SSD2-K-80K	
ø100	SSD2-K-100K	

Dimensions

- SSD2-KL4-40 to 100



- Rod end male thread



Code Bore size (mm)	A	B	C	D	EE	F	FA	FB	G	H	I	J
ø40	66.5	59.5	12	8.5	Rc1/8	52	36	31	57	15	5.5	Spot face ø9 depth 5.5
ø50	68.5	60.5	10.5	10.5	Rc1/4	64	42	32	71	18	6.9	Spot face ø11 depth 6.5
ø63	74	66	13	11	Rc1/4	77	48.5	32	84	23	8.7	Spot face ø14 depth 9
ø80	83.5	73.5	16	13	Rc3/8	98	59	32	104	31	10.5	Spot face ø17.5 depth 11
ø100	95	83	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	Spot face ø17.5 depth 11

Code Bore size (mm)	K	KA	KK	M	MM	N	O	WF	HD	RD
ø40	69	M6 depth 11	M8 depth 13	14	16	40	5	7	12.5	18
ø50	86	M8 depth 13	M10 depth 15	17	20	50	7	8	13.5	18
ø63	103	M10 depth 25	M10 depth 15	17	20	60	7	8	18.5	18.5
ø80	132	M12 depth 28	M16 depth 21	22	25	77	6	10	23.5	21
ø100	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12	29	25

*1 : The A + stroke length and B + stroke length when using a custom stroke length are the same as those when using the next longer standard stroke length.

*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

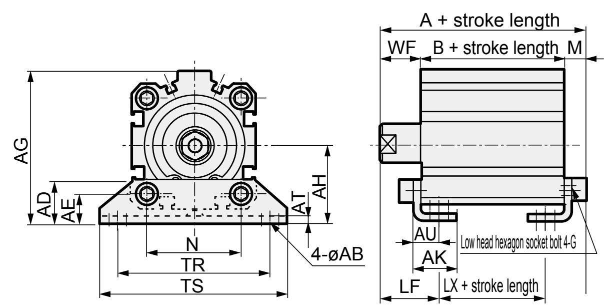
- Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

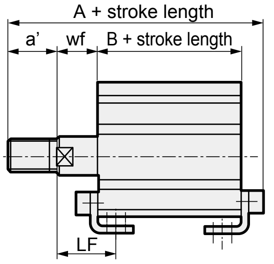
Dimensions with mounting bracket

● Axial foot (LB)

SSD2-KL4-40 to 100 -LB



Rod end male thread

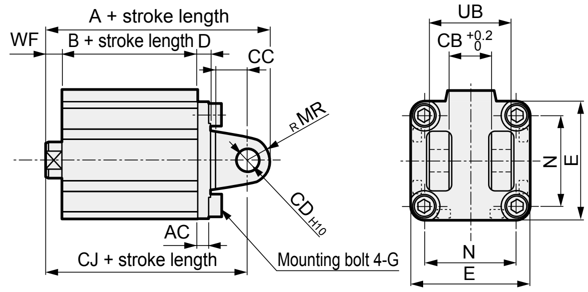


Code	Common dimensions													
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	LF
ø40	7	18	13	64	33	18.2	3.2	11.2	M6×16	40	64	78	7.2	25
ø50	9	22	14	78	39	22.7	3.2	14.7	M8×20	50	79	95	8.2	29.5
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	60	95	113	9.2	31
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	77	118	140	11.5	35
ø100	13	35	24	136	71	35.5	6	23	M12×40	94	137	162	13	39

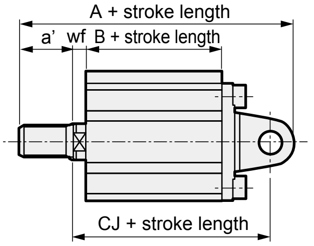
Code	Female thread				Male thread				
Bore size (mm)	WF	A	B	LX	a’	wf	A	B	LX
ø40	17	83.7	59.5	43.5	23.5	15	105.2	59.5	43.5
ø50	18	86.7	60.5	37.5	28.5	15	112.2	60.5	37.5
ø63	18	93.2	66	40	28.5	15	118.7	66	40
ø80	20	105	73.5	43.5	35.5	18	138.5	73.5	43.5
ø100	22	118	83	49	35.5	18	149.5	83	49

● Clevis bracket (CB)

SSD2-KL4-40 to 100 -CB



Rod end male thread

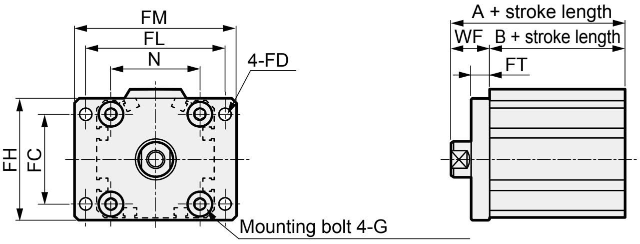


Code	Common dimensions									
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB
ø40	5	18.2	14	10	6	52	M6×16	10	40	36
ø50	6	22.2	20	14	7	64	M8×20	14	50	44
ø63	7	22.2	20	14	8	77	M10×25	14	60	44
ø80	9	28.2	27	18	10	98	M12×40	18	77	56
ø100	12	32.2	31	22	13	117	M12×40	22	94	64

Code	Female thread				Male thread				
Bore size (mm)	WF	A	B	CJ	a’	wf	A	B	CJ
ø40	7	98.5	59.5	88.5	23.5	5	120	59.5	86.5
ø50	8	110.5	60.5	96.5	28.5	5	136	60.5	93.5
ø63	8	118	66	104	28.5	5	143.5	66	101
ø80	10	139.5	73.5	121.5	35.5	8	173	73.5	119.5
ø100	12	162	83	140	35.5	8	193.5	83	136

● Rod side flange (FA)

SSD2-KL4-40 to 100 -FA

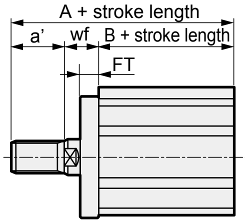


Mounting bolt 4-G

ø32 to ø63: Hexagon socket button head bolt

ø80/ø100: Special bolt

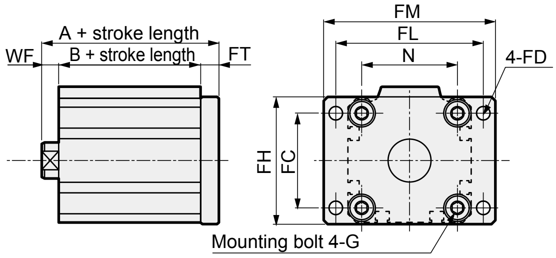
Rod end male thread



Code	Common dimensions								Female thread			Male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a’	wf	A	B
ø40	40	5.5	54	62	72	8	40	M6×16	17	76.5	59.5	23.5	15	98	59.5
ø50	50	6.6	67	76	89	9	50	M8×20	18	78.5	60.5	28.5	15	104	60.5
ø63	60	9	80	92	108	9	60	M10×25	18	84	66	28.5	15	109.5	66
ø80	77	11	99	116	134	11	77	M12×40	20	93.5	73.5	35.5	18	127	73.5
ø100	94	11	117	136	154	11	94	M12×40	22	105	83	35.5	18	136.5	83

● Head side flange (FB)

SSD2-KL4-40 to 100 -FB

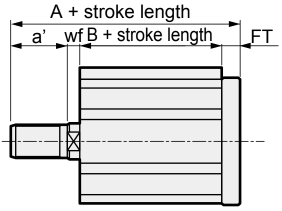


Mounting bolt 4-G

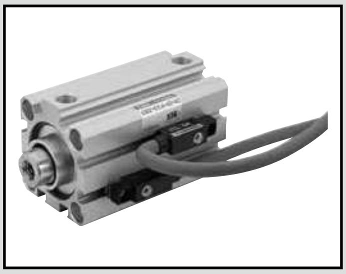
ø32 to ø63: Hexagon socket button head bolt

ø80/ø100: Special bolt

Rod end male thread



Code	Common dimensions								Female thread			Male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a’	wf	A	B
ø40	40	5.5	54	62	72	8	40	M6×16	7	74.5	59.5	23.5	5	96	59.5
ø50	50	6.6	67	76	89	9	50	M8×20	8	77.5	60.5	28.5	5	103	60.5
ø63	60	9	80	92	108	9	60	M10×25	8	83	66	28.5	5	108.5	66
ø80	77	11	99	116	134	11	77	M12×40	10	94.5	73.5	35.5	8	128	73.5
ø100	94	11	117	136	154	11	94	M12×40	12	106	83	35.5	8	137.5	83

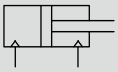


Compact cylinder double acting/high load/ with strong magnetic field proof switch/with coil scraper

SSD2-KG1L4 Series

● Bore size: ø40/ø50/ø63/ø80/ø100

JIS symbol



Specifications

Item	SSD2-KG1L4				
Bore size mm	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting				
Working fluid	Compressed air				
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)				
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)		0.1 (≈15 psi, 1 bar)		
Proof pressure MPa	1.6 (≈230 psi, 16 bar)				
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)				
Port size	Rc1/8	Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$				
Working piston speed mm/s	50 to 500		50 to 300		
Cushion	Rubber cushion				
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)				
Allowable absorbed energy J	0.63	0.98	1.56	2.51	3.92

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø40	20/25/30/35/40 45/50/75/100	100	20
ø50			
ø63			
ø80			
ø100			

*1:The custom stroke length is available in 1 mm increments. However, the total length is the same as that of the next longer standard stroke length.

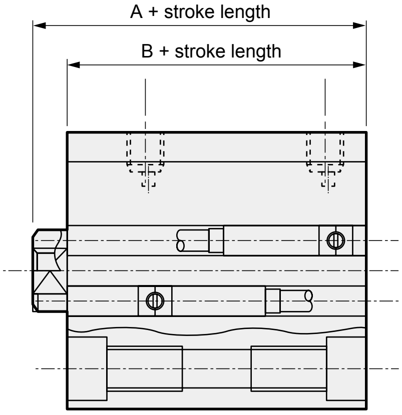
Number of installed switches and min. stroke length (mm)

Switch quantity	1	2	3
Switch model No. / Bore size (mm)	V0		
ø40	20	20	35
ø50	20	20	35
ø63	20	20	35
ø80	20	20	35
ø100	20	20	35

Custom stroke length

● SSD2-KG1L4 Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	40 to 100	1 to 99
Example of model No.	Model No.: SSD2-KG1L4-40-38 A +2 mm spacer is added to the SSD2-KG1L4-40-40 standard cylinder to create 38 mm stroke length. B + stroke length is 99.5mm.	



Switch specifications

Item	Reed 2-wire	
	V0	
Applications	For relay, programmable controller	
Load voltage	12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA
Internal voltage drop	3.0 V or less (with 40 mA load current)	
Indicator lamp	LED (Lit when ON)	
Leakage current	0 mA	
Weight g	1 m:63 3 m:170 5 m:277	

Cylinder weight table

(the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke length (mm) / Bore size (mm)	20	25	30	35	40	45	50	75	100
ø40	628	655	681	708	734	761	787	920	1052
ø50	960	1002	1044	1086	1128	1170	1212	1422	1632
ø63	1350	1406	1461	1517	1572	1628	1683	1961	2238
ø80	2247	2334	2421	2508	2595	2682	2769	3204	3639
ø100	3228	3342	3455	3569	3682	3796	3909	4477	5044

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

How to order

SSD2-KG1L4 - 50 - 40 - V0 - D - N - LB - I

Model No.

Ⓐ Bore size

Ⓑ Stroke length

Ⓒ Switch model No.

Ⓓ Switch quantity

Ⓔ Option

Ⓕ Mounting bracket *1

Ⓖ Accessory *2

Code	Description
Ⓐ Bore size (mm)	
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

Ⓑ Stroke length (mm)

Bore size	Stroke length *1	Custom stroke length *2
ø40 to ø100	20 to 100	In 1 mm increments

*1 : Refer to page 1030 for the number of installed switches and the min. stroke length.
*2 : The total length is the same as that of the next longer standard stroke length.

Ⓒ Switch model No.

Lead wire Straight	Contact	Voltage AC	Voltage DC	Display	Lead wire
V0*	Reed	●	●	1-color display	2-wire

*** Lead wire length**

Code	Description
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

Ⓓ Switch quantity

Code	Description
R	1 on rod side
H	1 on head side
D	2
T	3

Ⓔ Option

Code	Description
Blank	Rod end female thread
N	Rod end male thread

Ⓕ Mounting bracket

Code	Description
Blank	Without mounting bracket
LB	Axial foot (made-to-order product)
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange (made-to-order product)
FB	Head side flange

Ⓖ Accessory (available when rod end male thread "N" is selected)

Code	Description
I	Rod eye
Y	Rod clevis (pin and snap ring included)

⚠ Precautions for model No. selection

*1 : The mounting bracket is included at shipment.
*2 : "I" and "Y" cannot be selected together.

[Example of model No.]

SSD2-KG1L4-50-40-V0-D-N-LB-I

Model: Compact cylinder
Double acting/high load/with coil scraper/with strong magnetic field proof switch

Ⓐ Bore size : ø50 mm
Ⓑ Stroke length : 40 mm
Ⓒ Switch model No. : Reed V0 switch, Lead wire length 1 m
Ⓓ Switch quantity : 2 pcs. included
Ⓔ Option : Rod end male thread
Ⓕ Mounting bracket : Axial foot
Ⓖ Accessory : Rod eye

How to order switch

SW - V0

Switch model No.
(Item Ⓒ above)

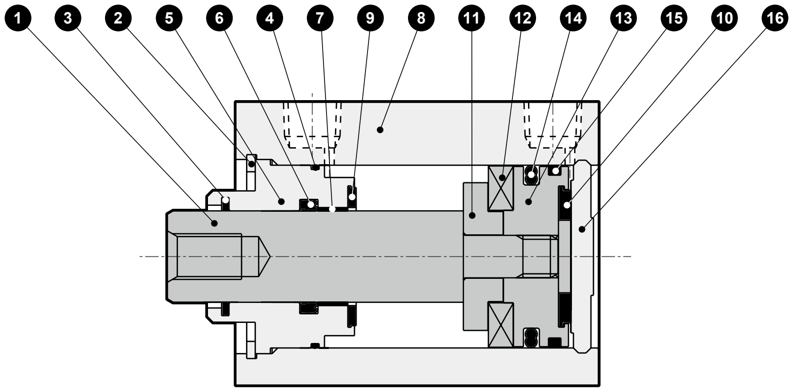
How to order mounting bracket

Bore size (mm) / Mounting bracket	ø40	ø50	ø63	ø80	ø100
Flange (FB)	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

*1:The foot mounting bracket is provided as 2 pcs./set.

Internal structure and parts list

- SSD2-KG1L4-40 to 100



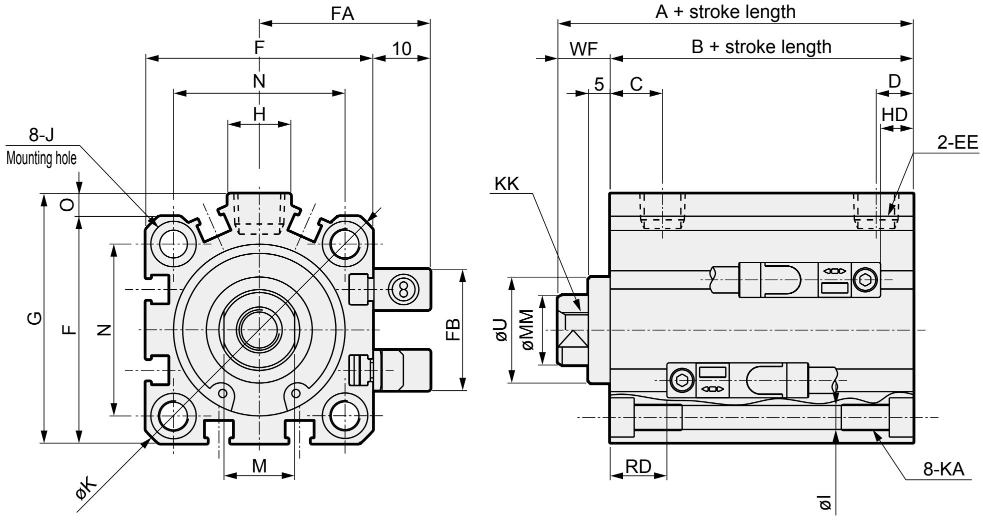
No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating
2	C type snap ring for hole	Steel	Zinc phosphate
3	Coil scraper	Phosphor bronze	
4	Rod metal gasket	Nitrile rubber	
5	Rod metal	ø40, ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø40, ø50: Alumite ø63 to ø100: Chromate
6	Rod packing	Nitrile rubber	
7	Bush	Oiles drymet	
8	Body	Aluminum alloy	Hard alumite
9	Cushion rubber R	Urethane rubber	
10	Cushion rubber H	Urethane rubber	
11	Spacer	Aluminum alloy	
12	Magnet	Plastic	
13	Piston	Aluminum alloy	Chromate
14	Piston packing	Nitrile rubber	
15	Wear ring	Polyacetal resin	
16	Cover	Aluminum alloy	Alumite

Repair parts list

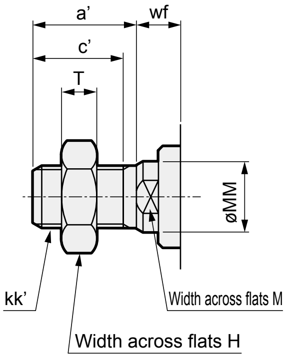
Part name Bore size (mm)	Kit No.	Repair parts No.
ø40	SSD2-KG1-40K	③ ④ ⑥ ⑨ ⑩ ⑭ ⑮
ø50	SSD2-KG1-50K	
ø63	SSD2-KG1-63K	
ø80	SSD2-KG1-80K	
ø100	SSD2-KG1-100K	

Dimensions

- SSD2-KG1L4-40 to 100



- Rod end male thread



Code Bore size (mm)	A	B	C	D	EE	F	FA	FB	G	H	I	J
ø40	71.5	59.5	12	8.5	Rc1/8	52	36	31	57	15	5.5	Spot face ø9 depth 5.5
ø50	73.5	60.5	10.5	10.5	Rc1/4	64	42	32	71	18	6.9	Spot face ø11 depth 6.5
ø63	79	66	13	11	Rc1/4	77	48.5	32	84	23	8.7	Spot face ø14 depth 9
ø80	88.5	73.5	16	13	Rc3/8	98	59	32	104	31	10.5	Spot face ø17.5 depth 11
ø100	100	83	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	Spot face ø17.5 depth 11

Code Bore size (mm)	K	KA	KK	M	MM	N	O	U	WF	HD	RD
ø40	69	M6 depth 11	M8 depth 13	14	16	40	5	28 h9	12	12.5	18
ø50	86	M8 depth 13	M10 depth 15	17	20	50	7	35 h9	13	13.5	18
ø63	103	M10 depth 25	M10 depth 15	17	20	60	7	35 h9	13	18.5	18.5
ø80	132	M12 depth 28	M16 depth 21	22	25	77	6	43 h9	15	23.5	21
ø100	156	M12 depth 28	M20 depth 27	27	30	94	6.5	59 h9	17	29	25

*1 : The A + stroke length and B + stroke length when using a custom stroke length are the same as those when using the next longer standard stroke length.

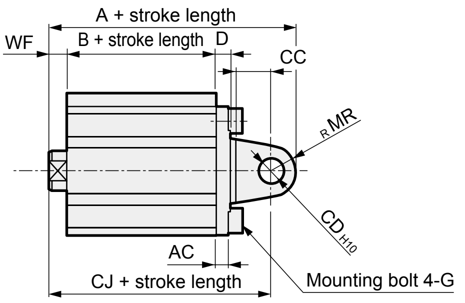
*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

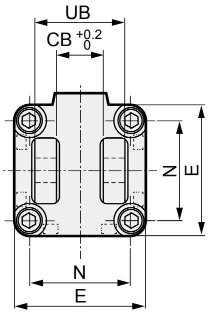
- Rod end male thread

Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø40	23.5	20.5	22	M14×1.5	14	16	8	10
ø50	28.5	26	27	M18×1.5	17	20	11	10
ø63	28.5	26	27	M18×1.5	17	20	11	10
ø80	35.5	32.5	32	M22×1.5	22	25	13	13
ø100	35.5	32.5	41	M26×1.5	27	30	16	13

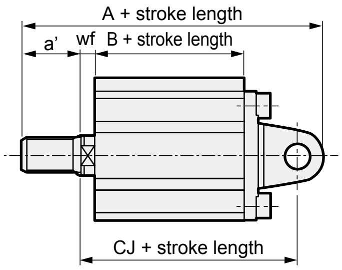
Dimensions with mounting bracket

● Clevis bracket (CB)
SSD2-KG1L4-40 to 100 -CB



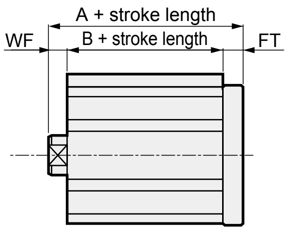


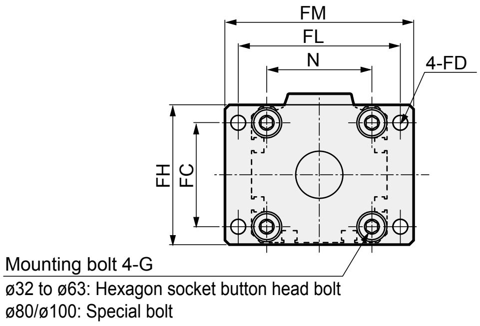
Rod end male thread



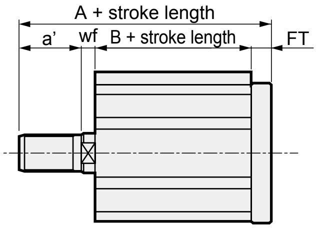
Code	Common dimensions										Female thread				Male thread				
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB	WF	A	B	CJ	a'	wf	A	B	CJ
ø40	5	18.2	14	10	6	52	M6×16	10	40	36	7	103.5	59.5	93.5	23.5	5	125	59.5	91.5
ø50	6	22.2	20	14	7	64	M8×20	14	50	44	8	115.5	60.5	101.5	28.5	5	141	60.5	98.5
ø63	7	22.2	20	14	8	77	M10×25	14	60	44	8	123	66	109	28.5	5	148.5	66	106
ø80	9	28.2	27	18	10	98	M12×40	18	77	56	10	144.5	73.5	126.5	35.5	8	178	73.5	124.5
ø100	12	32.2	31	22	13	117	M12×40	22	94	64	12	167	83	145	35.5	8	198.5	83	141

● Head side flange (FB)
SSD2-KG1L4-40 to 100 -FB

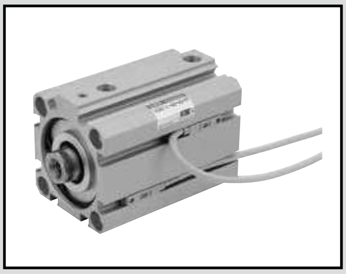




Rod end male thread



Code	Common dimensions								Female thread			Male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø40	40	5.5	54	62	72	8	40	M6×16	7	79.5	59.5	23.5	5	101	59.5
ø50	50	6.6	67	76	89	9	50	M8×20	8	82.5	60.5	28.5	5	108	60.5
ø63	60	9	80	92	108	9	60	M10×25	8	88	66	28.5	5	113.5	66
ø80	77	11	99	116	134	11	77	M12×40	10	99.5	73.5	35.5	8	133	73.5
ø100	94	11	117	136	154	11	94	M12×40	12	111	83	35.5	8	142.5	83

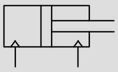


Compact cylinder double acting/single rod

SSD2-P7*/P5* Series

● Bore size: ø12/ø16/ø20/ø25/ø32/ø40/ø50/ø63/ø80/ø100/ø125/ø140/ø160

JIS symbol



Specifications

Item	SSD2-P7*/P5* SSD2-L-P7*/P5* (with switch)												
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125	ø140	ø160
Actuation	Double acting												
Working fluid	Compressed air												
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)												
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)							0.1 (≈15 psi, 1 bar)					
Proof pressure MPa	1.6 (≈230 psi, 16 bar)												
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)												
Port size	M5				Rc1/8 *1		Rc1/4		Rc3/8				
Pressure relief port size	M5										Rc3/8		
Stroke tolerance mm	$^{+1.0}_{0}$										$^{+2.0}_{0}$		
Working piston speed mm/s	50 to 500							50 to 300					
Cushion	None										Rubber cushion		
Lubrication	Not available												
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56	6.52	6.52	7.78

*1: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5/10/15/20 25/30	30	1(5) The value in ( ) is for types with one or two switches.
ø16			
ø20	5/10/15/20/25 30/35/40/45/50	50	
ø25			
ø32	5/10/15/20/25/30 35/40/45/50/75/100	100	
ø40			
ø50	10/15/20 25/30/35 40/45/50 75/100		
ø63			
ø80			
ø100			
ø125	10/20/30/40/50 75/100/125/150 175/200/250/300	300	
ø140			
ø160			

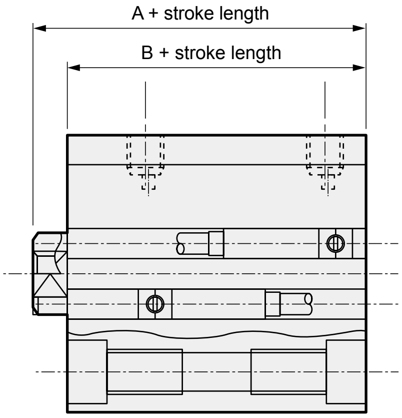
*1: Availability of custom stroke length
Custom stroke length is available in 1 mm increments. Total length when using a custom stroke length is different between ø12 to ø100 and ø125 to ø160. Please be careful.
(ø12 to ø100) The dimensions of the total length with the custom stroke length are the same as the next longer standard stroke length.
(ø125 to ø160) Total length dimension with custom stroke length is handled as custom stroke dedicated length.

2: Less than 5 mm with 1-color display switch and less than 10 mm with 2-color display, off-delay, T1 or T8* switch are not available.

Custom stroke length

● SSD2-P7*, P5* Series

Item	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	12/16	1 to 29
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-32-38-P7 A +2 mm spacer is added to the SSD2-32-40-P7 standard cylinder to create 38 mm stroke length. B + stroke length is 73mm.	



Switch specifications (F type switch)

● 1-color/2-color display

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 µA or less	1 mA or less		10 µA or less		
Weight g	1 m:10 3 m:29						

Switch specifications (T type switch)

- 1-color/2-color display/for AC magnetic field proof

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/T1V	**T2H/T2V/ T2JH/T2JV**	**T2YH/ T2YV**	**T2WH/ T2WV**	**T3H/ T3V**	**T3PH/ T3PV**	**T3YH/ T3YV**	**T3WH/ T3WV**	**T0H/T0V**		**T5H/T5V**		**T8H/T8V**			**T2YD(*4) T2YDT**
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			Dedicated for programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25˚C. (5 to 10 mA at 60°C)

*4 : Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.

*5 : The F type switch uses a bend-resistant lead wire.

Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

- ø12 to ø100

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35	
Bore size (mm)	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø12	66	107	74	116	83	125	91	133	100	142	108	150	-	-
ø16	92	138	103	148	113	158	124	169	135	180	146	191	-	-
ø20	130	185	142	217	155	230	168	243	180	255	193	268	206	281
ø25	181	272	196	287	212	303	228	319	244	335	259	350	275	366
ø32	254	368	276	390	298	412	320	434	341	455	363	477	385	499
ø40	373	516	400	543	426	569	453	596	480	623	506	649	533	676
ø50	-	-	691	885	733	927	775	969	817	1011	860	1054	902	1096
ø63	-	-	939	1218	994	1273	1049	1328	1104	1383	1159	1438	1215	1494
ø80	-	-	1911	2324	1998	2411	2084	2497	2171	2584	2257	2670	2344	2757
ø100	-	-	2625	3192	2739	3306	2852	3419	2966	3533	3080	3647	3194	3761

Stroke length (mm)	40		45		50		75		100	
Bore size (mm)	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø12	-	-	-	-	-	-	-	-	-	-
ø16	-	-	-	-	-	-	-	-	-	-
ø20	219	294	232	307	245	320	-	-	-	-
ø25	291	382	307	398	322	413	-	-	-	-
ø32	407	521	429	543	450	564	558	672	665	779
ø40	559	702	586	729	612	755	745	888	877	1020
ø50	944	1138	986	1180	1028	1222	1238	1432	1448	1642
ø63	1270	1549	1325	1604	1380	1659	1655	1934	1930	2209
ø80	2431	2844	2518	2931	2604	3017	3037	3450	3469	3882
ø100	3307	3874	3421	3988	3535	4102	4105	4672	4675	5242

- ø125 to ø160

(Unit: kg)

Stroke length (mm)	10		20		30		40		50		75		100	
Bore size (mm)	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø125	6.12	6.22	6.39	6.49	6.65	6.75	6.92	7.02	7.18	7.28	7.90	8.25	8.51	8.61
ø140	8.50	8.61	8.80	8.91	9.11	9.22	9.41	9.52	9.72	9.83	10.54	10.94	11.24	11.35
ø160	11.86	11.98	12.24	12.36	12.62	12.74	13.00	13.12	13.38	13.50	14.39	14.90	15.28	15.40

Stroke length (mm)	125		150		175		200		250		300	
Bore size (mm)	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø125	9.18	9.28	9.84	9.94	10.51	10.61	11.17	11.27	12.50	12.60	13.83	13.93
ø140	12.00	12.11	12.76	12.87	13.52	13.63	14.28	14.39	15.80	15.91	17.32	17.43
ø160	16.23	16.35	17.18	17.30	18.13	18.25	19.08	19.20	20.98	21.10	22.88	23.00

Note: Refer to Ending Pages 16 and 22 for weight of switches with 3 m and 5 m switch lead wire lengths.

How to order

Without switch (without magnet for switch)

SSD2 - 12 - 5 ——— N P7

With switch (built-in magnet for switch)

SSD2-L - 12 - 5 - T0H - R - N P7

Ⓐ Model No.

Ⓑ Bore size

Ⓒ Stroke length *1

Ⓓ Switch
* indicates the lead wire length.
*2
*3
*4
*5

Ⓔ Switch quantity

Ⓕ Option

Ⓖ Clean-room specifications *6

Code	Description
Ⓐ Model No.	
SSD2	Double acting/single rod
SSD2-L	Double acting/single rod/with switch

Ⓑ Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
125	ø125
140	ø140
160	ø160

Ⓒ Stroke length (mm)

Refer to the stroke length table on the following page.

Ⓓ Switch model No.

Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC	Voltage DC	Display	Lead wire	12	16	20	25	32	40	50	63	80	100	125	140	160
-	F2S	Proximity		●	1-color display	2-wire			●	●									
-	F3S			●		3-wire			●	●									
F2H*	F2V*			●		2-wire			●	●									
F3H*	F3V*			●		3-wire			●	●									
F3PH*	F3PV*			●	1-color display (PNP output)	3-wire			●	●									
F2YH*	F2YV*			●	2-color display	2-wire			●	●									
F3YH*	F3YV*			●		3-wire			●	●									
T0H*	T0V*	Reed	●	●	1-color display	2-wire	●	●	●	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●	Without indicator lamp		●	●	●	●	●	●	●	●	●	●	●	●	●
T8H*	T8V*		●	●	1-color display							●	●	●	●	●	●	●	●
T1H*	T1V*	Proximity	●		1-color display	2-wire			●	●	●	●	●	●	●	●	●	●	●
T2H*	T2V*			●			●	●	●	●	●	●	●	●	●	●	●	●	●
T3H*	T3V*			●		3-wire	●	●	●	●	●	●	●	●	●	●	●	●	●
T3PH*	T3PV*			●	1-color display (PNP output) (custom)		●	●	●	●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*			●	2-color display	2-wire	●	●	●	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*			●					●	●	●	●	●	●	●	●	●	●	●
T3WH*	T3WV*			●		3-wire	●	●	●	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*			●					●	●	●	●	●	●	●	●	●	●	●
T2YD*	-			●	2-color display AC magnetic field	2-wire			●	●	●	●	●	●	●	●	●	●	●
T2YDT*	-			●					●	●	●	●	●	●	●	●	●	●	●
T2JH*	T2JV*			●	1-color display off-delay	2-wire			●	●	●	●	●	●	●	●	●	●	●

*** Lead wire length**	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *8

Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2

Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread

Ⓖ Clean-room specifications

	Structure	Material limitations
P7	Exhaust port	-
P71	Vacuum treatment	-
P5	Exhaust port	Copper/silicon/halogen-based materials (fluorine, chlorine, bromine) prohibited (custom)
P51	Vacuum treatment	Copper/silicon/halogen-based materials (fluorine, chlorine, bromine) prohibited (custom)

⚠ Precautions for model No. selection

*1 : Availability of custom stroke length
Custom stroke length is available in 1 mm increments. (Less than 5 mm with switch is not available.) Total length when using a custom stroke length is different between ø12 to ø100 and ø125 to ø160. Please be careful.
[ø12 to ø100]
The dimensions of the total length with the custom stroke length are the same as the next longer standard stroke length.
[ø125 to ø160]
Dedicated custom stroke length.

2 : The T2YD switch cannot be mounted on the ø12 and ø16 bore sizes.

3 : The T8 switch cannot be mounted on the ø12 to ø32 bore sizes.

*4 : The F type switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.

*5 : The F type switch with L type lead wire on ø20 models cannot be selected on stroke lengths of 15 mm or under.

*6 : "P5" and "P51" are made-to-order products.

*7 : Refer to pages 750 and 751 for combinations of variations/ options.

*8 : F type switch cannot be selected.

[Example of model No.]

SSD2-L-12-5-T0H-R-NP7

Ⓐ Model : Compact cylinder, standard
Ⓑ Bore size : ø12 mm
Ⓒ Stroke length : 5 mm
Ⓓ Switch model No. : Reed switch T0H, lead wire length 1 m
Ⓔ Switch quantity : 1 on rod side
Ⓕ Option : Rod end male thread
Ⓖ Clean-room specifications : Exhaust port

[Stroke length table]

Stroke length (mm)		Applicable bore size												
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125	ø140	ø160
Standard stroke length	5	●	●	●	●	●	●							
	10	●	●	●	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●			
	40			●	●	●	●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●			
	50			●	●	●	●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●	●	●	●
	100					●	●	●	●	●	●	●	●	●
	125											●	●	●
	150											●	●	●
	175											●	●	●
	200											●	●	●
	250											●	●	●
	300											●	●	●
Min. stroke length (mm)		1												
Max. stroke length (mm)		30		50		100						300		
Custom stroke length *1		In 1 mm increments												

Theoretical thrust table

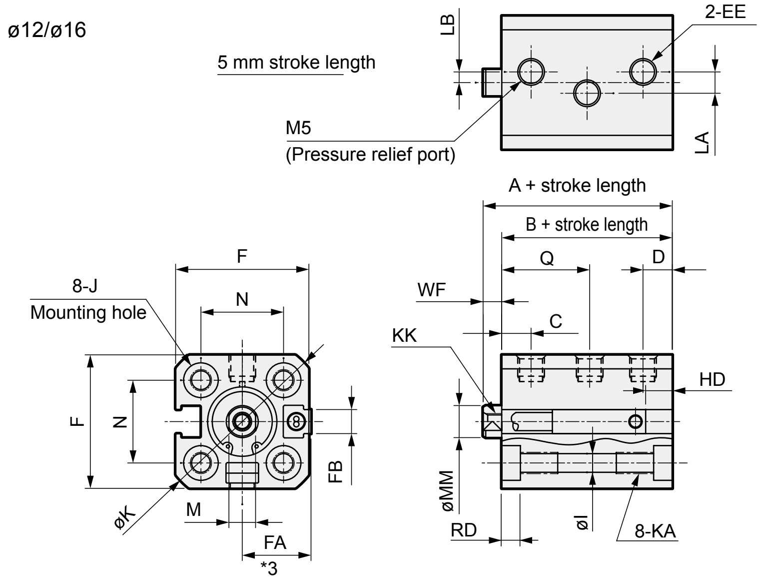
(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^2	1.13×10^2
	Pull	-	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	-	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3
ø125	Push	1.23×10^3	1.84×10^3	2.45×10^3	3.68×10^3	4.91×10^3	6.14×10^3	7.36×10^3	8.59×10^3	9.82×10^3	1.10×10^4	1.23×10^4
	Pull	1.13×10^3	1.70×10^3	2.26×10^3	3.39×10^3	4.52×10^3	5.65×10^3	6.79×10^3	7.92×10^3	9.05×10^3	1.02×10^4	1.13×10^4
ø140	Push	1.54×10^3	2.31×10^3	3.08×10^3	4.62×10^3	6.16×10^3	7.70×10^3	9.24×10^3	1.08×10^4	1.23×10^4	1.39×10^4	1.54×10^4
	Pull	1.44×10^3	2.16×10^3	2.89×10^3	4.33×10^3	5.77×10^3	7.22×10^3	8.66×10^3	1.01×10^4	1.15×10^4	1.30×10^4	1.44×10^4
ø160	Push	2.01×10^3	3.02×10^3	4.02×10^3	6.03×10^3	8.04×10^3	1.01×10^4	1.21×10^4	1.41×10^4	1.61×10^4	1.81×10^4	2.01×10^4
	Pull	1.88×10^3	2.83×10^3	3.77×10^3	5.65×10^3	7.54×10^3	9.42×10^3	1.13×10^4	1.32×10^4	1.51×10^4	1.70×10^4	1.88×10^4

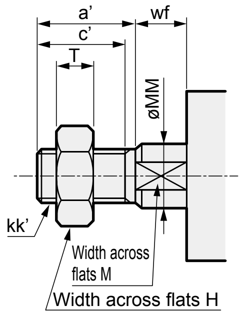
Dimensions

● SSD2-L-12 to 25-P7*/P5* (with switch/TOH/V, T5H/V, T2H/V, T3H/V)

ø12/ø16

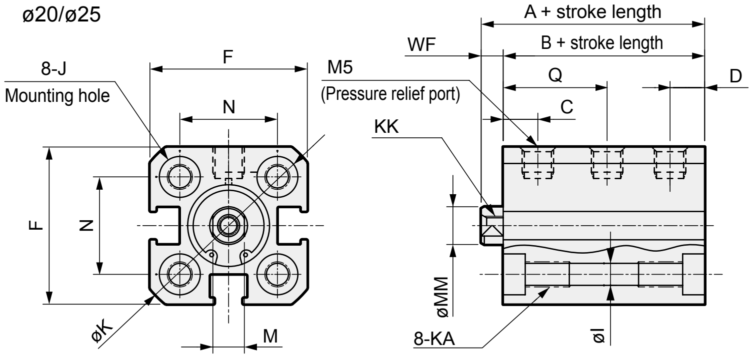


● Rod end male thread



● SSD2-12 to 25-P7*/P5* (without switch)

ø20/ø25



Code / Bore size (mm)	Without switch A *1	Without switch B *1	A	B	C	D	LA ≤5 St	LA Over 5 st	LB ≤5 St	LB Over 5 st	Q *4	EE	F	FA *3	FB	I	J	K	KA	KK
			Common dimensions with switch																	
ø12	30.5	27	35.5	32	5.5	5.5	4	0	2	0	16.5(16)	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6
ø16	30.5	27	35.5	32	5.5	5.5	6	0	0	0	16.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8
ø20	34	29.5	44	39.5	5.5	7	-	-	-	-	16.5	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7
ø25	37.5	32.5	47.5	42.5	7	8.5	-	-	-	-	18	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12

Code	Common dimensions with switch				Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
Bore size (mm)	M	MM	N	WF	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	5	6	15.5	3.5	4	9	4	9	6	11	-	-	-	-
ø16	6	8	20	3.5	2	11.5	2	11.5	3	13.5	-	-	-	-
ø20	8	10	25.5	4.5	6	14.5	6	14.5	8	16.5	10.5	19	9.5	18
ø25	10	12	28	5	8	16	8	16	10	18	12.5	20	11.5	19

Code	Proximity T2YH/T2YV T3YH/T3YV/T2JH/T2JV		Reed T8H/T8V		AC magnetic field proof T2YD/T2YDT/T1H/T1V	
Bore size (mm)	HD	RD	HD	RD	HD	RD
ø12	-	-	-	-	-	-
ø16	-	-	-	-	-	-
ø20	5	13.5	-	-	-	-
ø25	6.5	15	-	-	-	-

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

*3 : Dimensions in ( ) of FA are for the radial lead wire.

*4 : Dimensions in ( ) of code Q are when the value is for a 5 mm stroke without switch.

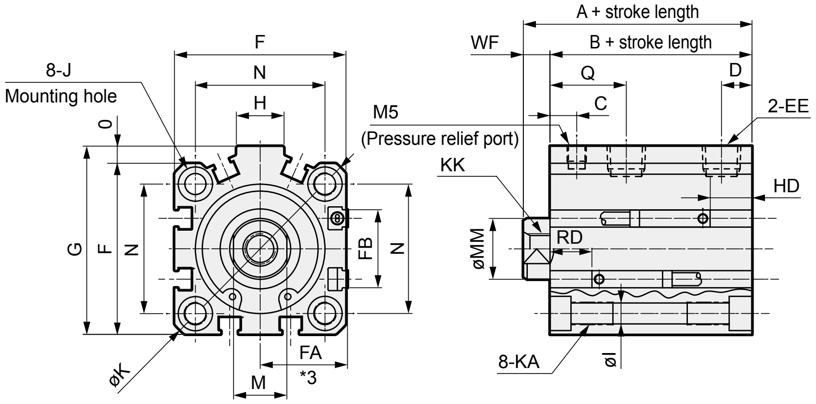
*5 : Only F type switch is available for the ø20 or ø25 piping port surface.

● Rod end male thread

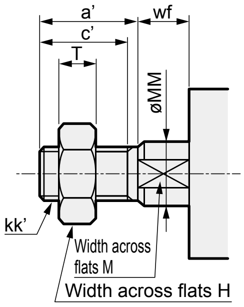
Code / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

Dimensions

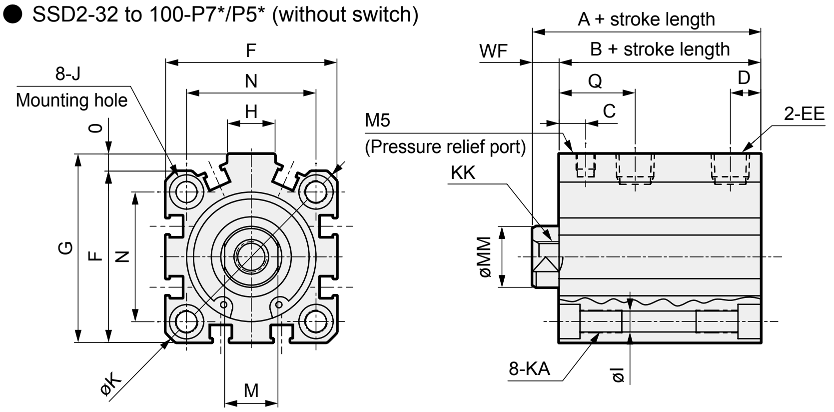
- SSD2-L-32 to 100-P7*/P5* (with switch/TOH/V, T5H/V, T2H/V, T3H/V)



- Rod end male thread



- SSD2-32 to 100-P7*/P5* (without switch)



Code	Without switch		Common dimensions with switch													
Bore size (mm)	A *1, *4	B *1, *4	A *1	B *1	C	D *6	Q	EE	F	FA *3	FB	G	H	I	J	K
ø32	40(50)	33(43)	50	43	7	8(5.5)	20	Rc1/8 *5	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60
ø40	46.5(56.5)	39.5(49.5)	56.5	49.5	8.5	8	21.5	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69
ø50	48.5(58.5)	40.5(50.5)	58.5	50.5	9.5	10.5(9.5)	25	Rc1/4 *5	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86
ø63	54(64)	46(56)	64	56	10	11	25.5	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face depth 9	103
ø80	68.5(78.5)	58.5(68.5)	78.5	68.5	11.5	13	30	Rc3/8	98	49.5(53)	28.5	104	31	10.5	17.5 spot face depth 11	132
ø100	80(90)	68(78)	90	78	15.5	15	35	Rc3/8	117	59(62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156

Code	Common dimensions with switch							Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size (mm)	KA	KK	M	MM	N	O	WF	HD	RD	HD	RD	HD	RD
ø32	M6 depth 11	M8 depth 13	14	16	34	4.5	7	4	19.5	4	19.5	6	21.5
ø40	M6 depth 11	M8 depth 13	14	16	40	5	7	7	22	7	22	8.5	23.5
ø50	M8 depth 13	M10 depth 15	17	20	50	7	8	7.5	22.5	7.5	22.5	9	24
ø63	M10 depth 25	M10 depth 15	17	20	60	7	8	12.5	23	12.5	23	14	24.5
ø80	M12 depth 28	M16 depth 21	22	25	77	6	10	17.5	25.5	17.5	25.5	19	27
ø100	M12 depth 28	M20 depth 27	27	30	94	6.5	12	23	29.5	23	29.5	24.5	31

Code	Proximity T2YH/T2YV T3YH, T3YV/T2JH/T2JV		Reed T8H/T8V		AC magnetic field proof T2YD, T2YDT/T1H/T1V	
Bore size (mm)	HD	RD	HD	RD	HD	RD
ø32	3.5	18.5	-	-	3.5	18.5
ø40	5.5	20.5	1	16	5.5	20.5
ø50	6	21	1.5	16.5	6	21
ø63	11	21.5	6.5	17	11	21.5
ø80	16	24	11.5	19.5	16	24
ø100	21.5	28	17	23.5	21.5	28

*1 : To calculate A+ stroke length or B+ stroke length when using custom stroke length, apply the next longer standard stroke length (instead of the custom stroke length) to the stroke length value. (Example) If the custom stroke length is 7 mm, apply the standard stroke length of 10 mm.

*2 : HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

*3 : Dimensions in ( ) of FA are for the radial lead wire.

*4 : Dimensions in ( ) of codes A and B are for stroke lengths of more than 50 mm.

*5 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5. The ø50 bore size with a 10 mm stroke and without a switch has a port size of Rc1/8.

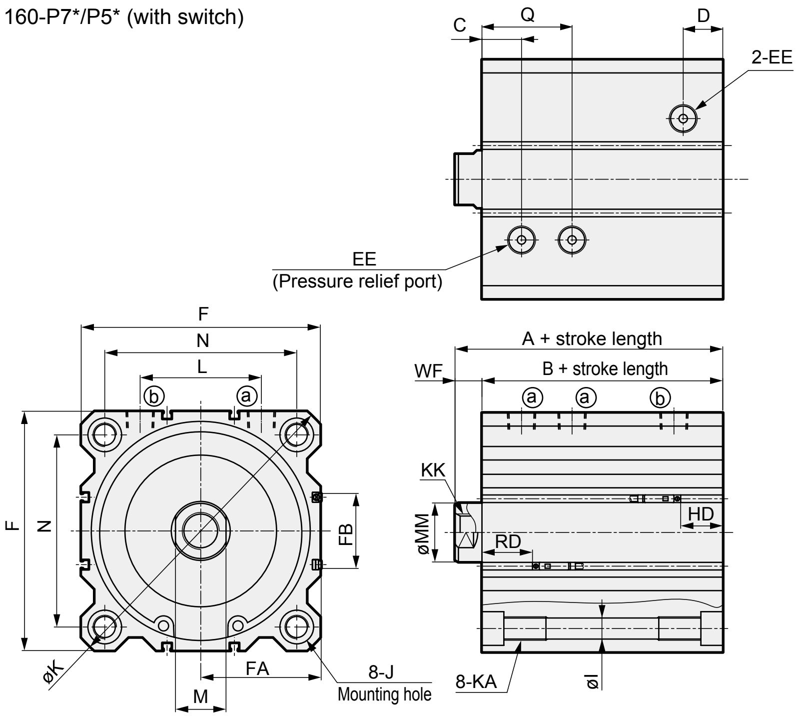
*6 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

- Rod end male thread

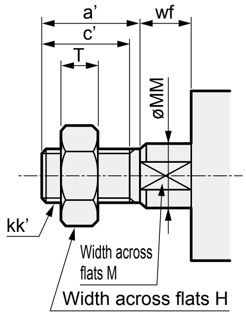
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

Dimensions (ø125 to ø160)

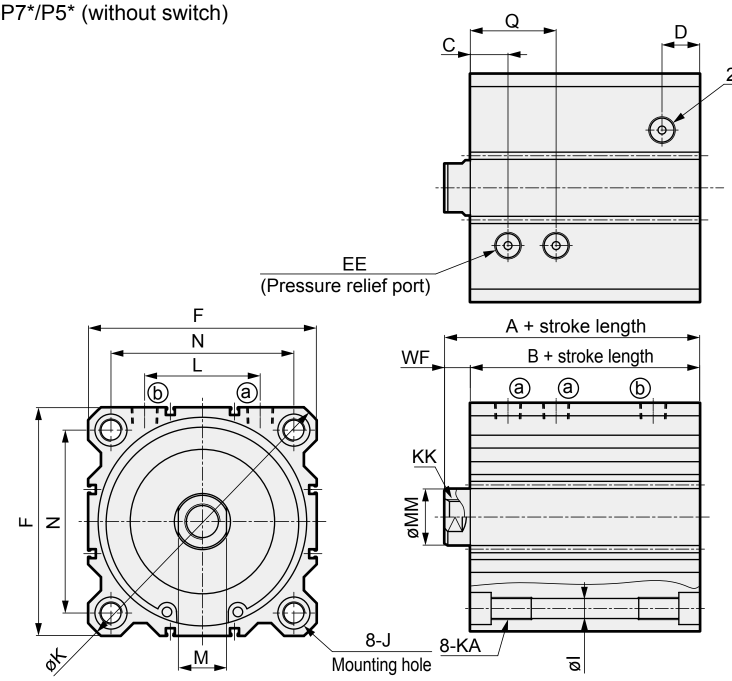
- SSD2-L-125 to 160-P7*/P5* (with switch)



- Rod end male thread



- SSD2-125 to 160-P7*/P5* (without switch)



Code	Common dimensions for types with/without switch																		
Bore size (mm)	A	B	C	D	EE	F	FA *2	FB	I	J	K	KA	KK	L	M	MM	N	Q	WF
ø125	118	102	23.5	23.5	Rc3/8	142	71.5(75)	44.5	12.5	20 spot face depth 13	190	M14 depth 25	M22 depth 30	72	30	35	114	53.5	16
ø140	128	112	27	27	Rc3/8	158	79.5(83)	44.5	12.5	20 spot face depth 13	210	M14 depth 25	M22 depth 30	80	30	35	128	57	16
ø160	143	126	30	30	Rc3/8	178	89.5(93)	48.5	14.7	23 spot face depth 15.2	238	M16 depth 28	M24 depth 33	90	36	40	144	65	17

Code	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2YH/T2YV, T3YH/T3YV	
Bore size (mm)	HD	RD	HD	RD	HD	RD
ø125	24.5	59.5	24.5	59.5	23	58
ø140	31	63	31	63	29.5	61.5
ø160	34	74	34	74	32.5	72.5

- *1 :Refer to page 1044 for HD , RD, and protruding dimensions of the 2-color display switches.
- *2 :Dimensions in ( ) of FA are for the radial lead wire.

Dimensions of rod end male thread

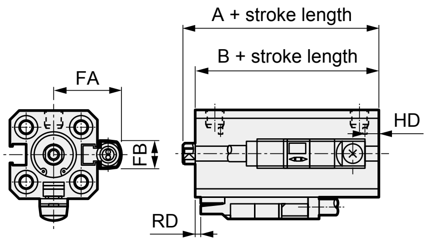
Code Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø125	45	42	46	M30×1.5	30	35	18	13
ø140	45	42	46	M30×1.5	30	35	18	13
ø160	50	47	55	M36×1.5	36	40	21	14

MEMO

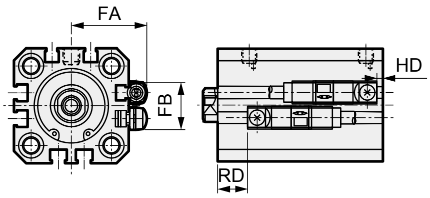
SSD2 Series common dimensions (with 2-color display, off-delay, AC magnetic field, T1* and T8* switches)

- SSD2-L-12 to 100 (with 2-color display, off-delay, T8* switches/T2YH/V, T3YH/V, T2JH/V, T8H/V)

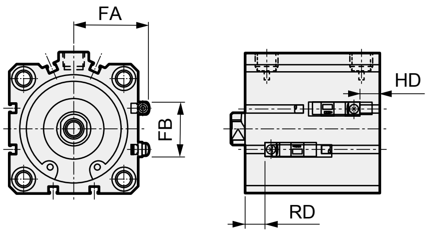
· ø12/ø16



· ø20/ø25



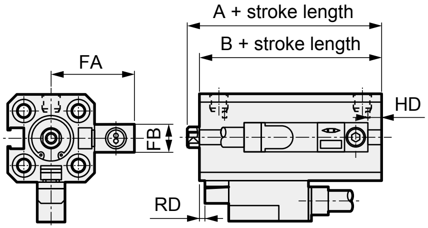
· ø32 to ø100



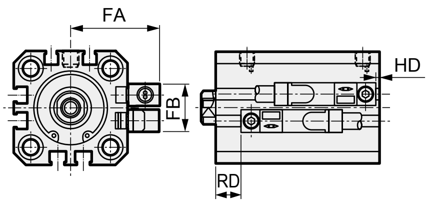
Code	FA	FB	T2YH/V, T3YH/V, T2JH/V												T8H/V									
			SSD2-L, XL,YL		SSD2-DL *1		SSD2 (Long) -L *2		SSD2-ML		SSD2-GL		SSD2-G5L		SSD2-L, XL,YL, GL		SSD2-DL *1		SSD2-ML		SSD2 (Long) -L *2		SSD2-G5L	
Bore size (mm)			RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD
ø12	18.8	8	-	-	1	3.5	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ø16	20.8	8	-	-	0.5	3.5	2.5	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ø20	24.3	16	6.5	2	5	8	14(8.5)	5.5(11)	10	1.5	16.5	2	-	-	-	-	0.5	3.5	-	-	9.5(4)	0(6.5)	-	-
ø25	26.3	17	8.5	3	8	10	17.5(10.5)	5(12.5)	13	1.5	18.5	3	-	-	-	-	1.5	5.5	-	-	13(6)	0(8)	-	-
ø32	28.8	24	8.5	3.5	7.5	9.5	16(8)	8(14.5)	17.5	2	18.5	3.5	19.5	3.5	-	-	3	5	-	-	11.5(4)	2.5(10)	-	-
ø40	32.3	31	10.5	5.5	10.5	15	24.5(15)	8(17.5)	10.5	5.5	10.5	5.5	20.5	5.5	6	1	6	10.5	6	1	20(10.5)	3.5(13)	16	1
ø50	38.3	32	11	6	11	15	24.5(16)	8.5(17.5)	11	6	11	6	21	6	6.5	1.5	6.5	10.5	6.5	1.5	19.5(11)	4(13)	16.5	1.5
ø63	44.8	32	11.5	11	11.5	16.5	18.5(13.5)	16(21.5)	11.5	11	11.5	11	21.5	11	7	6.5	7	12	7	6.5	13.5(8.5)	11.5(17)	17	6.5
ø80	55.3	32	14	16	14	21.5	22.5(17.5)	20.5(26.5)	-	-	14	16	28	16	9.5	11.5	9.5	17	-	-	17.5(12.5)	16(22)	23.5	11.5
ø100	64.8	32	18	21.5	18	27	26.5(21.5)	26.5(32)	-	-	18	21.5	33.5	21.5	13.5	17	13.5	22.5	-	-	21.5(16.5)	22(27.5)	29	17

- SSD2-L-12 to 100 (for AC magnetic field, with T1* switch, T2YD, T2YDT, T1H/V)

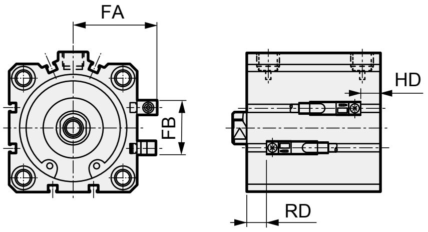
· ø12/ø16



· ø20/ø25



· ø32 to ø100



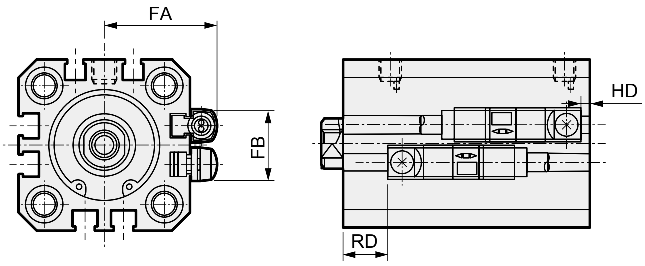
Code	FA	FB	SSD2-L, XL,YL		SSD2-DL *1		SSD2 (Long stroke) -L *2		SSD2-ML		SSD2-GL		SSD2-G5L	
Bore size (mm)			RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD
ø12	23.8	8	-	-	1.5	4	3	1	-	-	-	-	-	-
ø16	25.8	8	-	-	0.5	3.5	2.5	1.5	-	-	-	-	-	-
ø20	29.3	16	6.5	2	5	8	14(8.5)	5.5(11)	10	1.5	16.5	2	-	-
ø25	31.3	17	8.5	3	8	10	17.5(10.5)	5(12.5)	13	1.5	18.5	3	-	-
ø32	33.8	24	8.5	3.5	7.5	9.5	16(8)	8(14.5)	17.5	2	18.5	3.5	19.5	3.5
ø40	37.3	31	10.5	5.5	10.5	15	24.5(15)	8(17.5)	10.5	5.5	10.5	5.5	20.5	5.5
ø50	43.3	32	11	6	11	15	24.5(16)	8.5(17.5)	11	6	11	6	21	6
ø63	49.8	32	11.5	11	11.5	16.5	18.5(13.5)	16(21.5)	11.5	11	11.5	11	21.5	11
ø80	60.3	32	14	16	14	21.5	22.5(17.5)	20.5(26.5)	-	-	14	16	28	16
ø100	69.8	32	18	21.5	18	27	26.5(21.5)	26.5(32)	-	-	18	21.5	33.5	21.5

*1: The port surface with the mark is the “RD side”.
*2: Dimensions in ( ) are for stroke length over 100 for ø20, stroke length over 150 for ø25 to ø50, and stroke length over 200 for ø63 to ø100.

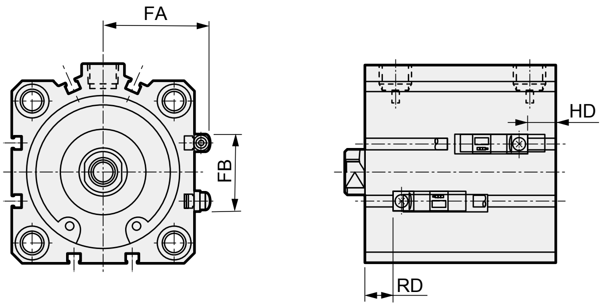
SSD2-K Series common dimensions (with 2-color display, off-delay, AC magnetic field, T1* and T8* switches)

- SSD2-KL-20 to 100 (with 2-color display, off-delay, T8* switches/T2YH/V, T3YH/V, T2JH/V, T8H/V)

· ø20/ø25



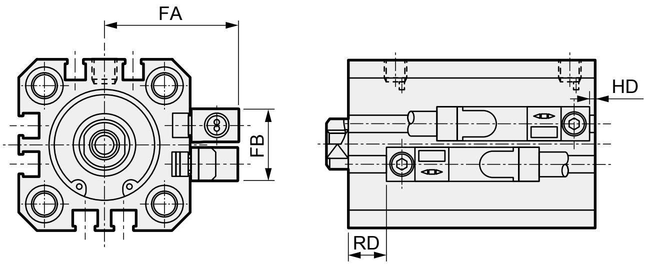
· ø32 to ø100



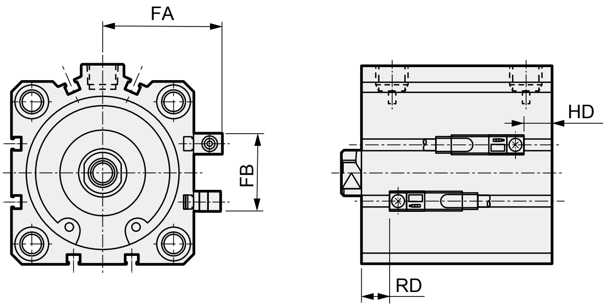
Code / Bore size (mm)	FA	FB	T2YH/V, T3YH/V, T2JH/V		T8H/V	
			RD	HD	RD	HD
ø20	24.3	16	8	5.5	-	-
ø25	26.3	17	11.5	5	-	-
ø32	28.8	24	14	8	-	-
ø40	32.3	31	18	8	13.5	3.5
ø50	38.3	32	18.5	8.5	14	4
ø63	44.8	32	16.5	16	12	11.5
ø80	55.3	32	19	20.5	14.5	16
ø100	64.8	32	23	26.5	18.5	22

- SSD2-KL-20 to 100 (for AC magnetic field, with T1* switch, T2YD, T2YDT, T1H/V)

· ø20/ø25



· ø32 to ø100



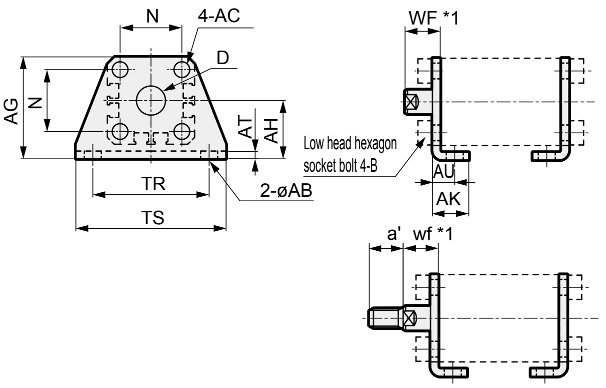
Code / Bore size (mm)	FA	FB	RD	HD
ø20	29.3	16	8	5.5
ø25	31.3	17	11.5	5
ø32	33.8	24	14	8
ø40	37.3	31	18	8
ø50	43.3	32	18.5	8.5
ø63	49.8	32	16.5	16
ø80	60.3	32	19	20.5
ø100	60.8	32	23	26.5

Dimensions (Mounting bracket: LB)

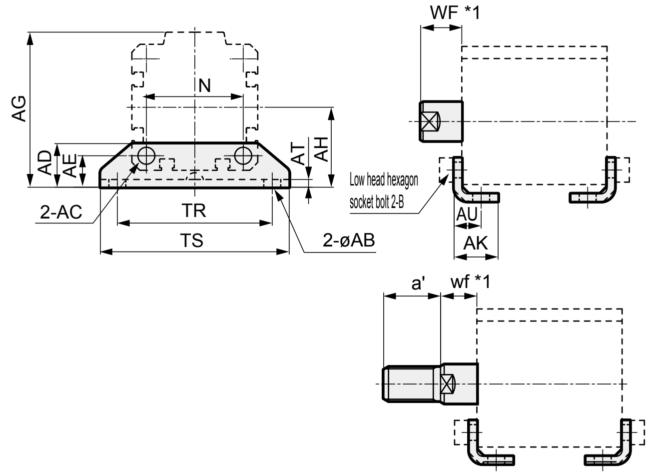
- Axial foot (LB)

Material: Steel
Zinc chromate treatment

· ø12 to ø25



· ø32 to ø100



*1: Hex socket mounting bolts are included.

Model No.	Bore size	AB	AC	AD	AE	AG	AH	AK	AT	AU	B	D	N	TR	TS	WF	wf	a'	Weight (g)
SSD2-LB-12	ø12	5	4.5	-	-	29.5	17	12.5	2	8	M4×10	8	15.5	34	44	13.5	13.5	10.5	51
SSD2-LB-16	ø16	5	4.5	-	-	33.5	19	13	2	8	M4×10	10	20	38	48	13.5	13.5	12	61
SSD2-LB-20	ø20	7	6.5	-	-	42	24	15	3.2	9.2	M6×16	12	25.5	48	62	14.5	14.5	14	161
SSD2-LB-25	ø25	7	6.5	-	-	46	26	16.5	3.2	10.7	M6×16	14	28	52	66	15	15	17.5	176
SSD2-LB-32	ø32	7	7	18.5	13	57	30	17	3.2	11.2	M6×16	-	34	57	71	17	15	23.5	107
SSD2-LB-40	ø40	7	7	18	13	64	33	18.2	3.2	11.2	M6×16	-	40	64	78	17	15	23.5	121
SSD2-LB-50	ø50	9	9	22	14	78	39	22.7	3.2	14.7	M8×20	-	50	79	95	18	15	28.5	201
SSD2-LB-63	ø63	11	11	26	16	91.5	46	25.2	3.2	16.2	M10×25	-	60	95	113	18	15	28.5	314
SSD2-LB-80	ø80	13	13	31.5	20.5	114	59	30.5	4.5	19.5	M12×40	-	77	118	140	20	18	35.5	678
SSD2-LB-100	ø100	13	13	35	24	136	71	35.5	6	23	M12×40	-	94	137	162	22	18	35.5	1198

*1: The WF/wf dimension of the cylinder for LB is set 10 mm longer than that of standard products. Contact CKD for the cylinder model No. when ordering individual cylinders and LB brackets.

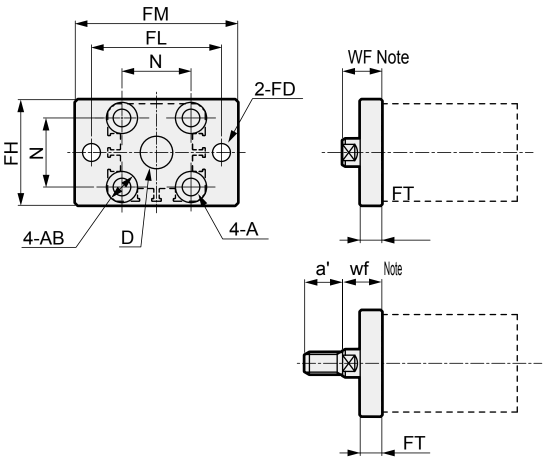
*2: The mounting brackets for SSD2 are the same dimensions as the compact mounting brackets for SSD.
Check the General Catalog (CB-029SA) in order to avoid mistakes.
(Example: SSD2-LB-32 is the same dimensions as SSD-LB2-32.)

Dimensions (Mounting bracket: FA, FB)

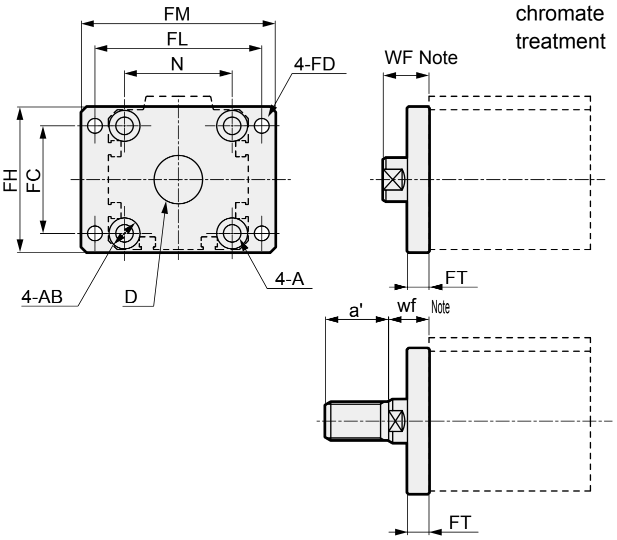
● Rod side flange (FA)

Material: Steel Zinc chromate treatment

· ø12 to ø25



· ø32 to ø100



*1: Mounting bolts are included.

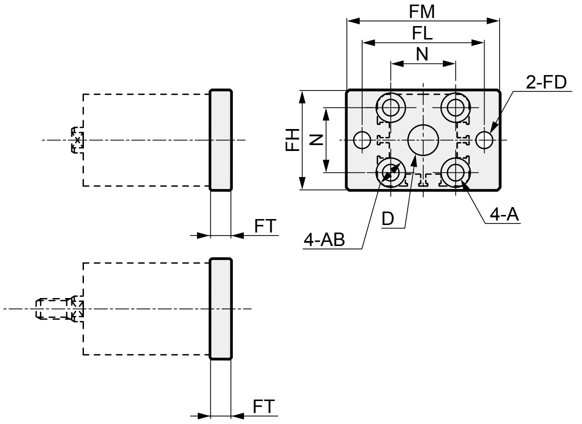
Model No.	Bore size	FC	FD	FH	FL	FM	FT	A	AB	D	N	WF	wf	a'	Weight (g)
SSD2-FA-12	ø12	-	4.5	25	45	55	5.5	4.5	8.5 spot face depth 2.7	8	15.5	13.5	13.5	10.5	54
SSD2-FA-16	ø16	-	4.5	30	45	55	5.5	4.5	8.5 spot face depth 2.7	10	20	13.5	13.5	12	64
SSD2-FA-20	ø20	-	6.6	39	48	60	8	6.5	11.5 spot face depth 3.8	12	25.5	14.5	14.5	14	129
SSD2-FA-25	ø25	-	6.6	42	52	64	8	6.5	11.5 spot face depth 3.8	14	28	15	15	17.5	148
SSD2-FA-32	ø32	34	5.5	48	56	65	8	6.5	11.5 spot face depth 3.8	22	34	17	15	23.5	167
SSD2-FA-40	ø40	40	5.5	54	62	72	8	6.5	11.5 spot face depth 3.8	28	40	17	15	23.5	215
SSD2-FA-50	ø50	50	6.6	67	76	89	9	9	15 spot face depth 5	35	50	18	15	28.5	387
SSD2-FA-63	ø63	60	9	80	92	108	9	11	18 spot face depth 6	35	60	18	15	28.5	573
SSD2-FA-80	ø80	77	11	99	116	134	11	13	19 spot face depth 7.5	43	77	20	18	35.5	1132
SSD2-FA-100	ø100	94	11	117	136	154	11	13	19 spot face depth 7.5	59	94	22	18	35.5	1522

Note: The WF/wf dimension of the cylinder for FA is set 10 mm longer than that of standard products. Contact CKD for the cylinder model No. when ordering individual cylinders and FA brackets.

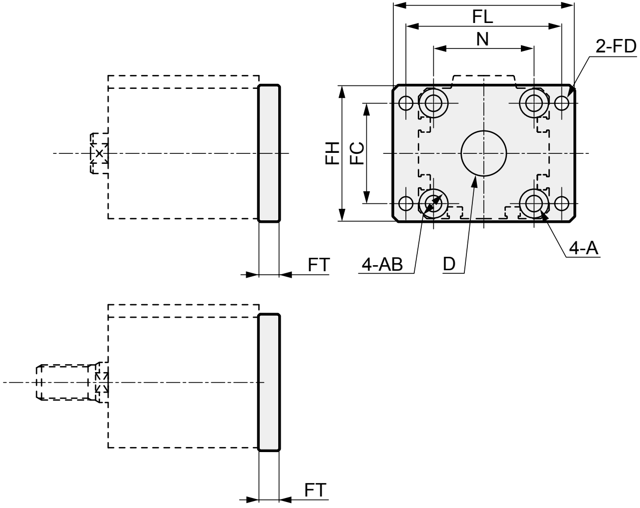
● Head side flange (FB)

Material: Steel, Zinc chromate treatment

· ø12 to ø25



· ø32 to ø100



*1: Mounting bolts are included.

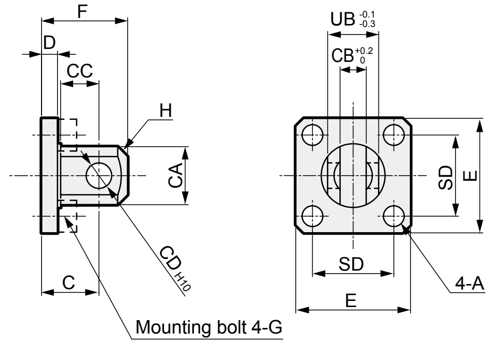
Model No.	Bore size	FC	FD	FH	FL	FM	FT	A	AB	D	N	Weight (g)
SSD2-FB-12	ø12	-	4.5	25	45	55	5.5	4.5	8.5 spot face depth 2.7	8	15.5	54
SSD2-FB-16	ø16	-	4.5	30	45	55	5.5	4.5	8.5 spot face depth 2.7	10	20	64
SSD2-FB-20	ø20	-	6.6	39	48	60	8	6.5	11.5 spot face depth 3.8	12	25.5	129
SSD2-FB-25	ø25	-	6.6	42	52	64	8	6.5	11.5 spot face depth 3.8	14	28	148
SSD2-FB-32	ø32	34	5.5	48	56	65	8	6.5	11.5 spot face depth 3.8	22	34	167
SSD2-FB-40	ø40	40	5.5	54	62	72	8	6.5	11.5 spot face depth 3.8	28	40	215
SSD2-FB-50	ø50	50	6.6	67	76	89	9	9	15 spot face depth 5	35	50	387
SSD2-FB-63	ø63	60	9	80	92	108	9	11	18 spot face depth 6	35	60	573
SSD2-FB-80	ø80	77	11	99	116	134	11	13	19 spot face depth 7.5	43	77	1132
SSD2-FB-100	ø100	94	11	117	136	154	11	13	19 spot face depth 7.5	59	94	1522

Dimensions (Mounting bracket: CB)

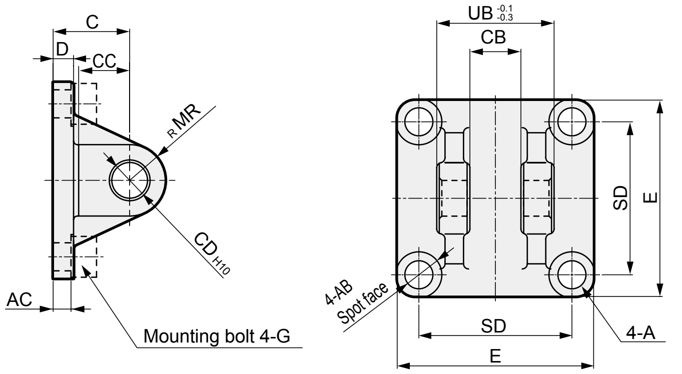
- Clevis bracket (CB)

Material: Cast iron
Painting

· ø12 to ø25



· ø32 to ø100



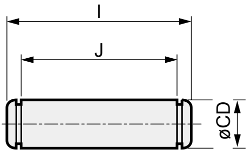
*1:Hex socket mounting bolts, pins, and snap rings are included.

Model No.	Bore size	A	AB	AC	C	CA	CB	CC	CD	D	E	F	G	H	MR	SD	UB	Weight (g)
SSD2-CB-12	ø12	4.5	-	-	14	12	$5.2^{+0.2}_{0}$	7	5	4	25	20	M4×12	C1.5	-	15.5	10	28
SSD2-CB-16	ø16	4.5	-	-	15	15	$6.6^{+0.3}_{0}$	8	5	5	29	21	M4×12	C2	-	20	12	43
SSD2-CB-20	ø20	6.5	-	-	18	20	$8.2^{+0.2}_{0}$	12	8	5	36	27	M6×16	C4	-	25.5	16	84
SSD2-CB-25	ø25	6.5	-	-	20	24	$10.2^{+0.2}_{0}$	14	10	5	40	30	M6×16	C5	-	28	20	110
SSD2-CB-32	ø32	6.6	13	4.5	20	-	$18.2^{+0.2}_{0}$	14	10	5	45	30	M6×16	-	10	34	36	159
SSD2-CB-40	ø40	6.6	14	5	22	-	$18.2^{+0.2}_{0}$	14	10	6	52	32	M6×16	-	10	40	36	207
SSD2-CB-50	ø50	9	16	6	28	-	$22.2^{+0.2}_{0}$	20	14	7	64	42	M8×20	-	14	50	44	420
SSD2-CB-63	ø63	11	18	7	30	-	$22.2^{+0.2}_{0}$	20	14	8	77	44	M10×25	-	14	60	44	605
SSD2-CB-80	ø80	13.5	23	9	38	-	$28.2^{+0.2}_{0}$	27	18	10	98	56	M12×40	-	18	77	56	1222
SSD2-CB-100	ø100	13.5	20	12	45	-	$32.2^{+0.2}_{0}$	31	22	13	117	67	M12×40	-	22	94	64	2031

*1: The mounting brackets for SSD2 are the same dimensions as the compact mounting brackets for SSD.
Check the General Catalog (CB-029SA) in order to avoid mistakes.
(Example: SSD2-CB-32 is the same dimensions as SSD-CB2-32.)

- Clevis bracket (CB) included pin dimensions table (P)

Material: Steel
Zinc
chromate
treatment



Model No.	Applicable bore size	I	J	CD	Applicable snap ring	Weight (g)
SSD2-P-12	ø12	15.2	10.2	$5^{-0.01}_{-0.028}$	E type 4	2.4
SSD2-P-16	ø16	18	13	$5^{-0.01}_{-0.028}$	E type 4	2.8
SSD2-P-20	ø20	21	16.2	$8^{-0.025}_{-0.047}$	C type for shaft 8	8.2
SSD2-P-25	ø25	25.6	20.2	$10^{-0.025}_{-0.047}$	C type for shaft 10	16
SSD2-P-32	ø32/ø40	41.6	36.2	$10^{-0.025}_{-0.047}$	C type for shaft 10	25
SSD2-P-50	ø50/ø63	50.6	44.2	$14^{-0.032}_{-0.059}$	C type for shaft 14	60
SSD2-P-80	ø80	64	56.2	$18^{-0.032}_{-0.059}$	C type for shaft 18	124
SSD2-P-100	ø100	72	64.2	$22^{-0.040}_{-0.083}$	C type for shaft 22	213

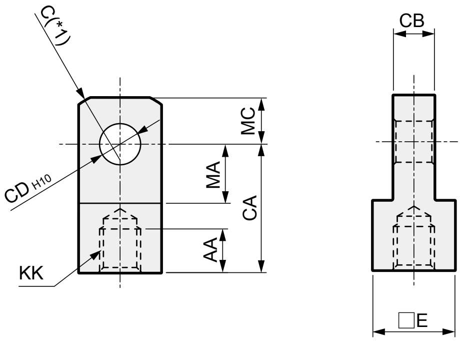
Dimensions (Accessory: I, Y)

CAD

● Rod eye (I)

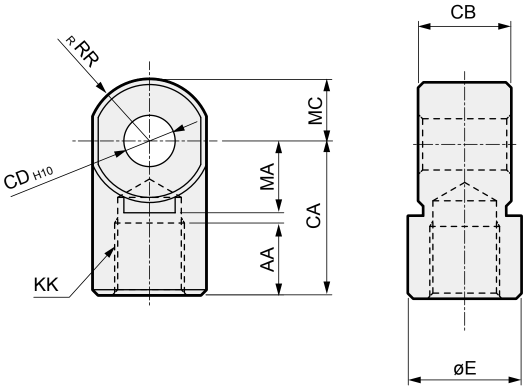
· ø12 to ø25

Material: Steel
Zinc chromate treatment



· ø32 to ø100

Material: Cast iron
Painting



*1: ø20/25 are SR RR

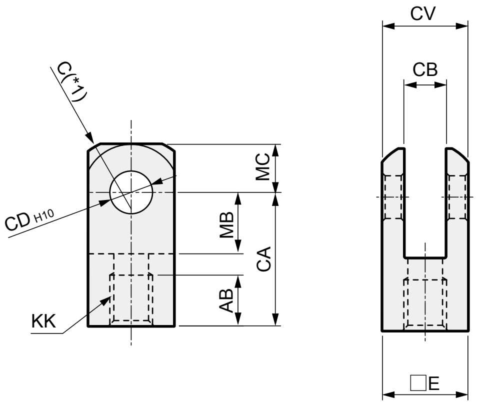
Model No.	Bore size	AA	CA	CB	CD	E	KK	MA	C	RR	MC	Weight (g)
SSD2-I-12	ø12	6	16	$5^{-0.2}_{-0.4}$	5	□10	M5×0.8	7	2	-	5.5	9
SSD2-I-16	ø16	8	25	$6.5^{-0.2}_{-0.4}$	5	□12	M6×1	14	2	-	7	21
SSD2-I-20	ø20	8.5	25	$8^{-0.2}_{-0.4}$	8	□16	M8×1.25	11.5	-	13.4	9	38
SSD2-I-25	ø25	10.5	30	$10^{-0.2}_{-0.4}$	10	□20	M10×1.25	14	-	17.1	11	71
SSD2-I-32	ø32/ø40	14	30	$18^{-0.3}_{-0.5}$	10	ø22	M14×1.5	14	-	12	12	74
SSD2-I-50	ø50/ø63	18	40	$22^{-0.3}_{-0.5}$	14	ø28	M18×1.5	20	-	16	16	155
SSD2-I-80	ø80	21	50	$28^{-0.3}_{-0.5}$	18	ø38	M22×1.5	27	-	21	21	380
SSD2-I-100	ø100	21	55	$32^{-0.3}_{-0.5}$	22	ø44	M26×1.5	31	-	24	24	550

*1: The accessories for SSD2 are the same dimensions as the compact accessories for SSD.
Check the General Catalog (CB-029SA) in order to avoid mistakes.
(Example: SSD2-I-32 is the same dimensions as SSD-I2-32.)

● Rod clevis (Y)

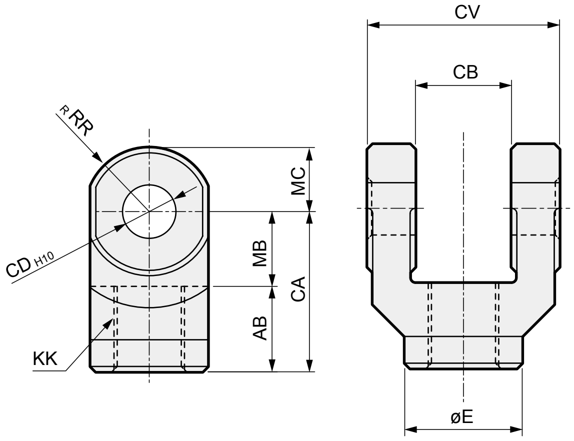
· ø12 to ø25

Material: Steel
Zinc chromate treatment



· ø32 to ø100

Material: Cast iron
Painting



*1: ø20/25 are SR RR
*2: A pin (including C ring) is included.
*3: The pins for the rod clevis are common with the pins for the clevis brackets.

Model No.	Bore size	AB	CA	CB	CD	CV	E	KK	MB	C	RR	MC	Weight (g)
SSD2-Y-12	ø12	6	16	$5^{+0.4}_{+0.2}$	5	10	□10	M5×0.8	7	2	-	5.5	12
SSD2-Y-16	ø16	11	21	$6.5^{+0.4}_{+0.2}$	5	12	□12	M6×1	10	2	-	7	20
SSD2-Y-20	ø20	13.5	25	$8^{+0.4}_{+0.2}$	8	16	□16	M8×1.25	11.5	-	13.4	9	45
SSD2-Y-25	ø25	16	30	$10^{+0.4}_{+0.2}$	10	20	□20	M10×1.25	14	-	17.1	11	84
SSD2-Y-32	ø32/ø40	16	30	$18^{+0.5}_{+0.3}$	10	36	ø22	M14×1.5	14	-	12	12	120
SSD2-Y-50	ø50/ø63	20	40	$22^{+0.5}_{+0.3}$	14	44	ø28	M18×1.5	20	-	16	16	257
SSD2-Y-80	ø80	23	50	$28^{+0.5}_{+0.3}$	18	56	ø38	M22×1.5	27	-	21	21	589
SSD2-Y-100	ø100	24	55	$32^{+0.5}_{+0.3}$	22	64	ø44	M26×1.5	31	-	24	24	933

*1: The accessories for SSD2 are the same dimensions as the compact accessories for SSD.
Check the General Catalog (CB-029SA) in order to avoid mistakes.
(Example: SSD2-Y-32 is the same dimensions as SSD-Y2-32.)