

Compact cylinder double acting/rotation-stop

# SSD2-M Series

- Bore size:  $\phi 12/\phi 16/\phi 20/\phi 25$   
 $\phi 32/\phi 40/\phi 50/\phi 63$



## Specifications

1 MPa = 10 bar

Item	SSD2-M SSD2-ML (with switch)										
	mm		$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	
Bore size	mm		$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	
Actuation	Double acting										
Working fluid	Compressed air										
Max. working pressure	1.0 ( $\approx 150$ psi, 10 bar)										
Min. working pressure	0.1 ( $\approx 15$ psi, 1 bar) 0.05 ( $\approx 7.3$ psi)										
Proof pressure	1.6 ( $\approx 230$ psi, 16 bar)										
Ambient temperature	$^{\circ}\text{C}$ -10 ( $14^{\circ}\text{F}$ ) to 60 ( $140^{\circ}\text{F}$ ) (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)	$\pm 1^{\circ}$			$\pm 0.7^{\circ}$			$\pm 0.8^{\circ}$				
Allowable absorbed energy	J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12		

\*1: The  $\phi 32$  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

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\phi 12$	5/10/15/20	30	1
$\phi 16$	25/30		
$\phi 20$	5/10/15/20/25	50	
$\phi 25$	30/35/40/45/50		
$\phi 32$	5/10/15/20/25/30/	100	
$\phi 40$	35/40/45/50/75/100		
$\phi 50$	10/15/20/25/30		
$\phi 63$	35/40/45/50/75/100		

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

## Min. stroke with switch (2 switches)

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
$\phi 12$	10(5)	5
$\phi 16$		
$\phi 20$	5	
$\phi 25$		
$\phi 32$		
$\phi 40$		
$\phi 50$		
$\phi 63$		

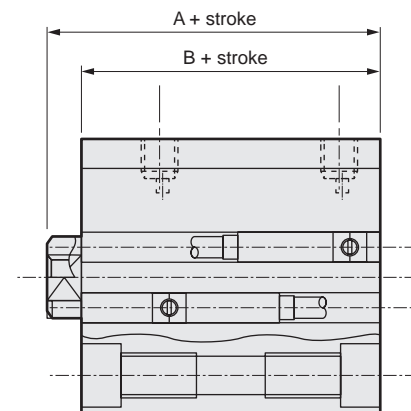
\*1: Less than 10 mm with the 2-color LED, off-delay, AC magnetic field proof, T1\* or T8\* switch is not available.

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

## Custom stroke

### ● SSD2-M Series

Item	Standard products	
	Standard stroke body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke body to adjust the stroke 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. B + stroke is 72 mm.	



### Switch specifications (F-switch)

● 1-color/2-color LED

Item	2-wire proximity		3-wire proximity		2-wire proximity		3-wire proximity			
	F2S		F3S		F2H/F2V		F2YH/F2YV		F3H/F3V	F3PH/F3PV (made to order)
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	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 LED/for AC magnetic field proof

Item	2-wire proximity		2-wire proximity				3-wire proximity				2-wire reed				2-wire proximity		
	T1H/T1V	T2H/T2V	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		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	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)	No 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-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 (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
	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	1.02x10 <sup>2</sup>	1.13x10 <sup>2</sup>
	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	1.01x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.61x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.01x10 <sup>2</sup>
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.36x10 <sup>2</sup>	1.51x10 <sup>2</sup>
ø20	Push	-	31.4	47.1	62.8	94.2	1.26x10 <sup>2</sup>	1.57x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.20x10 <sup>2</sup>	2.51x10 <sup>2</sup>	2.83x10 <sup>2</sup>	3.14x10 <sup>2</sup>
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.65x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.12x10 <sup>2</sup>	2.36x10 <sup>2</sup>
ø25	Push	-	49.1	73.6	98.2	1.47x10 <sup>2</sup>	1.96x10 <sup>2</sup>	2.45x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.44x10 <sup>2</sup>	3.93x10 <sup>2</sup>	4.42x10 <sup>2</sup>	4.91x10 <sup>2</sup>
	Pull	-	37.8	56.7	75.6	1.13x10 <sup>2</sup>	1.51x10 <sup>2</sup>	1.89x10 <sup>2</sup>	2.27x10 <sup>2</sup>	2.64x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.40x10 <sup>2</sup>	3.78x10 <sup>2</sup>
ø32	Push	-	80.4	1.21x10 <sup>2</sup>	1.61x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.22x10 <sup>2</sup>	4.02x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.63x10 <sup>2</sup>	6.43x10 <sup>2</sup>	7.24x10 <sup>2</sup>	8.04x10 <sup>2</sup>
	Pull	-	60.3	90.5	1.21x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.62x10 <sup>2</sup>	4.22x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.43x10 <sup>2</sup>	6.03x10 <sup>2</sup>
ø40	Push	-	1.26x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.51x10 <sup>2</sup>	3.77x10 <sup>2</sup>	5.03x10 <sup>2</sup>	6.28x10 <sup>2</sup>	7.54x10 <sup>2</sup>	8.80x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.13x10 <sup>3</sup>	1.26x10 <sup>3</sup>
	Pull	-	1.06x10 <sup>2</sup>	1.58x10 <sup>2</sup>	2.11x10 <sup>2</sup>	3.17x10 <sup>2</sup>	4.22x10 <sup>2</sup>	5.28x10 <sup>2</sup>	6.33x10 <sup>2</sup>	7.39x10 <sup>2</sup>	8.44x10 <sup>2</sup>	9.50x10 <sup>2</sup>	1.06x10 <sup>3</sup>
ø50	Push	-	1.96x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.93x10 <sup>2</sup>	5.89x10 <sup>2</sup>	7.85x10 <sup>2</sup>	9.82x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.37x10 <sup>3</sup>	1.57x10 <sup>3</sup>	1.77x10 <sup>3</sup>	1.96x10 <sup>3</sup>
	Pull	-	1.65x10 <sup>2</sup>	2.47x10 <sup>2</sup>	3.30x10 <sup>2</sup>	4.95x10 <sup>2</sup>	6.60x10 <sup>2</sup>	8.25x10 <sup>2</sup>	9.90x10 <sup>2</sup>	1.15x10 <sup>3</sup>	1.32x10 <sup>3</sup>	1.48x10 <sup>3</sup>	1.65x10 <sup>3</sup>
ø63	Push	-	1.56x10 <sup>2</sup>	3.12x10 <sup>2</sup>	4.68x10 <sup>2</sup>	6.23x10 <sup>2</sup>	9.35x10 <sup>2</sup>	1.25x10 <sup>3</sup>	1.56x10 <sup>3</sup>	1.87x10 <sup>3</sup>	2.18x10 <sup>3</sup>	2.49x10 <sup>3</sup>	2.81x10 <sup>3</sup>
	Pull	-	1.40x10 <sup>2</sup>	2.80x10 <sup>2</sup>	4.20x10 <sup>2</sup>	5.61x10 <sup>2</sup>	8.41x10 <sup>2</sup>	1.12x10 <sup>3</sup>	1.40x10 <sup>3</sup>	1.68x10 <sup>3</sup>	1.96x10 <sup>3</sup>	2.24x10 <sup>3</sup>	2.52x10 <sup>3</sup>

# SSD2-M Series

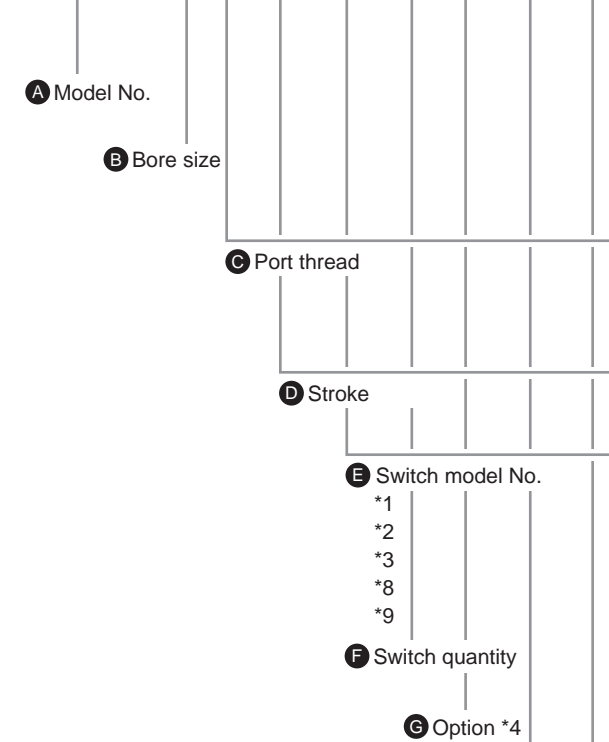
## How to order

No 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



## ⚠ 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 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-switch with L type lead wire on ø20 models cannot be selected on strokes 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-switch cannot be selected.

[Example of model No.]

**SSD2-ML-12-5-T0H-R-N-LB-I**

Model: Compact cylinder rotation-stop

- B** Bore size : ø12 mm
- C** Port thread : Rc thread
- D** Stroke : 5 mm
- E** Switch model No. : Reed T0H switch
- F** Switch quantity : 1 on rod side
- G** Option : Rod end male thread
- H** Mounting bracket : Axial foot
- I** Accessory : Rod eye

**H** Mounting bracket

\*5

\*6

**I** Accessory

\*7

Code	Description
<b>A Model No.</b>	
SSD2-M	Double acting/rotation-stop
SSD2-ML	Double acting/rotation-stop/with switch

<b>B Bore size (mm)</b>	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63

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

**D Stroke (mm)**  
Refer to the stroke table on the following page.

<b>E Switch model No.</b>																	
Lead wire	Lead wire	Contact	Voltage		Indicator	Lead wire	Bore size										
			AC	DC			12	16	20	25	32	40	50	63			
-	F2S*	Proximity	●	●	1-color LED	2-wire			●	●							
-	F3S*		●	●		3-wire			●	●							
F2H*	F2V*		●	●		2-wire			●	●							
F3H*	F3V*	Proximity	●	●	1-color LED (PNP output) (custom)	3-wire			●	●							
F3PH*	F3PV*		●	●		3-wire			●	●							
F2YH*	F2YV*		●	●		2-wire			●	●							
F3YH*	F3YV*	Reed	●	●	2-color LED	3-wire			●	●							
T0H*	T0V*		●	●		1-color LED	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		●	●		No indicator lamp	2-wire	●	●	●	●	●	●	●	●	●	●
T8H*	T8V*	Proximity	●	●	1-color LED	2-wire								●	●		
T1H*	T1V*		●	●		1-color LED	2-wire			●	●	●	●	●	●	●	●
T2H*	T2V*		●	●		1-color LED	2-wire	●	●	●	●	●	●	●	●	●	●
T3H*	T3V*	Proximity	●	●	1-color LED (PNP output)	3-wire	●	●	●	●	●	●	●	●	●	●	
T3PH*	T3PV*		●	●		2-wire	●	●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*		●	●		2-wire	●	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*	Proximity	●	●	2-color LED	2-wire			●	●	●	●	●	●	●	●	
T3WH*	T3WV*		●	●		3-wire	●	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*		●	●		2-wire			●	●	●	●	●	●	●	●	●
T2YD*	-	Reed	●	●	2-color LED	2-wire			●	●	●	●	●	●	●	●	
T2YD*	-		●	●		AC magnetic field	2-wire			●	●	●	●	●	●	●	●
T2JH*	T2JV*		●	●		1-color LED off-delay	2-wire			●	●	●	●	●	●	●	●

### \* Lead wire length

Blank	1 m (standard)
3	3 m (option)
5	5 m (option) <span style="float: right;">*11</span>

<b>F Switch quantity</b>	
R	1 on rod side
H	1 on head side
D	2

<b>G Option</b>	
Blank	Rod end female thread
N	Rod end male thread
M *4	Piston rod material (stainless steel) (made to order (ø32 to ø63))

<b>H Mounting bracket</b>	
Blank	Without mounting bracket
LB	Axial foot
CB	Clevis bracket (pin and snap ring included)
FA	Rod side flange
FB	Head side flange

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

### [Stroke table]

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

\*1: Less than 5 mm for 1-color LED switch and less than 10 mm for the 2-color LED, off-delay, AC magnetic field proof, T1\* or T8\* switch are not available. Refer to page 910 for the min. stroke with switch.

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

### How to order switch



Switch model No.  
(Item ⑤ on page 912)

### How to order mounting bracket

Bore size (mm)	ø12	ø16	ø20	ø25	ø32	ø40	ø50
<b>Mounting bracket</b>							
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
<b>Bore size (mm)</b>	<b>ø63</b>						
<b>Mounting bracket</b>							
Foot (LB)	SSD2-LB-63						
Flange (FA/FB)	SSD2-FA-63						
Clevis bracket (CB)	SSD2-CB-63						

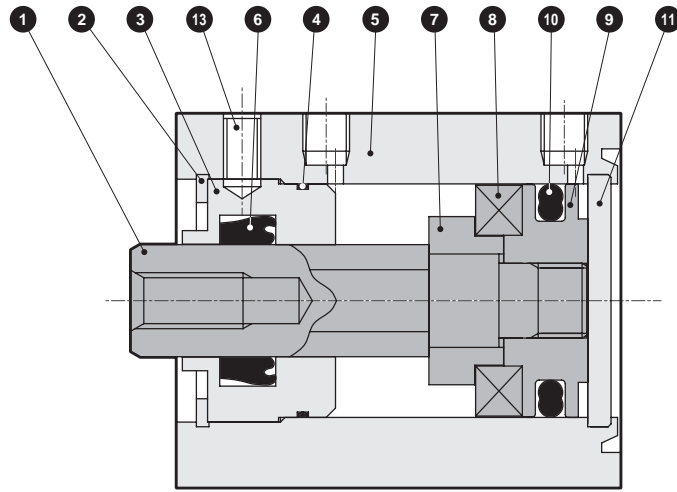
\*1: The foot mounting bracket is provided as 2 pcs./set.

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

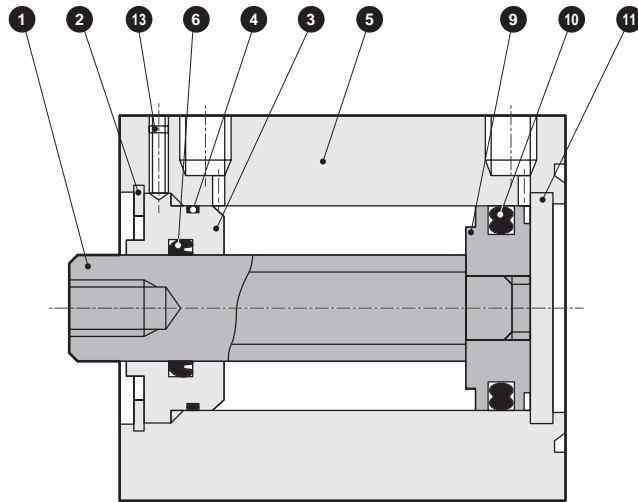
# SSD2-M Series

## 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)



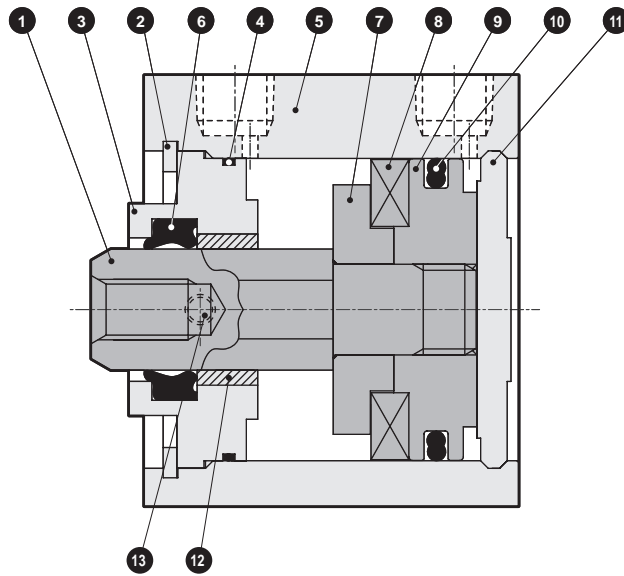
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Stainless steel		8	Magnet	Plastic	
2	C-snap ring	Steel	Zinc phosphate	9	Piston	Aluminum alloy	Chromate
3	Rod metal	Special aluminum	Alumite	10	Piston packing	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		11	Cover	Stainless 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

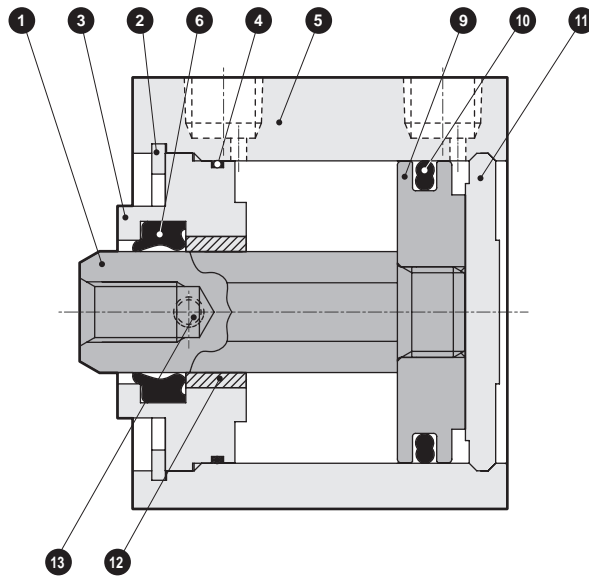
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-M-12K	4 6 10
ø16	SSD2-M-16K	
ø20	SSD2-M-20K	
ø25	SSD2-M-25K	

### 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	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	ø32 to ø50: Special aluminum ø63: Aluminum alloy	Alumite	10	Piston packing	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		11	Cover	Aluminum alloy	Alumite
5	Body	Aluminum alloy	Hard alumite	12	Bush	Oil impregnated bearing alloy	
6	Rod packing	Nitrile rubber		13	Hexagon socket set screw	Steel	
7	Spacer	Aluminum alloy	Chromate				

### 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	

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-M Series

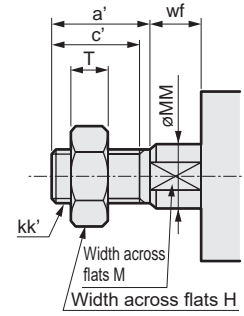
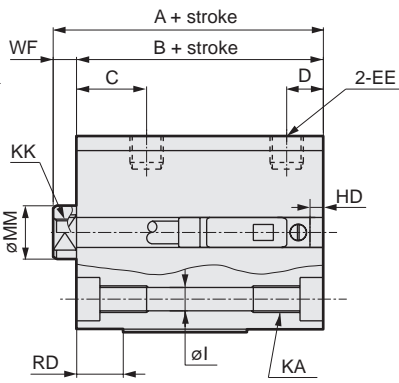
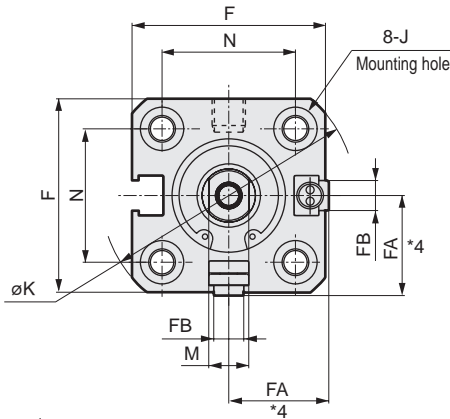
## Dimensions



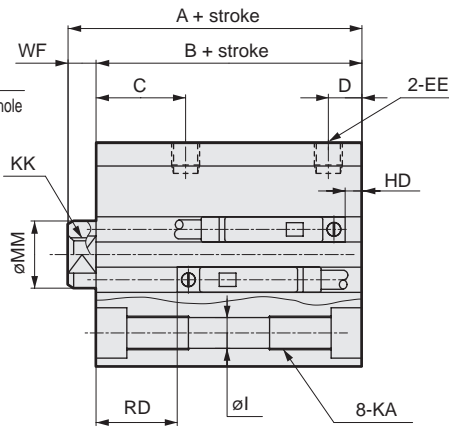
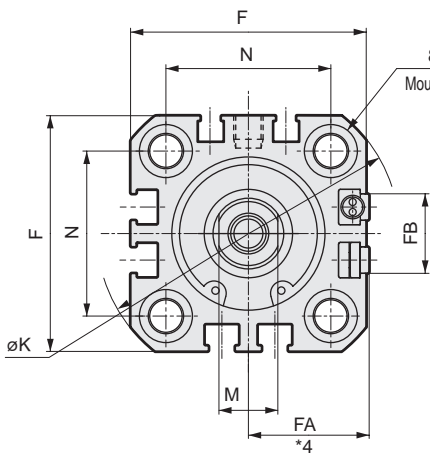
● SSD2-ML-12 to 25 (with switch)

● Rod end male thread

ø12/ø16



ø20/ø25



Code	Common dimensions with switch																	
	A <sup>*1</sup>	B <sup>*1</sup>	C	D	EE	F	FA <sup>*4</sup>	FB	I	J	K	KA	KK	M	MM	N	WF	
STK	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
SRL3	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
SRG3	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							
		HD	RD	HD	RD	HD	RD	HD	RD	HD	RD							
SRM3	ø12	0	7.5	0	7.5	2	9.5											
	ø16	0	7	0	7	2.5	9.5											
SRT3	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 or B+ stroke when using custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value. (Example) If the custom stroke is 7 mm, apply the standard stroke of 10 mm.

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

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

\*4 : Dimensions in ( ) of FA are for the L-shaped lead wire.

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

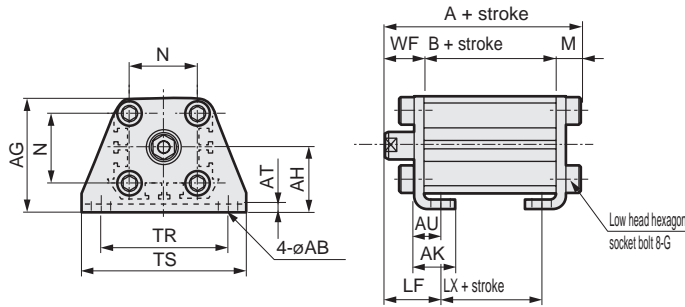
\*6 : Only F-switch is available for the ø20 or ø25 piping port surface.

● Dimensions of rod end male thread part

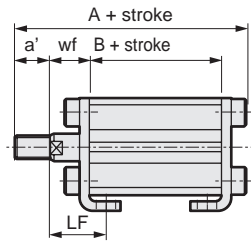
Code	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10x1.25	10	12	6	5

## Dimensions with mounting bracket

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



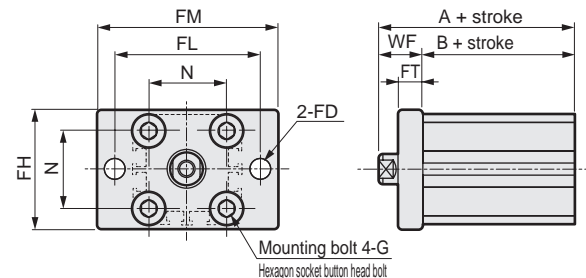
Rod end male thread



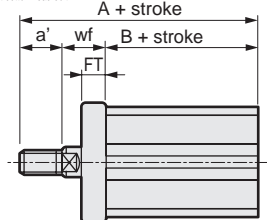
Code	Common dimensions										Female thread			
	Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M		
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8			
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8			
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2			
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2			

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	

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



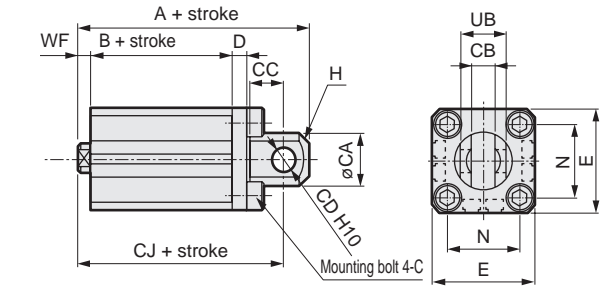
Rod end male thread



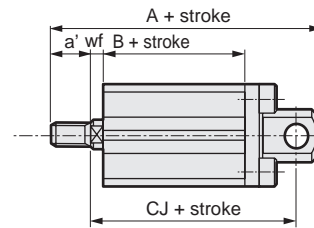
Code	Common dimensions						
	Bore size (mm)	FD	FH	FL	FM	FT	N
ø12	4.5	25	45	55	5.5	15.5	M4x12
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16

Code	Female thread				Male thread		
	Bore size (mm)	WF	A	B	a'	wf	A
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

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



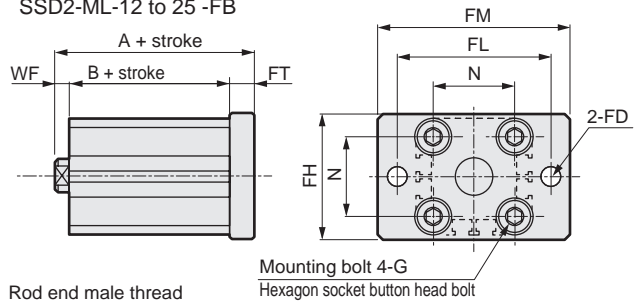
Rod end male thread



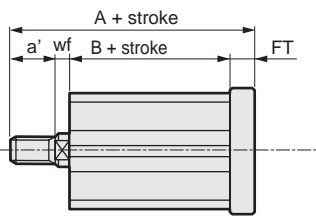
Code	Common dimensions									
	Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N
ø12	12	5.2 <sup>+0.2</sup> <sub>0</sub>	7	5	4	25	M4x12	C1.5	15.5	10 <sup>+0.1</sup> <sub>-0.3</sub>
ø16	15	6.6 <sup>+0.3</sup> <sub>0</sub>	8	5	5	29	M4x12	C2	20	12 <sup>+0.1</sup> <sub>-0.4</sub>
ø20	20	8.2 <sup>+0.2</sup> <sub>0</sub>	12	8	5	36	M6x16	C4	25.5	16 <sup>+0.1</sup> <sub>-0.3</sub>
ø25	24	10.2 <sup>+0.2</sup> <sub>0</sub>	14	10	5	40	M6x16	C5	28	20 <sup>+0.1</sup> <sub>-0.3</sub>

Code	Female thread					Male thread			
	Bore size (mm)	WF	A	B	CJ	a'	wf	A	B
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

- 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
ø12	4.5	25	45	55	5.5	15.5	M4x12
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16

Code	Female thread				Male thread		
	Bore size (mm)	WF	A	B	a'	wf	A
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

- 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-M Series

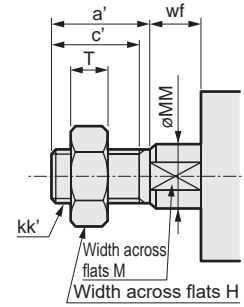
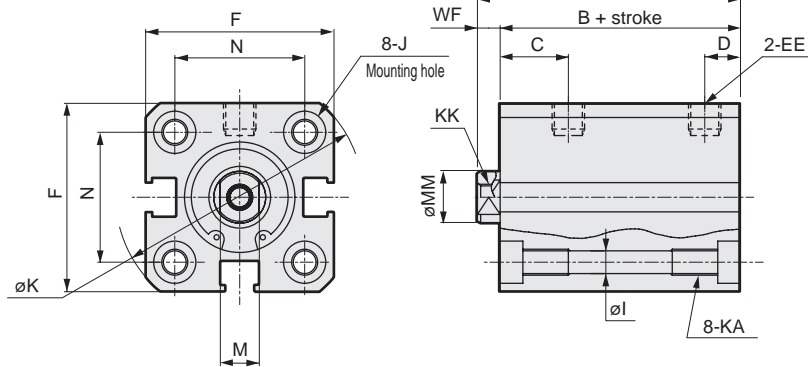
## Dimensions



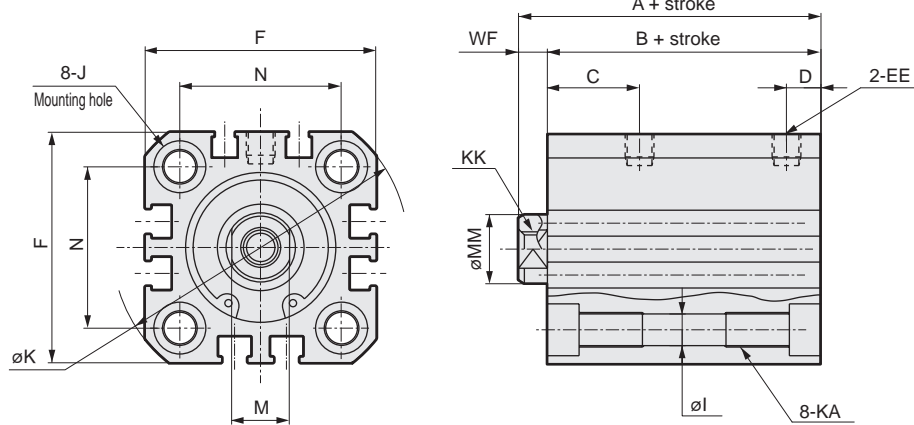
### ● SSD2-M-12 to 25 (without switch)

### ● Rod end male thread

ø12/ø16



ø20/ø25



Code	No switch														
	A <sup>*1</sup>	B <sup>*1</sup>	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 or B+ stroke when using custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value.  
 (Example) If the custom stroke is 7 mm, apply the standard stroke of 10 mm.

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

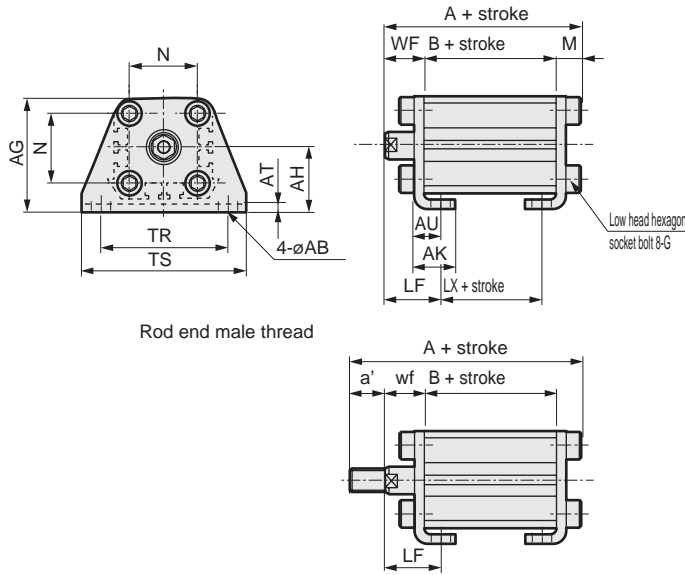
### ● Dimensions of rod end male thread part

Code	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	M10x1.25	10	12	6	5

## Dimensions with mounting bracket

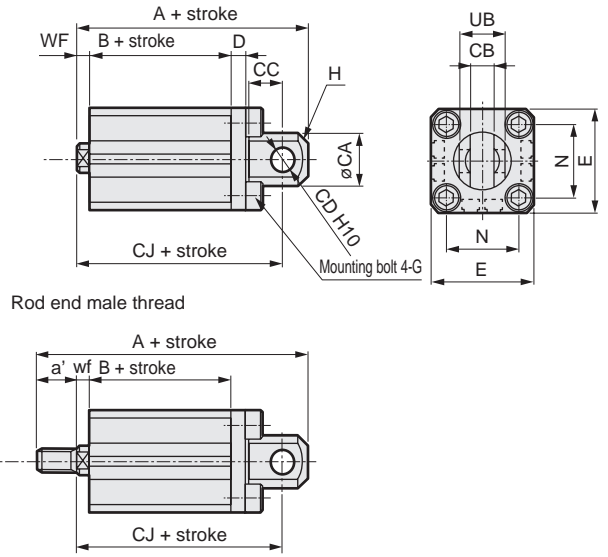


- Axial foot (LB) without switch  
SSD2-M-12 to 25 -LB



Rod end male thread

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



Rod end male thread

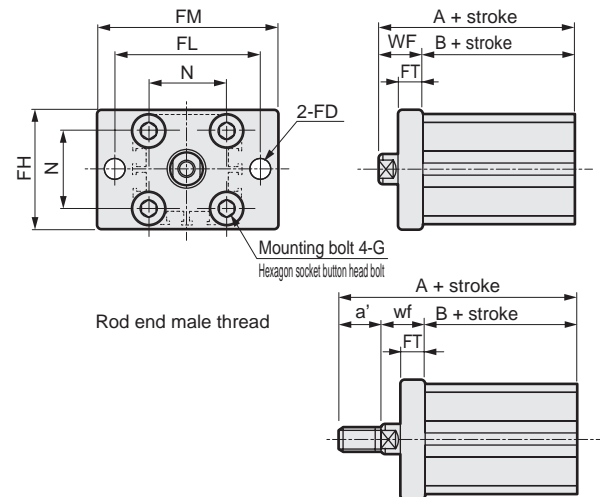
Code	Common dimensions						Female thread					
	Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8	
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8	
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2	
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2	

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

Code	Common dimensions									
	Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N
ø12	12	5.2 <sup>+0.2</sup> <sub>0</sub>	7	5	4	25	M4x12	C1.5	15.5	10 <sup>+0.1</sup> <sub>-0.3</sub>
ø16	15	6.6 <sup>+0.3</sup> <sub>0</sub>	8	5	5	29	M4x12	C2	20	12 <sup>+0.1</sup> <sub>-0.4</sub>
ø20	20	8.2 <sup>+0.2</sup> <sub>0</sub>	12	8	5	36	M6x16	C4	25.5	16 <sup>+0.1</sup> <sub>-0.3</sub>
ø25	24	10.2 <sup>+0.2</sup> <sub>0</sub>	14	10	5	40	M6x16	C5	28	20 <sup>+0.1</sup> <sub>-0.3</sub>

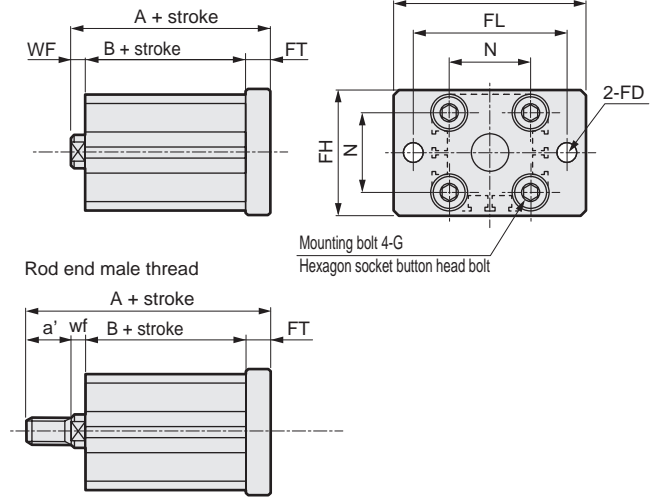
Code	Female thread					Male thread				
	Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø12	3.5	45.5	22	39.5	10.5	8.5	56	22	39.5	
ø16	3.5	46.5	22	40.5	12	8.5	58.5	22	40.5	
ø20	4.5	56	24.5	47	14	9.5	70	24.5	47	
ø25	5	62.5	27.5	52.5	17.5	10	80	27.5	52.5	

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



Rod end male thread

- Head side flange (FB) without switch  
SSD2-M-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	M4x12	
ø16	4.5	30	45	55	5.5	20	M4x12	
ø20	6.6	39	48	60	8	25.5	M6x16	
ø25	6.6	42	52	64	8	28	M6x16	

Code	Female thread				Male thread			
	Bore size (mm)	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	

Code	Common dimensions							
	Bore size (mm)	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4x12	
ø16	4.5	30	45	55	5.5	20	M4x12	
ø20	6.6	39	48	60	8	25.5	M6x16	
ø25	6.6	42	52	64	8	28	M6x16	

Code	Female thread				Male thread			
	Bore size (mm)	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	

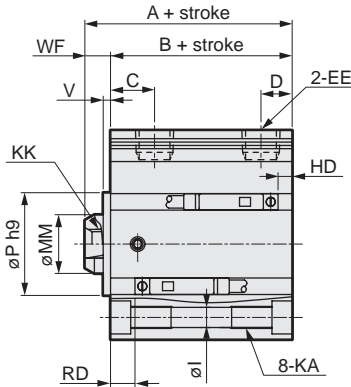
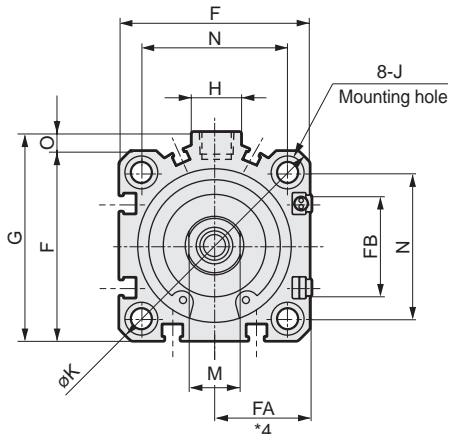
- SCP\*3
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS2
- CKV2
- CAV2/COVP/N2
- SSD2**
- SSG
- SSD
- CAT
- MDC2
- MVC
- SMG
- MSD/MSDG
- FC\*
- STK
- SRL3
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- ShkAbs
- FJ
- FK
- Spd Contr
- Ending

# SSD2-M Series

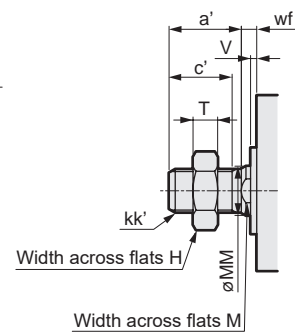
## Dimensions



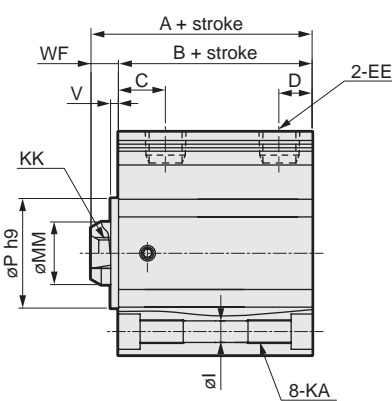
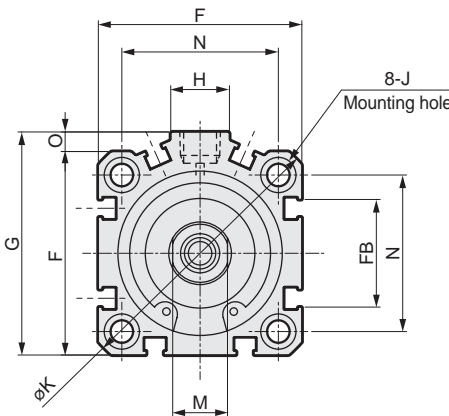
### ● SSD2-ML-32 to 63 (with switch)



### ● Rod end male thread



### ● SSD2-M-32 to 63 (without switch)



Code	No switch		Common dimensions with switch													
	A <sup>*1/6</sup>	B <sup>*1/6</sup>	A <sup>*1</sup>	B <sup>*1</sup>	C <sup>*8</sup>	D <sup>*8</sup>	EE	F	FA <sup>*4</sup>	FB	G	H	I	J	K	KA
ø32	39(49)	32(42)	49	42	18(20)	8(5.5)	Rc1/8 <sup>*7</sup>	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	
	KK	M	MM	N	O	P	V	WF	HD <sup>*2</sup>	RD <sup>*2</sup>	HD <sup>*2</sup>	RD <sup>*2</sup>	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 or B+ stroke when using custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value. (Example) If the custom stroke is 7 mm, apply the standard stroke of 10 mm.

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

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

\*4 : Dimensions in ( ) of FA are for the L-shaped lead wire.

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

\*6 : Dimensions in ( ) of codes A and B are for strokes 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.

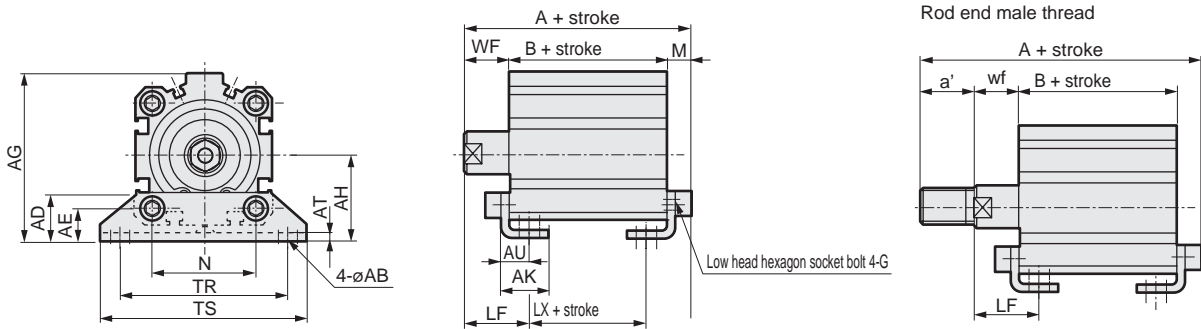
### ● Rod end male thread

Code	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	18	20	11	5
ø63	28.5	26	27	M18x1.5	18	20	11	5

## Dimensions with mounting bracket



- Axial foot (LB)  
SSD2-M(L)-32 to 63 -LB



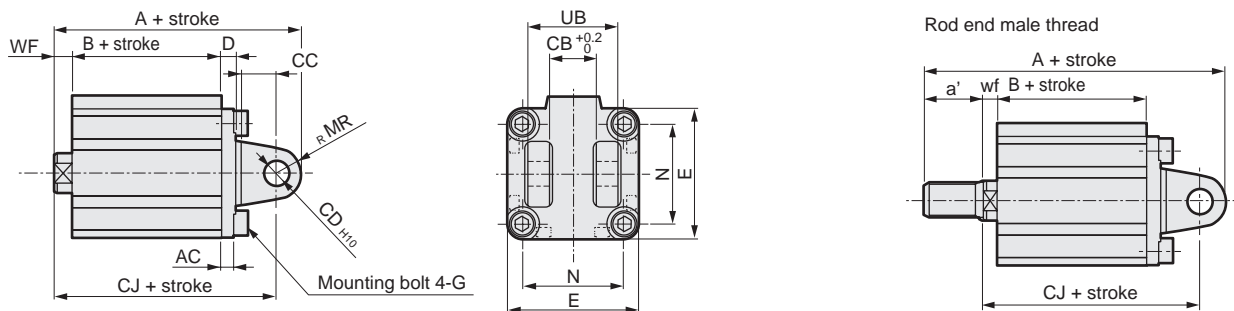
Code	Common dimensions														Female thread			
	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	WF	LF	No switch		
Bore size (mm)																A	B	LX
ø32	7	18.5	13	57	30	17	3.2	11.2	M6x16	34	57	71	7.2	17	25	56.2(66.2)	32(42)	16(26)
ø40	7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64	78	7.2	17	25	53.7(63.7)	29.5(39.5)	13.5(23.5)
ø50	9	22	14	78	39	22.7	3.2	14.7	M8x20	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	M10x25	60	95	113	9.2	18	31	63.2(73.2)	36(46)	10(20)

Code	Female thread			Male thread								
	With switch			a'	WF	LF	No switch			With switch		
	A	B	LX				A	B	LX	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 strokes of more than 50 mm.

\* A pin and a snap ring are included.

- Clevis bracket (CB)  
SSD2-M(L)-32 to 63 -CB



Code	Common dimensions										Female thread						Male thread								
	AC	CB	CC	CD	D	E	G	MR	N	UB	WF	No switch			With switch			a'	wf	No switch			With switch		
												A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø32	4.5	18.2	14	10	5	45	M6x16	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	M6x16	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	M8x20	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	M10x25	14	60	44	8	88	36	74	98	46	84	28.5	5	113.5	36	71	123.5	46	81

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

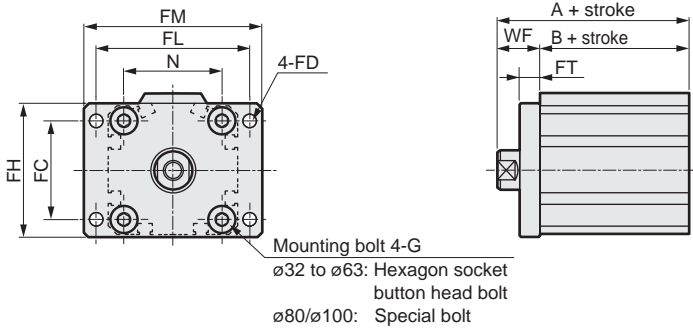
Ending

# SSD2-M Series

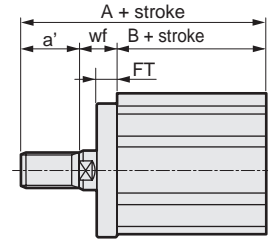


## Dimensions with mounting bracket

- Rod side flange (FA)  
SSD2-M(L)-32 to 63 -FA



Rod end male thread



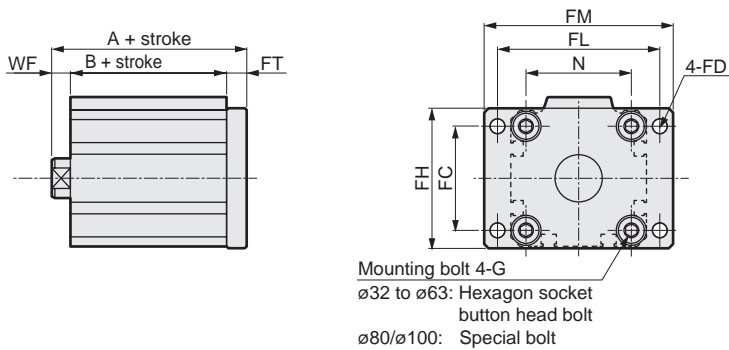
Code	Bore size (mm)	Common dimensions							Female thread					
		FC	FD	FH	FL	FM	FT	N	G	WF	No switch		With switch	
											A	B	A	B
SSD	ø32	34	5.5	48	56	65	8	34	M6x16	17	49(59)	32(42)	59	42
	ø40	40	5.5	54	62	72	8	40	M6x16	17	46.5(56.5)	29.5(39.5)	56.5	39.5
	ø50	50	6.6	67	76	89	9	50	M8x20	18	48.5(58.5)	30.5(40.5)	58.5	40.5
	ø63	60	9	80	92	108	9	60	M10x25	18	54(64)	36(46)	64	46

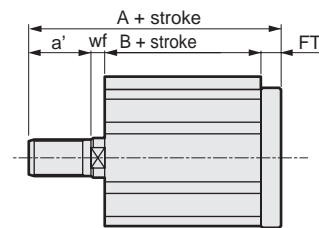
Code	Bore size (mm)	Male thread		No switch		With switch	
		a'	wf	A	B	A	B
	ø32	23.5	15	70.5(80.5)	32(42)	80.5	42
	ø40	23.5	15	68(78)	29.5(39.5)	78	39.5
	ø50	28.5	15	74(84)	30.5(40.5)	84	40.5
	ø63	28.5	15	79.5(89.5)	36(46)	89.5	46

\* Dimensions in ( ) are for strokes of more than 50 mm.

- Head side flange (FB)  
SSD2-M(L)-32 to 63 -FB



Rod end male thread



Code	Bore size (mm)	Common dimensions							Female thread				Male thread							
		FC	FD	FH	FL	FM	FT	N	G	WF	No switch		With switch		a'	wf	No switch		With switch	
											A	B	A	B			A	B	A	B
ShkAbs	ø32	34	5.5	48	56	65	8	34	M6x16	7	47	32	57	42	23.5	14	68.5	32	78.5	42
	ø40	40	5.5	54	62	72	8	40	M6x16	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	M8x20	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	M10x25	8	53	36	63	46	28.5	5	78.5	36	88.5	46

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# MEMO

---

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/double rod/rotation-stop

# SSD2-DM Series

- Bore size:  $\phi 12/\phi 16/\phi 20/\phi 25$   
 $\phi 32/\phi 40/\phi 50/\phi 63$



## Specifications

1 MPa = 10 bar

Item	SSD2-DM SSD2-DML (with switch)							
	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$
Bore size mm	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 ( $\approx 150$ psi, 10 bar)							
Min. working pressure MPa	0.15 ( $\approx 22$ psi, 1.5 bar)							0.1 ( $\approx 15$ psi)
Proof pressure MPa	1.6 ( $\approx 230$ psi, 16 bar)							
Ambient temperature $^{\circ}\text{C}$	-10 ( $14^{\circ}\text{F}$ ) to 60 ( $140^{\circ}\text{F}$ ) (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)	$\pm 1^{\circ}$		$\pm 0.7^{\circ}$			$\pm 0.8^{\circ}$		
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12

\*1: The  $\phi 32$  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

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\phi 12$	5/10/15/20	30	5
$\phi 16$	25/30		
$\phi 20$	5/10/15/20/25	50	
$\phi 25$	30/35/40/45/50		
$\phi 32$	5/10/15/20/25/30/	100	10
$\phi 40$	35/40/45/50/75/100		
$\phi 50$	10/15/20/25/30		
$\phi 63$	35/40/45/50/75/100		

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

## Min. stroke with switch (2 switches)

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
$\phi 12$	10(5)	5
$\phi 16$		
$\phi 20$	5	
$\phi 25$		
$\phi 32$	10	10
$\phi 40$		
$\phi 50$		
$\phi 63$		

\*1: Less than 10 mm with the 2-color LED, 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-switch)

● 1-color/2-color LED

Item	2-wire proximity		3-wire proximity		2-wire proximity		3-wire proximity		
	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%		
Load current	5 to 20 mA		50 mA or less		5 to 20 mA		50 mA or less		
Indicator	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 LED/for AC magnetic field proof

Item	2-wire proximity		2-wire proximity				3-wire proximity				2-wire reed				2-wire proximity	
	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		Dedicated for programmable controller			
Output method	-		NPN output				PNP 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	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)	No 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: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-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 (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
	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	1.06x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.36x10 <sup>2</sup>	1.51x10 <sup>2</sup>
ø20	Push/Pull	-	35.3	47.1	70.7	94.2	1.18x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.65x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.12x10 <sup>2</sup>	2.36x10 <sup>2</sup>
ø25	Push/Pull	-	56.7	75.6	1.13x10 <sup>2</sup>	1.51x10 <sup>2</sup>	1.89x10 <sup>2</sup>	2.27x10 <sup>2</sup>	2.64x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.40x10 <sup>2</sup>	3.78x10 <sup>2</sup>
ø32	Push/Pull	-	90.5	1.21x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.62x10 <sup>2</sup>	4.22x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.43x10 <sup>2</sup>	6.03x10 <sup>2</sup>
ø40	Push/Pull	-	1.58x10 <sup>2</sup>	2.11x10 <sup>2</sup>	3.17x10 <sup>2</sup>	4.22x10 <sup>2</sup>	5.28x10 <sup>2</sup>	6.33x10 <sup>2</sup>	7.39x10 <sup>2</sup>	8.44x10 <sup>2</sup>	9.50x10 <sup>2</sup>	1.06x10 <sup>3</sup>
ø50	Push/Pull	-	2.47x10 <sup>2</sup>	3.30x10 <sup>2</sup>	4.95x10 <sup>2</sup>	6.60x10 <sup>2</sup>	8.25x10 <sup>2</sup>	9.90x10 <sup>2</sup>	1.15x10 <sup>3</sup>	1.32x10 <sup>3</sup>	1.48x10 <sup>3</sup>	1.65x10 <sup>3</sup>
ø63	Push/Pull	2.80x10 <sup>2</sup>	4.20x10 <sup>2</sup>	5.61x10 <sup>2</sup>	8.41x10 <sup>2</sup>	1.12x10 <sup>3</sup>	1.40x10 <sup>3</sup>	1.68x10 <sup>3</sup>	1.96x10 <sup>3</sup>	2.24x10 <sup>3</sup>	2.52x10 <sup>3</sup>	2.80x10 <sup>3</sup>



# SSD2-DM Series

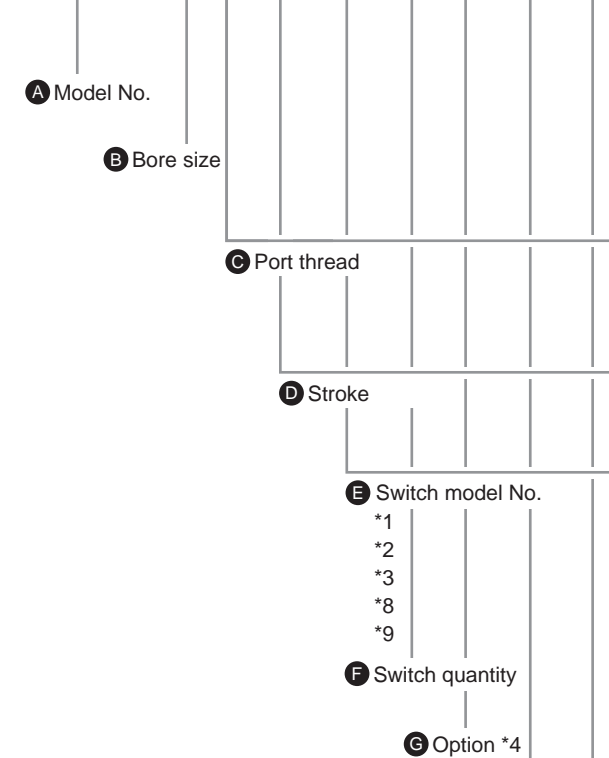
## How to order

No 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



## 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 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-switch with L type lead wire on ø20 models cannot be selected on strokes 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-switch cannot be selected.

[Example of model No.]

**SSD2-DML-12-5-T0H-R-N-LB-I**

Model: Compact cylinder rotation-stop

- B** Bore size : ø12 mm
- C** Port thread : Rc thread
- D** Stroke : 5 mm
- E** Switch model No. : Reed T0H switch
- F** Switch quantity : 1 on rod side
- G** Option : Rod end male thread
- H** Mounting bracket : Axial foot
- I** Accessory : Rod eye

- H** Mounting bracket \*5
- \*6
- I** Accessory \*7

Code	Description
<b>A Model No.</b>	
<b>SSD2-DM</b>	Double acting/double rod/rotation-stop
<b>SSD2-DML</b>	Double acting/double rod/rotation-stop/with switch

<b>B Bore size (mm)</b>	
<b>12</b>	ø12
<b>16</b>	ø16
<b>20</b>	ø20
<b>25</b>	ø25
<b>32</b>	ø32
<b>40</b>	ø40
<b>50</b>	ø50
<b>63</b>	ø63

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

**D Stroke (mm)**  
Refer to the stroke table on the following page.

<b>E Switch model No.</b>		Contact	Voltage AC DC	Indicator	Lead wire	Bore size									
Lead wire Straight	Lead wire L-shaped					12	16	20	25	32	40	50	63		
-	F2S*	Proximity	●	1-color LED	2-wire			●	●						
-	F3S*		●		3-wire			●	●						
F2H*	F2V*		●		2-wire			●	●						
F3H*	F3V*		●		3-wire			●	●						
F3PH*	F3PV*	Proximity	●	1-color LED (PNP output) (custom)	3-wire			●	●						
F2YH*	F2YV*		●	2-wire			●	●							
F3YH*	F3YV*		●	3-wire			●	●							
T0H*	T0V*		●	2-wire	1-color LED	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*	Reed	●	No indicator lamp	2-wire	●	●	●	●	●	●	●	●	●	
T8H*	T8V*		●	1-color LED	2-wire	●	●	●	●	●	●	●	●	●	
T1H*	T1V*		●	1-color LED	2-wire	●	●	●	●	●	●	●	●	●	
T2H*	T2V*		●	1-color LED	2-wire	●	●	●	●	●	●	●	●	●	
T3H*	T3V*	Proximity	●	1-color LED (PNP output)	3-wire	●	●	●	●	●	●	●	●	●	
T3PH*	T3PV*		●	2-wire	●	●	●	●	●	●	●	●	●	●	
T2WH*	T2WV*		●	2-wire	2-color LED	●	●	●	●	●	●	●	●	●	
T2YH*	T2YV*		●	3-wire	2-color LED	●	●	●	●	●	●	●	●	●	
T3WH*	T3WV*	Proximity	●	2-color LED	2-wire	●	●	●	●	●	●	●	●	●	
T3YH*	T3YV*		●	3-wire	2-color LED	●	●	●	●	●	●	●	●	●	
T2YD*	-		●	2-wire	2-color LED for AC magnetic field	●	●	●	●	●	●	●	●	●	
T2YDT*	-		●	2-wire	1-color LED off-delay	●	●	●	●	●	●	●	●	●	
T2JH*	T2JV*	●	2-wire	1-color LED off-delay	2-wire	●	●	●	●	●	●	●	●	●	

<b>* Lead wire length</b>	
<b>Blank</b>	1 m (standard)
<b>3</b>	3 m (option)
<b>5</b>	5 m (option)

<b>F Switch quantity</b>	
<b>R</b>	1 on rod side
<b>H</b>	1 on head side
<b>D</b>	2

<b>G Option</b>	
<b>Blank</b>	Rod end female thread
<b>N</b>	Rod end male thread
<b>M *4</b>	Piston rod material (stainless steel) (made to order (ø32 to ø63))

<b>H Mounting bracket</b>	
<b>Blank</b>	Without mounting bracket
<b>LB</b>	Axial foot
<b>FA</b>	Rod side flange

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

### [Stroke table]

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

\*1: Less than 5 mm for 1-color LED switch and less than 10 mm for the 2-color LED, off-delay, AC magnetic field proof, T1\* or T8\* switch are not available.

Refer to page 924 for the min. stroke with switch.

\*2: Available only for more than 50 mm stroke.

### How to order switch



Switch model No.  
(Item ⑤ on page 926)

### How to order mounting bracket

Bore size (mm)	ø12	ø16	ø20	ø25	ø32	ø40	ø50
<b>Mounting bracket</b>							
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
<b>Bore size (mm)</b>	<b>ø63</b>						
<b>Mounting bracket</b>							
Foot (LB)	SSD2-LB-63						
Flange (FA)	SSD2-FA-63						

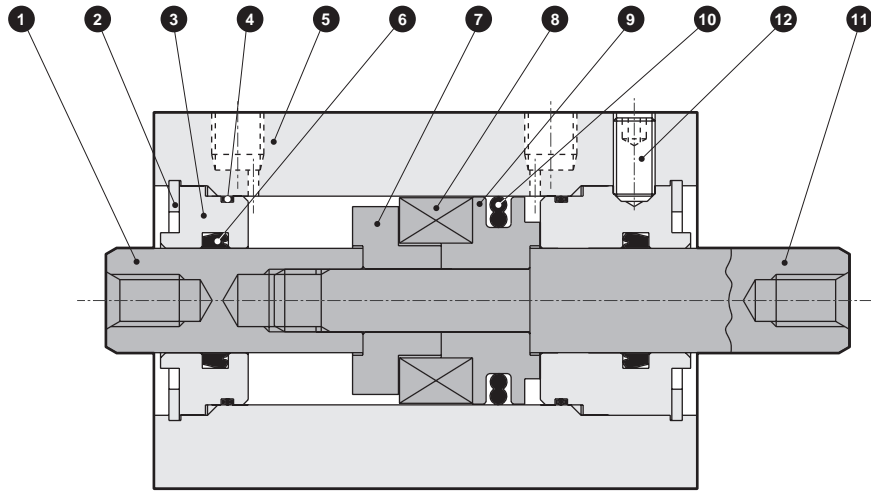
\*1: The foot mounting bracket is provided as 2 pcs./set.

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

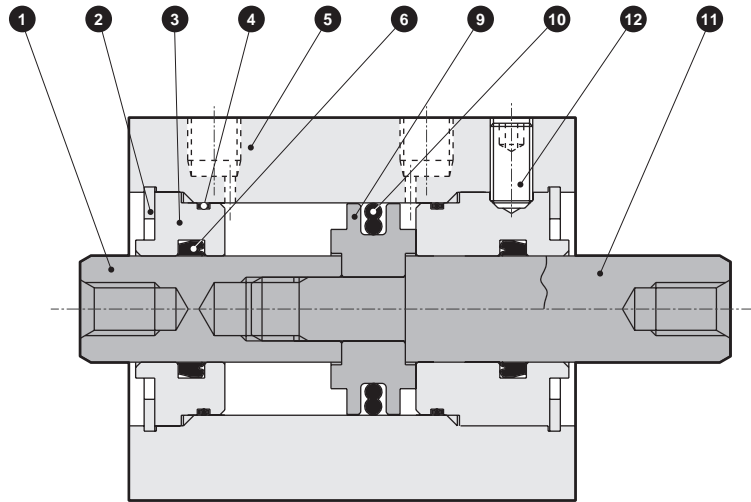
# SSD2-DM Series

## 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)



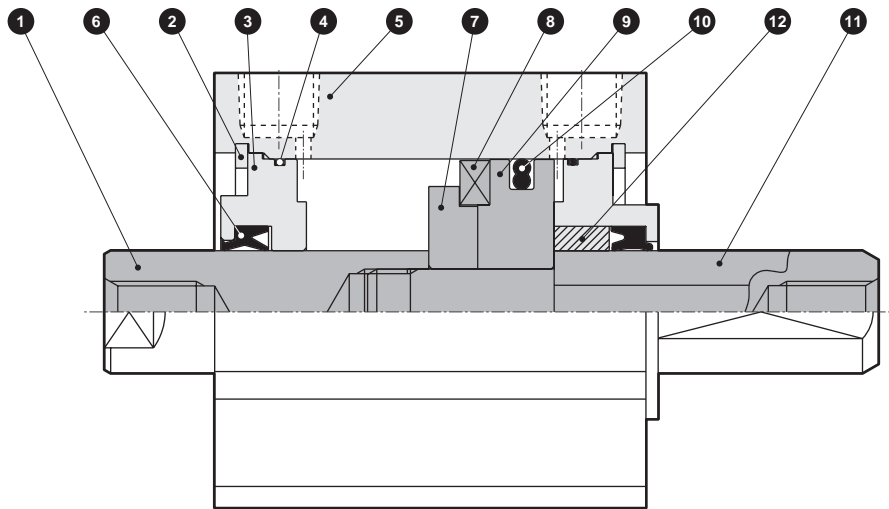
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod A	Stainless steel	Industrial chrome plating	7	Spacer	Aluminum alloy	Chromate
2	C-snap ring	Steel	Zinc phosphate	8	Magnet	Plastic	
3	Rod metal	Special aluminum	Alumite	9	Piston	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile 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

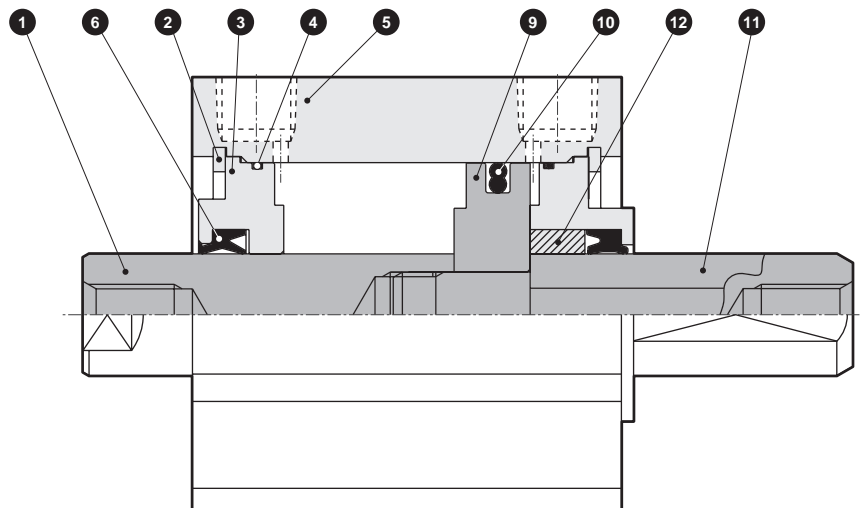
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-DM-12K	4 6 10
ø16	SSD2-DM-16K	
ø20	SSD2-DM-20K	
ø25	SSD2-DM-25K	

## 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-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	4 6 10
ø40	SSD2-DM-40K	
ø50	SSD2-DM-50K	
ø63	SSD2-DM-63K	

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

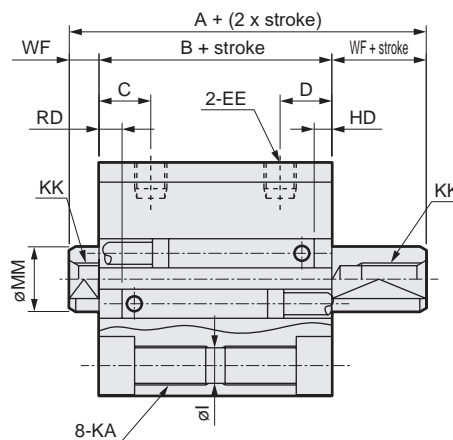
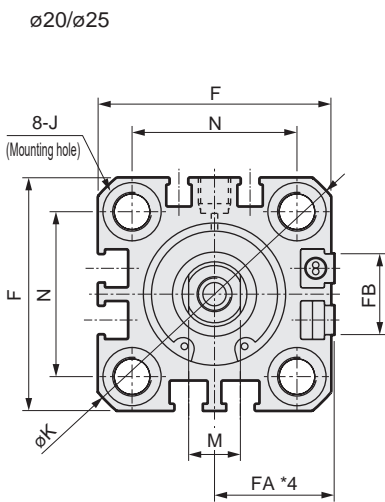
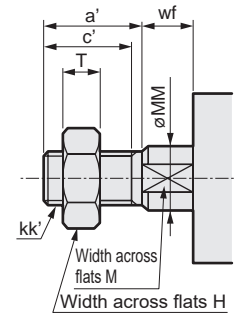
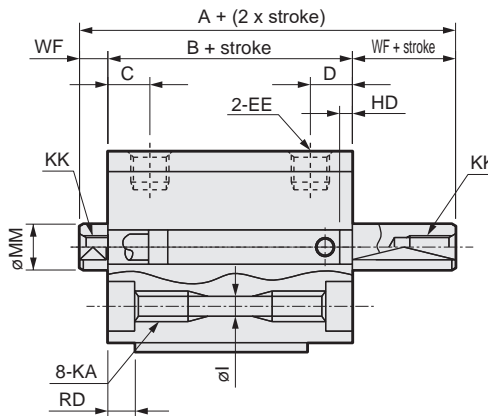
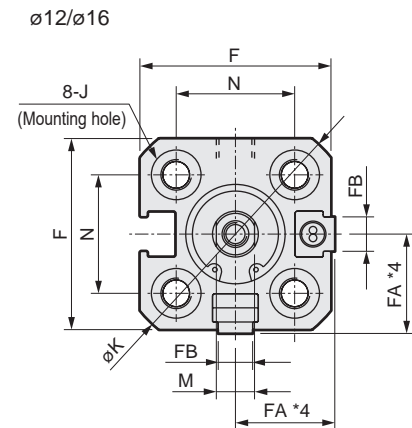
Ending

# SSD2-DM Series

## Dimensions

● SSD2-DML-12 to 25 (with switch)

● Rod end male thread



Note: The positions for the left and right widths across flats are unspecified.

Code	Common dimensions with switch																
	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								
	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-switch is available for the ø20 or ø25 piping port surface.

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

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

\*4 : Dimensions in ( ) of FA are for the L-shaped 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.

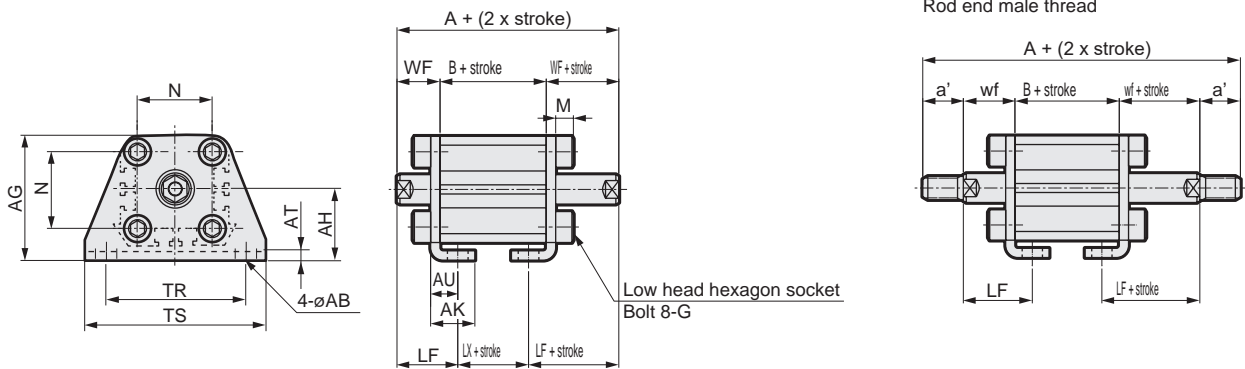
\*7 : The RD side can be identified with a mark on the port surface of the body.

● Dimensions of rod end male thread part

Code	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	M10x1.25	10	12	6	5

## Dimensions with mounting bracket

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

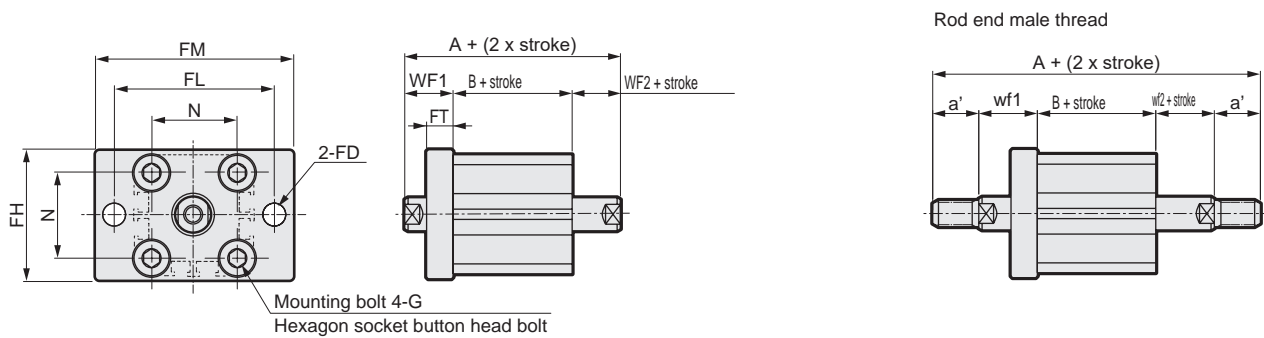


Code	Common dimensions										
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2

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



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	M4x12	13.5	3.5	49	32	10.5	13.5	3.5	70	32
ø16	4.5	30	45	55	5.5	20	M4x12	13.5	3.5	49	32	12	13.5	3.5	73	32
ø20	6.6	39	48	60	8	25.5	M6x16	14.5	4.5	60	41	14	14.5	4.5	88	41
ø25	6.6	42	52	64	8	28	M6x16	15	5	64	44	17.5	15	5	99	44

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

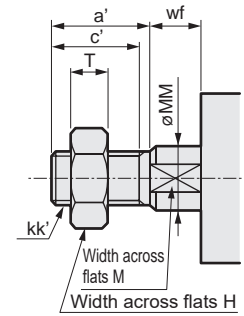
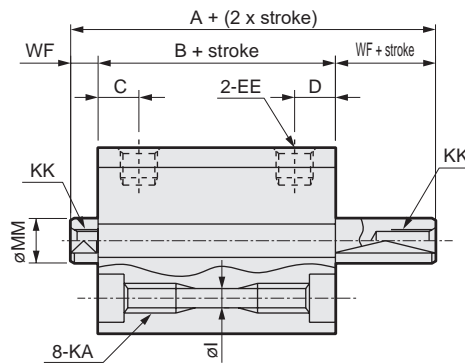
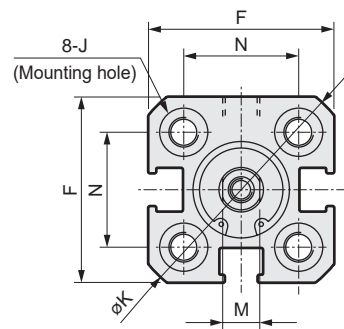
# SSD2-DM Series

## Dimensions

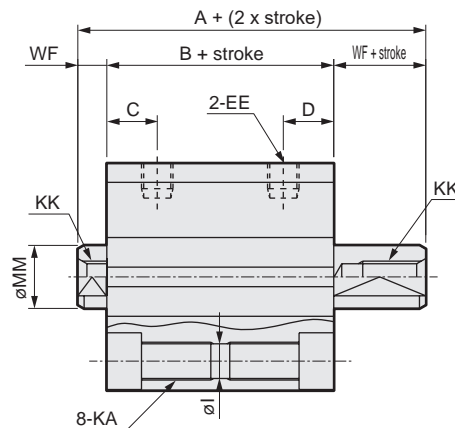
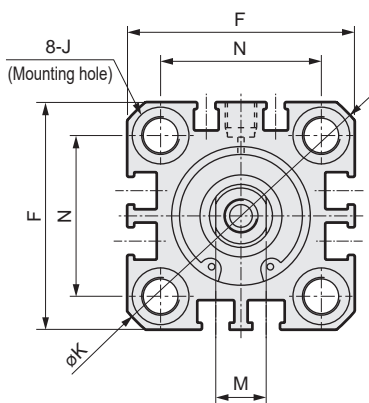
● SSD2-DM-12 to 25 (without switch)

● Rod end male thread

ø12/ø16



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
SRL3	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
SRG3	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

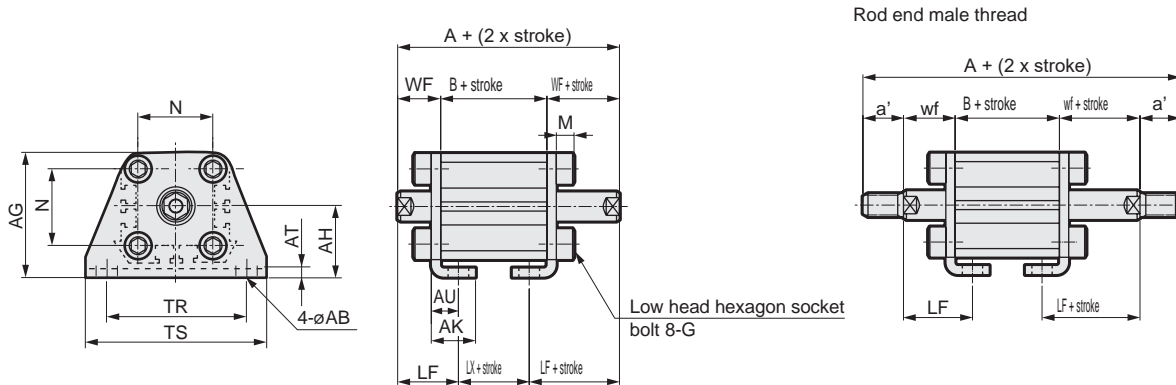
● Dimensions of rod end male thread part

Code	a'	c'	H	kk'	M	MM	T	wf
SRT3								
MRL2	ø12	10.5	9	8	M5	5	3.2	3.5
	ø16	12	10	10	M6	6	3.6	3.5
MRG2	ø20	14	12	13	M8	8	5	4.5
	ø25	17.5	15	17	M10x1.25	10	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

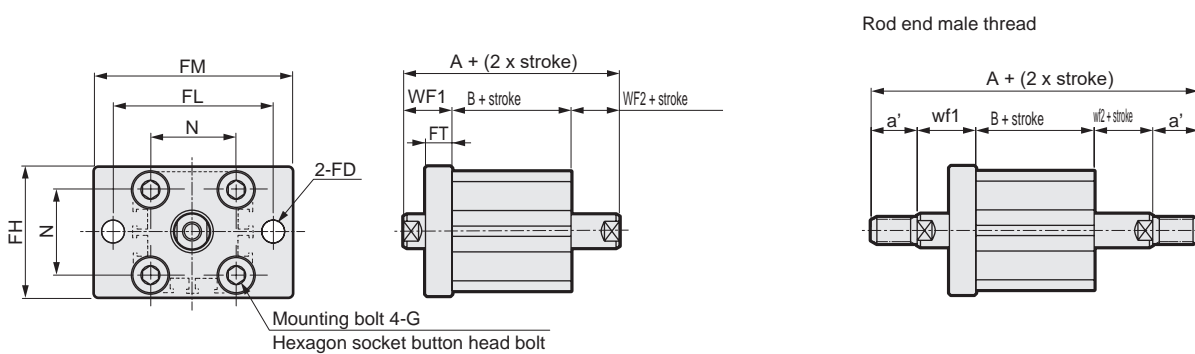


Code	Common dimensions										
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2

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



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	M4x12	13.5	3.5	44	27	10.5	13.5	3.5	65	27
ø16	4.5	30	45	55	5.5	20	M4x12	13.5	3.5	44	27	12	13.5	3.5	68	27
ø20	6.6	39	48	60	8	25.5	M6x16	14.5	4.5	50	31	14	14.5	4.5	78	31
ø25	6.6	42	52	64	8	28	M6x16	15	5	54	34	17.5	15	5	89	34

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

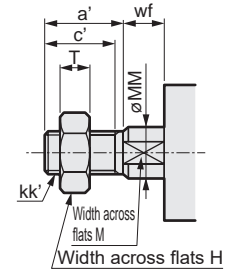
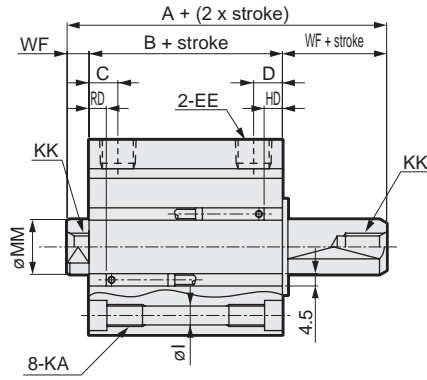
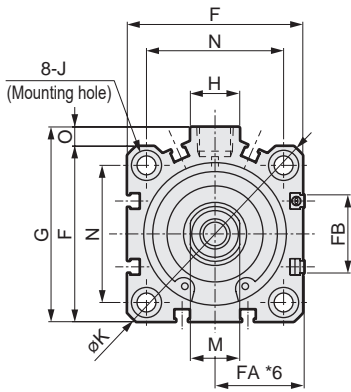


# SSD2-DM Series

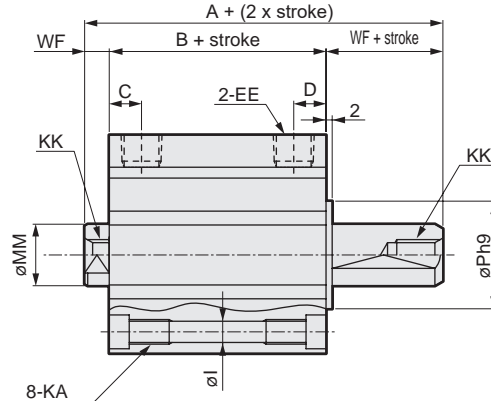
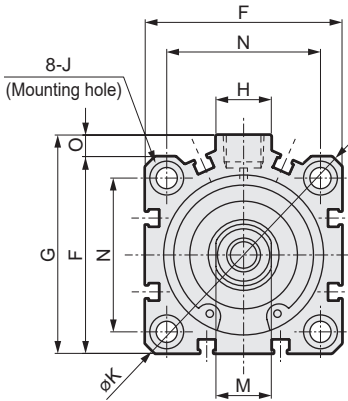
## Dimensions

● 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	No switch		Common dimensions with switch														
	A <sup>*2, *8</sup>	B <sup>*3, *8</sup>	A <sup>*2</sup>	B <sup>*3</sup>	C <sup>*10</sup>	D <sup>*10</sup>	EE <sup>*9</sup>	F	FA <sup>*6</sup>	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					
	M	MM	N	O	P	WF	HD <sup>*4</sup>	RD <sup>*4</sup>	HD <sup>*4</sup>	RD <sup>*4</sup>	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 is available only for more than 50 mm strokes.
- \*2 : To calculate A + (2 x stroke) when using a custom stroke, apply "A + next longer standard stroke + custom stroke". (Example) If the custom stroke is 70 mm, apply "A + standard stroke 75 mm + custom stroke 70 mm".
- \*3 : To calculate B + stroke when using custom stroke, apply the next longer standard stroke instead of the custom stroke. (Example) If the custom stroke is 70 mm, apply the standard stroke 75 mm.
- \*4 : HD and RD dimensions for 5 mm stroke differ from these dimensions according to the setting.
- \*5 : Refer to page 1044 for HD, RD and protruding dimensions of the 2-color LED, off-delay, AC magnetic field proof, T1\* and T8\* switches.
- \*6 : Dimensions in ( ) of FA are for the L-shaped lead wire.
- \*7 : For dimensions of individual accessories, refer to pages 1046 to 1049.
- \*8 : Dimensions in ( ) of codes A and B are for strokes 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.

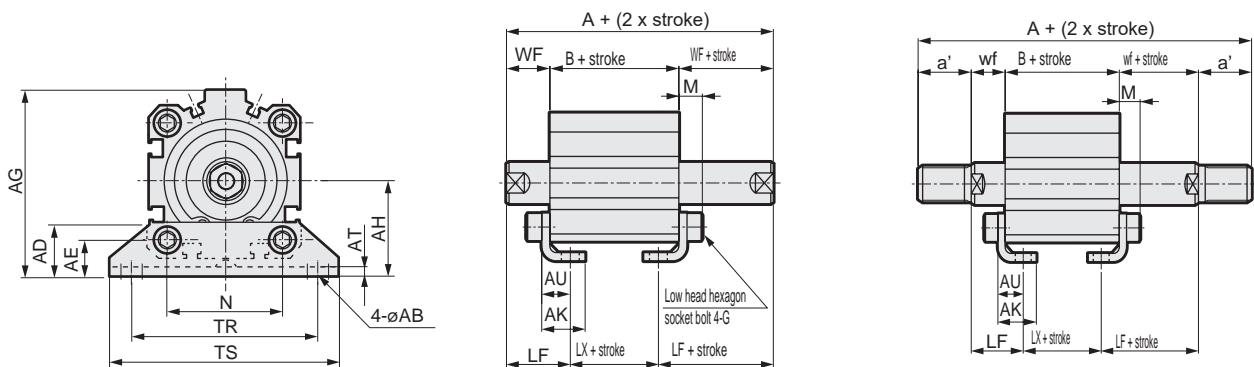
\*11 : The RD side can be identified with a mark on the port surface of the body.

● Dimensions of rod end male thread part

Code	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

## Dimensions with mounting bracket

- Axial foot (LB)  
SSD2-DM(L)-32 to 63-LB



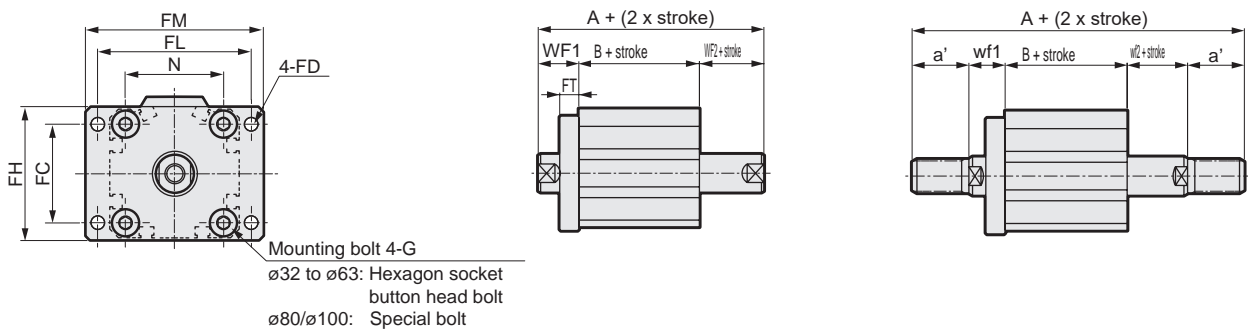
Code		Common dimensions												
Bore size (mm)		AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø32		7	18.5	13	57	30	17	3.2	11.2	M6x16	34	57	71	7.2
ø40		7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64	78	7.2
ø50		9	22	14	78	39	22.7	3.2	14.7	M8x20	50	79	95	8.2
ø63		11	26	16	91.5	46	25.2	3.2	16.2	M10x25	60	95	113	9.2

Code		Female thread						Male thread									
Bore size (mm)	WF	LF	No switch			With switch			a'	wf	LF	No 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(137.5)	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 strokes 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

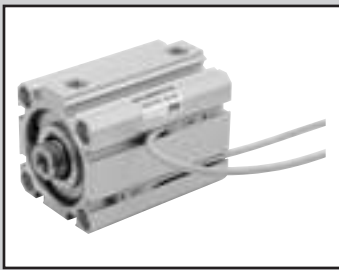
Code		Common dimensions								
Bore size (mm)		FC	FD	FH	FL	FM	FT	N	G	
ø32		34	5.5	48	56	65	8	34	M6x16	
ø40		40	5.5	54	62	72	8	40	M6x16	
ø50		50	6.6	67	76	89	9	50	M8x20	
ø63		60	9	80	92	108	9	60	M10x25	

Code		Female thread						Male thread									
Bore size (mm)	WF1	WF2	No switch			With switch			a'	wf1	wf2	No switch			With switch		
			A	B	LX	A	B	LX				A	B	LX	A	B	LX
ø32	17	7	54.5(64.5)	30.5(40.5)	14.5(24.5)	64.5	40.5	24.5	23.5	15	5	97.5(107.5)	30.5(40.5)	14.5(24.5)	107.5	40.5	24.5
ø40	17	7	64(74)	40(50)	24(34)	74	50	34	23.5	15	5	107(117)	40(50)	24(34)	117	50	34
ø50	18	8	66.5(76.5)	40.5(50.5)	17.5(27.5)	76.5	50.5	27.5	28.5	15	5	117.5(127.5)	40.5(50.5)	17.5(27.5)	127.5	50.5	27.5
ø63	18	8	68(78)	42(52)	16(26)	78	52	26	28.5	15	5	119(129)	42(52)	16(26)	129	52	26

\* Dimensions in ( ) are for strokes 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:  $\varnothing 20/\varnothing 25/\varnothing 32/\varnothing 40/\varnothing 50/\varnothing 63/\varnothing 80/\varnothing 100$



## Specifications

Item	SSD2-G SSD2-GL (with switch)								
	$\varnothing 20$	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$	
Bore size mm	$\varnothing 20$	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$	
Actuation	Double acting								
Working fluid	Compressed air								
Max. working pressure MPa	1.0 ( $\approx 150$ psi, 10 bar)								
Min. working pressure MPa	0.15 ( $\approx 22$ psi, 1.5 bar)					0.1 ( $\approx 15$ psi, 1 bar)			
Proof pressure MPa	1.6 ( $\approx 230$ psi, 16 bar)								
Ambient temperature $^{\circ}\text{C}$	-10 ( $14^{\circ}\text{F}$ ) to 60 ( $140^{\circ}\text{F}$ ) (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  $\varnothing 32$  bore size with a 5 mm stroke and without a switch has a port size of M5.

## Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\varnothing 20$	5/10/15/20/25	50	1
$\varnothing 25$	30/35/40/45/50		
$\varnothing 32$	5/10/15/20/25/30/	100	
$\varnothing 40$	35/40/45/50/75/100		
$\varnothing 50$	10/15/20/25	100	1
$\varnothing 63$	30/35/40/45/50		
$\varnothing 80$	75/100		
$\varnothing 100$			

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

## Min. stroke with switch (2 switches)

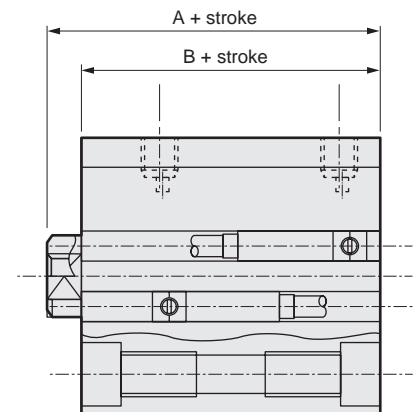
Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
$\varnothing 20$	5	5
$\varnothing 25$		
$\varnothing 32$		
$\varnothing 40$		
$\varnothing 50$		
$\varnothing 63$		
$\varnothing 80$		
$\varnothing 100$		

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

## Custom stroke

### ● SSD2 Series

Item	Standard products	
	Standard stroke body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke body to adjust the stroke 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. B + stroke is 63 mm.	



### Switch specifications (F-switch)

● 1-color/2-color LED

Item	2-wire proximity		3-wire proximity		2-wire proximity		3-wire proximity			
	F2S		F3S		F2H/F2V		F2YH/F2YV		F3H/F3V	F3PH/F3PV (made to order)
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	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 LED/for AC magnetic field proof

Item	2-wire proximity		2-wire proximity				3-wire proximity				2-wire reed				2-wire proximity		
	T1H/T1V	T2H/T2V	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	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)	No 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-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 (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
	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	1.26x10 <sup>2</sup>	1.57x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.20x10 <sup>2</sup>	2.51x10 <sup>2</sup>	2.83x10 <sup>2</sup>	3.14x10 <sup>2</sup>
	Pull	-	35.3	47.1	70.7	94.2	1.18x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.65x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.12x10 <sup>2</sup>	2.36x10 <sup>2</sup>
ø25	Push	-	73.6	98.2	1.47x10 <sup>2</sup>	1.96x10 <sup>2</sup>	2.45x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.44x10 <sup>2</sup>	3.93x10 <sup>2</sup>	4.42x10 <sup>2</sup>	4.91x10 <sup>2</sup>
	Pull	-	56.7	75.6	1.13x10 <sup>2</sup>	1.51x10 <sup>2</sup>	1.89x10 <sup>2</sup>	2.27x10 <sup>2</sup>	2.64x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.40x10 <sup>2</sup>	3.78x10 <sup>2</sup>
ø32	Push	-	1.21x10 <sup>2</sup>	1.61x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.22x10 <sup>2</sup>	4.02x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.63x10 <sup>2</sup>	6.43x10 <sup>2</sup>	7.24x10 <sup>2</sup>	8.04x10 <sup>2</sup>
	Pull	-	90.5	1.21x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.62x10 <sup>2</sup>	4.22x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.43x10 <sup>2</sup>	6.03x10 <sup>2</sup>
ø40	Push	-	1.88x10 <sup>2</sup>	2.51x10 <sup>2</sup>	3.77x10 <sup>2</sup>	5.03x10 <sup>2</sup>	6.28x10 <sup>2</sup>	7.54x10 <sup>2</sup>	8.80x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.13x10 <sup>3</sup>	1.26x10 <sup>3</sup>
	Pull	-	1.58x10 <sup>2</sup>	2.11x10 <sup>2</sup>	3.17x10 <sup>2</sup>	4.22x10 <sup>2</sup>	5.28x10 <sup>2</sup>	6.33x10 <sup>2</sup>	7.39x10 <sup>2</sup>	8.44x10 <sup>2</sup>	9.50x10 <sup>2</sup>	1.06x10 <sup>3</sup>
ø50	Push	-	2.95x10 <sup>2</sup>	3.93x10 <sup>2</sup>	5.89x10 <sup>2</sup>	7.85x10 <sup>2</sup>	9.82x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.37x10 <sup>3</sup>	1.57x10 <sup>3</sup>	1.77x10 <sup>3</sup>	1.96x10 <sup>3</sup>
	Pull	-	2.47x10 <sup>2</sup>	3.30x10 <sup>2</sup>	4.95x10 <sup>2</sup>	6.60x10 <sup>2</sup>	8.25x10 <sup>2</sup>	9.90x10 <sup>2</sup>	1.15x10 <sup>3</sup>	1.32x10 <sup>3</sup>	1.48x10 <sup>3</sup>	1.65x10 <sup>3</sup>
ø63	Push	3.12x10 <sup>2</sup>	4.68x10 <sup>2</sup>	6.23x10 <sup>2</sup>	9.35x10 <sup>2</sup>	1.25x10 <sup>3</sup>	1.56x10 <sup>3</sup>	1.87x10 <sup>3</sup>	2.18x10 <sup>3</sup>	2.49x10 <sup>3</sup>	2.81x10 <sup>3</sup>	3.12x10 <sup>3</sup>
	Pull	2.80x10 <sup>2</sup>	4.20x10 <sup>2</sup>	5.61x10 <sup>2</sup>	8.41x10 <sup>2</sup>	1.12x10 <sup>3</sup>	1.40x10 <sup>3</sup>	1.68x10 <sup>3</sup>	1.96x10 <sup>3</sup>	2.24x10 <sup>3</sup>	2.52x10 <sup>3</sup>	2.80x10 <sup>3</sup>
ø80	Push	5.03x10 <sup>2</sup>	7.54x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.51x10 <sup>3</sup>	2.01x10 <sup>3</sup>	2.51x10 <sup>3</sup>	3.02x10 <sup>3</sup>	3.52x10 <sup>3</sup>	4.02x10 <sup>3</sup>	4.52x10 <sup>3</sup>	5.03x10 <sup>3</sup>
	Pull	4.54x10 <sup>2</sup>	6.80x10 <sup>2</sup>	9.07x10 <sup>2</sup>	1.36x10 <sup>3</sup>	1.81x10 <sup>3</sup>	2.27x10 <sup>3</sup>	2.72x10 <sup>3</sup>	3.17x10 <sup>3</sup>	3.63x10 <sup>3</sup>	4.08x10 <sup>3</sup>	4.54x10 <sup>3</sup>
ø100	Push	7.85x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.57x10 <sup>3</sup>	2.36x10 <sup>3</sup>	3.14x10 <sup>3</sup>	3.93x10 <sup>3</sup>	4.71x10 <sup>3</sup>	5.50x10 <sup>3</sup>	6.28x10 <sup>3</sup>	7.07x10 <sup>3</sup>	7.85x10 <sup>3</sup>
	Pull	7.15x10 <sup>2</sup>	1.07x10 <sup>3</sup>	1.43x10 <sup>3</sup>	2.14x10 <sup>3</sup>	2.86x10 <sup>3</sup>	3.57x10 <sup>3</sup>	4.29x10 <sup>3</sup>	5.00x10 <sup>3</sup>	5.72x10 <sup>3</sup>	6.43x10 <sup>3</sup>	7.15x10 <sup>3</sup>

# SSD2-G Series

## How to order

No 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**

**A** Model No.

**B** Bore size

**C** Stroke

**D** Switch model No.

\*1  
\*2  
\*5  
\*6

**E** Switch quantity

**F** Option

**G** Mounting bracket  
\*3  
\*8

## ⚠ Precautions for model No. selection

- \*1 : The T8\* switch cannot be mounted on the ø20 to ø32 bore sizes.
- \*2 : The F-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-switch with L type lead wire on ø20 models cannot be selected on strokes of 15 mm or under.
- \*6 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
- \*7 : F-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

- B** Bore size : ø20 mm
- C** Stroke : 10 mm
- D** Switch model No.: Reed T0H switch/  
Lead wire length 1 m
- E** Switch quantity : 1 on rod side
- F** Option : Rod end male thread
- G** Mounting bracket: Axial foot
- H** Accessory : Rod eye

**H** Accessory  
\*4

Code	Description													
<b>A Model No.</b>														
<b>SSD2-G</b>	Double acting/single rod/rubber scraper													
<b>SSD2-GL</b>	Double acting/single rod/rubber scraper/with switch													
<b>B Bore size (mm)</b>														
<b>20</b>	ø20													
<b>25</b>	ø25													
<b>32</b>	ø32													
<b>40</b>	ø40													
<b>50</b>	ø50													
<b>63</b>	ø63													
<b>80</b>	ø80													
<b>100</b>	ø100													
<b>C Stroke (mm)</b>														
Refer to the stroke table on the following page.														
<b>D Switch model No.</b>														
Lead wire	Lead wire	Contact	Voltage	Indicator	Lead wire	Bore size								
Straight	L-shaped		AC	DC		20	25	32	40	50	63	80	100	
-	F2S*	Proximity	●	●	1-color LED	2-wire	●	●						
-	F3S*		●	●		3-wire	●	●						
F2H*	F2V*		●	●		2-wire	●	●						
F3H*	F3V*		●	●	3-wire	●	●							
F3PH*	F3PV*		●	●	1-color LED (PNP output) (custom)	3-wire	●	●						
F2YH*	F2YV*		●	●	2-color LED	2-wire	●	●						
F3YH*	F3YV*	●	●	3-wire	●	●								
T0H*	T0V*	Reed	●	●	1-color LED	2-wire	●	●	●	●	●	●	●	
T5H*	T5V*		●	●	No indicator lamp		●	●	●	●	●	●	●	
T8H*	T8V*		●	●	1-color LED		●	●	●	●	●	●	●	
T1H*	T1V*	Proximity	●	●	1-color LED	2-wire	●	●	●	●	●	●	●	
T2H*	T2V*		●	●			3-wire	●	●	●	●	●	●	●
T3H*	T3V*		●	●			1-color LED (PNP output)	●	●	●	●	●	●	●
T3PH*	T3PV*		●	●	2-color LED	2-wire	●	●	●	●	●	●	●	
T2WH*	T2WV*		●	●	3-wire		●	●	●	●	●	●	●	
T2YH*	T2YV*		●	●	2-color LED		●	●	●	●	●	●	●	
T3WH*	T3WV*	●	●	3-wire	●	●	●	●	●	●	●			
T3YH*	T3YV*	●	●	2-color LED	2-wire	●	●	●	●	●	●	●		
T2YD*	-	●	●	AC magnetic field		●	●	●	●	●	●	●		
T2JD*	-	●	●	1-color LED off-delay		2-wire	●	●	●	●	●	●		
T2JH*	T2JV*	●	●	2-wire	●	●	●	●	●	●	●	●		
<b>* Lead wire length</b>														
<b>Blank</b>	1 m (standard)													
<b>3</b>	3 m (option)													
<b>5</b>	5 m (option)													
<b>E Switch quantity</b>														
<b>R</b>	1 on rod side													
<b>H</b>	1 on head side													
<b>D</b>	2													
<b>F Option</b>														
<b>Blank</b>	Rod end female thread													
<b>N</b>	Rod end male thread													
<b>G Mounting bracket</b>														
<b>Blank</b>	Without mounting bracket													
<b>LB</b>	Axial foot (made-to-order product)													
<b>CB</b>	Clevis bracket (pin and snap ring included)													
<b>FA</b>	Rod side flange (made-to-order product)													
<b>FB</b>	Head side flange													
<b>H Accessory (available when rod end male thread "N" is selected)</b>														
<b>I</b>	Rod eye													
<b>Y</b>	Rod clevis (pin and snap ring included)													

### [Stroke table]

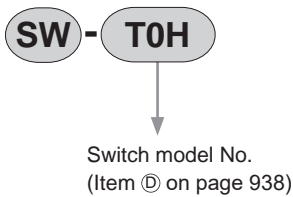
Stroke (mm)	Applicable bore size								
	20	25	32	40	50	63	80	100	
Standard stroke	5	●	●	●	●				
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●
	35	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●
	45	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
	75			●	●	●	●	●	●
	100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

\*1: Less than 5 mm for 1-color LED switch and less than 10 mm for the 2-color LED, off-delay, AC magnetic field proof, T1\* or T8\* switch are not available.

Refer to page 936 for the min. stroke with switch.

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

### How to order switch



### How to order mounting bracket

Bore size (mm)	ø20	ø25	ø32	ø40	ø50	ø63	ø80
<b>Mounting bracket</b>							
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
<b>Bore size (mm)</b>	<b>ø100</b>						
<b>Mounting bracket</b>							
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.

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

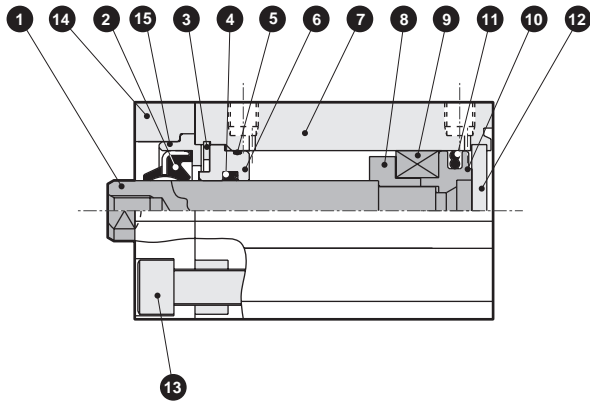
Spd  
Contr

Ending

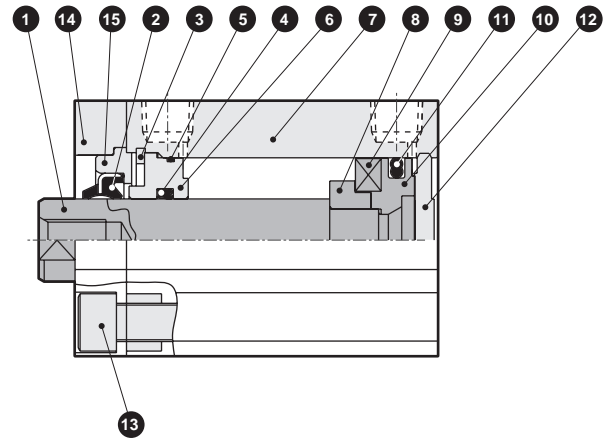
# SSD2-G Series

## Internal structure and parts list

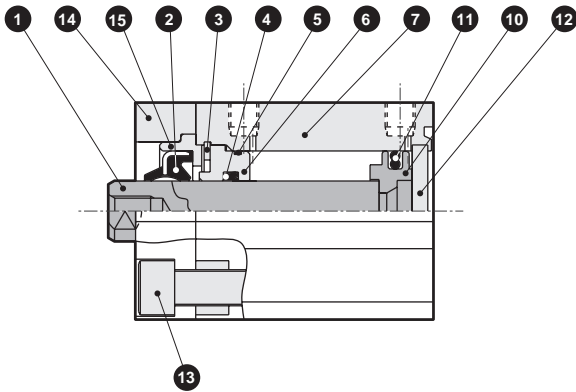
● SSD2-GL-20, 25 (double acting/single rod/rubber scraper/ with switch)



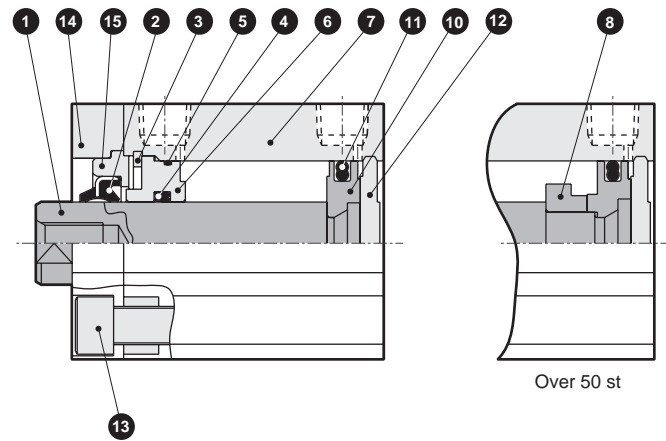
● SSD2-GL-32 (double acting/single rod/rubber scraper/ with switch)



● SSD2-G-20, 25 (double acting/single rod/rubber scraper)



● SSD2-G-32 (double acting/single rod/rubber scraper)



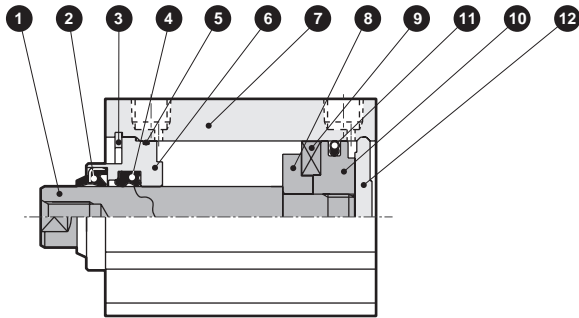
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	ø20, ø25: Stainless steel ø32: Steel	Industrial chrome plating	9	Magnet	Plastic	
2	Scraper	Nitrile rubber		10	Piston	Aluminum alloy	Chromate
3	C-snap ring	Stainless steel		11	Piston packing	Nitrile rubber	
4	Rod packing	Nitrile rubber		12	Cover	ø20 to ø25: Stainless steel ø32: Aluminum alloy	ø32: Alumite
5	Rod metal gasket	Nitrile rubber		13	Hexagon socket head cap screw	Stainless steel	
6	Rod metal	Special aluminum	Alumite	14	Adaptor (A)	Aluminum alloy	Alumite
7	Body	Aluminum alloy	Hard alumite	15	Adaptor (B)	Aluminum alloy	Alumite
8	Spacer	Aluminum alloy	Chromate				

## Repair parts list

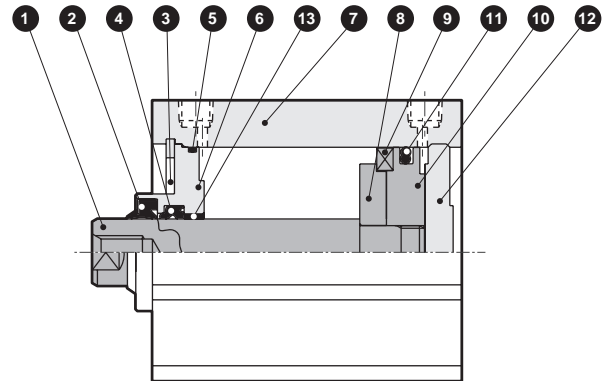
Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø20	SSD2-G-20K	2 4 5 11
ø25	SSD2-G-25K	
ø32	SSD2-G-32K	

### Internal structure and parts list

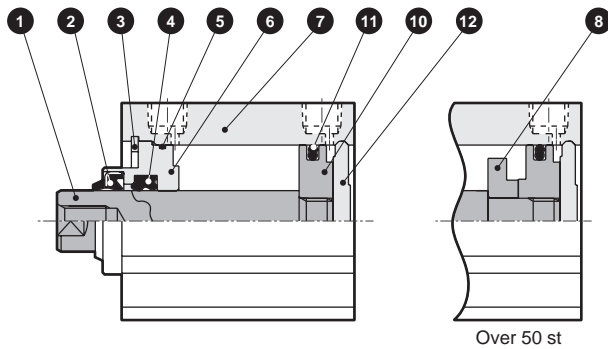
● SSD2-GL-40, 50 (double acting/single rod/rubber scraper/ with switch)



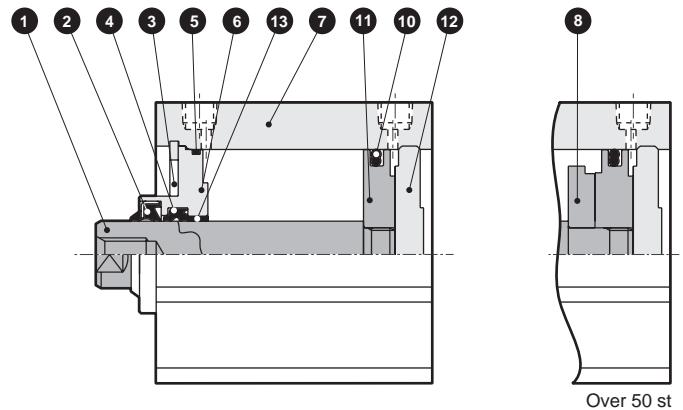
● SSD2-GL-63 to 100 (double acting/single rod/rubber scraper/ with switch)



● SSD2-G-40, 50 (double acting/single rod/rubber scraper)



● SSD2-G-63 to 100 (double acting/single rod/rubber scraper)



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

### Repair parts list

Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø40	SSD2-G-40K	2 4 5 11
ø50	SSD2-G-50K	
ø63	SSD2-G-63K	
ø80	SSD2-G-80K	
ø100	SSD2-G-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

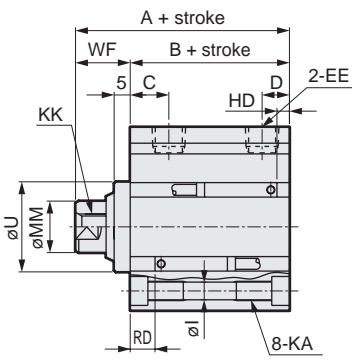
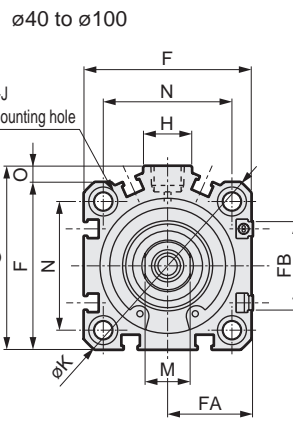
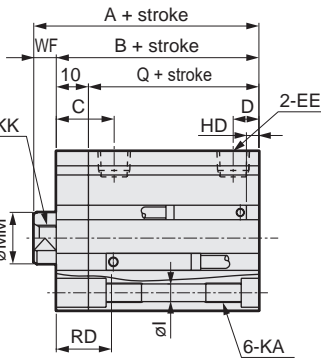
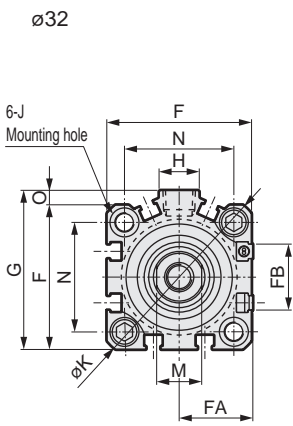
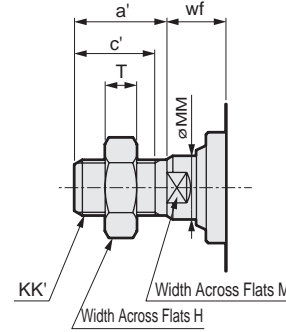
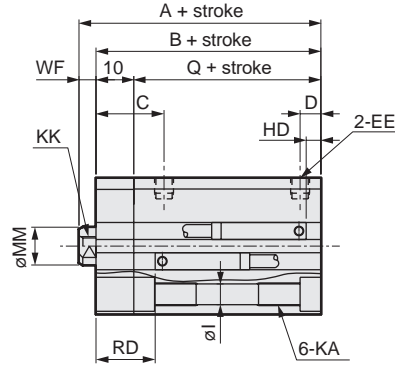
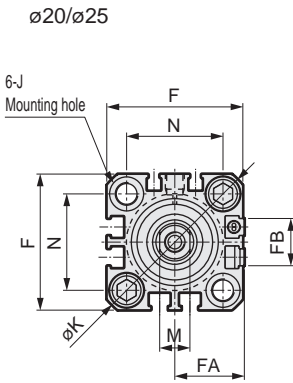


# SSD2-G Series

## dimensions

### ● SSD2-G(L)

### ● Rod end male thread



- \*1: To calculate A + stroke or B + stroke when using custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value. (Example) If the custom stroke is 7 mm, apply the standard stroke of 10 mm.
- \*2: HD and RD dimensions for 5 mm stroke differ from these dimensions according to the setting.
- \*3 :For Dimensions of individual accessories Pages 1046 to 1049.
- \*4: Dimensions in ( ) of codes A, B and Q are for strokes 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 L-shaped lead wire type.
- \*7: Dimensions in ( ) of code J are for the rod side mounting hole.

Code	Dimensions without switch				Common dimensions with switch														
	A <sup>*1</sup>	B <sup>*1</sup>	Q	Stroke	A <sup>*1</sup>	B <sup>*1</sup>	Q	C	D	EE <sup>*5</sup>	F	FA <sup>*6</sup>	FB	G	H	I	J	K	KA
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 TOH/TOV, T5H/TSV		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2VW, T3WH/T3VW		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S		Dimensions of rod end male thread part							
	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	M 10 x 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	M 14 x 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	M 14 x 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	M 18 x 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	M 18 x 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	M 22 x 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	M 26 x 1.5	27	30	16	18

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# MEMO

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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

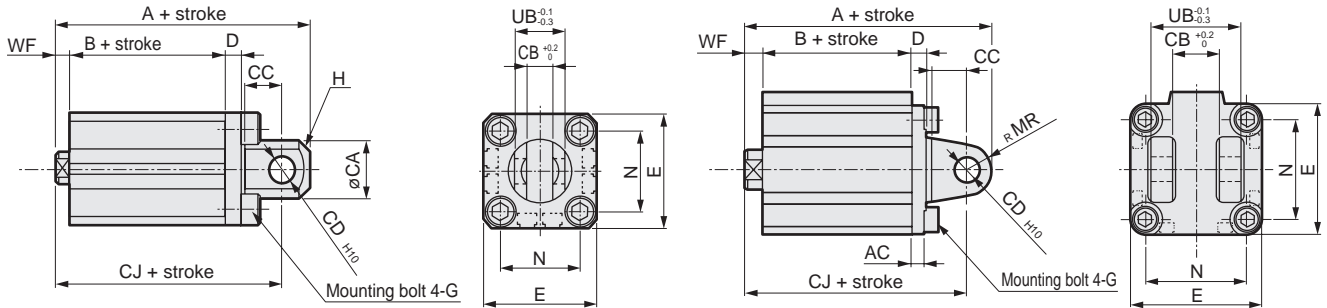
# SSD2-G Series

## Dimensions with mounting bracket

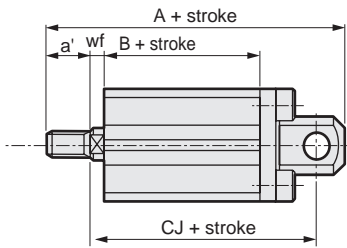
● Clevis bracket (CB)  
SSD2-G(L)-20 to 100 -CB

•  $\phi 20/\phi 25$

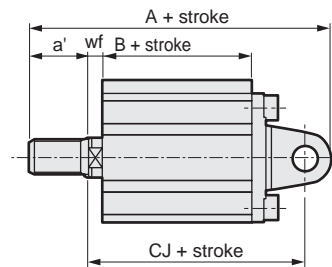
•  $\phi 32$  to  $\phi 100$



Rod end male thread



Rod end male thread

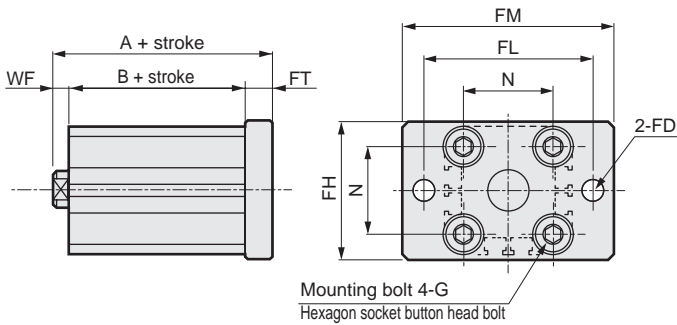


Code	Common dimensions															
	Bore size(mm)	AC	CA	CB	CC	CD	D	E	G	MR	N	UB				
SCP*3	$\phi 20$	-	20	8.2	12	8	5	36	M 6 x 16	-	25.5	16				
CMK2	$\phi 25$	-	24	10.2	14	10	5	40	M 6 x 16	-	28	20				
CMA2	$\phi 32$	4.5	-	18.2	14	10	5	45	M 6 x 16	10	34	36				
SCM	$\phi 40$	5	-	18.2	14	10	6	52	M 6 x 16	10	40	36				
SCG	$\phi 50$	6	-	22.2	20	14	7	64	M 8 x 20	14	50	44				
SCA2	$\phi 63$	7	-	22.2	20	14	8	77	M 10 x 25	14	60	44				
SCS2	$\phi 80$	9	-	28.2	27	18	10	98	M 12 x 40	18	77	56				
CKV2	$\phi 100$	12	-	32.2	31	22	13	117	M 12 x 40	22	94	64				
Code	Bore size(mm)	Female thread						Male thread								
		WF	No switch			With switch			a'	wf	No switch			With switch		
A	B		CJ	A	B	CJ	A	B			CJ	A	B	CJ		
MRL2	$\phi 20$	4.5	61	29.5	52	71	39.5	62	14	4.5	75	29.5	52	85	39.5	62
MRG2	$\phi 25$	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
SM-25	$\phi 32$	7	70	33	60	80	43	70	23.5	5	91.5	33	58	101.5	43	68
ShkAbs	$\phi 40$	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
	$\phi 50$	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
FJ	$\phi 63$	18	98	36	84	108	46	94	28.5	15	123.5	36	81	133.5	46	91
	$\phi 80$	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
FK	$\phi 100$	22	142	53	120	152	63	130	35.5	18	173.5	53	116	183.5	63	126

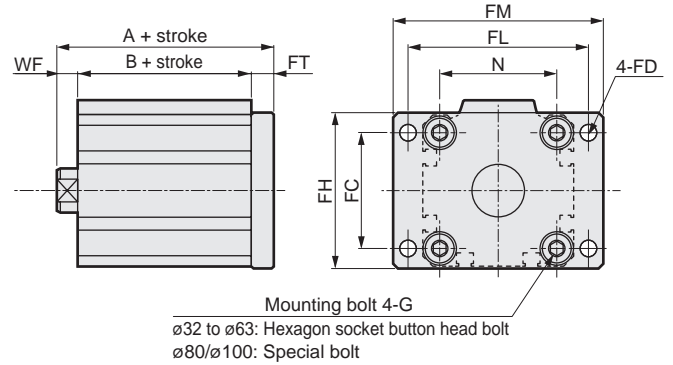
### Dimensions with mounting bracket

- Head side flange (FB)  
SSD2-G(L)-20 to 100 -FB

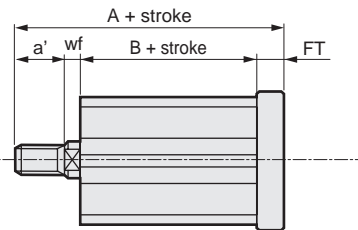
·  $\phi 20/\phi 25$



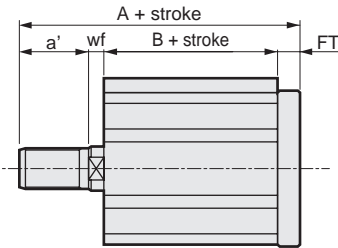
·  $\phi 32$  to  $\phi 100$



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	No switch		With switch		a'	wf	No switch		With switch	
											A	B	A	B			A	B	A	B
ø20	-	6.6	39	48	60	8	25.5	M6x16	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	M6x16	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	M6x16	7	48	33	58	43	23.5	5	69.5	33	79.5	43	
ø40	40	5.5	54	62	72	8	40	M6x16	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	M8x20	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	M10x25	18	63	36	73	46	28.5	15	88.5	36	98.5	46	
ø80	77	11	99	116	134	11	77	M12x40	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	M12x40	22	86	53	96	63	35.5	18	117.5	53	127.5	63	

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

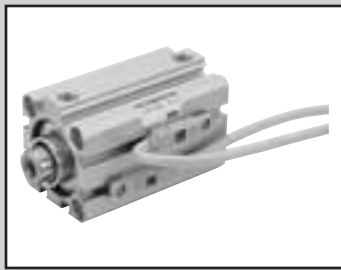
ShkAbs

FJ

FK

Spd  
Contr

Ending



Compact cylinder Double acting/coolant proof

# SSD2-G2/G3 Series

● Bore size:  $\phi 16/\phi 20/\phi 25/\phi 32/\phi 40/\phi 50/\phi 63/\phi 80/\phi 100$

JIS symbol



## Specifications

Item	SSD2-G2/G3									
	SSD2-G2L/G3L (with switch)									
Bore size mm	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	1.0									
Min. working pressure MPa	0.15					0.1				
Proof pressure MPa	1.6									
Ambient temperature °C	-10 to 60 (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	No									
Lubrication	Not required (use turbine oil class 1 ISO VG32 if lubrication is necessary)									
Allowable absorbed energy J	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56	

\*1: The  $\phi 32$  bore size with a 5 mm stroke and without a switch has a port size of M5.

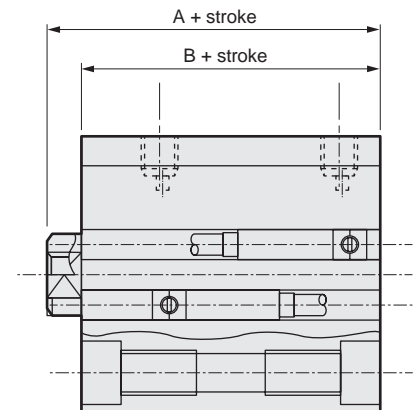
## Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\phi 16$	5/10/15/20/25/30	30	1 (10) The value in ( ) is for types with one or two switches.
$\phi 20$	5/10/15/20/25/30/	50	
$\phi 25$	35/40/45/50		
$\phi 32$	5/10/15/20/25/30/35/	100	
$\phi 40$	40/45/50/75/100		
$\phi 50$	10/15/20/25/30/35/40/45	100	
$\phi 63$			
$\phi 80$			
$\phi 100$			

## Custom stroke

### ● SSD2-G2/G3 Series

Item	Standard product	
	Standard stroke body with spacer	
Model No.	Refer to How to order.	
Product Descriptions	A spacer is added to the standard stroke body to adjust the stroke 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 38mm stroke. B + stroke is 73 mm.	



### Switch specifications

● Proximity switch

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	Red/green LED (Lit when ON)	
Leakage current	1 mA or less	10 µA or less
Max. shock resistance	980 m/S <sup>2</sup>	
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 (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
	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	1.01x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.61x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.01x10 <sup>2</sup>
	Pull	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.36x10 <sup>2</sup>	1.51x10 <sup>2</sup>
ø20	Push	-	47.1	62.8	94.2	1.26x10 <sup>2</sup>	1.57x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.20x10 <sup>2</sup>	2.51x10 <sup>2</sup>	2.83x10 <sup>2</sup>	3.14x10 <sup>2</sup>
	Pull	-	35.3	47.1	70.7	94.2	1.18x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.65x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.12x10 <sup>2</sup>	2.36x10 <sup>2</sup>
ø25	Push	-	73.6	98.2	1.47x10 <sup>2</sup>	1.96x10 <sup>2</sup>	2.45x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.44x10 <sup>2</sup>	3.93x10 <sup>2</sup>	4.42x10 <sup>2</sup>	4.91x10 <sup>2</sup>
	Pull	-	56.7	75.6	1.13x10 <sup>2</sup>	1.51x10 <sup>2</sup>	1.89x10 <sup>2</sup>	2.27x10 <sup>2</sup>	2.64x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.40x10 <sup>2</sup>	3.78x10 <sup>2</sup>
ø32	Push	-	1.21x10 <sup>2</sup>	1.61x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.22x10 <sup>2</sup>	4.02x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.63x10 <sup>2</sup>	6.43x10 <sup>2</sup>	7.24x10 <sup>2</sup>	8.04x10 <sup>2</sup>
	Pull	-	90.5	1.21x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.62x10 <sup>2</sup>	4.22x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.43x10 <sup>2</sup>	6.03x10 <sup>2</sup>
ø40	Push	-	1.88x10 <sup>2</sup>	2.51x10 <sup>2</sup>	3.77x10 <sup>2</sup>	5.03x10 <sup>2</sup>	6.28x10 <sup>2</sup>	7.54x10 <sup>2</sup>	8.80x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.13x10 <sup>3</sup>	1.26x10 <sup>3</sup>
	Pull	-	1.58x10 <sup>2</sup>	2.11x10 <sup>2</sup>	3.17x10 <sup>2</sup>	4.22x10 <sup>2</sup>	5.28x10 <sup>2</sup>	6.33x10 <sup>2</sup>	7.39x10 <sup>2</sup>	8.44x10 <sup>2</sup>	9.50x10 <sup>2</sup>	1.06x10 <sup>3</sup>
ø50	Push	-	2.95x10 <sup>2</sup>	3.93x10 <sup>2</sup>	5.89x10 <sup>2</sup>	7.85x10 <sup>2</sup>	9.82x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.37x10 <sup>3</sup>	1.57x10 <sup>3</sup>	1.77x10 <sup>3</sup>	1.96x10 <sup>3</sup>
	Pull	-	2.47x10 <sup>2</sup>	3.30x10 <sup>2</sup>	4.95x10 <sup>2</sup>	6.60x10 <sup>2</sup>	8.25x10 <sup>2</sup>	9.90x10 <sup>2</sup>	1.15x10 <sup>3</sup>	1.32x10 <sup>3</sup>	1.48x10 <sup>3</sup>	1.65x10 <sup>3</sup>
ø63	Push	3.12x10 <sup>2</sup>	4.68x10 <sup>2</sup>	6.23x10 <sup>2</sup>	9.35x10 <sup>2</sup>	1.25x10 <sup>3</sup>	1.56x10 <sup>3</sup>	1.87x10 <sup>3</sup>	2.18x10 <sup>3</sup>	2.49x10 <sup>3</sup>	2.81x10 <sup>3</sup>	3.12x10 <sup>3</sup>
	Pull	2.80x10 <sup>2</sup>	4.20x10 <sup>2</sup>	5.61x10 <sup>2</sup>	8.41x10 <sup>2</sup>	1.12x10 <sup>3</sup>	1.40x10 <sup>3</sup>	1.68x10 <sup>3</sup>	1.96x10 <sup>3</sup>	2.24x10 <sup>3</sup>	2.52x10 <sup>3</sup>	2.80x10 <sup>3</sup>
ø80	Push	5.03x10 <sup>2</sup>	7.54x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.51x10 <sup>3</sup>	2.01x10 <sup>3</sup>	2.51x10 <sup>3</sup>	3.02x10 <sup>3</sup>	3.52x10 <sup>3</sup>	4.02x10 <sup>3</sup>	4.52x10 <sup>3</sup>	5.03x10 <sup>3</sup>
	Pull	4.54x10 <sup>2</sup>	6.80x10 <sup>2</sup>	9.07x10 <sup>2</sup>	1.36x10 <sup>3</sup>	1.81x10 <sup>3</sup>	2.27x10 <sup>3</sup>	2.72x10 <sup>3</sup>	3.17x10 <sup>3</sup>	3.63x10 <sup>3</sup>	4.08x10 <sup>3</sup>	4.54x10 <sup>3</sup>
ø100	Push	7.85x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.57x10 <sup>3</sup>	2.36x10 <sup>3</sup>	3.14x10 <sup>3</sup>	3.93x10 <sup>3</sup>	4.71x10 <sup>3</sup>	5.50x10 <sup>3</sup>	6.28x10 <sup>3</sup>	7.07x10 <sup>3</sup>	7.85x10 <sup>3</sup>
	Pull	7.15x10 <sup>2</sup>	1.07x10 <sup>3</sup>	1.43x10 <sup>3</sup>	2.14x10 <sup>3</sup>	2.86x10 <sup>3</sup>	3.57x10 <sup>3</sup>	4.29x10 <sup>3</sup>	5.00x10 <sup>3</sup>	5.72x10 <sup>3</sup>	6.43x10 <sup>3</sup>	7.15x10 <sup>3</sup>

# SSD2-G2/G3 Series

## How to order

No 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**

**A** Degree of protection level

**B** Bore size

**C** Port thread

**D** Stroke

**E** Switch model No.

\*1

\*6

**F** Switch quantity

**G** Option

**H** Mounting bracket

\*2

\*3

**I** Accessory

\*4

## ⚠ Precautions for model No. selection

\*1 : The F-switch can only be mounted on the piping port surface of bore sizes  $\phi 20$  and  $\phi 25$ .

\*2 : The mounting bracket is included at shipment.

\*3 : The structure of bore sizes  $\phi 16$  to  $\phi 32$  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

**A** Degree of protection level : Coolant proof scraper + packing NBR, with switch

**B** Bore size :  $\phi 32$  mm

**C** Port thread : Rc thread

**D** Stroke : 30 mm

**E** Switch model No. : Proximity switch T2YLH, lead wire 1 m

**F** Switch quantity : 1 on rod side

**G** Option : Rod end male thread

**H** Mounting bracket : Axial foot

Code	Description
<b>A Degree of protection level</b>	
<b>G2</b>	Coolant proof scraper + packing NBR
<b>G3</b>	Coolant proof scraper + packing FKM
<b>G2L</b>	Coolant proof scraper + packing NBR, with switch
<b>G3L</b>	Coolant proof scraper + packing FKM, with switch

<b>B Bore size (mm)</b>	
<b>16</b>	$\phi 16$
<b>20</b>	$\phi 20$
<b>25</b>	$\phi 25$
<b>32</b>	$\phi 32$
<b>40</b>	$\phi 40$
<b>50</b>	$\phi 50$
<b>63</b>	$\phi 63$
<b>80</b>	$\phi 80$
<b>100</b>	$\phi 100$

<b>C Port thread</b>	
<b>Blank</b>	Rc thread
<b>NN</b>	NPT thread ( $\phi 32$ and over) (made-to-order product)
<b>GN</b>	G thread ( $\phi 32$ and over) (made-to-order product)

<b>D Stroke (mm)</b>
Refer to the stroke table on the following page.

<b>E Switch model No.</b>					
Lead wire	Lead wire	Contact	Voltage	Indicator	Lead wire
Straight	L-shaped				
<b>T2YLH*</b>	<b>T2YLV*</b>	Proximity	DC	2-color LED	2-wire
<b>T3YLH*</b>	<b>T3YLV*</b>				

<b>* Lead wire length</b>	
<b>Blank</b>	1 m (standard)
<b>3</b>	3 m (option)
<b>5</b>	5 m (option)

<b>F Switch quantity</b>	
<b>R</b>	1 on rod side
<b>H</b>	1 on head side
<b>D</b>	2

<b>G Option</b>	
<b>Blank</b>	Rod end female thread
<b>N</b>	Rod end male thread

<b>H Mounting bracket</b>	
<b>Blank</b>	Without mounting bracket
<b>LB</b>	Axial foot (made-to-order product)
<b>CB</b>	Clevis bracket (pin and snap ring included)
<b>FA</b>	Rod side flange (made-to-order product)
<b>FB</b>	Head side flange

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

### [Stroke table]

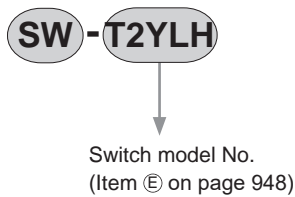
Stroke (mm)	Applicable bore size									
	16	20	25	32	40	50	63	80	100	
Standard stroke	5	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●
	35		●	●	●	●	●	●	●	●
	40		●	●	●	●	●	●	●	●
	45		●	●	●	●	●	●	●	●
	50		●	●	●	●	●	●	●	●
	75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

\*1: Less than 10 mm stroke is not available.

Refer to page 946 for the min. stroke with switch.

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

### How to order switch



### How to order mounting bracket

Bore size (mm)	ø16	ø20	ø25	ø32	ø40	ø50	ø63
<b>Mounting bracket</b>							
Foot (LB)					SSD2-LB-40	SSD2-LB-50	SSD2-LB-63
Flange (FA/FB)					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
<b>Bore size (mm)</b>	<b>ø80</b>	<b>ø100</b>					
<b>Mounting bracket</b>							
Foot (LB)	SSD2-LB-80	SSD2-LB-100					
Flange (FA/FB)	SSD2-FA-80	SSD2-FA-100					
Clevis bracket (CB)	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.

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

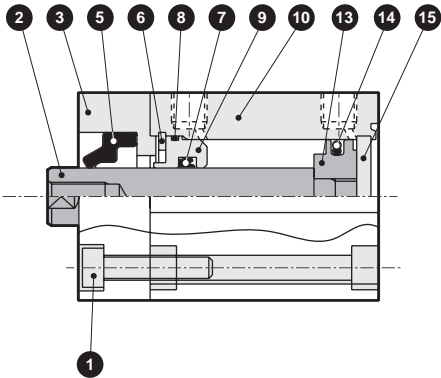


# SSD2-G2/G3 Series

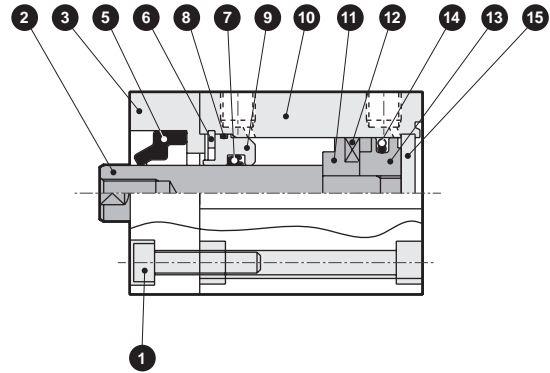
## Internal structure and parts list

● Degree of protection: Packing NBR SSD2-G2/G2L  
Packing FKM SSD2-G3/G3L

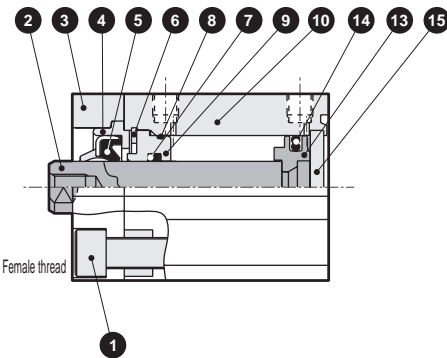
● SSD2-G<sub>2</sub><sup>2</sup>-16 (without switch)



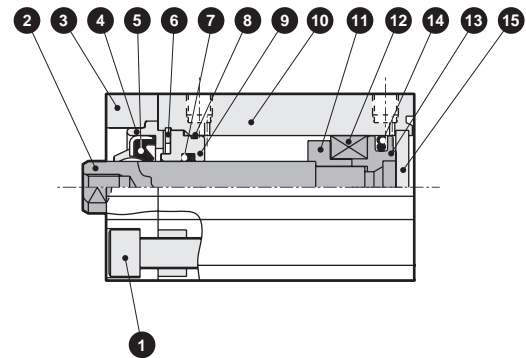
● SSD2-G<sub>2</sub><sup>2</sup>L-16 (with switch)



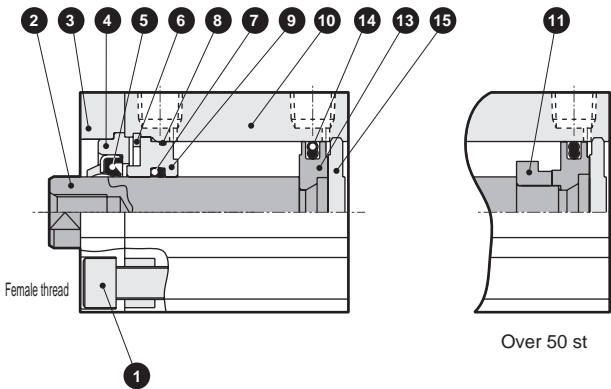
● SSD2-G<sub>2</sub><sup>2</sup>-20, 25 (without switch)



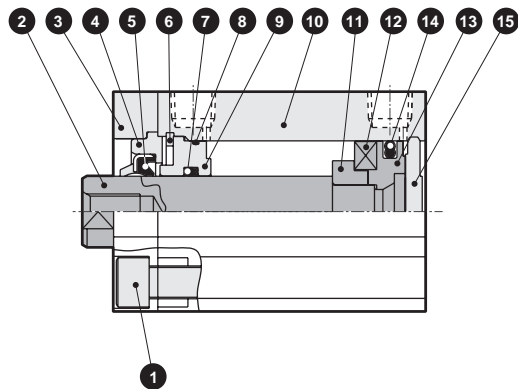
● SSD2-G<sub>2</sub><sup>2</sup>L-20, 25 (with switch)



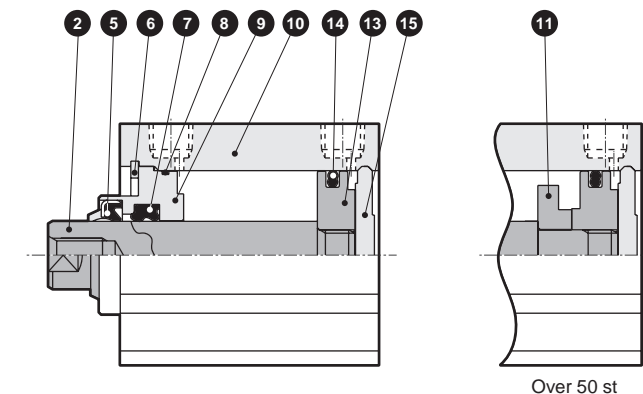
● SSD2-G<sub>2</sub><sup>2</sup>-32 (without switch)



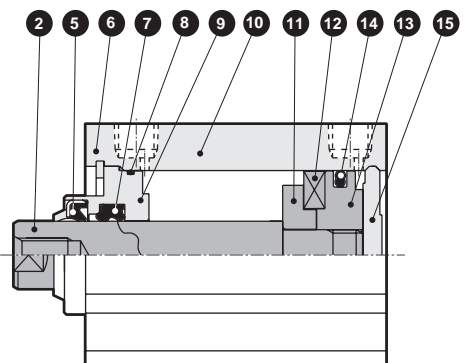
● SSD2-G<sub>2</sub><sup>2</sup>L-32 (with switch)



● SSD2-G<sub>2</sub><sup>2</sup>-40, 50 (without switch)



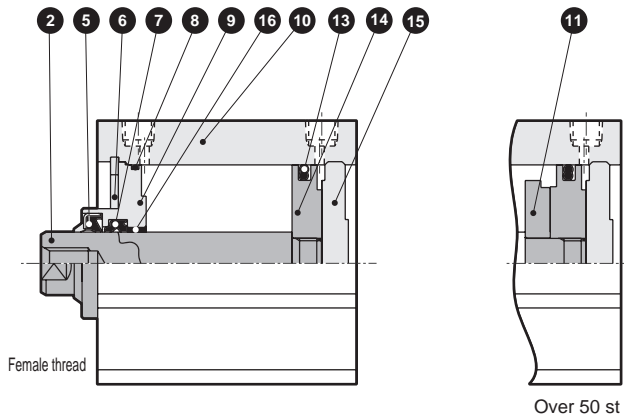
● SSD2-G<sub>2</sub><sup>2</sup>L-40, 50 (with switch)



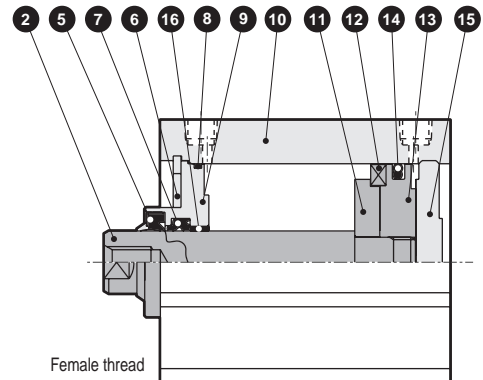
## Internal structure and parts list

- Degree of protection: Packing NBR SSD2-G2/G2L  
Packing FKM SSD2-G3/G3L

- SSD2-G<sub>2</sub>-63 to 100 (without switch)



- SSD2-G<sub>2</sub>-L-63 to 100 (with switch)



## Main parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Hexagon socket head cap screw	Stainless steel	ø16 to ø32 only	9	Rod metal	ø16 to ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø16 to ø50: Alumite ø63 to ø100: Chromate
2	Piston rod	Stainless steel	Industrial chrome plating	10	Body	Aluminum alloy	Hard alumite
3	Adaptor (A)	Aluminum alloy	Alumite: ø16 to ø32 only	11	Spacer	Aluminum alloy	Chromate
4	Adaptor (B)	Aluminum alloy	Alumite: ø16 to ø32 only	12	Magnet	Plastic	
5	Scraper	G2	Nitrile rubber	13	Piston	Aluminum alloy	Chromate
		G3	Fluoro rubber				
6	C-snap ring	Stainless steel		14	Piston packing	G2	Nitrile rubber
7	Rod packing	G2	Nitrile rubber			G3	Fluoro rubber
		G3	Fluoro rubber	15	Cover	ø16 to ø25: Stainless steel ø32 to ø100: Aluminum alloy	Alumite: ø32 to ø100
8	Rod metal gasket	G2	Nitrile rubber			16	Bush
		G3	Fluoro rubber				

## Repair parts list

Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø16	SSD2-G2-16K	5 7 8 14
	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.

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

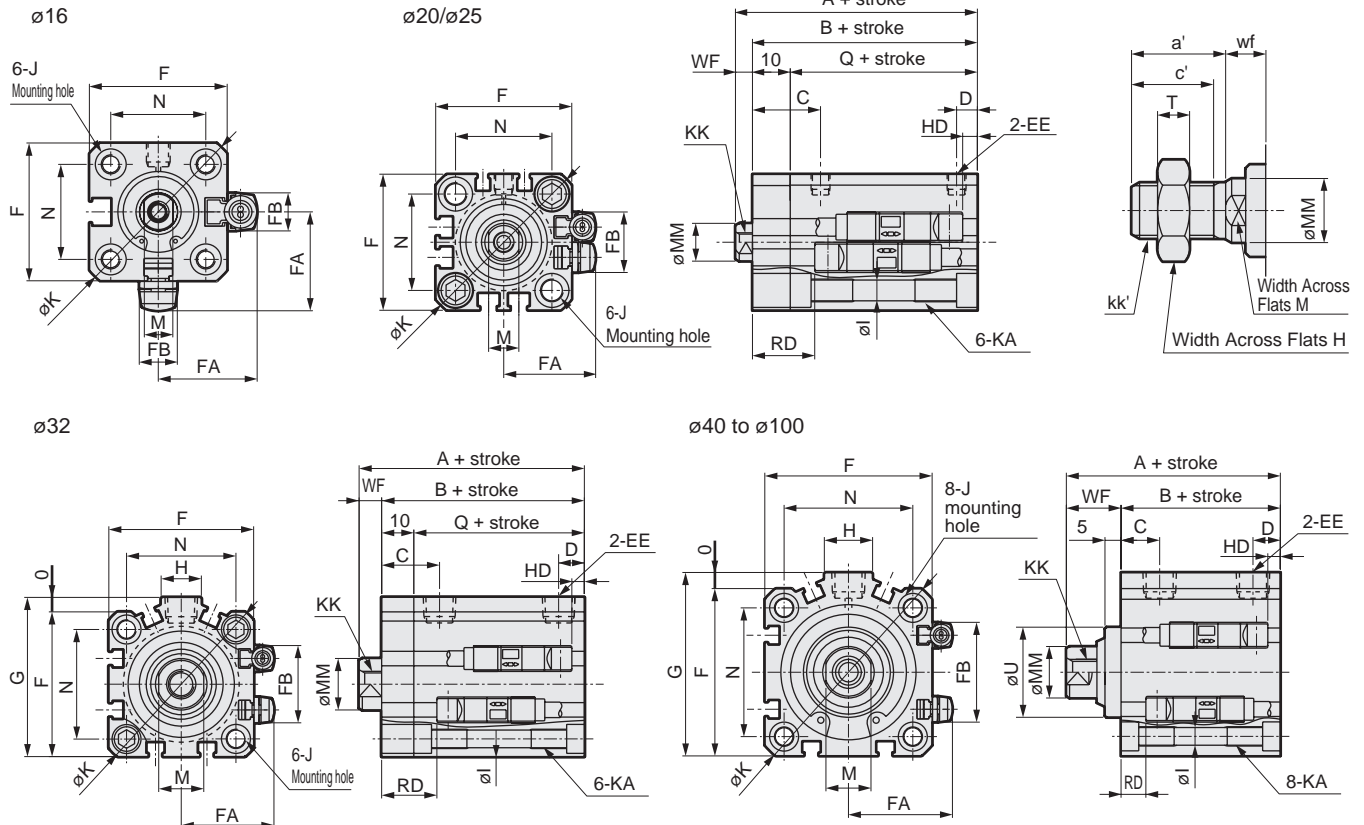
Ending

# SSD2-G2/G3 Series

## dimensions

- Degree of protection: Packing NBR  
SSD2-G2/G2L
- Degree of protection: Packing FKM  
SSD2-G3/G3L

● Rod end male thread



- \*1: To calculate A + stroke or B + stroke when using custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value. (Example) If the custom stroke is 7 mm, apply the standard stroke of 10 mm.
- \*2: HD and RD dimensions for 5 mm stroke 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 strokes 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															
	A <sup>*1</sup>	B <sup>*1</sup>	Q	A <sup>*1</sup>	B <sup>*1</sup>	Q	C	D	EE <sup>*5</sup>	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							
	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	M 10 x 1.25	10	12	6	10
ø32	14	16	34	4.5	-	12	19	3	23.5	20.5	22	M 14 x 1.5	14	16	8	10
ø40	14	16	40	5	28	17	12	6.5	23.5	20.5	22	M 14 x 1.5	14	16	8	15
ø50	17	20	50	7	35	18	12	7.5	28.5	26	27	M 18 x 1.5	17	20	11	15
ø63	17	20	60	7	35	18	12.5	12.5	28.5	26	27	M 18 x 1.5	17	20	11	15
ø80	22	25	77	6	43	20	15	17.5	35.5	32.5	32	M 22 x 1.5	22	25	13	18
ø100	27	30	94	6.5	59	22	19	23	35.5	32.5	41	M 26 x 1.5	27	30	16	18

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# MEMO

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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

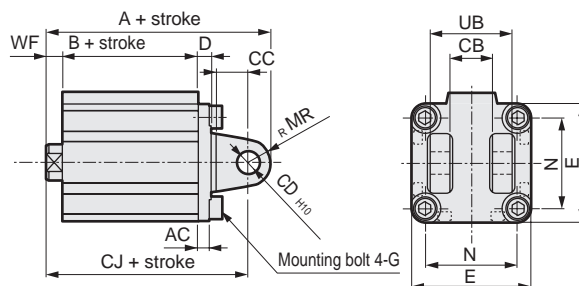
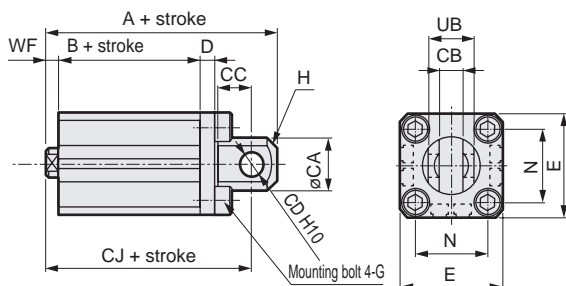
# SSD2-G2/G3 Series

## Dimensions with mounting bracket

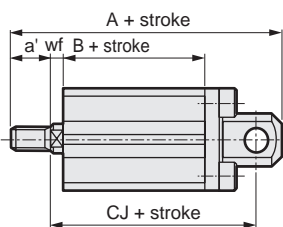
● Clevis bracket (CB)  
SSD2-G2(L)/G3(L)-16 to 100 -CB

•  $\phi 16$  to  $\phi 25$

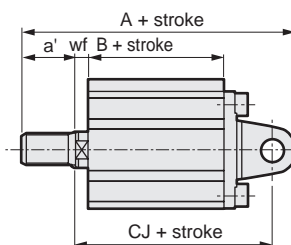
•  $\phi 32$  to  $\phi 100$



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
$\phi 16$	-	15	6.6 <sup>+0.3 0</sup>	8	5	5	29	M 4 x 12	C2	-	20	12
$\phi 20$	-	20	8.2 <sup>+0.2 0</sup>	12	8	5	36	M 6 x 16	C4	-	25.5	16
$\phi 25$	-	24	10.2 <sup>+0.2 0</sup>	14	10	5	40	M 6 x 16	C5	-	28	20
$\phi 32$	4.5	-	18.2 <sup>+0.2 0</sup>	14	10	5	45	M 6 x 16	-	10	34	36
$\phi 40$	5	-	18.2 <sup>+0.2 0</sup>	14	10	6	52	M 6 x 16	-	10	40	36
$\phi 50$	6	-	22.2 <sup>+0.2 0</sup>	20	14	7	64	M 8 x 20	-	14	50	44
$\phi 63$	7	-	22.2 <sup>+0.2 0</sup>	20	14	8	77	M 10 x 25	-	14	60	44
$\phi 80$	9	-	28.2 <sup>+0.2 0</sup>	27	18	10	98	M 12 x 40	-	18	77	56
$\phi 100$	12	-	32.2 <sup>+0.2 0</sup>	31	22	13	117	M 12 x 40	-	22	94	64

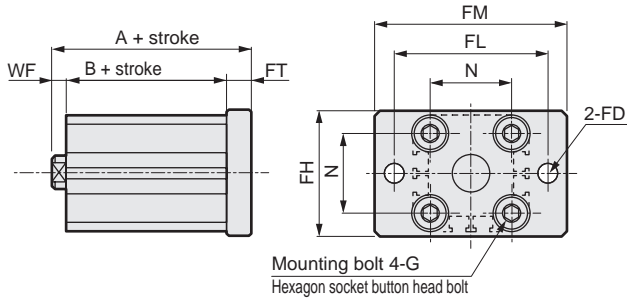
  

Code	Bore size(mm)	Female thread						Male thread								
		WF	No switch			With switch			a'	wf	No switch			With switch		
			A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
$\phi 16$	8.5	56.5	27	50.5	61.5	32	55.5	12	8.5	68.5	27	50.5	73.5	32	55.5	
$\phi 20$	9.5	66	29.5	57	76	39.5	67	14	9.5	80	29.5	57	90	39.5	67	
$\phi 25$	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	
$\phi 32$	12	75	33	65	85	43	75	23.5	10	96.5	33	63	106.5	43	73	
$\phi 40$	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	
$\phi 50$	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	
$\phi 63$	18	98	36	84	108	46	94	28.5	15	123.5	36	81	133.5	46	91	
$\phi 80$	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	
$\phi 100$	22	142	53	120	152	63	130	35.5	18	173.5	53	116	183.5	63	126	

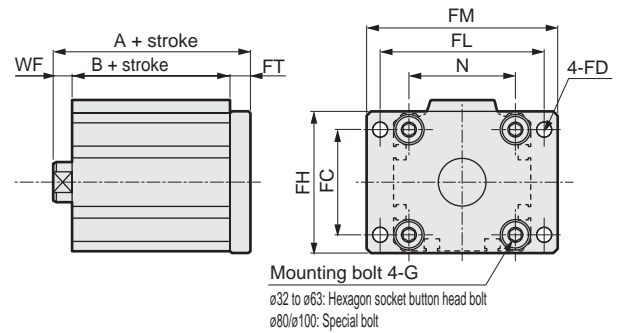
## Dimensions with mounting bracket

- Head side flange (FB)  
SSD2-G2(L)/G3 (L)-20 to 100-FB

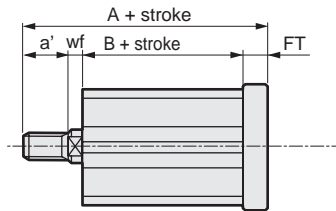
·  $\varnothing 16$  to  $\varnothing 25$



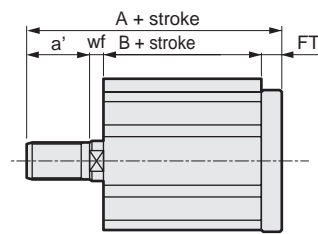
·  $\varnothing 32$  to  $\varnothing 100$



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	No switch		With switch		a'	wf	No switch		With switch	
											A	B	A	B			A	B	A	B
$\varnothing 16$	-	4.5	30	45	55	5.5	M4x12	20	8.5	41	27	46	32	12	8.5	53	27	58	32	
$\varnothing 20$	-	6.6	39	48	60	8	M6x16	25.5	9.5	47	29.5	57	39.5	14	9.5	61	29.5	71	39.5	
$\varnothing 25$	-	6.6	42	52	64	8	M6x16	28	10	50.5	32.5	60.5	42.5	17.5	10	68	32.5	78	42.5	
$\varnothing 32$	34	5.5	48	56	65	8	M6x16	34	12	53	33	63	43	23.5	10	74.5	33	84.5	43	
$\varnothing 40$	40	5.5	54	62	72	8	M6x16	40	17	54.5	29.5	64.5	39.5	23.5	15	76	29.5	86	39.5	
$\varnothing 50$	50	6.6	67	76	89	9	M8x20	50	18	57.5	30.5	67.5	40.5	28.5	15	83	30.5	93	40.5	
$\varnothing 63$	60	9	80	92	108	9	M10x25	60	18	63	36	73	46	28.5	15	88.5	36	98.5	46	
$\varnothing 80$	77	11	99	116	134	11	M12x40	77	20	74.5	43.5	84.5	53.5	35.5	18	108	43.5	118	53.5	
$\varnothing 100$	94	11	117	136	154	11	M12x40	94	22	86	53	96	63	35.5	18	117.5	53	127.5	63	

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

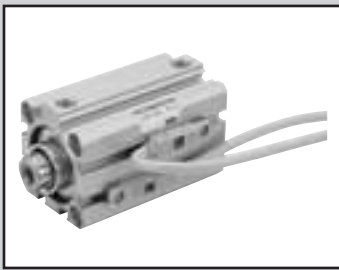
ShkAbs

FJ

FK

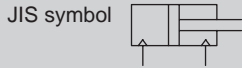
Spd  
Contr

Ending



# Compact cylinder double acting/high load/coolant proof SSD2-KG2/KG3 Series

- Bore size:  $\phi 16/\phi 20/\phi 25/\phi 32/\phi 40/\phi 50$   
 $\phi 63/\phi 80/\phi 100$



## Specifications

Item	SSD2-KG2/KG3									
	SSD2-KG2L/KG3L (with switch)									
Bore size mm	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	1.0 ( $\approx 150$ psi, 10 bar)									
Min. working pressure MPa	0.15 ( $\approx 22$ psi, 1.5 bar)					0.1 ( $\approx 15$ psi, 1 bar)				
Proof pressure MPa	1.6 ( $\approx 230$ psi, 16 bar)									
Ambient temperature $^{\circ}\text{C}$	-10 ( $14^{\circ}\text{F}$ ) to 60 ( $140^{\circ}\text{F}$ ) (no freezing)									
Port size	M5x0.8			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

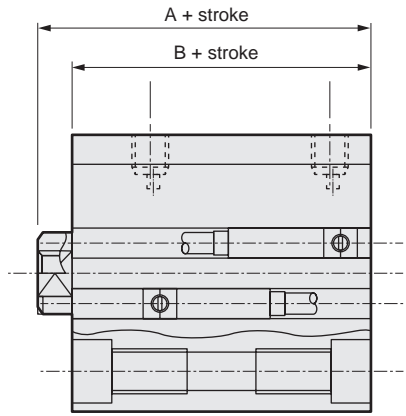
Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\phi 16$	5/10/15/20/25/30	30	1(10) The value in ( ) is for types with one or two switches.
$\phi 20$	5/10/15/20/25/30/35/40/45/50	50	
$\phi 25$	5/10/15/20/25/30/35/40/45/50/75/100	100	
$\phi 32$	10/15/20/25/30/35/40/45/50/75/100	100	
$\phi 40$			
$\phi 50$			
$\phi 63$			
$\phi 80$			
$\phi 100$			

\*1: The custom stroke 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.

## Custom stroke

### ● SSD2-KG2/KG3 Series

Item	Standard products	
	Standard stroke body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke body to adjust the stroke 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. B + stroke is 88 mm.	



### Switch specifications

● Proximity switch

Type/model No. Item	Proximity/2-wire	Proximity/3-wire
	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	Red/green LED (Lit when ON)	
Leakage current	1 mA or less	10 µA or less
Max. shock resistance	980 m/S <sup>2</sup>	
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 (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
	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	1.01x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.61x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.01x10 <sup>2</sup>
	Pull	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.36x10 <sup>2</sup>	1.51x10 <sup>2</sup>
ø20	Push	-	47.1	62.8	94.2	1.26x10 <sup>2</sup>	1.57x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.20x10 <sup>2</sup>	2.51x10 <sup>2</sup>	2.83x10 <sup>2</sup>	3.14x10 <sup>2</sup>
	Pull	-	35.3	47.1	70.7	94.2	1.18x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.65x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.12x10 <sup>2</sup>	2.36x10 <sup>2</sup>
ø25	Push	-	73.6	98.2	1.47x10 <sup>2</sup>	1.96x10 <sup>2</sup>	2.45x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.44x10 <sup>2</sup>	3.93x10 <sup>2</sup>	4.42x10 <sup>2</sup>	4.91x10 <sup>2</sup>
	Pull	-	56.7	75.6	1.13x10 <sup>2</sup>	1.51x10 <sup>2</sup>	1.89x10 <sup>2</sup>	2.27x10 <sup>2</sup>	2.64x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.40x10 <sup>2</sup>	3.78x10 <sup>2</sup>
ø32	Push	-	1.21x10 <sup>2</sup>	1.61x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.22x10 <sup>2</sup>	4.02x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.63x10 <sup>2</sup>	6.43x10 <sup>2</sup>	7.24x10 <sup>2</sup>	8.04x10 <sup>2</sup>
	Pull	-	90.5	1.21x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.62x10 <sup>2</sup>	4.22x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.43x10 <sup>2</sup>	6.03x10 <sup>2</sup>
ø40	Push	-	1.88x10 <sup>2</sup>	2.51x10 <sup>2</sup>	3.77x10 <sup>2</sup>	5.03x10 <sup>2</sup>	6.28x10 <sup>2</sup>	7.54x10 <sup>2</sup>	8.80x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.13x10 <sup>3</sup>	1.26x10 <sup>3</sup>
	Pull	-	1.58x10 <sup>2</sup>	2.11x10 <sup>2</sup>	3.17x10 <sup>2</sup>	4.22x10 <sup>2</sup>	5.28x10 <sup>2</sup>	6.33x10 <sup>2</sup>	7.39x10 <sup>2</sup>	8.44x10 <sup>2</sup>	9.50x10 <sup>2</sup>	1.06x10 <sup>3</sup>
ø50	Push	-	2.95x10 <sup>2</sup>	3.93x10 <sup>2</sup>	5.89x10 <sup>2</sup>	7.85x10 <sup>2</sup>	9.82x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.37x10 <sup>3</sup>	1.57x10 <sup>3</sup>	1.77x10 <sup>3</sup>	1.96x10 <sup>3</sup>
	Pull	-	2.47x10 <sup>2</sup>	3.30x10 <sup>2</sup>	4.95x10 <sup>2</sup>	6.60x10 <sup>2</sup>	8.25x10 <sup>2</sup>	9.90x10 <sup>2</sup>	1.15x10 <sup>3</sup>	1.32x10 <sup>3</sup>	1.48x10 <sup>3</sup>	1.65x10 <sup>3</sup>
ø63	Push	3.12x10 <sup>2</sup>	4.68x10 <sup>2</sup>	6.23x10 <sup>2</sup>	9.35x10 <sup>2</sup>	1.25x10 <sup>3</sup>	1.56x10 <sup>3</sup>	1.87x10 <sup>3</sup>	2.18x10 <sup>3</sup>	2.49x10 <sup>3</sup>	2.81x10 <sup>3</sup>	3.12x10 <sup>3</sup>
	Pull	2.80x10 <sup>2</sup>	4.20x10 <sup>2</sup>	5.61x10 <sup>2</sup>	8.41x10 <sup>2</sup>	1.12x10 <sup>3</sup>	1.40x10 <sup>3</sup>	1.68x10 <sup>3</sup>	1.96x10 <sup>3</sup>	2.24x10 <sup>3</sup>	2.52x10 <sup>3</sup>	2.80x10 <sup>3</sup>
ø80	Push	5.03x10 <sup>2</sup>	7.54x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.51x10 <sup>3</sup>	2.01x10 <sup>3</sup>	2.51x10 <sup>3</sup>	3.02x10 <sup>3</sup>	3.52x10 <sup>3</sup>	4.02x10 <sup>3</sup>	4.52x10 <sup>3</sup>	5.03x10 <sup>3</sup>
	Pull	4.54x10 <sup>2</sup>	6.80x10 <sup>2</sup>	9.07x10 <sup>2</sup>	1.36x10 <sup>3</sup>	1.81x10 <sup>3</sup>	2.27x10 <sup>3</sup>	2.72x10 <sup>3</sup>	3.17x10 <sup>3</sup>	3.63x10 <sup>3</sup>	4.08x10 <sup>3</sup>	4.54x10 <sup>3</sup>
ø100	Push	7.85x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.57x10 <sup>3</sup>	2.36x10 <sup>3</sup>	3.14x10 <sup>3</sup>	3.93x10 <sup>3</sup>	4.71x10 <sup>3</sup>	5.50x10 <sup>3</sup>	6.28x10 <sup>3</sup>	7.07x10 <sup>3</sup>	7.85x10 <sup>3</sup>
	Pull	7.15x10 <sup>2</sup>	1.07x10 <sup>3</sup>	1.43x10 <sup>3</sup>	2.14x10 <sup>3</sup>	2.86x10 <sup>3</sup>	3.57x10 <sup>3</sup>	4.29x10 <sup>3</sup>	5.00x10 <sup>3</sup>	5.72x10 <sup>3</sup>	6.43x10 <sup>3</sup>	7.15x10 <sup>3</sup>



# SSD2-KG2/KG3 Series

## How to order

No 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**

**A** Degree of protection level

**B** Bore size

**C** Stroke

**D** Switch model No.  
\*5

**E** Switch quantity

**F** Option

**G** Mounting bracket  
\*1  
\*2

**H** Accessory \*3

## ⚠ Precautions for model No. selection

\*1 : The mounting bracket is included at shipment.

\*2 : The structure of bore sizes  $\phi 16$  to  $\phi 25$  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

**A** Degree of protection level: Coolant proof scraper + packing NBR, with switch

**B** Bore size :  $\phi 32$  mm

**C** Stroke : 30 mm

**D** Switch model No. : Proximity switch T2YLH, lead wire 1 m

**E** Switch quantity : 1 on rod side

**F** Option : Rod end male thread

**G** Mounting bracket : Axial foot

Code	Description				
<b>A Degree of protection level</b>					
<b>KG2</b>	High load + coolant proof scraper + packing NBR				
<b>KG3</b>	High load + coolant proof scraper + packing FKM				
<b>KG2L</b>	High load + coolant proof scraper + packing NBR, with switch				
<b>KG3L</b>	High load + coolant proof scraper + packing FKM, with switch				
<b>B Bore size (mm)</b>					
<b>16</b>	$\phi 16$				
<b>20</b>	$\phi 20$				
<b>25</b>	$\phi 25$				
<b>32</b>	$\phi 32$				
<b>40</b>	$\phi 40$				
<b>50</b>	$\phi 50$				
<b>63</b>	$\phi 63$				
<b>80</b>	$\phi 80$				
<b>100</b>	$\phi 100$				
<b>C Stroke (mm)</b>					
Refer to the stroke table on the following page.					
<b>D Switch model No.</b>					
<b>Lead wire</b>	<b>Lead wire</b>	<b>Contact</b>	<b>Voltage</b>	<b>Indicator</b>	<b>Lead wire</b>
<b>Straight</b>	<b>L-shaped</b>	<b>Proximity</b>	<b>DC</b>	<b>2-color LED</b>	<b>2-wire</b>
<b>T2YLH*</b>	<b>T2YLV*</b>				<b>3-wire</b>
<b>T3YLH*</b>	<b>T2YLV*</b>				
<b>* Lead wire length</b>					
<b>Blank</b>	1 m (standard)				
<b>3</b>	3 m (option)				
<b>5</b>	5 m (option)				
<b>E Switch quantity</b>					
<b>R</b>	1 on rod side				
<b>H</b>	1 on head side				
<b>D</b>	2				
<b>F Option</b>					
<b>Blank</b>	Rod end female thread				
<b>N</b>	Rod end male thread				
<b>G Mounting bracket</b>					
<b>Blank</b>	Without mounting bracket				
<b>LB</b>	Axial foot (made-to-order product)				
<b>CB</b>	Clevis bracket (pin and snap ring included)				
<b>FA</b>	Rod side flange (made-to-order product)				
<b>FB</b>	Head side flange				
<b>H Accessory (available when rod end male thread "N" is selected)</b>					
<b>I</b>	Rod eye				
<b>Y</b>	Rod clevis (pin and snap ring included)				

### How to order switch

**SW - T2YLH**

Switch model No.  
(Item ① on page 958)

### [Stroke table]

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

\*1: Less than 10 mm stroke is not available.

Refer to page 956 for the number of installed switches and the min. stroke.

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

### How to order mounting bracket

Bore size (mm)	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Mounting bracket									
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.

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

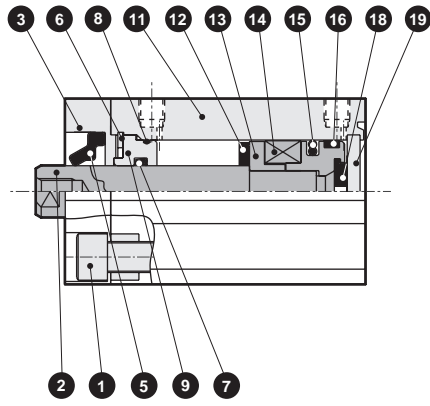
# SSD2-KG2/KG3 Series

## Internal structure and parts list

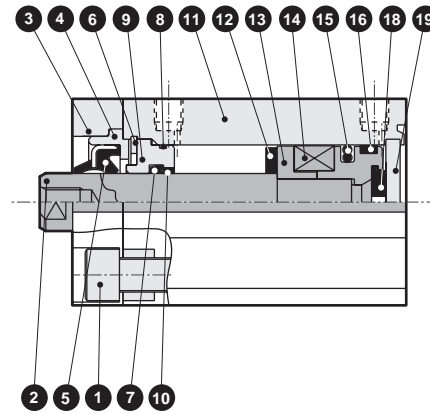
- SCP\*3
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS2
- CKV2
- CAV2/  
COVPIN2
- SSD2**
- SSG
- SSD
- CAT
- MDC2
- MVC
- SMG
- MSD/  
MSDG
- FC\*
- STK
- SRL3
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- ShkAbs
- FJ
- FK
- Spd  
Contr
- Ending

- Degree of protection: Packing NBR SSD2-KG2/KG2L
- Degree of protection: Packing FKM SSD2-KG3/KG3L

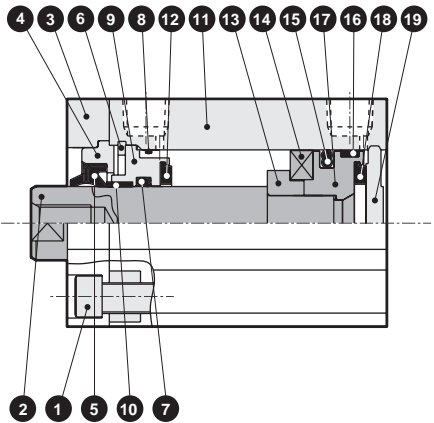
● SSD2-KG<sub>2</sub> L-16 (with switch)



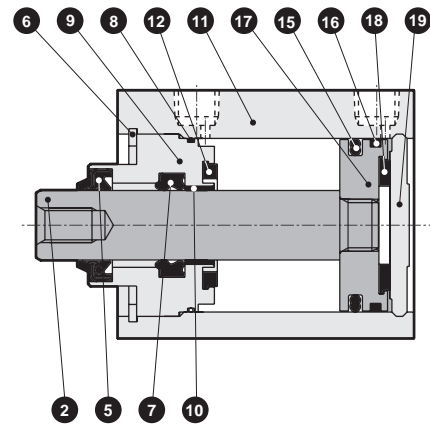
● SSD2-KG<sub>2</sub> L-20, 25 (with switch)



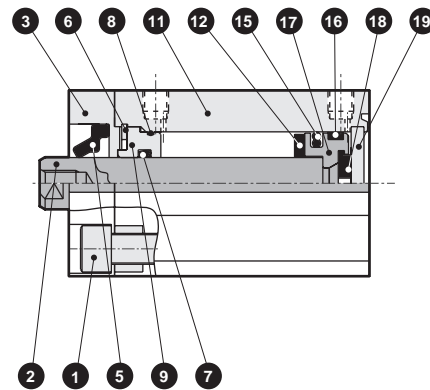
● SSD2-KG<sub>2</sub> L-32 to 50 (with switch)



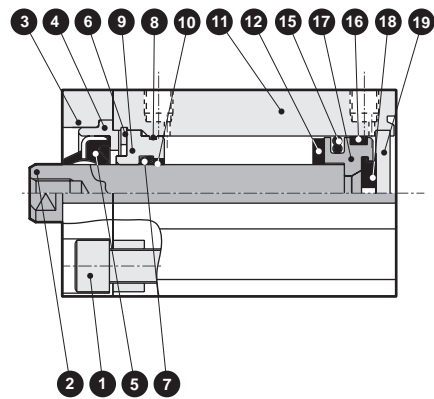
● SSD2-KG<sub>2</sub> L-63 to 100 (with switch)



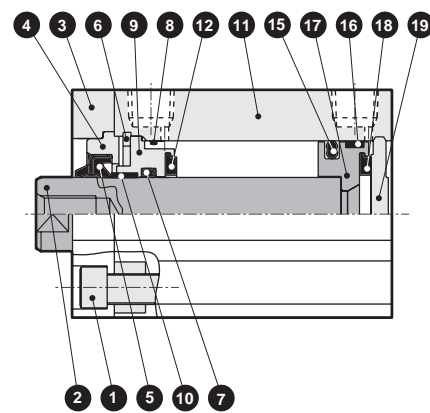
● SSD2-KG<sub>2</sub> -16 (without switch)



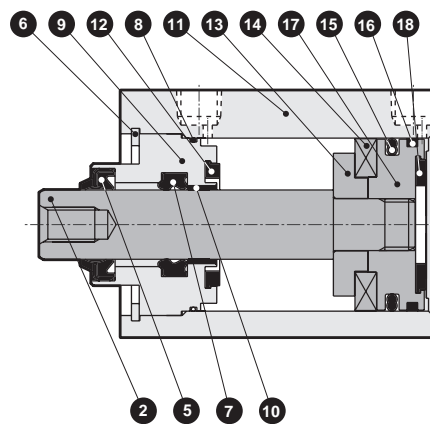
● SSD2-KG<sub>2</sub> -20, 25 (without switch)



● SSD2-KG<sub>2</sub> -32 to 50 (without switch)



● SSD2-KG<sub>2</sub> -63 to 100 (without switch)



# SSD2-KG2/KG3 Series

Internal structure and parts list

## Main parts list

Part No.	Part name	Material	Remarks	Part No.	Part name	Material	Remarks
1	Hexagon socket head cap screw	Stainless steel	ø16 to ø32 only	10	Bush	Oiles drymet	ø20 to ø100 only
2	Piston rod	Stainless steel	Industrial chrome plating	11	Body	Aluminum alloy	Hard alumite
3	Adaptor (A)	Aluminum alloy	ø16 to ø32 only	12	Cushion rubber (R)	Urethane rubber	
4	Adaptor (B)	Aluminum alloy	ø16 to ø32 only	13	Spacer	Aluminum alloy	ø16 to ø32: Chromate
5	Scraper	G2	Nitrile rubber	14	Magnet	Plastic	
		G3	Fluoro rubber				
6	C-snap ring (for hole)	Stainless steel		15	Piston packing	G2	Nitrile rubber
						G3	Fluoro rubber
7	Rod packing	G2	Nitrile rubber	16	Wear ring	Polyacetal resin	
		G3	Fluoro rubber				
8	Rod metal gasket	G2	Nitrile rubber	17	Piston	Aluminum alloy	
		G3	Fluoro rubber			Chromate	
9	Rod metal	Aluminum alloy		18	Cushion rubber (H)	Urethane rubber	
		Alumite					
				19	Cover	ø16 to ø25: Stainless steel ø32 to ø100: Aluminum alloy	Alumite: ø32 to ø100

## Consumable parts list

Part name	Kit No.	Consumable parts No.
Bore size (mm)		
ø16	SSD2-KG2-16K	
	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

# SSD2-KG2/KG3 Series

## dimensions

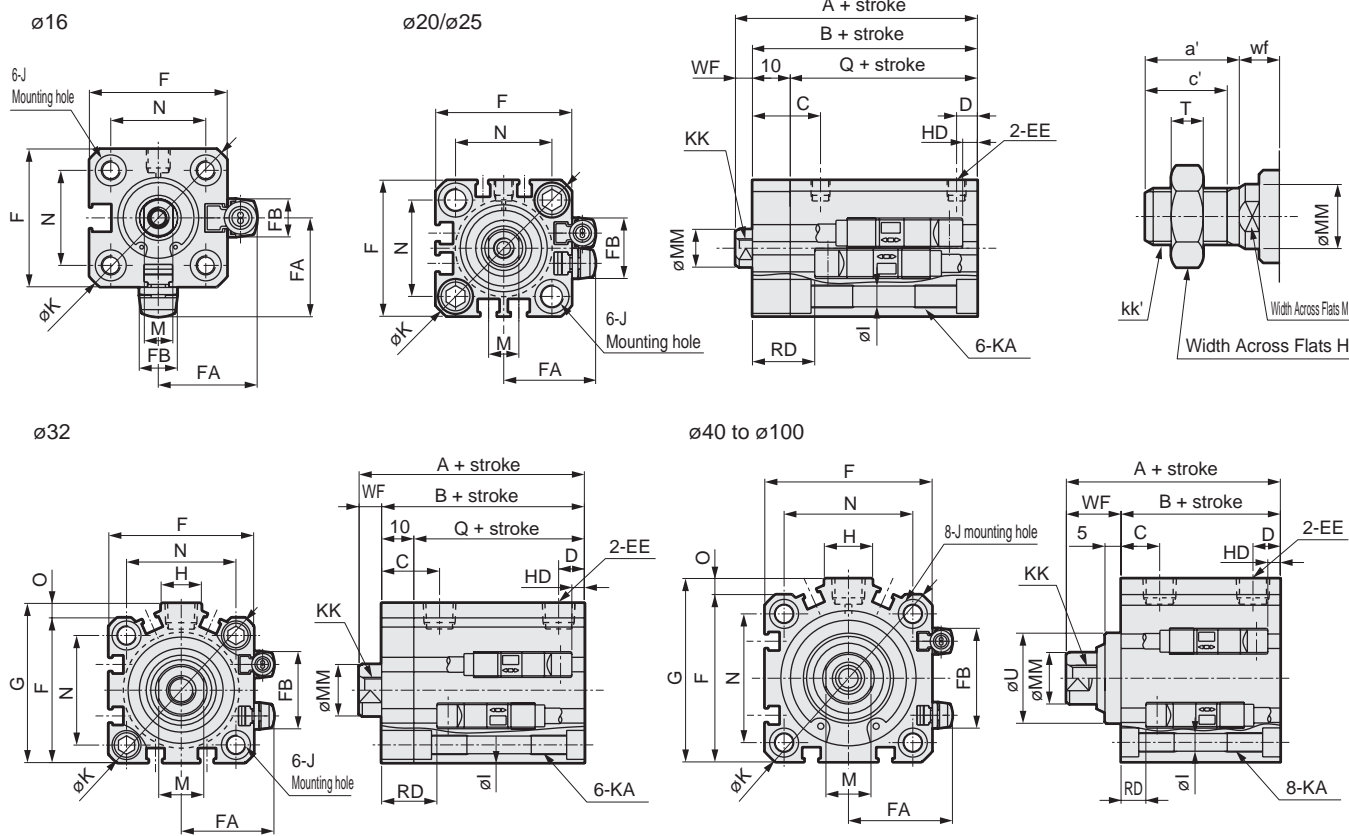
● Degree of protection: Packing NBR

SSD2-KG/KG2L

● Degree of protection: Packing FKM

SSD2-KG3/KG3L

● Rod end male thread



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

\*2: HD and RD dimensions for 5 mm stroke 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 strokes 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																
	A <sup>*1</sup>	B <sup>*1</sup>	Q <sup>*1</sup>	A <sup>*1</sup>	B <sup>*1</sup>	Q <sup>*1</sup>	C	D	EE	F	FA	FB	G	H	I	J	K	KA	KK	
SRG3	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
SRM3	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
SRT3	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
MRL2	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
MRG2	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										
	M	MM	N	O	U	WF	HD	RD	a'	c'	H	KK'	M	MM	T	wf				
ShkAbs	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			
FJ	ø25	10	12	28	-	-	10	4.5	22.5	17.5	15	17	M 10 x 1.25	10	12	6	10			
	ø32	14	16	34	4.5	-	12	9.5	25.5	23.5	20.5	22	M 14 x 1.5	14	16	8	10			
FK	ø40	14	16	40	5	28	17	10.5	31.0	23.5	20.5	22	M 14 x 1.5	14	16	8	15			
	ø50	17	20	50	7	35	18	11.5	31.0	28.5	26	27	M 18 x 1.5	17	20	11	15			
Spd Contr	ø63	17	20	60	7	35	18	18.0	29.0	28.5	26	27	M 18 x 1.5	17	20	11	15			
	ø80	22	25	77	6	43	20	24.0	31.5	35.5	32.5	32	M 22 x 1.5	22	25	13	18			
Ending	ø100	27	30	94	6.5	59	22	29.5	35.5	35.5	32.5	41	M 26 x 1.5	27	30	16	18			

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# MEMO

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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

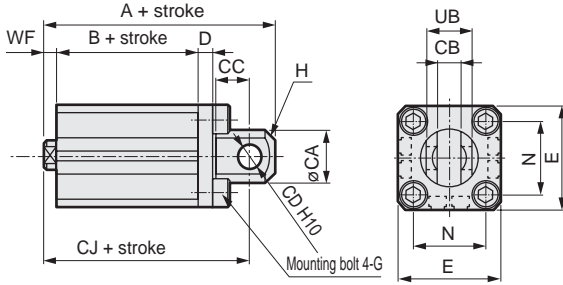
Ending

# SSD2-KG2/KG3 Series

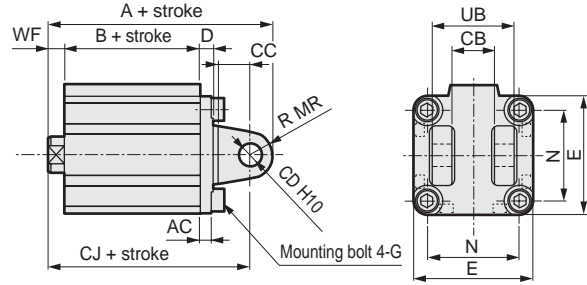
## Dimensions with mounting bracket

● Clevis bracket (CB)  
SSD2-KG2(L)/KG3(L)-20 to 100 -CB

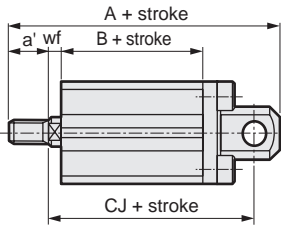
•  $\phi 16$  to  $\phi 25$



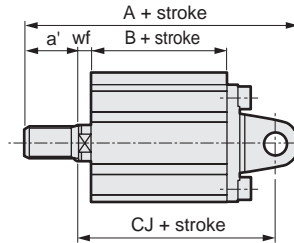
•  $\phi 32$  to  $\phi 100$



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			
FC*	$\phi 16$	-	15	6.6 <sup>+0.3 0</sup>	8	5	5	29	M 4 x 12	C2	-	20	12			
STK	$\phi 20$	-	20	8.2 <sup>+0.2 0</sup>	12	8	5	36	M 6 x 16	C4	-	25.5	16			
SRL3	$\phi 25$	-	24	10.2 <sup>+0.2 0</sup>	14	10	5	40	M 6 x 16	C5	-	28	20			
SRG3	$\phi 32$	4.5	-	18.2 <sup>+0.2 0</sup>	14	10	5	45	M 6 x 16	-	10	34	36			
	$\phi 40$	5	-	18.2 <sup>+0.2 0</sup>	14	10	6	52	M 6 x 16	-	10	40	36			
SRM3	$\phi 50$	6	-	22.2 <sup>+0.2 0</sup>	20	14	7	64	M 8 x 20	-	14	50	44			
	$\phi 63$	7	-	22.2 <sup>+0.2 0</sup>	20	14	8	77	M 10 x 25	-	14	60	44			
SRT3	$\phi 80$	9	-	28.2 <sup>+0.2 0</sup>	27	18	10	98	M 12 x 40	-	18	77	56			
	$\phi 100$	12	-	32.2 <sup>+0.2 0</sup>	31	22	13	117	M 12 x 40	-	22	94	64			
Code	Bore size(mm)	Female thread						Male thread								
		WF	No switch			With switch			a'	wf	No switch			With switch		
A	B		CJ	A	B	CJ	A	B			CJ	A	B	CJ		
MRG2	$\phi 16$	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
	$\phi 20$	9.5	71	34.5	62	81	44.5	72	14	9.5	85	34.5	62	95	44.5	72
SM-25	$\phi 25$	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
ShkAbs	$\phi 32$	12	85	43	75	95	53	85	23.5	10	106.5	43	73	116.5	53	83
	$\phi 40$	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
FJ	$\phi 50$	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
	$\phi 63$	18	108	46	94	118	56	104	28.5	15	133.5	46	91	143.5	56	101
FK	$\phi 80$	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
Spd Contr	$\phi 100$	22	152	63	130	162	73	140	35.5	18	183.5	63	126	193.5	73	136

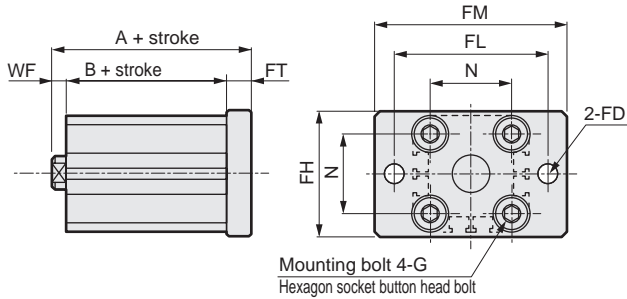
# SSD2-KG2/KG3 Series

Dimensions with mounting bracket

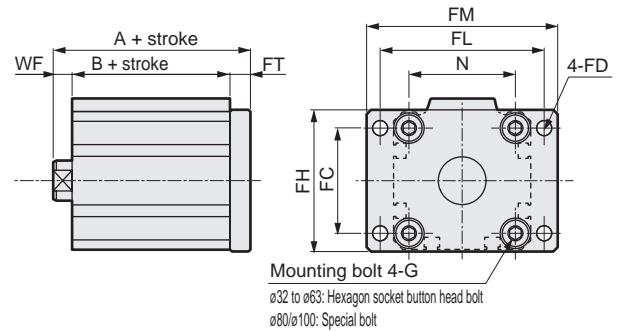
## Dimensions with mounting bracket

- Head side flange (FB)  
SSD2-KG2(L)/KG3(L)-20 to 100 -FB

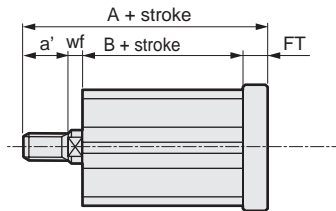
·  $\phi 16$  to  $\phi 25$



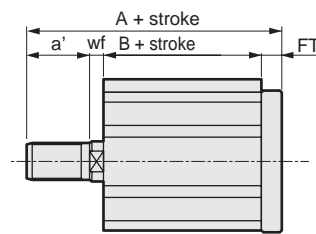
·  $\phi 32$  to  $\phi 100$



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	No switch		With switch		a'	wf	No switch		With switch	
											A	B	A	B			A	B	A	B
$\phi 16$	-	4.5	30	45	55	5.5	M4x12	20	8.5	46	32	51	37	12	8.5	58	32	63	37	
$\phi 20$	-	6.6	39	48	60	8	M6x16	25.5	9.5	52	34.5	62	44.5	14	9.5	66	34.5	76	44.5	
$\phi 25$	-	6.6	42	52	64	8	M6x16	28	10	55.5	37.5	65.5	47.5	17.5	10	73	37.5	83	47.5	
$\phi 32$	34	5.5	48	56	65	8	M6x16	34	12	63	43	73	53	23.5	10	84.5	43	94.5	53	
$\phi 40$	40	5.5	54	62	72	8	M6x16	40	17	64.5	39.5	74.5	49.5	23.5	15	86	39.5	96	49.5	
$\phi 50$	50	6.6	67	76	89	9	M8x20	50	18	67.5	40.5	77.5	50.5	28.5	15	93	40.5	103	50.5	
$\phi 63$	60	9	80	92	108	9	M10x25	60	18	73	46	83	56	28.5	15	98.5	46	108.5	56	
$\phi 80$	77	11	99	116	134	11	M12x40	77	20	84.5	53.5	94.5	63.5	35.5	18	118	53.5	128	63.5	
$\phi 100$	94	11	117	136	154	11	M12x40	94	22	96	63	106	73	35.5	18	127.5	63	137.5	73	

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

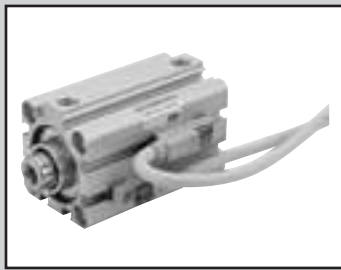
FJ

FK

Spd  
Contr

Ending





Compact cylinder  
double acting/single rod/coil scraper

Compact cylinder  
double acting/single rod/anti-spatter adherence

# SSD2-G1 Series SSD2-G4 Series

● Bore size:  $\phi 25/\phi 32/\phi 40/\phi 50/\phi 63/\phi 80/\phi 100$



## Specifications

Item	SSD2-G1/G4 SSD2-G1L/G4L (with switch)							
	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	
Bore size mm	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 ( $\approx 150$ psi, 10 bar)							
Min. working pressure MPa	0.15 ( $\approx 22$ psi, 1.5 bar)				0.1 ( $\approx 15$ psi, 1 bar)			
Proof pressure MPa	1.6 ( $\approx 230$ psi, 16 bar)							
Ambient temperature $^{\circ}\text{C}$	-10 ( $14^{\circ}\text{F}$ ) to 60 ( $140^{\circ}\text{F}$ ) (no freezing)							
Port size	M5	Rc1/8		Rc1/4		Rc3/8		
Stroke tolerance mm	$\begin{matrix} +1.0 \\ 0 \end{matrix}$							
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  $\phi 32$  bore size with a 5 mm stroke and without a switch has a port size of M5.

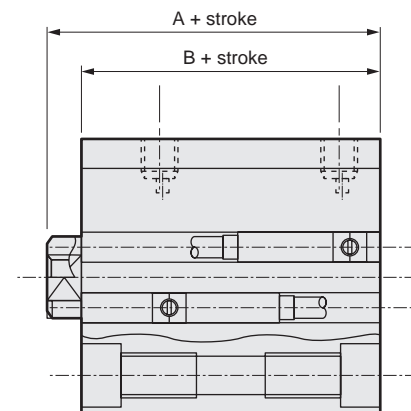
## Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\phi 25$	5/10/15/20/25/ 30/35/40/45/50	50	1(10) The value in ( ) is for types with one or two switches.
$\phi 32$	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
$\phi 40$			
$\phi 50$	10/15/20/25		
$\phi 63$	30/35/40/45/50		
$\phi 80$	75/100		
$\phi 100$			

## Custom stroke

### ● SSD2-G1, G4 Series

Item	Standard products	
	Standard stroke body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke body to adjust the stroke 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. B + stroke is 63mm.	



## Switch specifications

Item	2-wire proximity	
	T2YD/T2YDT	
Applications	Dedicated for programmable controller	
Indicator	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 <sup>2</sup> 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 <sup>2</sup>	
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 (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
	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	1.47x10 <sup>2</sup>	1.96x10 <sup>2</sup>	2.45x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.44x10 <sup>2</sup>	3.93x10 <sup>2</sup>	4.42x10 <sup>2</sup>	4.91x10 <sup>2</sup>
	Pull	-	56.7	75.6	1.13x10 <sup>2</sup>	1.51x10 <sup>2</sup>	1.89x10 <sup>2</sup>	2.27x10 <sup>2</sup>	2.64x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.40x10 <sup>2</sup>	3.78x10 <sup>2</sup>
ø32	Push	-	1.21x10 <sup>2</sup>	1.61x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.22x10 <sup>2</sup>	4.02x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.63x10 <sup>2</sup>	6.43x10 <sup>2</sup>	7.24x10 <sup>2</sup>	8.04x10 <sup>2</sup>
	Pull	-	90.5	1.21x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.62x10 <sup>2</sup>	4.22x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.43x10 <sup>2</sup>	6.03x10 <sup>2</sup>
ø40	Push	-	1.88x10 <sup>2</sup>	2.51x10 <sup>2</sup>	3.77x10 <sup>2</sup>	5.03x10 <sup>2</sup>	6.28x10 <sup>2</sup>	7.54x10 <sup>2</sup>	8.80x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.13x10 <sup>3</sup>	1.26x10 <sup>3</sup>
	Pull	-	1.58x10 <sup>2</sup>	2.11x10 <sup>2</sup>	3.17x10 <sup>2</sup>	4.22x10 <sup>2</sup>	5.28x10 <sup>2</sup>	6.33x10 <sup>2</sup>	7.39x10 <sup>2</sup>	8.44x10 <sup>2</sup>	9.50x10 <sup>2</sup>	1.06x10 <sup>3</sup>
ø50	Push	-	2.95x10 <sup>2</sup>	3.93x10 <sup>2</sup>	5.89x10 <sup>2</sup>	7.85x10 <sup>2</sup>	9.82x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.37x10 <sup>3</sup>	1.57x10 <sup>3</sup>	1.77x10 <sup>3</sup>	1.96x10 <sup>3</sup>
	Pull	-	2.47x10 <sup>2</sup>	3.30x10 <sup>2</sup>	4.95x10 <sup>2</sup>	6.60x10 <sup>2</sup>	8.25x10 <sup>2</sup>	9.90x10 <sup>2</sup>	1.15x10 <sup>3</sup>	1.32x10 <sup>3</sup>	1.48x10 <sup>3</sup>	1.65x10 <sup>3</sup>
ø63	Push	3.12x10 <sup>2</sup>	4.68x10 <sup>2</sup>	6.23x10 <sup>2</sup>	9.35x10 <sup>2</sup>	1.25x10 <sup>3</sup>	1.56x10 <sup>3</sup>	1.87x10 <sup>3</sup>	2.18x10 <sup>3</sup>	2.49x10 <sup>3</sup>	2.81x10 <sup>3</sup>	3.12x10 <sup>3</sup>
	Pull	2.80x10 <sup>2</sup>	4.20x10 <sup>2</sup>	5.61x10 <sup>2</sup>	8.41x10 <sup>2</sup>	1.12x10 <sup>3</sup>	1.40x10 <sup>3</sup>	1.68x10 <sup>3</sup>	1.96x10 <sup>3</sup>	2.24x10 <sup>3</sup>	2.52x10 <sup>3</sup>	2.80x10 <sup>3</sup>
ø80	Push	5.03x10 <sup>2</sup>	7.54x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.51x10 <sup>3</sup>	2.01x10 <sup>3</sup>	2.51x10 <sup>3</sup>	3.02x10 <sup>3</sup>	3.52x10 <sup>3</sup>	4.02x10 <sup>3</sup>	4.52x10 <sup>3</sup>	5.03x10 <sup>3</sup>
	Pull	4.54x10 <sup>2</sup>	6.80x10 <sup>2</sup>	9.07x10 <sup>2</sup>	1.36x10 <sup>3</sup>	1.81x10 <sup>3</sup>	2.27x10 <sup>3</sup>	2.72x10 <sup>3</sup>	3.17x10 <sup>3</sup>	3.63x10 <sup>3</sup>	4.08x10 <sup>3</sup>	4.54x10 <sup>3</sup>
ø100	Push	7.85x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.57x10 <sup>3</sup>	2.36x10 <sup>3</sup>	3.14x10 <sup>3</sup>	3.93x10 <sup>3</sup>	4.71x10 <sup>3</sup>	5.50x10 <sup>3</sup>	6.28x10 <sup>3</sup>	7.07x10 <sup>3</sup>	7.85x10 <sup>3</sup>
	Pull	7.15x10 <sup>2</sup>	1.07x10 <sup>3</sup>	1.43x10 <sup>3</sup>	2.14x10 <sup>3</sup>	2.86x10 <sup>3</sup>	3.57x10 <sup>3</sup>	4.29x10 <sup>3</sup>	5.00x10 <sup>3</sup>	5.72x10 <sup>3</sup>	6.43x10 <sup>3</sup>	7.15x10 <sup>3</sup>

# SSD2-G1/G4 Series

SCP\*3  
CMK2  
CMA2  
SCM  
SCG  
SCA2  
SCS2  
CKV2  
CAV2/  
COVPIN2  
**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

No 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**

**A** Model No.

**B** Bore size

**C** Stroke  
\*1

**D** Switch model No.

**E** Switch quantity

**F** Option

**G** Mounting bracket  
\*1

**H** Accessory  
\*2

Code	Description				
<b>A Model No.</b>					
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				
<b>B Bore size (mm)</b>					
25	ø25				
32	ø32				
40	ø40				
50	ø50				
63	ø63				
80	ø80				
100	ø100				
<b>C Stroke (mm)</b>					
Refer to the stroke table on the following page.					
<b>D Switch model No.</b>					
Lead wire Straight	Lead wire L-shaped	Contact	Voltage	Indicator	Lead wire
T2YD*	-	Proximity	DC	2-color LED for AC magnetic field	2-wire
T2YDT*	-				
<b>* Lead wire length</b>					
Blank	1 m (standard)				
3	3 m (option)				
5	5 m (option)				
<b>E Switch quantity</b>					
R	1 on rod side				
H	1 on head side				
D	2				
<b>F Option</b>					
Blank	Rod end female thread				
N	Rod end male thread				
<b>G Mounting bracket</b>					
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				
<b>H Accessory (available when rod end male thread "N" is selected)</b>					
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

**B** Bore size : ø32 mm

**C** Stroke : 10 mm

**D** Switch model No.: Proximity switch for AC magnetic field  
T2YD, lead wire length 1 m

**E** Switch quantity : 1 on rod side

**F** Option : Rod end male thread

### [Stroke table]

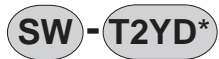
Stroke (mm)	Applicable bore size						
	25	32	40	50	63	80	100
Standard stroke	5	●	●	●			
	10	●	●	●	●	●	●
	15	●	●	●	●	●	●
	20	●	●	●	●	●	●
	25	●	●	●	●	●	●
	30	●	●	●	●	●	●
	35	●	●	●	●	●	●
	40	●	●	●	●	●	●
	45	●	●	●	●	●	●
	50	●	●	●	●	●	●
	75		●	●	●	●	●
	100		●	●	●	●	●
Min. stroke (mm) *1	1						
Max. stroke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

\*1: Less than 10 mm stroke is not available.

Refer to page 966 for the min. stroke with switch.

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

### How to order switch



Switch model No.  
(Item ④ on page 968)

### How to order mounting bracket

Bore size (mm)	ø25	ø32	ø40	ø50	ø63	ø80
<b>Mounting bracket</b>						
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
<b>Bore size (mm)</b>	<b>ø100</b>					
<b>Mounting bracket</b>						
Flange (FB)	SSD2-FA-100					
Clevis bracket (CB)	SSD2-CB-100					

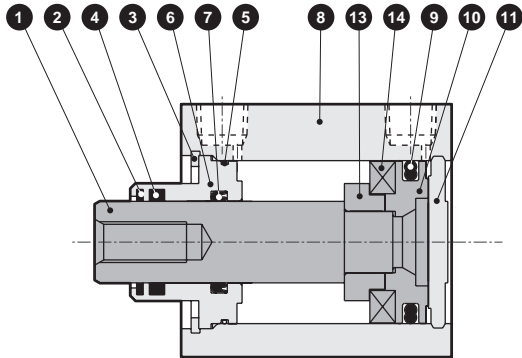
\*1: The foot mounting bracket is provided as 2 pcs./set.

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

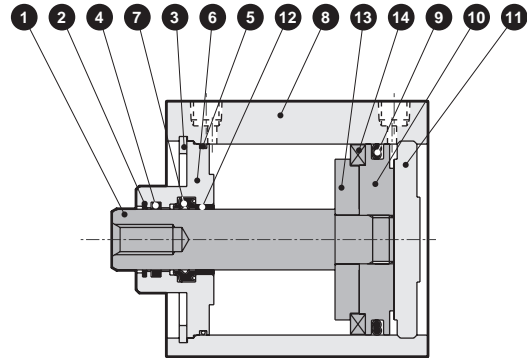
# SSD2-G1/G4 Series

## Internal structure and parts list

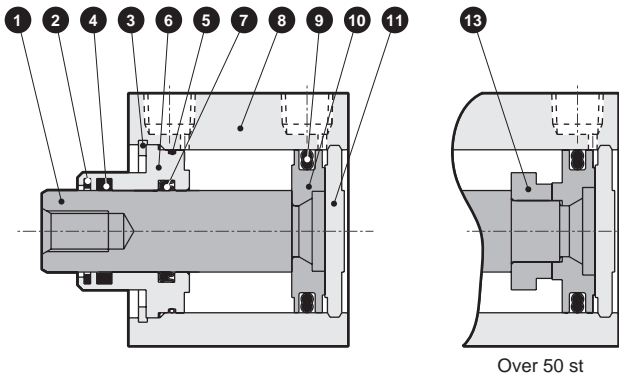
● SSD2-G1L, G4L-25 to 50 (double acting/anti-spatter adherence/ with switch)



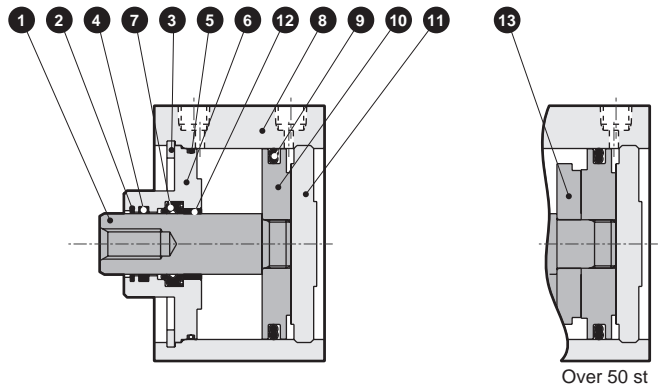
● SSD2-G1L, G4L-63 to 100 (double acting/anti-spatter adherence/ with switch)



● SSD2-G1, G4-25 to 50 (double acting/anti-spatter adherence)



● SSD2-G1, G4-63 to 100 (double acting/anti-spatter adherence)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	ø25: Stainless steel ø32 to ø100: Steel	Industrial chrome plating	8	Body	Aluminum alloy	Hard alumite
2	Coil scraper	Phosphor bronze		9	Piston packing	Nitrile rubber	
3	C-snap ring	Steel	Zinc phosphate	10	Piston	Aluminum alloy	Chromate
4	Lube keeping structure	Special rubber	G4 only	11	Cover	ø25: Stainless steel ø32 to ø100: Aluminum alloy	ø32 to ø100: Alumite
5	Rod metal gasket	Nitrile rubber		12	Bush	Oiles drymet	
6	Rod metal	ø25 to ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø25 to ø50: Alumite ø63 to ø100: Chromate	13	Spacer	Aluminum alloy	Chromate
7	Rod packing	Nitrile rubber		14	Magnet	Plastic	

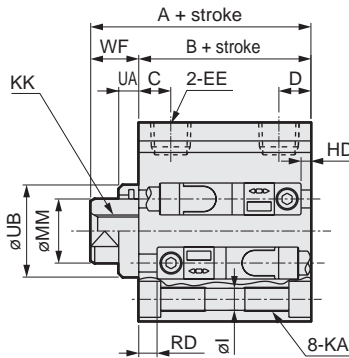
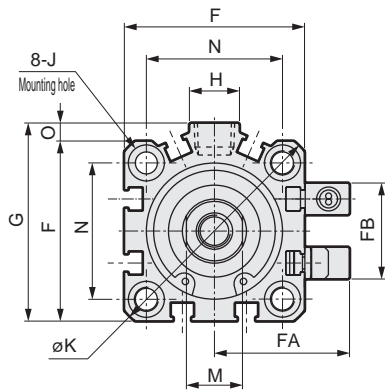
### Repair parts list

Part name	Kit No.	Repair parts No.
<b>Bore size (mm)</b>		
ø25	SSD2-G1-25K	2 5 7 9
ø32	SSD2-G1-32K	
ø40	SSD2-G1-40K	
ø50	SSD2-G1-50K	
ø63	SSD2-G1-63K	
ø80	SSD2-G1-80K	
ø100	SSD2-G1-100K	

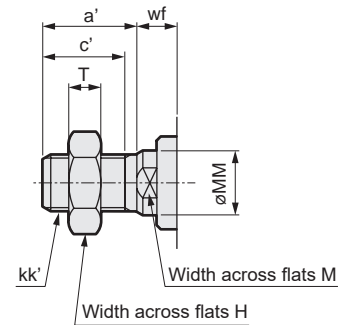
### Dimensions



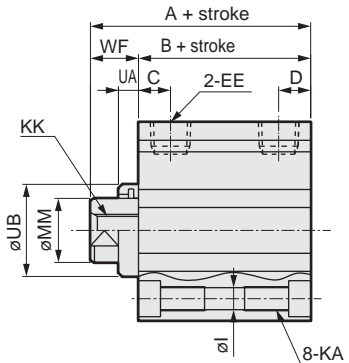
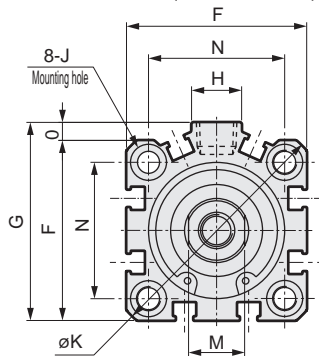
● SSD2-G1L/G4L-25 to 100 (with switch, T0H/V, T5H/V, T2H/V, T3H/V)



● Rod end male thread



● SSD2-G1/G4-25 to 100 (without switch)



Code	No switch			Common dimensions with switch											
	A <sup>*1</sup>		B <sup>*6</sup>	A <sup>*1</sup>		B <sup>*1</sup>	C <sup>*6</sup>	D <sup>*6</sup>	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 <sup>*5</sup>	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	Common dimensions with switch											Proximity T2YD			
	J	K	KA	KK	M	MM	N	O	UA		UB	WF		HD	RD <sup>*2</sup>
									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 or B+ stroke when using custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value. (Example) If the custom stroke is 7 mm, apply the standard stroke of 10 mm.

\*2 : HD and RD dimensions for 5 mm stroke 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 strokes 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
ø32	23.5	20.5	22	M14x1.5	14	16	8	10	15	
ø40	23.5	20.5	22	M14x1.5	14	16	8	10	15	
ø50	28.5	26	27	M18x1.5	17	20	11	10	15	
ø63	28.5	26	27	M18x1.5	17	20	11	10	15	
ø80	35.5	32.5	32	M22x1.5	22	25	13	13	18	
ø100	35.5	32.5	41	M26x1.5	27	30	16	13	18	

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

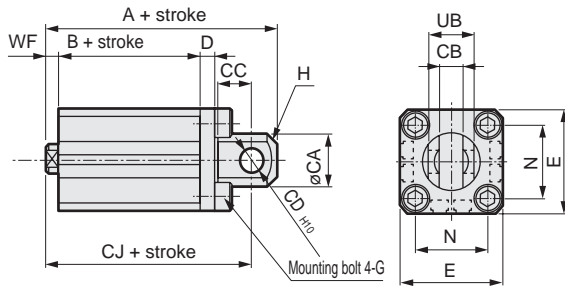
# SSD2-G1/G4 Series

## Dimensions with mounting bracket

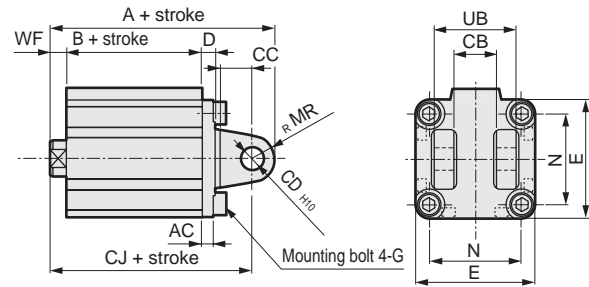


- Clevis bracket (CB)  
SSD2-G1(L)/G4(L)-25 to 100 -CB

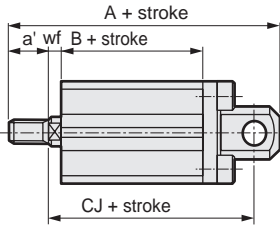
•  $\phi 25$



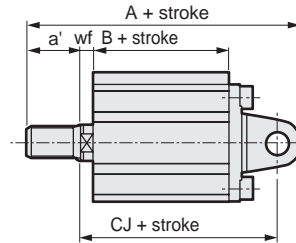
•  $\phi 32$  to  $\phi 100$



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		No switch				With switch				
		A		CJ		A		B		G1		G4		G1		G4		G1		G4				
		G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	G1	G4			
$\phi 25$	-	24	10.2	14	10	5	40	M 6 x 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
$\phi 32$	4.5	-	18.2	14	10	5	45	M 6 x 16	C4	10	34	36	12	17	65	70	23	55	60	75	80	33	65	70
$\phi 40$	5	-	18.2	14	10	6	52	M 6 x 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
$\phi 50$	6	-	22.2	20	14	7	64	M 8 x 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
$\phi 63$	7	-	22.2	20	14	8	77	M 10 x 25	-	14	60	44	13	18	93	98	36	79	84	103	108	46	89	94
$\phi 80$	9	-	28.2	27	18	10	98	M 12 x 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
$\phi 100$	12	-	32.2	31	22	13	117	M 12 x 40	-	22	94	64	17	22	137	142	53	115	120	147	152	63	125	130

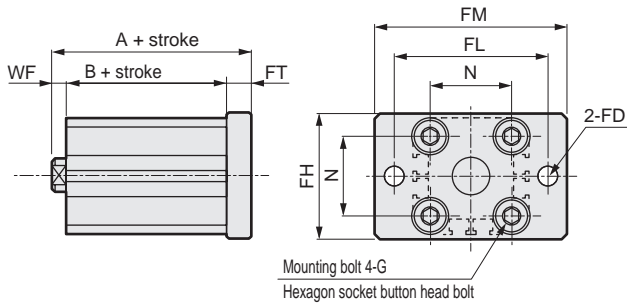
  

Code	Male thread													
	Bore size (mm)	a'	wf		No switch				With switch					
			A		CJ		A		B		A		CJ	
			G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	G1	G4
$\phi 25$	17.5	5	5	85	85	32.5	57.5	57.5	95	95	42.5	67.5	67.5	
$\phi 32$	23.5	10	15	86.5	91.5	23	53	58	96.5	101.5	33	63	68	
$\phi 40$	23.5	10	15	95	100	29.5	61.5	66.5	105	110	39.5	71.5	76.5	
$\phi 50$	28.5	10	15	111	116	30.5	68.5	73.5	121	126	40.5	78.5	83.5	
$\phi 63$	28.5	10	15	118.5	123.5	36	76	81	128.5	133.5	46	86	91	
$\phi 80$	35.5	13	18	148	153	43.5	94.5	99.5	158	163	53.5	104.5	109.5	
$\phi 100$	35.5	13	18	168.5	173.5	53	111	116	178.5	183.5	63	121	126	

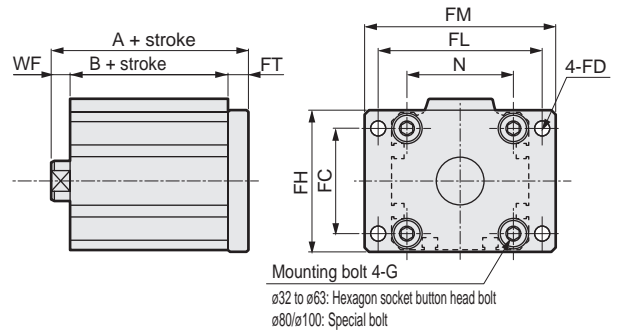
## Dimensions with mounting bracket

- Head side flange (FB)  
SSD2-G1(L)/G4(L)-25 to 100 -FB

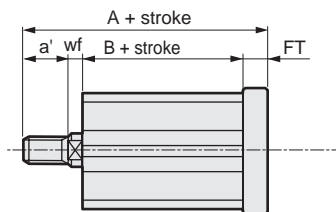
•  $\phi 25$



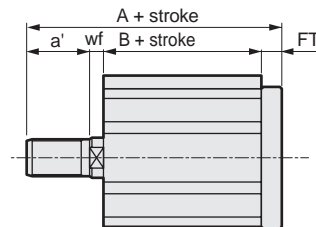
•  $\phi 32$  to  $\phi 100$



Rod end male thread



Rod end male thread



Code	Common dimensions								Female thread							
	FC	FD	FH	FL	FM	FT	N	G	WF		No switch			With switch		
									G1	G4	A		B	A		B
$\phi 25$	-	6.6	42	52	64	8	28	M 6 x 16	5	5	45.5	45.5	32.5	55.5	55.5	42.5
$\phi 32$	34	5.5	48	56	65	8	34	M 6 x 16	12	17	43	48	23	53	58	33
$\phi 40$	40	5.5	54	62	72	8	40	M 6 x 16	12	17	49.5	54.5	29.5	59.5	64.5	39.5
$\phi 50$	50	6.6	67	76	89	9	50	M 8 x 20	13	18	52.5	57.5	30.5	62.5	67.5	40.5
$\phi 63$	60	9	80	92	108	9	60	M 10 x 25	13	18	58	63	36	68	73	46
$\phi 80$	77	11	99	116	134	11	77	M 12 x 40	15	20	69.5	74.5	43.5	79.5	84.5	53.5
$\phi 100$	94	11	117	136	154	11	94	M 12 x 40	17	22	81	86	53	91	96	63

Code	Male thread								
	a'	wf		No switch			With switch		
		G1	G4	A		B	A		B
$\phi 25$	17.5	5	5	63	63	32.5	73	73	42.5
$\phi 32$	23.5	10	15	64.5	69.5	23	74.5	79.5	33
$\phi 40$	23.5	10	15	71	76	29.5	81	86	39.5
$\phi 50$	28.5	10	15	78	83	30.5	88	93	40.5
$\phi 63$	28.5	10	15	83.5	88.5	36	93.5	98.5	46
$\phi 80$	35.5	13	18	103	108	43.5	113	118	53.5
$\phi 100$	35.5	13	18	112.5	117.5	53	122.5	127.5	63

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

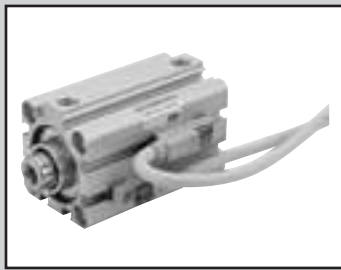
FJ

FK

Spd  
Contr

Ending





Compact cylinder  
double acting/single rod/high load/coil scraper

Compact cylinder  
double acting/single rod/high load/anti-spatter adherence

# SSD2-KG1 Series SSD2-KG4 Series

● Bore size:  $\varnothing 25/\varnothing 32/\varnothing 40/\varnothing 50/\varnothing 63/\varnothing 80/\varnothing 100$



## Specifications

Item	SSD2-KG1/KG4 SSD2-KG1L/KG4L (with switch)							
	mm	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$
Bore size	mm	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$
Actuation		Double acting						
Working fluid		Compressed air						
Max. working pressure	MPa	1.0 ( $\approx 150$ psi, 10 bar)						
Min. working pressure	MPa	0.15 ( $\approx 22$ psi, 1.5 bar)				0.1 ( $\approx 15$ psi, 1 bar)		
Proof pressure	MPa	1.6 ( $\approx 230$ psi, 16 bar)						
Ambient temperature	$^{\circ}\text{C}$	-10 (14 $^{\circ}\text{F}$ ) to 60 (140 $^{\circ}\text{F}$ ) (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

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\varnothing 25$	5/10/15/20/25/ 30/35/40/45/50	50	1(10) The value in ( ) is for types with one or two switches.
$\varnothing 32$	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
$\varnothing 40$	10/15/20/25 30/35/40/45/50 75/100		
$\varnothing 50$			
$\varnothing 63$			
$\varnothing 80$			
$\varnothing 100$			

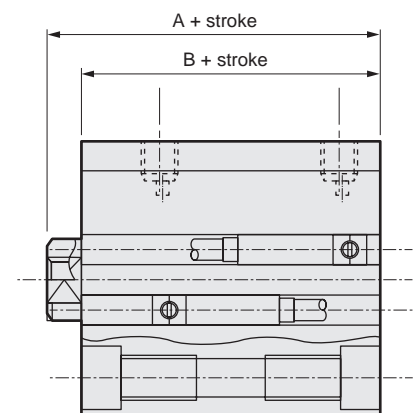
\*1: The custom stroke is available in 1 mm increments.

\*2: Dimensions of custom stroke (example: 64 mm stroke) are the same as the next stroke up (example: 75 mm stroke).

## Custom stroke

### ● SSD2-KG1, KG4 Series

Item	Standard products	
	Standard stroke body with spacer	
Model No.	Refer to How to order.	
Description	A spacer is added to the standard stroke body to adjust the stroke 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. B + stroke is 83mm.	



## Switch specifications

Item	2-wire proximity	
	T2YD/T2YDT	
Applications	Dedicated for programmable controller	
Indicator	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 <sup>2</sup> 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 <sup>2</sup>	
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 (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
	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	1.47x10 <sup>2</sup>	1.96x10 <sup>2</sup>	2.45x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.44x10 <sup>2</sup>	3.93x10 <sup>2</sup>	4.42x10 <sup>2</sup>	4.91x10 <sup>2</sup>
	Pull	-	56.7	75.6	1.13x10 <sup>2</sup>	1.51x10 <sup>2</sup>	1.89x10 <sup>2</sup>	2.27x10 <sup>2</sup>	2.64x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.40x10 <sup>2</sup>	3.78x10 <sup>2</sup>
ø32	Push	-	1.21x10 <sup>2</sup>	1.61x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.22x10 <sup>2</sup>	4.02x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.63x10 <sup>2</sup>	6.43x10 <sup>2</sup>	7.24x10 <sup>2</sup>	8.04x10 <sup>2</sup>
	Pull	-	90.5	1.21x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.62x10 <sup>2</sup>	4.22x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.43x10 <sup>2</sup>	6.03x10 <sup>2</sup>
ø40	Push	-	1.88x10 <sup>2</sup>	2.51x10 <sup>2</sup>	3.77x10 <sup>2</sup>	5.03x10 <sup>2</sup>	6.28x10 <sup>2</sup>	7.54x10 <sup>2</sup>	8.80x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.13x10 <sup>3</sup>	1.26x10 <sup>3</sup>
	Pull	-	1.58x10 <sup>2</sup>	2.11x10 <sup>2</sup>	3.17x10 <sup>2</sup>	4.22x10 <sup>2</sup>	5.28x10 <sup>2</sup>	6.33x10 <sup>2</sup>	7.39x10 <sup>2</sup>	8.44x10 <sup>2</sup>	9.50x10 <sup>2</sup>	1.06x10 <sup>3</sup>
ø50	Push	-	2.95x10 <sup>2</sup>	3.93x10 <sup>2</sup>	5.89x10 <sup>2</sup>	7.85x10 <sup>2</sup>	9.82x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.37x10 <sup>3</sup>	1.57x10 <sup>3</sup>	1.77x10 <sup>3</sup>	1.96x10 <sup>3</sup>
	Pull	-	2.47x10 <sup>2</sup>	3.30x10 <sup>2</sup>	4.95x10 <sup>2</sup>	6.60x10 <sup>2</sup>	8.25x10 <sup>2</sup>	9.90x10 <sup>2</sup>	1.15x10 <sup>3</sup>	1.32x10 <sup>3</sup>	1.48x10 <sup>3</sup>	1.65x10 <sup>3</sup>
ø63	Push	3.12x10 <sup>2</sup>	4.68x10 <sup>2</sup>	6.23x10 <sup>2</sup>	9.35x10 <sup>2</sup>	1.25x10 <sup>3</sup>	1.56x10 <sup>3</sup>	1.87x10 <sup>3</sup>	2.18x10 <sup>3</sup>	2.49x10 <sup>3</sup>	2.81x10 <sup>3</sup>	3.12x10 <sup>3</sup>
	Pull	2.80x10 <sup>2</sup>	4.20x10 <sup>2</sup>	5.61x10 <sup>2</sup>	8.41x10 <sup>2</sup>	1.12x10 <sup>3</sup>	1.40x10 <sup>3</sup>	1.68x10 <sup>3</sup>	1.96x10 <sup>3</sup>	2.24x10 <sup>3</sup>	2.52x10 <sup>3</sup>	2.80x10 <sup>3</sup>
ø80	Push	5.03x10 <sup>2</sup>	7.54x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.51x10 <sup>3</sup>	2.01x10 <sup>3</sup>	2.51x10 <sup>3</sup>	3.02x10 <sup>3</sup>	3.52x10 <sup>3</sup>	4.02x10 <sup>3</sup>	4.52x10 <sup>3</sup>	5.03x10 <sup>3</sup>
	Pull	4.54x10 <sup>2</sup>	6.80x10 <sup>2</sup>	9.07x10 <sup>2</sup>	1.36x10 <sup>3</sup>	1.81x10 <sup>3</sup>	2.27x10 <sup>3</sup>	2.72x10 <sup>3</sup>	3.17x10 <sup>3</sup>	3.63x10 <sup>3</sup>	4.08x10 <sup>3</sup>	4.54x10 <sup>3</sup>
ø100	Push	7.85x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.57x10 <sup>3</sup>	2.36x10 <sup>3</sup>	3.14x10 <sup>3</sup>	3.93x10 <sup>3</sup>	4.71x10 <sup>3</sup>	5.50x10 <sup>3</sup>	6.28x10 <sup>3</sup>	7.07x10 <sup>3</sup>	7.85x10 <sup>3</sup>
	Pull	7.15x10 <sup>2</sup>	1.07x10 <sup>3</sup>	1.43x10 <sup>3</sup>	2.14x10 <sup>3</sup>	2.86x10 <sup>3</sup>	3.57x10 <sup>3</sup>	4.29x10 <sup>3</sup>	5.00x10 <sup>3</sup>	5.72x10 <sup>3</sup>	6.43x10 <sup>3</sup>	7.15x10 <sup>3</sup>

# SSD2-KG1/KG4 Series

SCP\*3  
CMK2  
CMA2  
SCM  
SCG  
SCA2  
SCS2  
CKV2  
CAV2/  
COVPIN2  
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

No 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**

**A** Model No.

**B** Bore size

**C** Stroke

**D** Switch model No.

**E** Switch quantity

**F** Option

**G** Mounting bracket \*1

**H** Accessory \*2

Code	Description				
<b>A Model No.</b>					
<b>SSD2-KG1</b>	Double acting/single rod/high load/coil scraper				
<b>SSD2-KG1L</b>	Double acting/single rod/high load/coil scraper/with switch				
<b>SSD2-KG4</b>	Double acting/single rod/high load/anti-spatter adherence				
<b>SSD2-KG4L</b>	Double acting/single rod/high load/anti-spatter adherence/with switch				
<b>B Bore size (mm)</b>					
<b>25</b>	ø25				
<b>32</b>	ø32				
<b>40</b>	ø40				
<b>50</b>	ø50				
<b>63</b>	ø63				
<b>80</b>	ø80				
<b>100</b>	ø100				
<b>C Stroke (mm)</b>					
Refer to the stroke table on the following page.					
<b>D Switch model No.</b>					
<b>Lead wire</b>	<b>Lead wire</b>	<b>Contact</b>	<b>Voltage</b>	<b>Indicator</b>	<b>Lead wire</b>
<b>Straight</b>	<b>L-shaped</b>	<b>Proximity</b>	<b>DC</b>	<b>2-color LED</b>	<b>2-wire</b>
<b>T2YD*</b>	-			<b>for AC magnetic field</b>	
<b>T2YDT*</b>	-				
<b>* Lead wire length</b>					
<b>Blank</b>	1 m (standard)				
<b>3</b>	3 m (option)				
<b>5</b>	5 m (option)				
<b>E Switch quantity</b>					
<b>R</b>	1 on rod side				
<b>H</b>	1 on head side				
<b>D</b>	2				
<b>F Option</b>					
<b>Blank</b>	Rod end female thread				
<b>N</b>	Rod end male thread				
<b>G Mounting bracket</b>					
<b>Blank</b>	Without mounting bracket				
<b>LB</b>	Axial foot (made-to-order product)				
<b>CB</b>	Clevis bracket (pin and snap ring included)				
<b>FA</b>	Rod side flange (made-to-order product)				
<b>FB</b>	Head side flange				
<b>H Accessory (available when rod end male thread "N" is selected)</b>					
<b>I</b>	Rod eye				
<b>Y</b>	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

**B** Bore size : ø32 mm

**C** Stroke : 10 mm

**D** Switch model No.: Proximity switch for AC magnetic field  
T2YD, lead wire length 1 m

**E** Switch quantity : 1 on rod side

**F** Option : Rod end male thread

## How to order switch



Switch model No.  
(Item ④ on page 976)

## [Stroke table]

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

\*1: Less than 10 mm stroke is not available.

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

## How to order mounting bracket

Bore size (mm)	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Mounting bracket							
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.

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

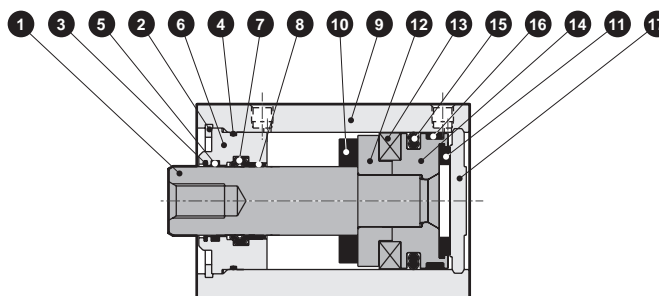
Ending

# SSD2-KG1/KG4 Series

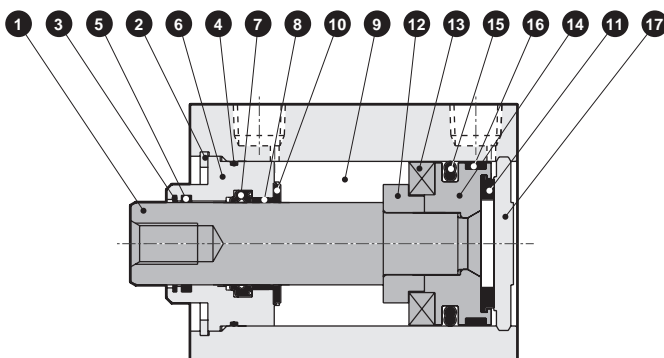
## Internal structure and parts list

SCP\*3  
CMK2  
CMA2  
SCM  
SCG  
SCA2  
SCS2  
CKV2  
CAV2/  
COVPIN2  
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

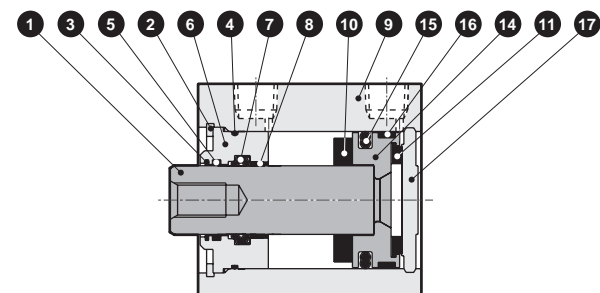
● SSD2-KG1L/KG4L-25  
(double acting/single rod high load/anti-spatter adherence/with switch)



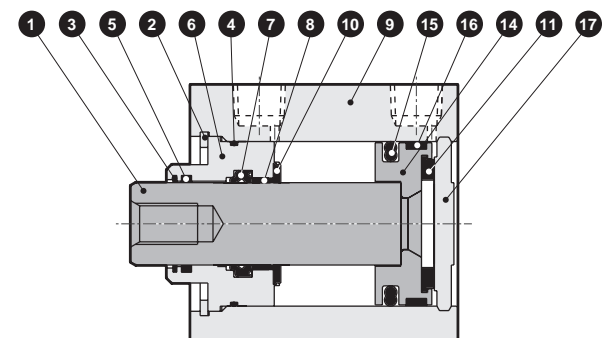
● SSD2-KG1L/KG4L-32 to 50  
(double acting/single rod high load/anti-spatter adherence/with switch)



● 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)



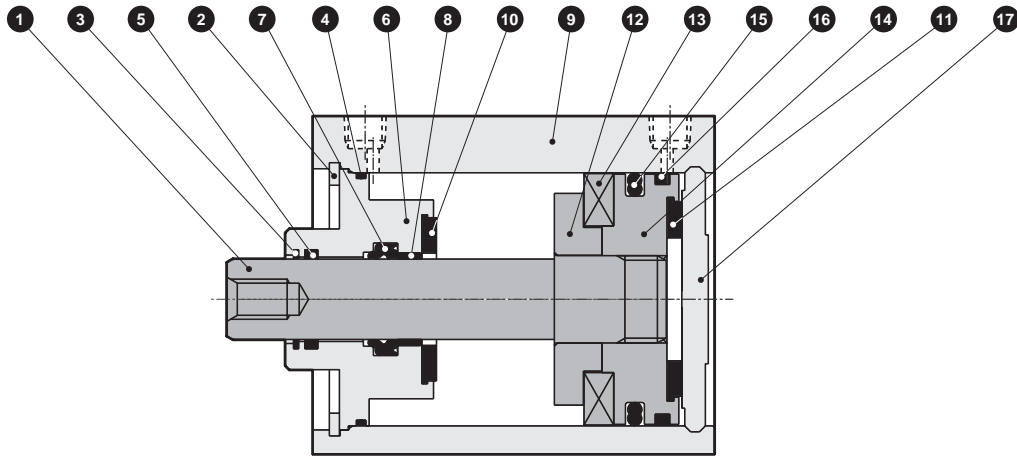
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	ø25: Stainless steel ø32 to ø50: Steel	Industrial chrome plating	10	Cushion rubber R	Urethane rubber	
2	C-snap ring for hole	Steel	Zinc phosphate	11	Cushion rubber H	Urethane rubber	
3	Coil scraper	Phosphor bronze		12	Spacer	Aluminum alloy	ø25, ø32: Chromate
4	Rod metal gasket	Nitrile rubber		13	Magnet	Plastic	
5	Lube keeping structure	Special rubber	G4 only	14	Piston	Aluminum alloy	Chromate
6	Rod metal	Special aluminum	Alumite	15	Piston packing	Nitrile rubber	
7	Rod packing	Nitrile rubber		16	Wear ring	Polyacetal resin	
8	Bush	Oiles drymet		17	Cover	ø25: Stainless steel ø32 to 50: Aluminum alloy	ø32 to ø50: Alumite
9	Body	Aluminum alloy	Hard alumite				

## Repair parts list

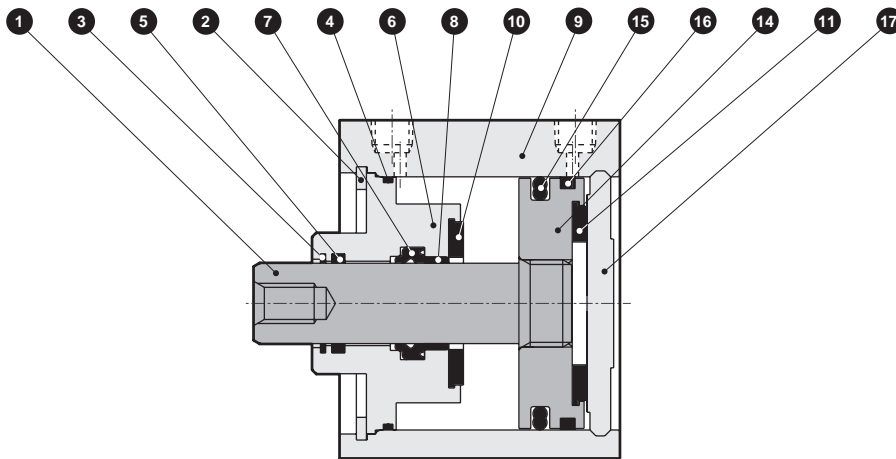
Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø25	SSD2-KG1-25K	3 4 7
ø32	SSD2-KG1-32K	10 11 15 16
ø40	SSD2-KG1-40K	
ø50	SSD2-KG1-50K	

## 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	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	10	Cushion rubber R	Urethane rubber	
2	C-snap ring for hole	Steel	Zinc phosphate	11	Cushion rubber H	Urethane rubber	
3	Coil scraper	Phosphor bronze		12	Spacer	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		13	Magnet	Plastic	
5	Lube keeping structure	Special rubber	G4 only	14	Piston	Aluminum alloy	Chromate
6	Rod metal	Aluminum alloy	Chromate	15	Piston packing	Nitrile rubber	
7	Rod packing	Nitrile rubber		16	Wear ring	Polyacetal resin	
8	Bush	Oiles drymet		17	Cover	Aluminum alloy	Alumite
9	Body	Aluminum alloy	Hard alumite				

## Repair parts list

Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø63	SSD2-KG1-63K	3 4 7 10
ø80	SSD2-KG1-80K	11 15 16
ø100	SSD2-KG1-100K	

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

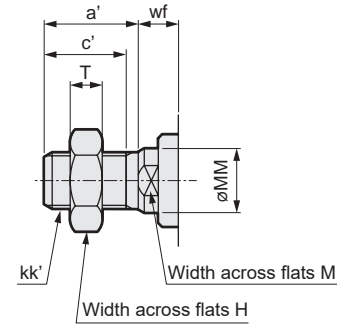
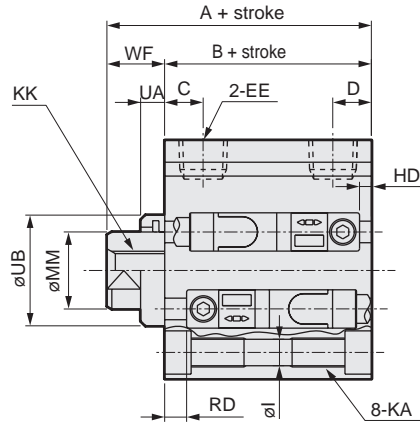
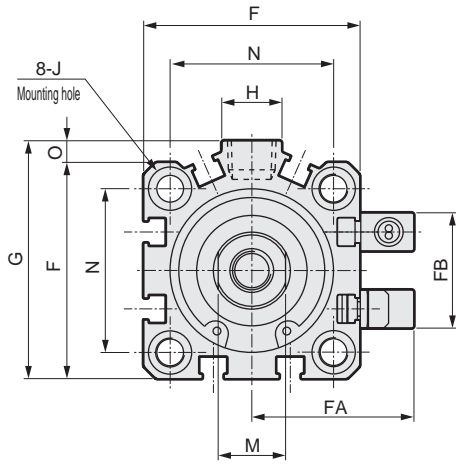
# SSD2-KG1/KG4 Series

## 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 <sup>*1</sup>		B <sup>*1</sup>	C	D	EE	F	FA	FB	G	H	I	J	K
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 <sup>*2</sup>
							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 or B+ stroke when using custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value. (Example) If the custom stroke is 7 mm, apply the standard stroke of 10 mm.

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

\*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

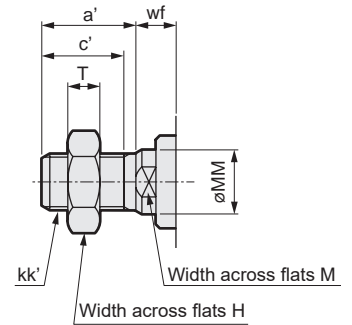
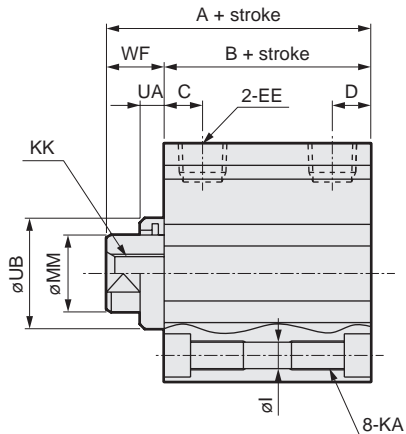
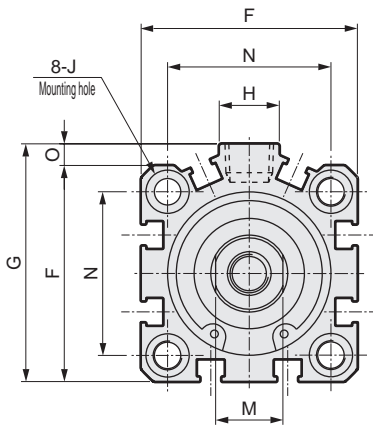
● Rod end male thread

Code	Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf	
									G1	G4
ø25	17.5	15	17	M10x1.25	10	12	6	5	5	
ø32	23.5	20.5	22	M14x1.5	14	16	8	10	15	
ø40	23.5	20.5	22	M14x1.5	14	16	8	10	15	
ø50	28.5	26	27	M18x1.5	17	20	11	10	15	
ø63	28.5	26	27	M18x1.5	17	20	11	10	15	
ø80	35.5	32.5	32	M22x1.5	22	25	13	13	18	
ø100	35.5	32.5	41	M26x1.5	27	30	16	13	18	

### Dimensions

● SSD2-KG1/KG4-25 to 100 (without switch)

● Rod end male thread



Code	Dimensions without switch												
	A <sup>*1, *4</sup>		B <sup>*1, *4</sup>	C	D	EE <sup>*5</sup>	F	G	H	I	J	K	KA
Bore size (mm)	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	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 or B+ stroke when using custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value. (Example)

If the custom stroke is 7 mm, apply the standard stroke of 10 mm.

\*2 : HD and RD dimensions for 5 mm stroke 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 strokes 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	a'	c'	H	kk'	M	MM	T	wf	
								G1	G4
ø25	17.5	15	17	M10x1.25	10	12	6	5	5
ø32	23.5	20.5	22	M14x1.5	14	16	8	10	15
ø40	23.5	20.5	22	M14x1.5	14	16	8	10	15
ø50	28.5	26	27	M18x1.5	17	20	11	10	15
ø63	28.5	26	27	M18x1.5	17	20	11	10	15
ø80	35.5	32.5	32	M22x1.5	22	25	13	13	18
ø100	35.5	32.5	41	M26x1.5	27	30	16	13	18

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



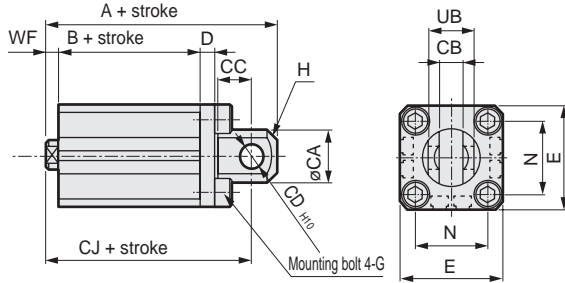
# SSD2-KG1/KG4 Series

## Dimensions with mounting bracket

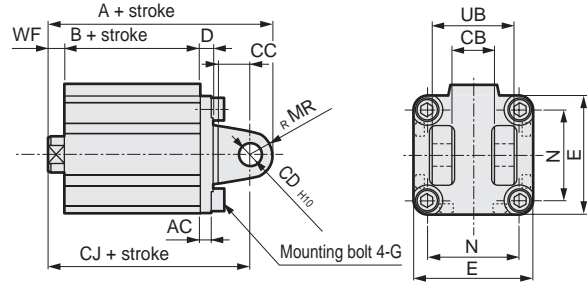


● Clevis bracket (CB)  
SSD2-G1(L)/G4(L)-25 to 100 -CB

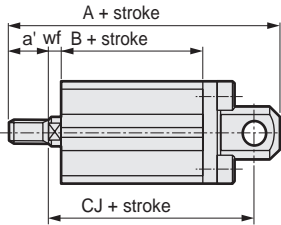
•  $\phi 25$



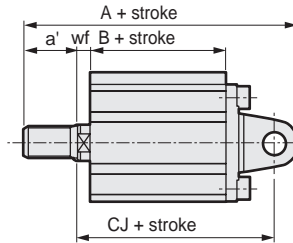
•  $\phi 32$  to  $\phi 100$



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		No switch				With switch				
		A		CJ		A		B		G1		G4		B		A		B						
		G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	G1	G4					
$\phi 25$	-	24	10.2	14	10	5	40	M 6 x 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
$\phi 32$	4.5	-	18.2	14	10	5	45	M 6 x 16	C4	10	34	36	12	17	65	70	23	55	60	75	80	33	65	70
$\phi 40$	5	-	18.2	14	10	6	52	M 6 x 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
$\phi 50$	6	-	22.2	20	14	7	64	M 8 x 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
$\phi 63$	7	-	22.2	20	14	8	77	M 10 x 25	-	14	60	44	13	18	93	98	36	79	84	103	108	46	89	94
$\phi 80$	9	-	28.2	27	18	10	98	M 12 x 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
$\phi 100$	12	-	32.2	31	22	13	117	M 12 x 40	-	22	94	64	17	22	137	142	53	115	120	147	152	63	125	130

Code	Male thread												
	Bore size (mm)	a'	wf		No switch				With switch				
			A		CJ		A		B		CJ		
			G1	G4	G1	G4	G1	G4	G1	G4	G1	G4	
$\phi 25$	17.5	5	5	85	85	32.5	57.5	57.5	95	95	42.5	67.5	67.5
$\phi 32$	23.5	10	15	86.5	91.5	23	53	58	96.5	101.5	33	63	68
$\phi 40$	23.5	10	15	95	100	29.5	61.5	66.5	105	110	39.5	71.5	76.5
$\phi 50$	28.5	10	15	111	116	30.5	68.5	73.5	121	126	40.5	78.5	83.5
$\phi 63$	28.5	10	15	118.5	123.5	36	76	81	128.5	133.5	46	86	91
$\phi 80$	35.5	13	18	148	153	43.5	94.5	99.5	158	163	53.5	104.5	109.5
$\phi 100$	35.5	13	18	168.5	173.5	53	111	116	178.5	183.5	63	121	126

# SSD2-KG1/KG4 Series

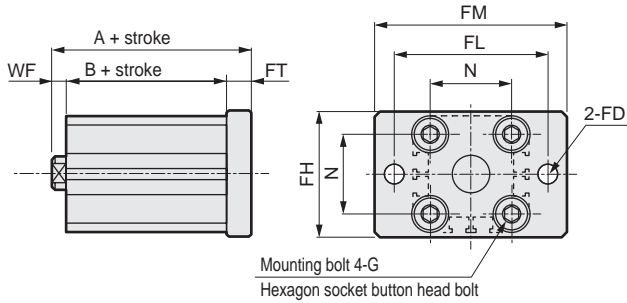
Dimensions with mounting bracket

## Dimensions with mounting bracket

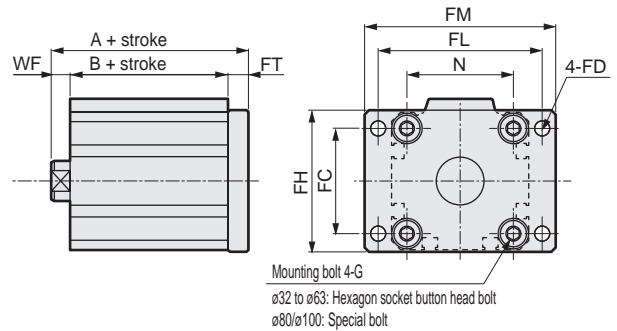


- Head side flange (FB)  
SSD2-G1(L)/G4(L)-25 to 100 -FB

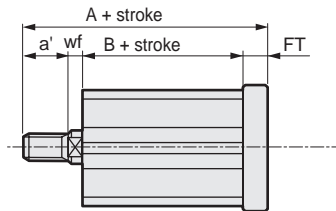
•  $\phi 25$



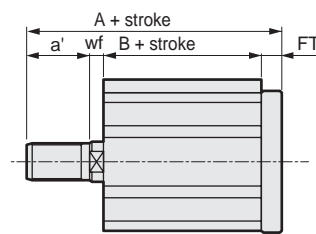
•  $\phi 32$  to  $\phi 100$



Rod end male thread



Rod end male thread



Code	Common dimensions								Female thread							
	FC	FD	FH	FL	FM	FT	N	G	WF		No switch			With switch		
									G1	G4	A		B	A		B
$\phi 25$	-	6.6	42	52	64	8	28	M 6 x 16	5	5	45.5	45.5	32.5	55.5	55.5	42.5
$\phi 32$	34	5.5	48	56	65	8	34	M 6 x 16	12	17	43	48	23	53	58	33
$\phi 40$	40	5.5	54	62	72	8	40	M 6 x 16	12	17	49.5	54.5	29.5	59.5	64.5	39.5
$\phi 50$	50	6.6	67	76	89	9	50	M 8 x 20	13	18	52.5	57.5	30.5	62.5	67.5	40.5
$\phi 63$	60	9	80	92	108	9	60	M 10 x 25	13	18	58	63	36	68	73	46
$\phi 80$	77	11	99	116	134	11	77	M 12 x 40	15	20	69.5	74.5	43.5	79.5	84.5	53.5
$\phi 100$	94	11	117	136	154	11	94	M 12 x 40	17	22	81	86	53	91	96	63

Code	Male thread								
	a'	wf		No switch			With switch		
		G1	G4	A		B	A		B
$\phi 25$	17.5	5	5	63	63	32.5	73	73	42.5
$\phi 32$	23.5	10	15	64.5	69.5	23	74.5	79.5	33
$\phi 40$	23.5	10	15	71	76	29.5	81	86	39.5
$\phi 50$	28.5	10	15	78	83	30.5	88	93	40.5
$\phi 63$	28.5	10	15	83.5	88.5	36	93.5	98.5	46
$\phi 80$	35.5	13	18	103	108	43.5	113	118	53.5
$\phi 100$	35.5	13	18	112.5	117.5	53	122.5	127.5	63

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