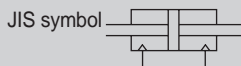


Compact cylinder double acting/  
double rod/coil scraper

## SSD2-DG1 Series

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



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

## SSD2-DG4 Series



### Specifications

Item	SSD2-DG1/DG4 SSD2-DG1L/DG4L (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	0.2 ( $\approx 29$ psi, 2 bar)				0.15 ( $\approx 22$ psi, 1.5 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	Rc1/8				Rc1/4		Rc3/8		
Stroke tolerance	mm	$^{+1.0}$ 0							
Working piston speed	mm/s	50 to 500					50 to 300		
Cushion	None								
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)								
Allowable absorbed energy	J	0.021	0.025	0.092	0.1	0.12	0.27	0.56	

### Stroke

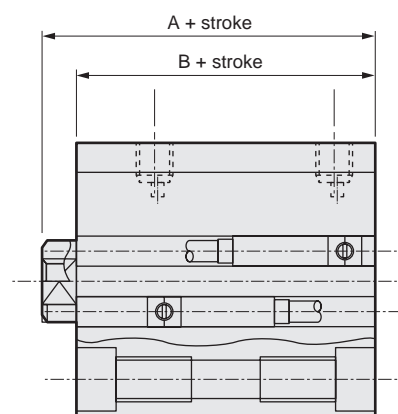
Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\varnothing 25$	5/10/15/20/25/ 30/35/40/45/50	50	1(10) The value in ( ) is for types with one or two switches.
$\varnothing 32$	5/10/15/20/25/30/ 35/40/45/50/75/100	100	
$\varnothing 40$	10/15/20/25 30/35/40/45/50 75/100		
$\varnothing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

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

### Custom stroke

#### ● SSD2-DG1, DG4 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-DG1-32-38 A +2 mm spacer is added to the SSD2-DG1-32-40 standard cylinder to create 38 mm stroke. B + stroke is 90.5mm.	



## Switch specifications

● Proximity switch for AC magnetic field

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)	60 ms or less	
Lead wire length	1m (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	234	325	249	340	265	356	281	372	297	388	313	403	329	419	344	435	360	461	375	486	-	-	-	-
ø32	308	423	354	468	399	514	446	560	490	605	537	651	584	696	631	741	678	786	725	831	960	1056	1195	1281
ø40	446	589	473	616	499	642	526	669	553	696	579	732	606	754	632	775	659	802	685	828	818	961	950	1093
ø50	-	-	746	940	796	989	846	1041	896	1089	946	1139	996	1189	1046	1239	1098	1291	1149	1343	1407	1603	1664	1863
ø63	-	-	1203	1567	1278	1642	1353	1717	1428	1792	1503	1867	1579	1943	1654	2018	1729	2093	1804	2168	2179	2543	2554	2918
ø80	-	-	2112	2042	2229	2420	2345	2798	2462	2915	2578	3031	2695	3153	2812	3275	2929	3392	3045	3508	3628	4091	4210	4673
ø100	-	-	3153	3775	3322	3924	3490	4072	3659	4256	3828	4440	3997	4604	4165	4767	4334	4931	4503	5095	5348	5915	6193	6735

## Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø25	Push/Pull	-	75.6	1.13x10 <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	-	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	-	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	-	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	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/Pull	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/Pull	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-DG1/DG4 Series

## How to order

No switch (without magnet for switch)

**SSD2-DG4** - **32** - **10** - **N** - **LB** - **I**

With switch (built-in magnet for switch)

**SSD2-DG4L** - **32** - **10** - **T2YD** - **R** - **N** - **LB** - **I**

**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-DG1</b>	Double acting/double rod/coil scraper				
<b>SSD2-DG1L</b>	Double acting/double rod/coil scraper/with switch				
<b>SSD2-DG4</b>	Double acting/double rod/anti-spatter adherence				
<b>SSD2-DG4L</b>	Double acting/double rod/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>T2YD*</b>	-	Proximity	DC	2-color LED for AC magnetic field	2-wire
<b>T2YDT*</b>	-				
<b>T2YDU (Made-to-order product)</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>FA</b>	Rod side flange (made-to-order product)				
<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** - **T2YD**

Switch model No.  
(Item **D** above)

## ⚠ Precautions for model No. selection

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

\*2: "I" and "Y" cannot be selected together.

## [Example of model No.]

**SSD2-DG4L-32-10-T2YD-R-N**

Model: Compact cylinder

Double acting, double rod, anti-spatter adherence

**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.

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

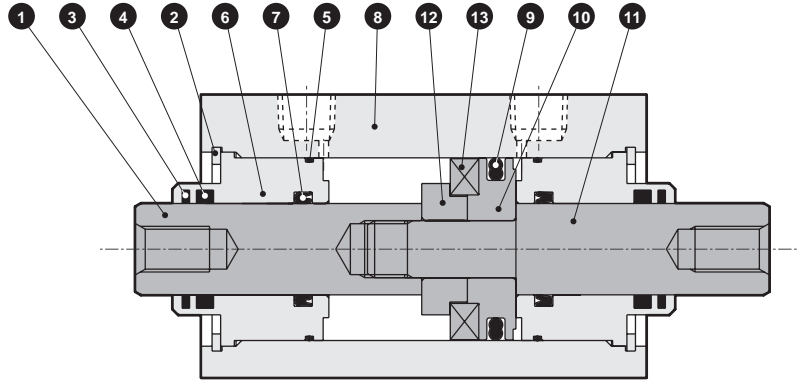
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
<b>SSD2</b>
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

# SSD2-DG1/DG4 Series

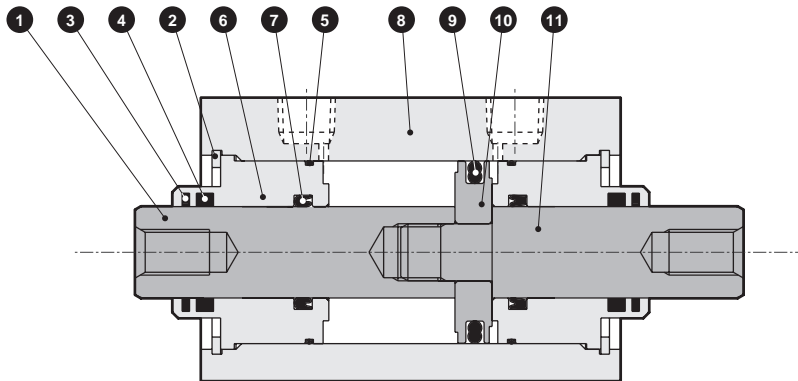
SCP\*3  
CMK2  
CMA2  
SCM  
SCG  
SCA2  
SCS2  
CKV2  
CAV2/  
COVPIN2  
**SSD2**  
SSG  
SSD  
CAT  
MDC2  
MVC  
SMG  
MSD/  
MSDG  
FC\*  
STK  
SRL3  
SRG3  
SRM3  
SRT3  
MRL2  
MRG2  
SM-25  
ShkAbs  
FJ  
FK  
Spd  
Contr  
Ending

## Internal structure and parts list

● SSD2-DG1L/DG4L-25 to 50 (double acting/double rod/anti-spatter adherence/with switch)



● SSD2-DG1/DG4-25 to 50 (double acting/double rod/anti-spatter adherence)



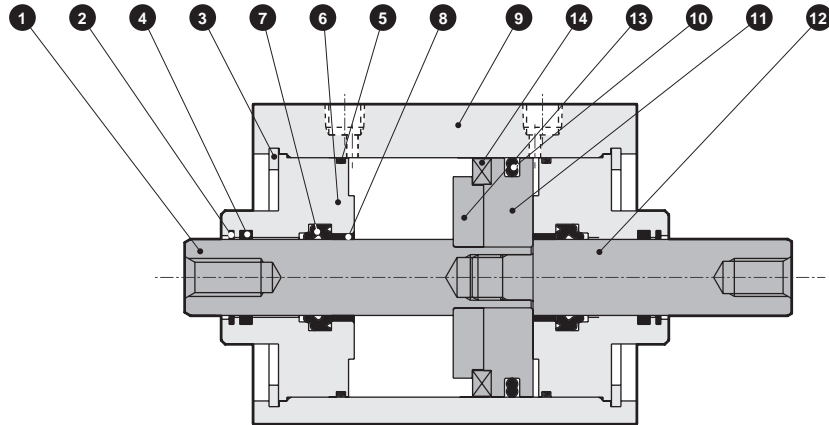
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod A	ø25: Stainless steel ø32 to ø50: Steel	Industrial chrome plating	8	Body	Aluminum alloy	Hard alumite
2	C-snap ring for hole	Steel	Zinc phosphate	9	Piston packing	Nitrile rubber	
3	Coil scraper	Phosphor bronze		10	Piston	Aluminum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

## Repair parts list

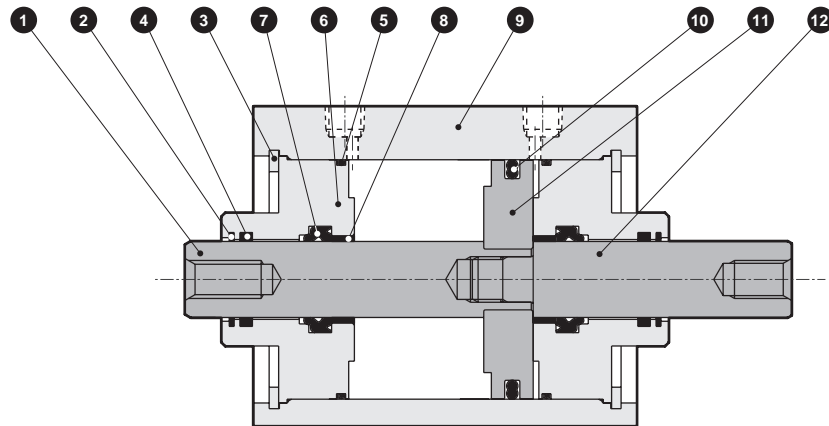
Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø25	SSD2-DG1-25K	3 5 7 9
ø32	SSD2-DG1-32K	
ø40	SSD2-DG1-40K	
ø50	SSD2-DG1-50K	

## Internal structure and parts list

- SSD2-DG1L/DG4L-63 to 100 (double acting/double rod/anti-spatter adherence/with switch)



- SSD2-DG1/DG4-63 to 100 (double acting/double rod/anti-spatter adherence)



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

## Repair parts list

Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø63	SSD2-DG1-63K	
ø80	SSD2-DG1-80K	2 5 7 10
ø100	SSD2-DG1-100K	

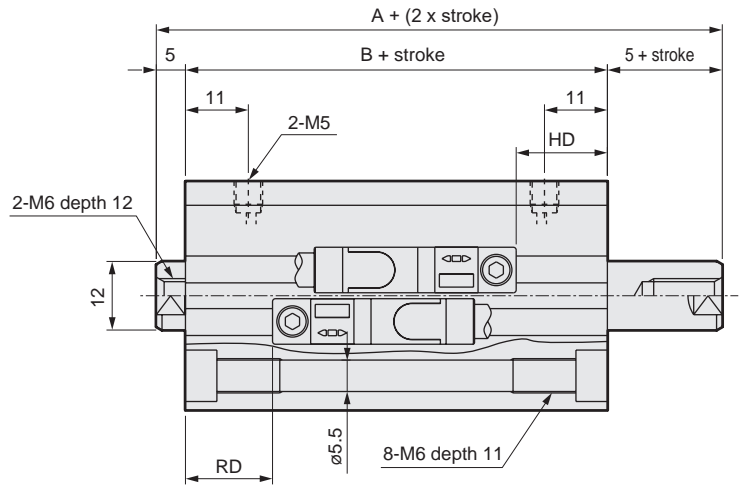
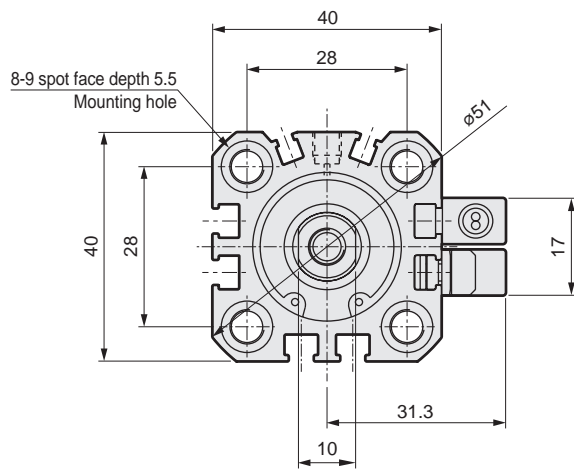
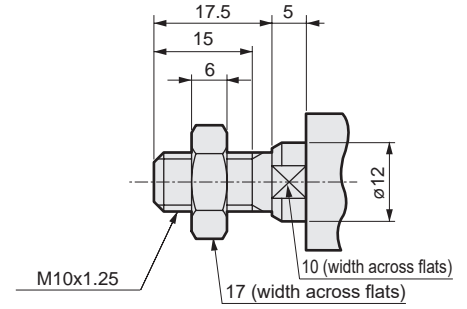
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
<b>SSD2</b>
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

# SSD2-DG1/DG4 Series

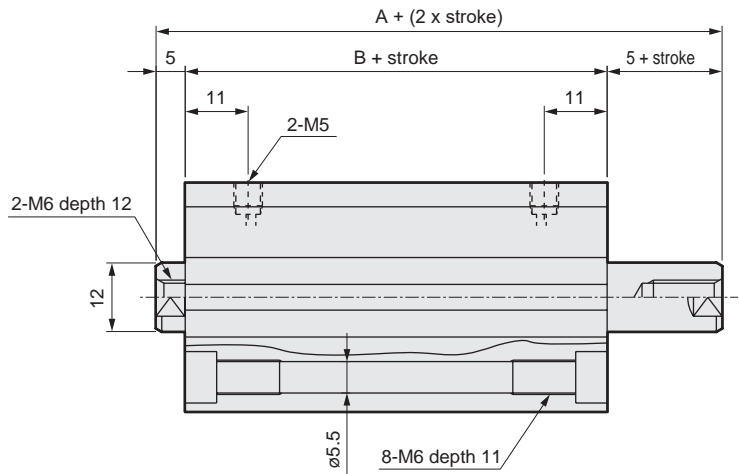
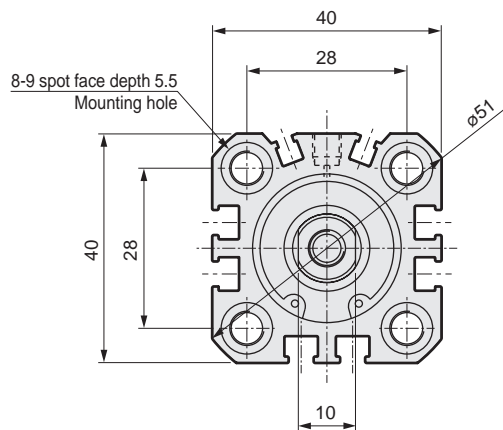
## Dimensions

● SSD2-DG1L/DG4L-25 (with switch)

● Rod end male thread



● SSD2-DG1/DG4-25 (without switch)



Code	No switch		Dimensions with switch					
	A <sup>*1</sup>	B <sup>*1</sup>	A <sup>*1</sup>	B <sup>*1</sup>	FA	FB	RD <sup>*2</sup>	HD
FJ	59	49	69	59	31.5	17	20	21.5

\*1 : To calculate A+ (2 x stroke), B+ stroke or 5+ stroke when using a custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value. Left and right projection dimensions of rod differ.

(Example) If the custom stroke is 17 mm, apply the standard stroke 20 mm.

\*2 : RD dimensions for custom stroke differ from these dimensions according to the setting.

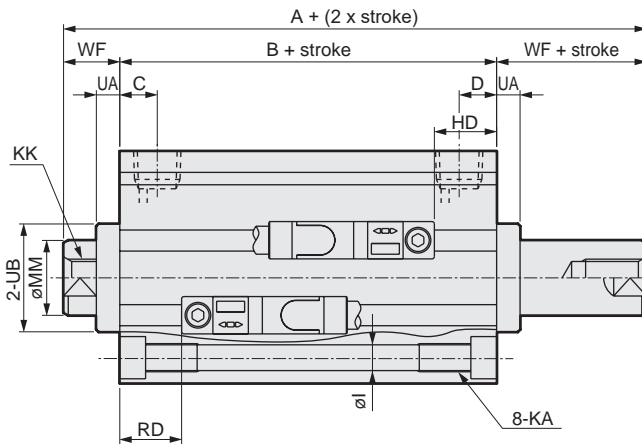
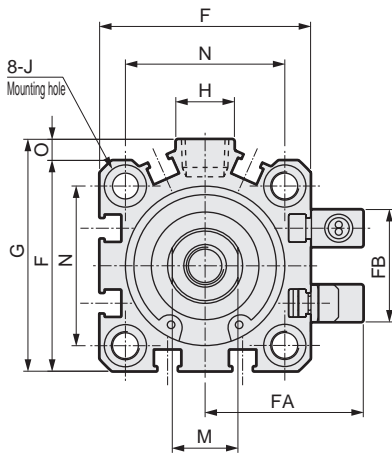
\*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

# SSD2-DG1/DG4 Series

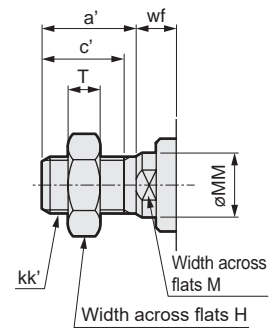
Double acting/double rod

## Dimensions

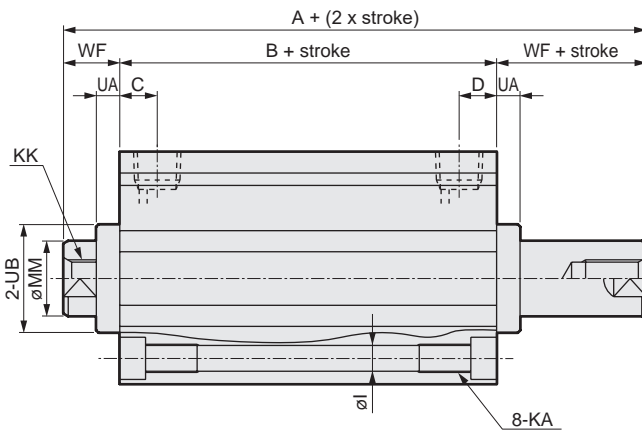
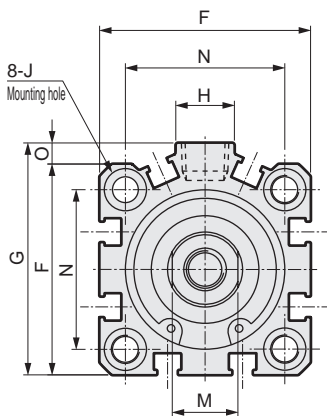
● SSD2-DG1L/DG4L-32 to 100 (with switch)



● Rod end male thread



● SSD2-DG1/DG4-32 to 100 (without switch)



Code	No switch			Common dimensions with switch														
	A <sup>*1, *4</sup>		B <sup>*1, *4</sup>	A <sup>*1</sup>		B <sup>*1</sup>	C	D	EE	F	FA	FB	G	H	I	J	KA	KK
	G1	G4		G1	G4													
ø32	54.5(64.5)	64.5(74.5)	30.5(40.5)	64.5	74.5	40.5	8	8	Rc1/8	45	33.5	24	49.5	12.5	5.5	9 spot face depth 5.5	M6 depth 11	M8 depth 13
ø40	64(74)	74(84)	40(50)	74	84	50	12	12	Rc1/8	52	37	31	57	15	5.5	9 spot face depth 5.5	M6 depth 11	M8 depth 13
ø50	66.5(76.5)	76.5(86.5)	40.5(50.5)	76.5	86.5	50.5	10.5	10.5	Rc1/4	64	43	32	71	18	6.9	11 spot face depth 6.5	M8 depth 13	M10 depth 15
ø63	68(78)	78(88)	42(52)	78	88	52	13	13	Rc1/4	77	49.5	32	84	23	8.7	14 spot face depth 9	M10 depth 25	M10 depth 15
ø80	81(91)	91(101)	51(61)	91	101	61	16	16	Rc3/8	98	60	32	104	31	10.5	17 spot face depth 11	M12 depth 28	M16 depth 21
ø100	94.5(104.5)	104.5(114.5)	60.5(70.5)	104.5	114.5	70.5	23	23	Rc3/8	117	69.5	32	123.5	38	10.5	17.5 spot face depth 11	M12 depth 28	M20 depth 27

Code	Common dimensions with switch								With T2YD switch		
	M	MM	N	O	UA		UB	WF		RD <sup>*2</sup>	HD
					G1	G4		G1	G4		
ø32	14	16	34	4.5	5	10	23 h9	12	17	20.5	22
ø40	14	16	40	5	5	10	28 h9	12	17	23.5	27.5
ø50	17	20	50	7	5	10	35 h9	13	18	23.5	27.5
ø63	17	20	60	7	5	10	35 h9	13	18	24	28.5
ø80	22	25	77	6	5	10	43 h9	15	20	26.5	35
ø100	27	30	94	6.5	5	10	59 h9	17	22	30.5	40.5

\*1 : To calculate A+ (2 x stroke), B+ stroke or WF+ stroke when using a custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value. Left and right projection dimensions of rod differ. (Example) If the custom stroke is 17 mm, apply the standard stroke 20 mm.

\*2 : RD dimensions for custom stroke differ from these dimensions according to the setting.

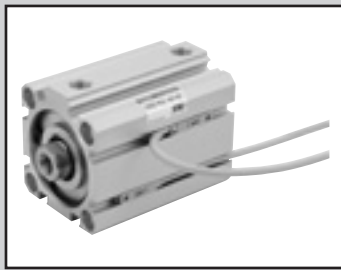
\*3 : For dimensions of individual accessories, refer to pages 1046 to 1049.

\*4 : Dimensions in ( ) of codes A and B are for strokes of more than 50 mm.

● Dimensions of rod end male thread part

Code	a'	c'	H	kk'	M	MM	T	wf	
								G1	G4
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





Compact cylinder double acting single rod/environment-resistant scraper

# SSD2-G5 Series

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

JIS symbol



## Specifications

Item	SSD2-G5 SSD2-G5L (with switch)									
	mm	$\varnothing 20$	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$	
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	0.2 ( $\approx 29$ psi, 2 bar)					0.15 ( $\approx 22$ psi, 1.5 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/ 30/35/40/45/50	50	1
$\varnothing 25$			
$\varnothing 32$	5/10/15/20/25/30/35/40/ 45/50/75/100	100	
$\varnothing 40$			
$\varnothing 50$	10/15/20/25/30/35/40/4 5/50/75/100	100	
$\varnothing 63$			
$\varnothing 80$			
$\varnothing 100$			

## 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.

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

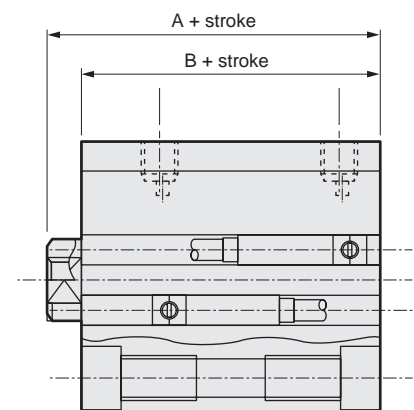
\*1: For the type with switch, refer to the table of switch mounting quantity and minimum stroke.

\*2: The custom stroke is available in 1 mm increments. The total length when using a custom stroke is the same as that when using the next longer standard stroke.

## Custom stroke

### ● SSD2-G5 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-G5-32-38 A +2 mm spacer is added to the SSD2-G5-32-40 standard cylinder to create 38 mm stroke. B + stroke is 73mm.	



### 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%	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	95	150	107	182	120	195	133	208	145	220	158	233	171	246	184	259	197	272	210	285	-	-	-	-
ø25	131	222	146	237	162	253	178	269	194	285	209	300	225	316	241	332	257	348	272	363	-	-	-	-
ø32	185	299	207	321	229	343	251	365	272	386	294	408	316	430	338	452	360	474	381	495	552	600	662	710
ø40	269	412	296	439	322	465	349	492	376	519	402	545	429	572	455	598	482	625	508	651	726	784	858	916
ø50	-	-	476	670	518	712	560	754	602	796	645	839	687	881	729	923	771	965	813	1007	1160	1217	1370	1427
ø63	-	-	703	982	758	1037	813	1092	868	1147	923	1202	999	1258	1074	1313	1150	1369	1144	1423	1332	1696	1709	1973
ø80	-	-	1240	1653	1327	1740	1413	1826	1500	1908	1586	1990	1673	2082	1760	2173	1847	2265	1933	2346	2701	2754	3136	3211
ø100	-	-	1879	2446	1993	2560	2106	2673	2220	2787	2334	2901	2448	3015	2561	3128	2675	3242	2789	3356	3857	3929	4424	4496

### Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
ø20	Push	-	62.8	94.2	1.26x10 <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	-	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	-	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	-	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	-	1.61x10 <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	-	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	-	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	-	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	-	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	-	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	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	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	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	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	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	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>	

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-G5 Series

## How to order

No switch (without magnet for switch)

**SSD2-G5** - **20** - **5** - **N** - **LB** - **I**

With switch (built-in magnet for switch)

**SSD2-G5L** - **20** - **5** - **T0H** - **R** - **N** - **LB** - **I**

**A** Model No.

**B** Bore size

**C** Port thread

**D** Stroke

**E** Switch model No.

\*1

\*4

**F** Switch quantity

**G** Option

**H** Mounting bracket

\*2

**I** Accessory

\*3

## Precautions for model No. selection

\*1 : The T8\* switch cannot be mounted on the ø20 to ø32 bore sizes.

\*2 : The mounting bracket is included at shipment. The WF/wf dimension of the cylinder for "LB" and "FA" is set 10 mm longer than that of standard products. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.

\*3 : "I" and "Y" cannot be selected together.

\*4 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

\*5 : F-switch cannot be selected.

## [Example of model No.]

**SSD2-G5L-32-5-T0H-R-N-LB-I**

Model: Compact cylinder  
Double acting/single rod/environment-resistant scraper

- B** Bore size : ø32 mm
- C** Port thread : Type of Rc thread
- D** Stroke : 5 mm
- E** Switch model : Reed switch T0H  
No. Lead wire length 1 m
- F** Switch quantity : 1 on rod side
- G** Option : Rod end male thread
- H** Mounting bracket : Axial foot
- I** Accessory : Rod eye

Code	Description															
<b>A Model No.</b>																
<b>SSD2-G5</b>	Double acting/single rod/environment-resistant scraper (made-to-order product)															
<b>SSD2-G5L</b>	Double acting/single rod/environment-resistant scraper/switch (MTO)															
<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 Port thread</b>																
<b>Blank</b>	Rc thread/M5 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)															
<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	Bore size									
			AC	DC			Line	20	25	32	40	50	63	80	100	
Straight	-	F2S*	Proximity	●	1-color LED	2-wire	●	●								
	-	F3S*		3-wire		●	●									
	F2H*	F2V*		2-wire		●	●									
	F3H*	F3V*		3-wire		●	●									
L-shaped	F3PH*	F3PV*	Proximity	●	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	2-wire		●	●	●	●	●	●	●	●	●	●	●	
T8H*	T8V*	1-color LED							●	●	●	●	●	●	●	
T1H*	T1V*		2-wire		●	●	●	●	●	●	●	●	●	●	●	●
Proximity	T2H*	T2V*	1-color LED	2-wire	●	●	●	●	●	●	●	●	●	●	●	●
	T3H*	T3V*		3-wire	●	●	●	●	●	●	●	●	●	●	●	●
	T3PH*	T3PV*	1-color LED (PNP output)	3-wire	●	●	●	●	●	●	●	●	●	●	●	●
	T2WH*	T2WV*	2-color LED	2-wire	●	●	●	●	●	●	●	●	●	●	●	●
	T2YH*	T2YV*		3-wire	●	●	●	●	●	●	●	●	●	●	●	●
	T3WH*	T3WV*	2-color LED	2-wire	●	●	●	●	●	●	●	●	●	●	●	●
	T3YH*	T3YV*		3-wire	●	●	●	●	●	●	●	●	●	●	●	●
	T2YD*	-	2-color LED	2-wire	●	●	●	●	●	●	●	●	●	●	●	●
T2YDT*	-	for AC magnetic field														
T2JH*	T2JV*	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>H Mounting bracket</b>																
<b>Blank</b>	Without mounting bracket															
<b>LB</b>	Axial foot															
<b>CB</b>	Clevis bracket (pin and snap ring included)															
<b>FA</b>	Rod side flange															
<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								
	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 992 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 ㊞ on page 994)

### How to order mounting bracket

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

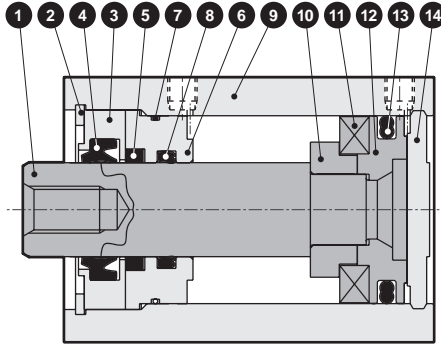
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
<b>SSD2</b>
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

# SSD2-G5 Series

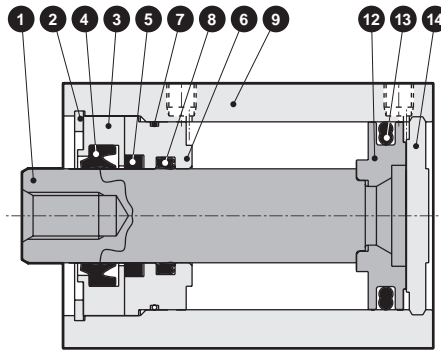
SCP\*3  
CMK2  
CMA2  
SCM  
SCG  
SCA2  
SCS2  
CKV2  
CAV2/  
COVPIN2  
**SSD2**  
SSG  
SSD  
CAT  
MDC2  
MVC  
SMG  
MSD/  
MSDG  
FC\*  
STK  
SRL3  
SRG3  
SRM3  
SRT3  
MRL2  
MRG2  
SM-25  
ShkAbs  
FJ  
FK  
Spd  
Contr  
Ending

## Internal structure and parts list

● SSD2-G5L-20, 25  
(double acting/environmentally-resistant scraper/with switch)



● SSD2-G5-20, 25  
(double acting/environmentally-resistant scraper)



## Main parts list

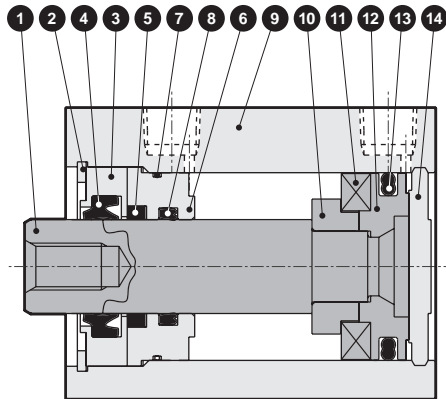
Part No.	Part name	Material	Remarks	Part No.	Part name	Material	Remarks
1	Piston rod	Stainless steel	Industrial chrome plating	9	Body	Aluminum alloy	Hard alumite
2	C-snap ring	Steel	Zinc phosphate	10	Spacer	Aluminum alloy	Chromate
3	Rod metal 1	Special aluminum	Alumite	11	Magnet	Plastic	
4	Scraper	Nitrile rubber		12	Piston	Aluminum alloy	Chromate
5	Lube keeping structure	Special rubber		13	Piston packing	Nitrile rubber	
6	Rod metal	Special aluminum	Alumite	14	Cover	Stainless steel	
7	Rod metal gasket	Nitrile rubber					
8	Rod packing	Nitrile rubber					

## Consumable parts list

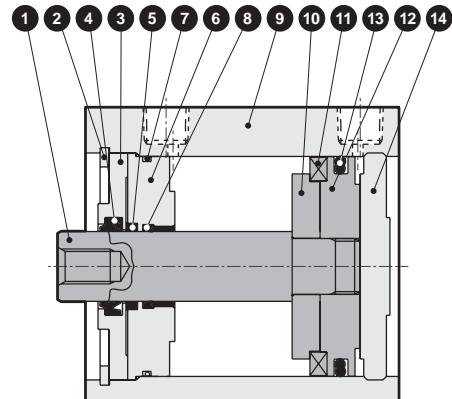
Part name	Kit No.	Consumable parts No.
Bore size (mm)		
ø20	<b>SSD2-G5-20K</b>	4 5 7 8 13
ø25	<b>SSD2-G5-25K</b>	

## Internal structure and parts list

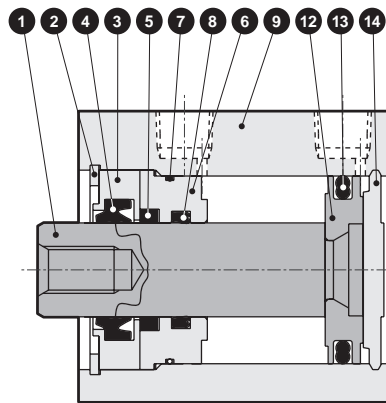
- SSD2-G5L-32 to 50  
(double acting/environmentally-resistant scraper/with switch)



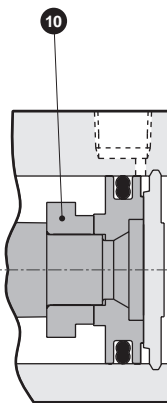
- SSD2-G5L-63 to 100  
(double acting/environmentally-resistant scraper/with switch)



- SSD2-G5-32 to 50  
(double acting/environmentally-resistant scraper)

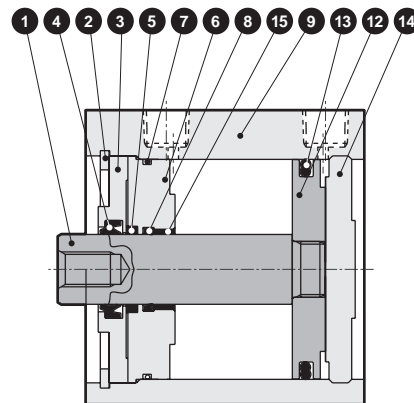


50 st or less

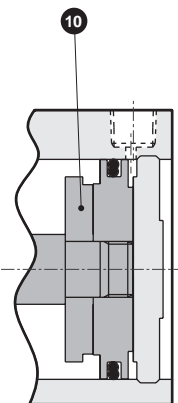


Over 50 st

- SSD2-G5-63 to 100  
(double acting/environmentally-resistant scraper)



50 st or less



Over 50 st

## Main parts list

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

## Consumable parts list

Part name	Kit No.	Consumable parts No.
Bore size (mm)		
ø32	SSD2-G5-32K	4 5 7 8 13
ø40	SSD2-G5-40K	
ø50	SSD2-G5-50K	
ø63	SSD2-G5-63K	
ø80	SSD2-G5-80K	
ø100	SSD2-G5-100K	

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

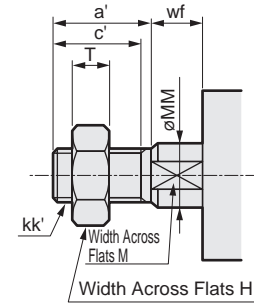
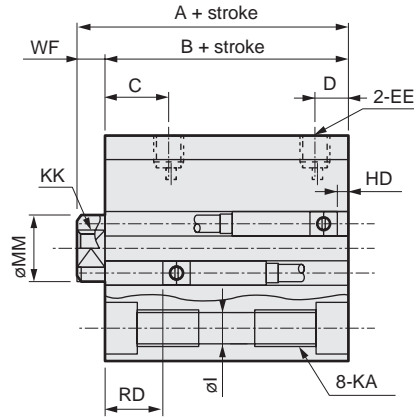
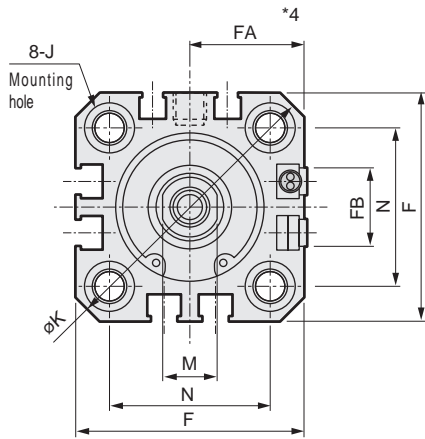
# SSD2-G5 Series

## dimensions

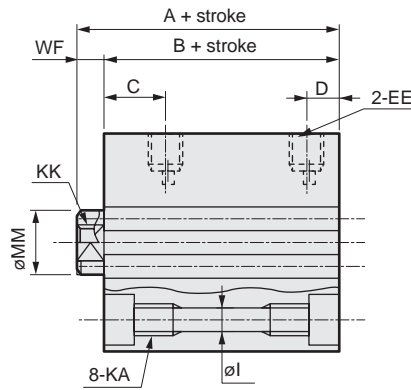
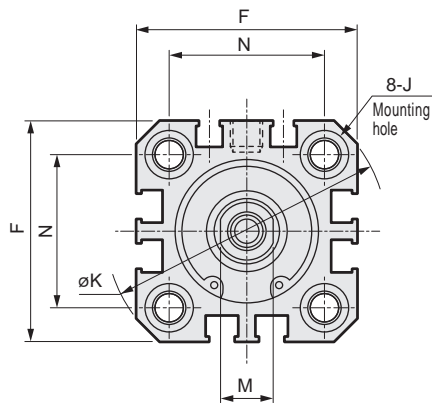
● SSD2-G5L-20, 25 (with switch, TOH/V, T5H/V, T2H/V, T3H/V)

● Rod end male thread

ø20/ø25



● SSD2-G5-20, 25 (without switch)



Code	No switch		Common dimensions with switch							
	A <sup>*1</sup>	B <sup>*1</sup>	A <sup>*1</sup>	B <sup>*1</sup>	C	D	EE	F	FA <sup>*4</sup>	FB
ø20	34	29.5	44	39.5	18	5.5	M5	36	18.5(22)	12.5
ø25	37.5	32.5	47.5	42.5	21	6	M5	40	20.5(24)	13.5

Code	Common dimensions with switch									
	I	J	K	KA	KK	M	MM	N	WF	
ø20	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5	
ø25	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5	

Switch dimensions	Reed TOH/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
ø20	3	17.5	3	17.5	5	19.5	7.5	22	6.5	21
ø25	4	19.5	4	19.5	6	21.5	8.5	24	7.5	23

\*1: To calculate A + stroke 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.

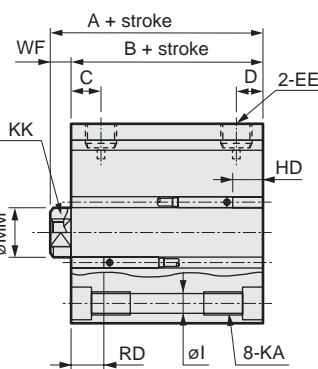
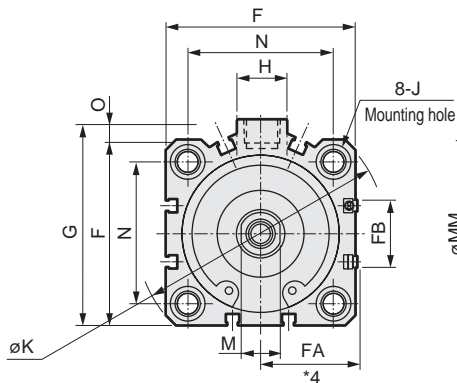
\*5: For dimensions with individual accessories, refer to pages 1046 to 1049.

Rod end male thread

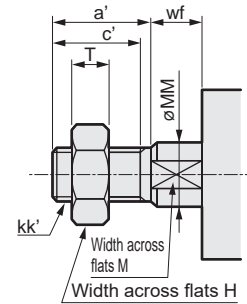
Code	a'	c'	H	kk'	M	MM	T	wf
	ø20	14	12	13	M8	8	10	5
ø25	17.5	15	17	M 10 x 1.25	10	12	6	5

## Dimensions

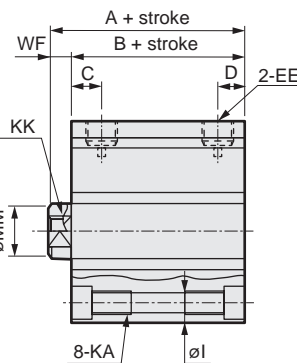
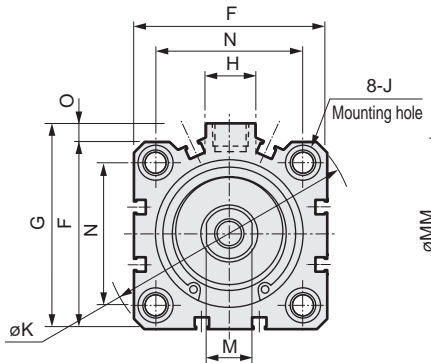
### ● SSD2-G5L-32 to 100 (with switch, TOH/V, T5H/V, T2H/V, T3H/V)



### ● Rod end male thread



### ● SSD2-G5-32 to 100 (without switch)



Code	No switch		Common dimensions with switch									
	A <sup>*1</sup>	B <sup>*1</sup>	A <sup>*1</sup>	B <sup>*1</sup>	C <sup>*7</sup>	D <sup>*7</sup>	EE <sup>*8</sup>	F	FA <sup>*4</sup>	FB	G	H
ø32	40(50)	33(43)	50	43	18(20)	8(5.5)	Rc1/8	45	23(26.5)	20.5	49.5	12.5
ø40	46.5(56.5)	39.5(49.5)	56.5	49.5	22(21.5)	8.5(8)	Rc1/8	52	26.5(30)	27.5	57	15
ø50	48.5(58.5)	40.5(50.5)	58.5	50.5	20.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18
ø63	54(64)	46(56)	64	56	23	11	Rc1/4	77	39(42.5)	28.5	84	23
ø80	63.5(73.5)	53.5(63.5)	73.5	63.5	26	13	Rc3/8	98	49.5(53)	28.5	104	31
ø100	75(85)	63(73)	85	73	33	15	Rc3/8	117	59(62.5)	28.5	123.5	38

Code	Common dimensions with switch									
	I	J	K	KA	KK	M	MM	N	O	WF
ø32	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7
ø40	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7
ø50	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8
ø63	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	8
ø80	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	10
ø100	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12

Switch dimensions	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
	HD	RD	HD	RD	HD	RD
ø32	4	19.5	4	19.5	6	21.5
ø40	7	22	7	22	8.5	23.5
ø50	7.5	22.5	7.5	22.5	9	24
ø63	12.5	23	12.5	23	14	24.5
ø80	17.5	25.5	17.5	25.5	19	27
ø100	23	29.5	23	29.5	24.5	31

\*1 : To calculate A+ stroke 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 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

\*8 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.

### Rod end male thread

Code	Bore size	a'	c'	H	kk'	M	MM	T	wf
		ø32	23.5	20.5	22	M14x1.5	14	16	8
ø40	23.5	20.5	22	M14x1.5	14	16	8	5	
ø50	28.5	26	27	M18x1.5	17	20	11	5	
ø63	28.5	26	27	M18x1.5	17	20	11	5	
ø80	35.5	32.5	32	M22x1.5	22	25	13	8	
ø100	35.5	32.5	41	M26x1.5	27	30	16	8	

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

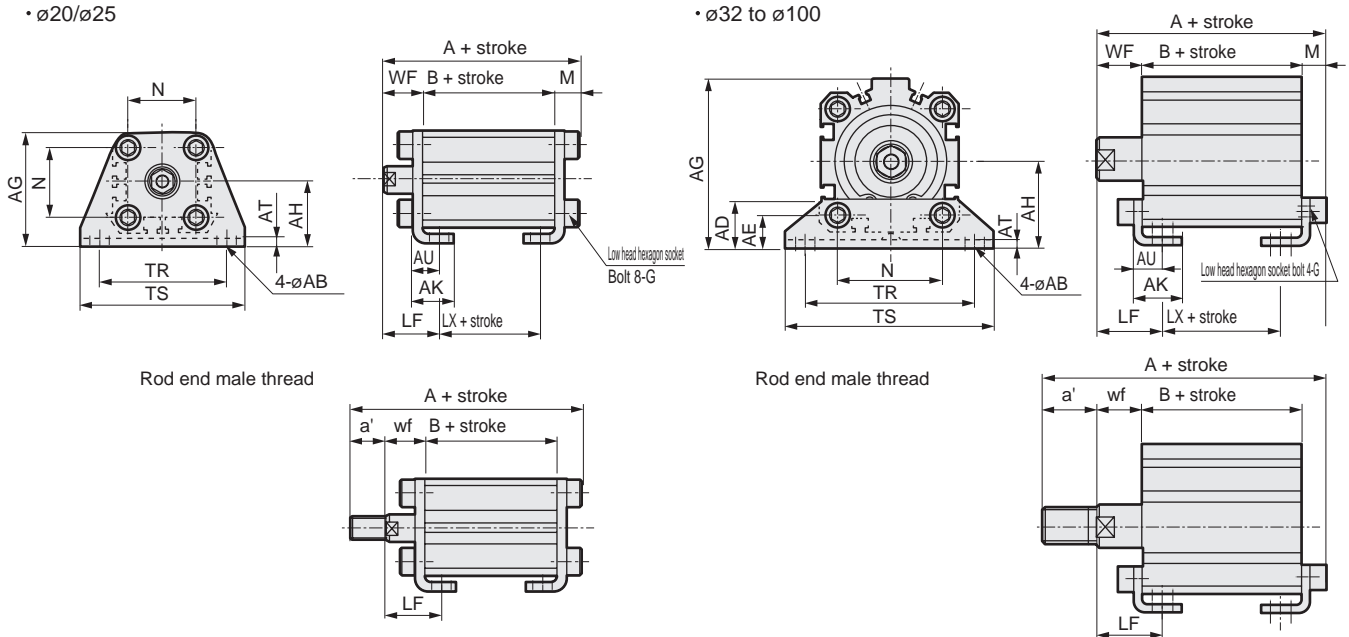
Ending



# SSD2-G5 Series

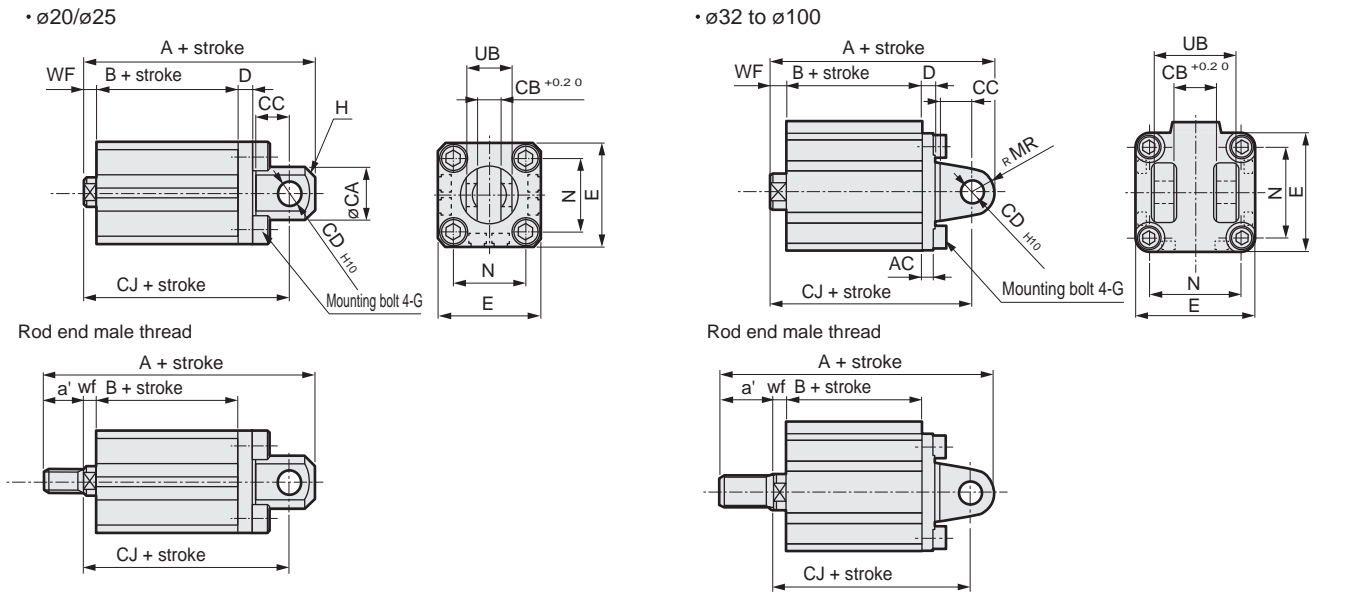
## Dimensions with mounting bracket

- Axial foot (LB)  
SSD2-G5(L)-20 to 100 -LB  
•  $\phi 20/\phi 25$



Code	Common dimensions														Female thread						Male thread									
	Bore size(mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	LF	WF	No switch			With switch			a'	wf	No switch			With switch		
		A	B	CJ	A	B	CJ	A	B	CJ	A	B	CJ	A	B	CJ														
MDC2	$\phi 20$	7	-	-	42	24	15	3.2	9.2	M 6 x 16	25.5	48	62	7.2	20.5	14.5	51.2	29.5	17.5	61.2	39.5	27.5	14	14.5	65.2	29.5	17.5	75.2	39.5	27.5
	$\phi 25$	7	-	-	46	26	16.5	3.2	10.7	M 6 x 16	28	52	66	7.2	22.5	15	54.7	32.5	17.5	64.7	42.5	27.5	15	17.5	72.2	32.5	17.5	82.2	42.5	27.5
MVC	$\phi 32$	7	18.5	13	57	30	17	3.2	11.2	M 6 x 16	34	57	71	7.2	25	17	57.2	33	17	67.2	43	27	23.5	15	78.7	33	17	88.7	43	27
	$\phi 40$	7	18	13	64	33	18.2	3.2	11.2	M 6 x 16	40	64	78	7.2	25	17	63.7	39.5	23.5	73.7	49.5	33.5	23.5	15	85.2	39.5	23.5	95.2	49.5	33.5
	$\phi 50$	9	22	14	78	39	22.7	3.2	14.7	M 8 x 20	50	79	95	8.2	29.5	18	66.7	40.5	17.5	76.7	50.5	27.5	28.5	15	92.2	40.5	17.5	102.2	50.5	27.5
SMG	$\phi 63$	11	26	16	91.5	46	25.2	3.2	16.2	M 10 x 25	60	95	113	9.2	31	18	73.2	46	20	83.2	56	30	28.5	15	98.7	46	20	108.7	56	30
	$\phi 80$	13	31.5	20.5	114	59	30.5	4.5	19.5	M 12 x 40	77	118	140	11.5	35	20	85	53.5	23.5	95	63.5	33.5	35.5	18	118.5	53.5	23.5	128.5	63.5	33.5
MSD/MSDG	$\phi 100$	13	35	24	136	71	35.5	6	23	M 12 x 40	94	137	162	13	39	22	98	63	29	108	73	39	35.5	18	129.5	63	29	139.5	73	39

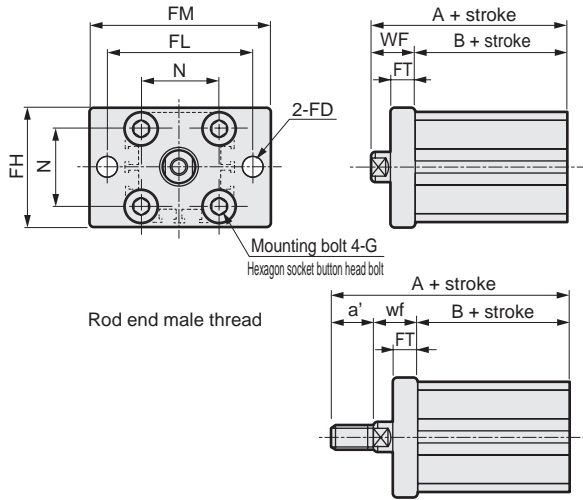
- Clevis bracket (CB)  
SSD2-G5(L)-20 to 100 -CB  
•  $\phi 20/\phi 25$



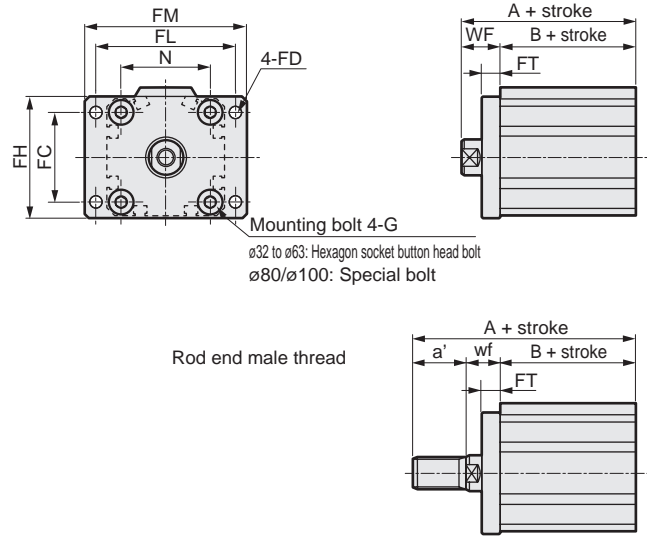
Code	Common dimensions														Female thread						Male thread							
	Bore size(mm)	AC	CA	CB	CC	CD	D	E	G	H	MR	N	UB	WF	No switch			With switch			a'	wf	No switch			With switch		
		A	B	CJ	A	B	CJ	A	B	CJ	A	B	CJ	A	B	CJ												
FJ	$\phi 20$	-	20	8.2	12	8	5	36	M 6 x 16	C4	-	25.5	16	4.5	61	29.5	52	71	39.5	62	14	4.5	75	29.5	52	85	39.5	62
FK	$\phi 25$	-	24	10.2	14	10	5	40	M 6 x 16	C5	-	28	20	5	67.5	32.5	57.5	77.5	42.5	67.5	17.5	5	85	32.5	57.5	95	42.5	67.5
Spd Contr	$\phi 32$	4.5	-	18.2	14	10	5	45	M 6 x 16	-	10	34	36	7	70	33	60	80	43	70	23.5	5	91.5	33	58	101.5	43	68
	$\phi 40$	5	-	18.2	14	10	6	52	M 6 x 16	-	10	40	36	7	78.5	39.5	68.5	88.5	49.5	78.5	23.5	5	100	39.5	66.5	110	49.5	76.5
	$\phi 50$	6	-	22.2	20	14	7	64	M 8 x 20	-	14	50	44	8	90.5	40.5	76.5	100.5	50.5	86.5	28.5	5	116	40.5	73.5	126	50.5	83.5
	$\phi 63$	7	-	22.2	20	14	8	77	M 10 x 25	-	14	60	44	8	98	46	84	108	56	94	28.5	5	123.5	46	81	133.5	56	91
	$\phi 80$	9	-	28.2	27	18	10	98	M 12 x 40	-	18	77	56	10	119.5	53.5	101.5	129.5	63.5	111.5	35.5	8	153	53.5	99.5	163	63.5	109.5
Ending	$\phi 100$	12	-	32.2	31	22	13	117	M 12 x 40	-	22	94	64	12	142	63	120	152	73	130	35.5	8	173.5	63	116	183.5	73	126

### Dimensions with mounting bracket

- Rod side flange (FA)  
SSD2-G5(L)-20 to 100 -FA  
·  $\phi 20/\phi 25$

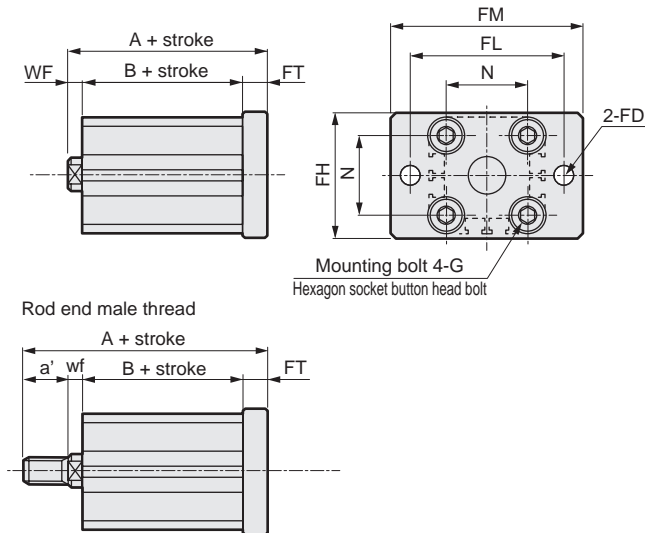


- $\phi 32$  to  $\phi 100$

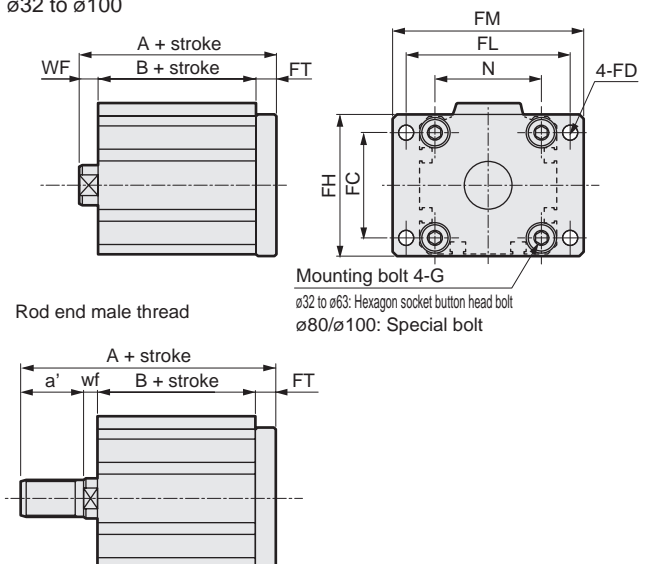


Code	Common dimensions								Female thread				Male thread							
	Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	No switch		With switch		a'	wf	No switch		With switch	
											A	B	A	B			A	B	A	B
$\phi 20$	-	6.6	39	48	60	8	25.5	M6x16	14.5	44	29.5	54	39.5	14	14.5	58	29.5	68	39.5	
$\phi 25$	-	6.6	42	52	64	8	28	M6x16	15	47.5	32.5	57.5	42.5	17.5	15	65	32.5	75	42.5	
$\phi 32$	34	5.5	48	56	65	8	34	M6x16	17	50	33	60	43	23.5	15	71.5	33	81.5	43	
$\phi 40$	40	5.5	54	62	72	8	40	M6x16	17	56.5	39.5	66.5	49.5	23.5	15	78	39.5	88	49.5	
$\phi 50$	50	6.6	67	76	89	9	50	M8x20	18	58.5	40.5	68.5	50.5	28.5	15	84	40.5	94	50.5	
$\phi 63$	60	9	80	92	108	9	60	M10x25	18	64	46	74	56	28.5	15	89.5	46	99.5	56	
$\phi 80$	77	11	99	116	134	11	77	M12x40	20	73.5	53.5	83.5	63.5	35.5	18	107	53.5	117	63.5	
$\phi 100$	94	11	117	136	154	11	94	M12x40	22	85	63	95	73	35.5	18	116.5	63	126.5	73	

- Head side flange (FB)  
SSD2-G5(L)-20 to 100 -FB  
·  $\phi 20/\phi 25$

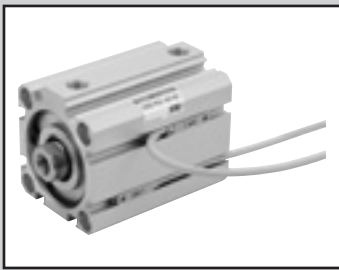


- $\phi 32$  to  $\phi 100$



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
$\phi 20$	-	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	
$\phi 25$	-	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	
$\phi 32$	34	5.5	48	56	65	8	34	M6x16	7	48	33	58	43	23.5	5	69.5	33	79.5	43	
$\phi 40$	40	5.5	54	62	72	8	40	M6x16	7	54.5	39.5	64.5	49.5	23.5	5	76	39.5	86	49.5	
$\phi 50$	50	6.6	67	76	89	9	50	M8x20	8	57.5	40.5	67.5	50.5	28.5	5	83	40.5	93	50.5	
$\phi 63$	60	9	80	92	108	9	60	M10x25	8	63	46	73	56	28.5	5	88.5	46	98.5	56	
$\phi 80$	77	11	99	116	134	11	77	M12x40	10	74.5	53.5	84.5	63.5	35.5	8	108	53.5	118	63.5	
$\phi 100$	94	11	117	136	154	11	94	M12x40	12	86	63	96	73	35.5	8	117.5	63	127.5	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/high load/environment-resistant scraper

# SSD2-KG5 Series

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



## Specifications

Item	SSD2-KG5 SSD2-KG5L (with switch)									
	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	0.2 ( $\approx 29$ psi, 2 bar)				0.15 ( $\approx 22$ psi, 2 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 class 1 ISO VG32 if necessary for lubrication)									
Allowable absorbed energy	J	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92	

## Stroke

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

## Min. stroke with switch (2 switches)

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

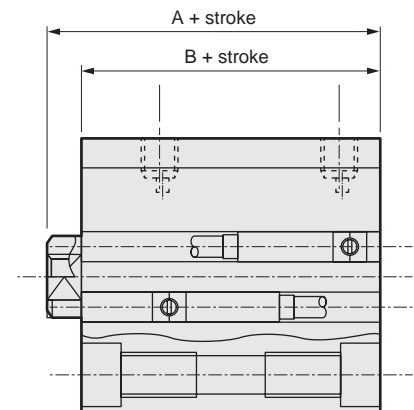
\*1 : Less than 10 mm with the 2-color LED, off-delay, AC magnetic field proof, T1\* or T8\* switch is not available.

\*4 : When using the type with switch, refer to the table of the min. stroke with switch.

## Custom stroke

### ● SSD2-KG5 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-KG5-32-38 A +2 mm spacer is added to the SSD2-KG5-32-40 standard cylinder to create 38 mm stroke. B + stroke is 83mm.	



### 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/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V		T2YD(*4) T2YDT	
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay		Dedicated for programmable controller	
Output method	-	-			NPN output	PNP output	NPN output	NPN output	-				-			
Pwr. supp. V.	-	-			10 to 28 VDC				-				-			
Load voltage	85 to 265 VAC	10 to 30 VDC	24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%	
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator	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.

### Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	-	62.8	94.2	1.26x10 <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	-	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	-	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	-	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	-	1.61x10 <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	-	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	-	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	-	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	-	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	-	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	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	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	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	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	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	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-KG5 Series

## How to order

No switch (without magnet for switch)

**SSD2-KG5** - **20** - **5** - **N** - **LB** - **I**

With switch (built-in magnet for switch)

**SSD2-KG5L** - **20** - **5** - **T0H** - **R** - **N** - **LB** - **I**

**A** Model No.

**B** Bore size

**C** Port thread

**D** Stroke

**E** Switch model No.

\*4

**F** Switch quantity

**G** Option

## ⚠ Precautions for model No. selection

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

\*2 : "I" and "Y" cannot be selected together. The WF/wf dimension of the cylinder for "LB" and "FA" is set 10 mm longer than that of standard products. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.

\*3 : "I" and "Y" cannot be selected together.

\*4 : Switches are shipped with the product.  
Contact CKD if assembling before shipment is necessary.

\*5 : F-switch cannot be selected.

[Example of model No.]

**SSD2-KG5L-32-5-T0H-R-N**

Model: Compact cylinder

Double acting/single rod/high load/environment-resistant scraper

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

**C** Port thread : Rc thread

**D** Stroke : 5 mm

**E** Switch model No.: Reed T0H switch  
Lead wire 1 m

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

**G** Option : Rod end male thread

**H** Mounting bracket

\*1

\*2

**I** Accessory

\*3

Code	Description															
<b>A Model No.</b>																
<b>SSD2-KG5</b>	Double acting/single rod/high load/environment-resistant scraper (made-to-order product)															
<b>SSD2-KG5L</b>	Double acting/single rod/high load/environment-resistant scraper/switch (MTO)															
<b>B Bore size (mm)</b>																
<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/M5 thread															
<b>N</b>	NPT thread ( $\phi 32$ and over)															
<b>G</b>	G thread ( $\phi 32$ and over)															
<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	Bore size									
			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*					3-wire	●	●	1-color LED (PNP output) (custom)	●	●					
F2YH*	F2YV*					2-wire	●	●	2-color LED	●	●					
F3YH*	F3YV*	3-wire	●	●	●	●										
T0H*	T0V*	2-wire	●	●	1-color LED	●	●	●		●	●	●	●			
T5H*	T5V*	2-wire	●	●	No indicator lamp	●	●	●	●	●	●	●				
T8H*	T8V*	2-wire	●	●	1-color LED	●	●	●	●	●	●	●				
T1H*	T1V*	2-wire	●	●	1-color LED	●	●	●	●	●	●	●				
T2H*	T2V*	2-wire	●	●		●	●	●	●	●	●	●				
T3H*	T3V*	3-wire	●	●		●	●	●	●	●	●	●				
T3PH*	T3PV*	3-wire	●	●	1-color LED (PNP output)	●	●	●	●	●	●	●				
T2WH*	T2WV*	2-wire	●	●	2-color LED	●	●	●	●	●	●	●				
T2YH*	T2YV*	2-wire	●	●		●	●	●	●	●	●	●				
T3WH*	T3WV*	3-wire	●	●		●	●	●	●	●	●	●				
T3YH*	T3YV*	3-wire	●	●	2-color LED	●	●	●	●	●	●	●				
T2YD*	-	2-wire	●	●		●	●	●	●	●	●	●				
T2YDT*	-	2-wire	●	●	AC magnetic field	●	●	●	●	●	●	●				
T2JH*	T2JV*	2-wire	●	●	1-color LED off-delay	●	●	●	●	●	●	●				
<b>* Lead wire length</b>																
<b>Blank</b>	1 m (standard)															
<b>3</b>	3 m (option)															
<b>5</b>	5 m (option) *5															
<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															
<b>CB</b>	Clevis bracket (pin and snap ring included)															
<b>FA</b>	Rod side flange															
<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]

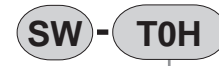
Stroke (mm)	Applicable bore size							
	20	25	32	40	50	63	80	100
5	●	●	●	●				
10	●	●	●	●	●	●	●	●
15	●	●	●	●	●	●	●	●
20	●	●	●	●	●	●	●	●
25	●	●	●	●	●	●	●	●
30	●	●	●	●	●	●	●	●
35	●	●	●	●	●	●	●	●
40	●	●	●	●	●	●	●	●
45	●	●	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
75			●	●	●	●	●	●
100			●	●	●	●	●	●
Min. stroke (mm) *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 1002 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 switch



Switch model No.  
(Item ⑤ on page 1004)

### 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	107	182	120	195	133	208	145	220	158	233	170	245	182	257	195	270	206	281	220	295	-	-	-	-
ø25	146	237	162	253	178	269	194	285	209	300	226	317	242	333	258	349	274	365	290	381	-	-	-	-
ø32	230	344	251	365	272	386	294	408	316	430	338	452	360	474	381	495	403	517	424	538	597	646	705	753
ø40	323	466	349	492	376	519	402	545	428	571	455	598	482	625	508	651	535	678	561	704	779	837	911	969
ø50	-	-	560	754	602	796	645	839	688	882	729	923	771	965	813	1007	855	1049	897	1091	1244	1301	1454	1511
ø63	-	-	813	1092	868	1147	923	1202	979	1258	1034	1313	1089	1368	1144	1423	1199	1478	1254	1533	1744	1808	2019	2083
ø80	-	-	1413	1826	1500	1913	1586	1999	1673	2086	1760	2173	1847	2260	1933	2346	2020	2433	2106	2519	2886	2952	3318	3384
ø100	-	-	2106	2673	2220	2787	2334	2901	2448	3015	2561	3128	2675	3242	2789	3356	2903	3470	3017	3584	4082	4154	4652	4724

### How to order mounting bracket

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

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

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

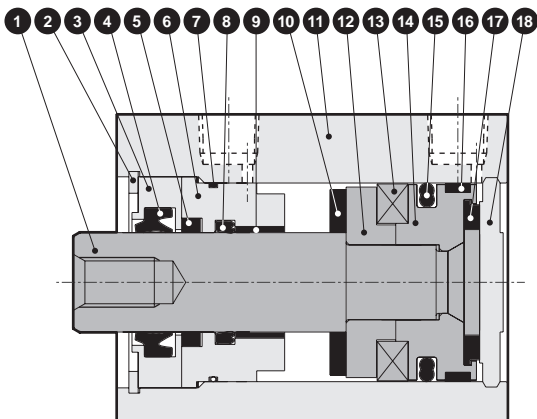
Spd  
Contr

Ending

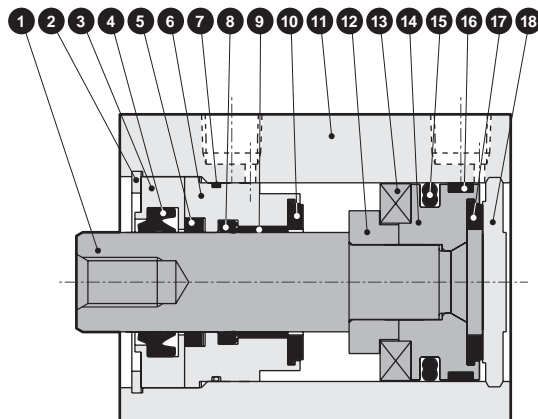
# SSD2-KG5 Series

## Internal structure and parts list

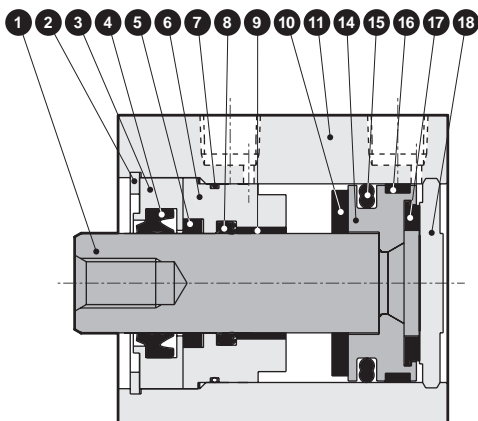
● SSD2-KG5L-20□25  
(double acting/high load/environment-resistant scraper/with switch)



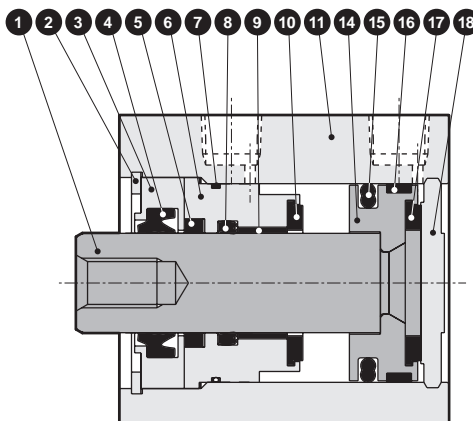
● SSD2-KG5L-32 to 50  
(double acting/high load/environment-resistant scraper/with switch)



● SSD2-KG5-20□25  
(double acting/high load/environment-resistant scraper)



● SSD2-KG5-32 to 50  
(double acting/high load/environment-resistant scraper)



## Main parts list

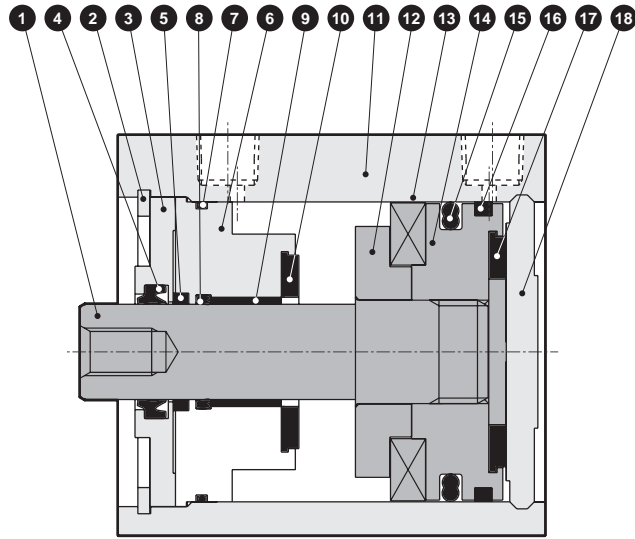
Part No.	Part name	Material	Remarks	Part No.	Part name	Material	Remarks
1	Piston rod	ø20/ø25: Stainless steel ø32 to ø50: Steel	Industrial chrome plating	11	Body	Aluminum alloy	Hard alumite
2	C-snap ring	Steel	Zinc phosphate	12	Spacer	Special resin	
3	Rod metal 1	Special aluminum	Chromate	13	Magnet	Plastic	
4	Scraper	Nitrile rubber		14	Piston	Aluminum alloy	Chromate
5	Lube keeping structure	Special rubber		15	Piston packing	Nitrile rubber	
6	Rod metal 2	Special aluminum	Alumite	16	Wear ring	Polyacetal resin	
7	Rod metal gasket	Nitrile rubber		17	Cushion rubber H	Urethane rubber	
8	Rod packing	Nitrile rubber		18	Cover	ø20/ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
9	Bush	Oiles drymet					
10	Cushion rubber R	Urethane rubber					

## Consumable parts list

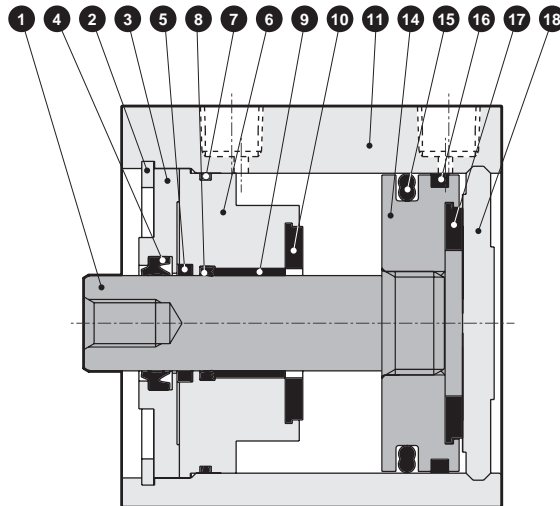
Part name	Kit No.	Consumable parts No.
Bore size (mm)		
ø20	SSD2-KG5-20K	
ø25	SSD2-KG5-25K	
ø32	SSD2-KG5-32K	
ø40	SSD2-KG5-40K	
ø50	SSD2-KG5-50K	

## Internal structure and parts list

● SSD2-KG5L-63 to 100 (double acting/high load/environment-resistant scraper/with switch)



● SSD2-KG5-63 to 100 (double acting/high load/environment-resistant scraper)



## Main parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	10	Cushion rubber R	Urethane rubber	
2	C-snap ring	Steel	Zinc phosphate	11	Body	Aluminum alloy	Hard alumite
3	Rod metal 1	Aluminum alloy	Chromate	12	Spacer	Aluminum alloy	Chromate
4	Scraper	Nitrile rubber		13	Magnet	Plastic	
5	Lube keeping structure	Special rubber		14	Piston	Aluminum alloy	Chromate
6	Rod metal 2	Aluminum alloy	Chromate	15	Piston packing	Nitrile rubber	
7	Rod metal gasket	Nitrile rubber		16	Wear ring	Polyacetal resin	
8	Rod packing	Nitrile rubber		17	Cushion rubber H	Urethane rubber	
9	Bush	Oiles drymet		18	Cover	Aluminum alloy	Alumite

## Repair parts list

Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø63	SSD2-KG5-63K	4 5 7 8
ø80	SSD2-KG5-80K	10 15 16 17
ø100	SSD2-KG5-100K	

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

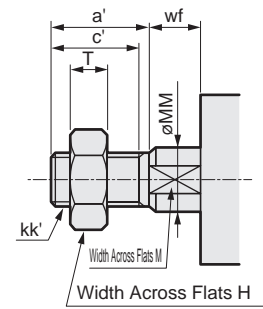
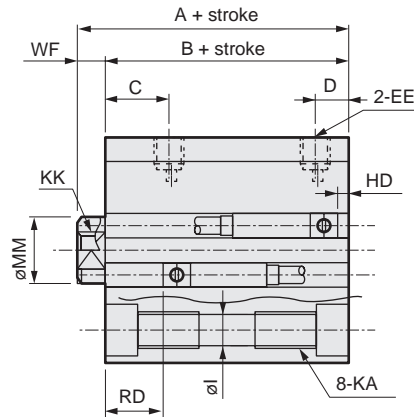
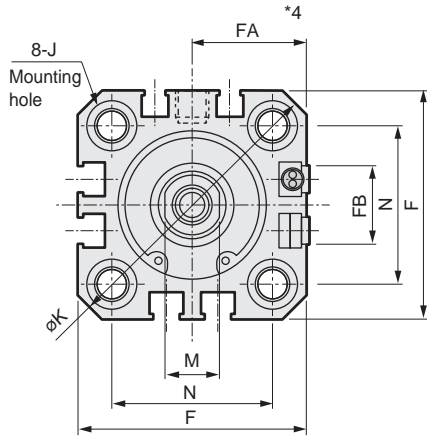


# SSD2-KG5 Series

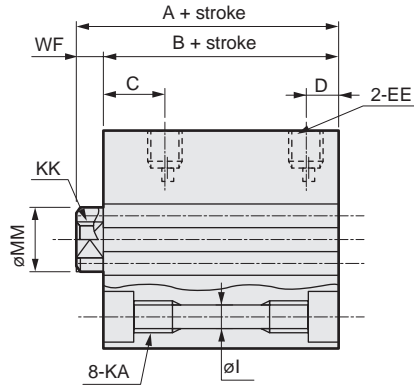
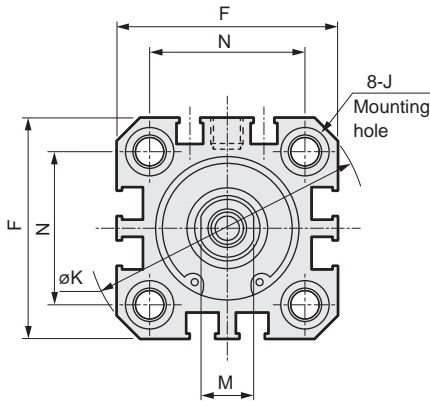
## dimensions

● SSD2-KG5L-20, 25 (with switch, TOH/V, T5H/V, T2H/V, T3H/V)

● Rod end male thread



● SSD2-KG5-20, 25 (without switch)



Code	No switch		Common dimensions with switch								
	A <sup>*1</sup>	B <sup>*1</sup>	A <sup>*1</sup>	B <sup>*1</sup>	C	D	EE	F	FA <sup>*4</sup>	FB	
SRL3	ø20	39	34.5	49	44.5	18	5.5	M5	36	18.5(22)	12.5
	ø25	42.5	37.5	52.5	47.5	21	6	M5	40	20.5(24)	13.5

Code	Common dimensions with switch									
	I	J	K	KA	KK	M	MM	N	WF	
SRM3	ø20	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
	ø25	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimensions	Reed/proximity 1-color		Proximity 2-color		
	HD	RD	HD	RD	
Bore size	ø20	6	18.5	4.5	18.5
	ø25	5.5	22	4	22

Switch dimensions	Proximity F2H/V, F3H/V F2YH/V/F3YH/V		Proximity F2S/F3S		
	HD	RD	HD	RD	
Bore size	ø20	10.5	23	9	23
	ø25	10	26.5	8.5	26.5

\*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 type.

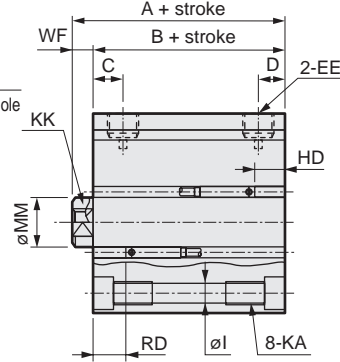
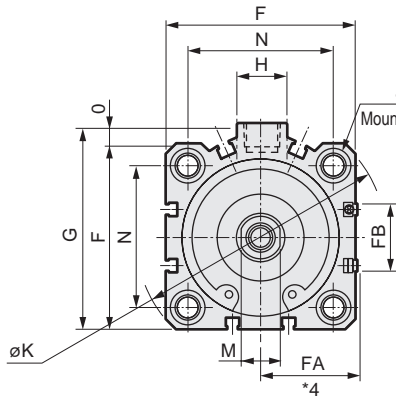
\*5: For dimensions of individual accessories, refer to pages 1046 to 1049.

### Rod end male thread

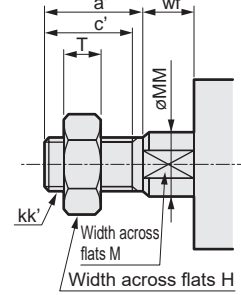
Code	a'	c'	H	kk'	M	MM	T	wf
	Bore size							
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M 10 x 1.25	10	12	6	5

### Dimensions

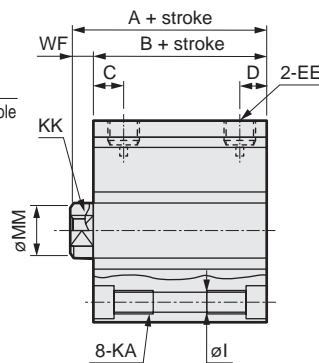
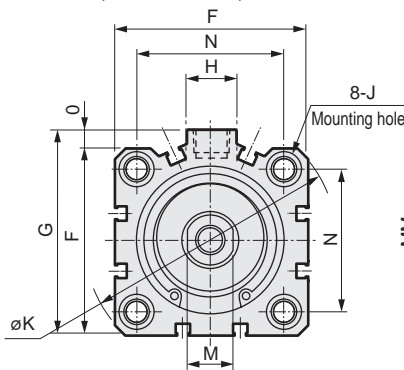
● SSD2-KG5L-32 to 100 (with switch, TOH/V, T5H/V, T2H/V, T3H/V)



● Rod end male thread



● SSD2-32 to 100 (without switch)



Code	No switch		Common dimensions with switch									
	A <sup>*1</sup>	B <sup>*1</sup>	A <sup>*1</sup>	B <sup>*1</sup>	C	D	EE	F	FA <sup>*3</sup>	FB	G	H
ø32	50(60)	43(53)	60	53	18	8	Rc1/8	45	23(26.5)	20.5	49.5	12.5
ø40	56.5(66.5)	49.5(59.5)	66.5	59.5	22	8.5	Rc1/8	52	26.5(30)	27.5	57	15
ø50	58.5(68.5)	50.5(60.5)	68.5	60.5	20.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18
ø63	64(74)	56(66)	74	66	23	11	Rc1/4	77	39(42.5)	28.5	84	23
ø80	73.5(83.5)	63.5(73.5)	83.5	73.5	26	13	Rc3/8	98	49.5(53)	28.5	104	31
ø100	85(95)	73(83)	95	83	33	15	Rc3/8	117	59(62.5)	28.5	123.5	38

Code	Common dimensions with switch										
	I	J	K	KA	KK	M	MM	N	O	WF	
ø32	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7	
ø40	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7	
ø50	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8	
ø63	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	8	
ø80	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	10	
ø100	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12	

Switch dimensions	Reed/proximity 1-color		Proximity 2-color		T8H/V switch	
	HD	RD	HD	RD	HD	RD
ø32	8.5	24	7	22.5	-	-
ø40	9.5	29.5	8	28	3.5	23.5
ø50	10	30	8.5	28.5	4	24
ø63	17.5	28	16	26.5	11.5	22
ø80	22	30.5	20.5	29	16	24.5
ø100	28	34.5	26.5	33	22	28.5

\*1 : To calculate A+ stroke 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 : Dimensions in ( ) of FA are for the L-shaped lead wire.

\*4 : For dimensions of individual accessories, refer to pages 1046 to 1049.

\*5 : Dimensions in ( ) of codes A and B are for strokes of more than 50 mm.

### Rod end male thread

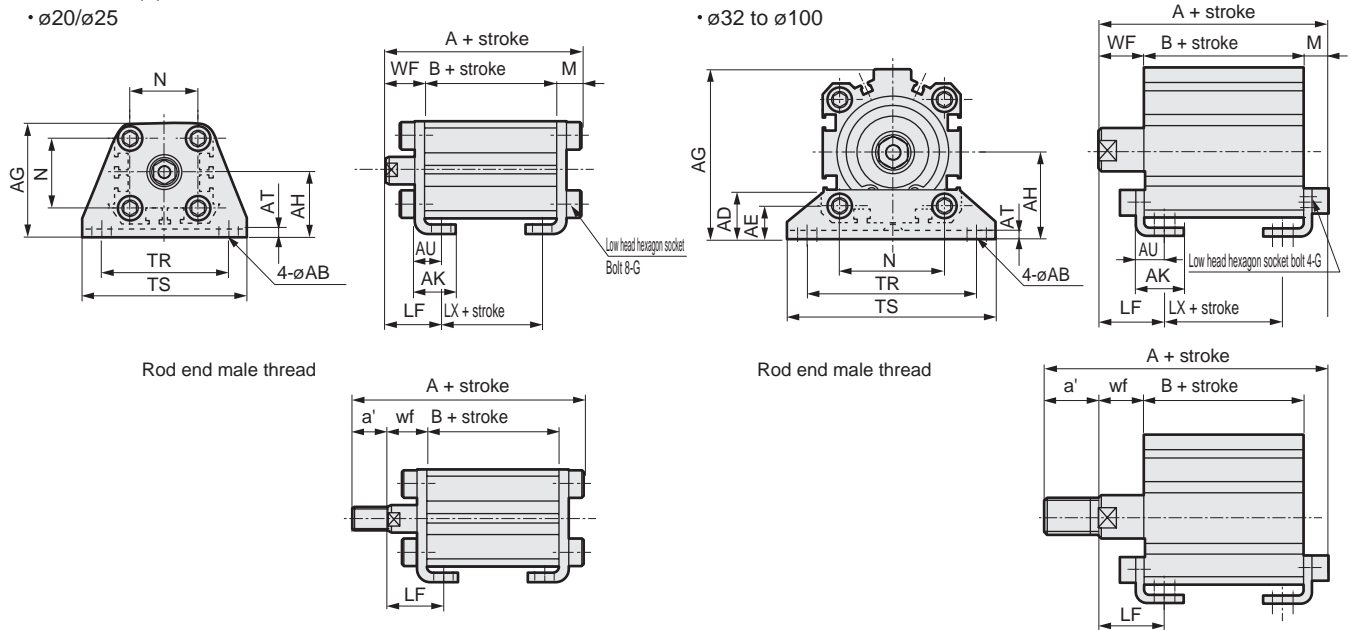
Code	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14x1.5	14	16	8	5
ø40	23.5	20.5	22	M14x1.5	14	16	8	5
ø50	28.5	26	27	M18x1.5	17	20	11	5
ø63	28.5	26	27	M18x1.5	17	20	11	5
ø80	35.5	32.5	32	M22x1.5	22	25	13	8
ø100	35.5	32.5	41	M26x1.5	27	30	16	8

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-KG5 Series

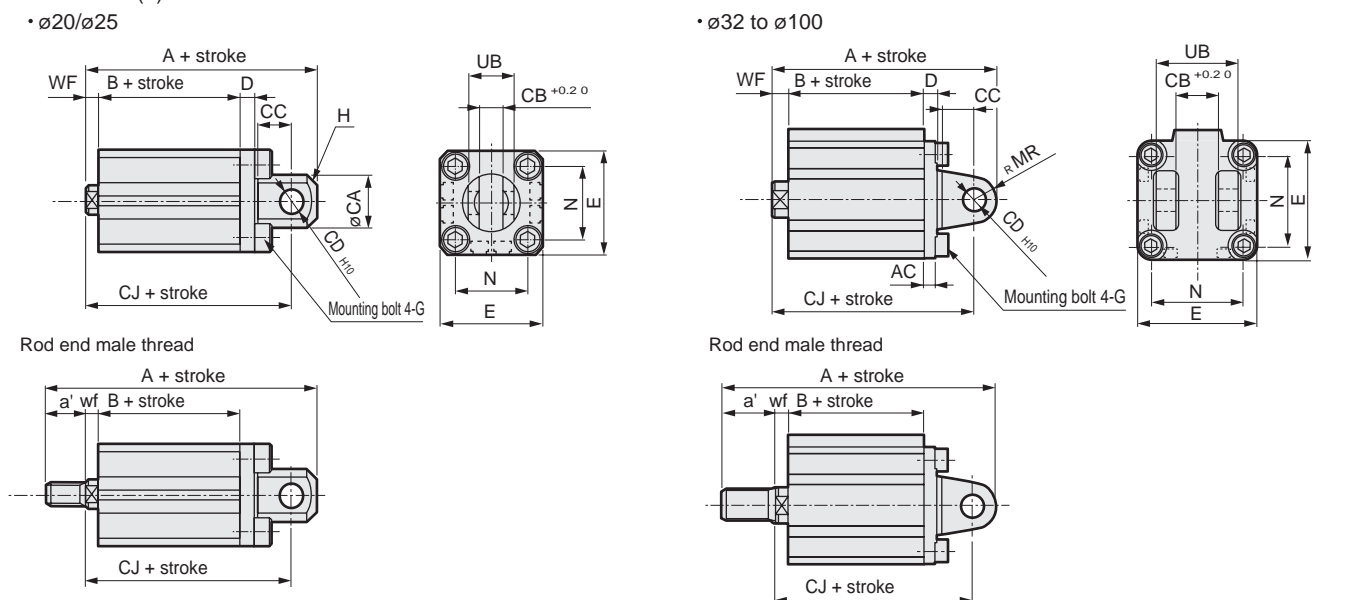
## Dimensions with mounting bracket

- Axial foot (LB)  
SSD2-KG5(L)-20 to 100 -LB  
•  $\phi 20/\phi 25$



Code	Common dimensions														Female thread						Male thread											
	Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	LF	WF	No switch			With switch			a'		wf		No switch			With switch		
		A	B	LX	A	B	LX	a'	wf	A	B	LX	A	B	LX	A	B	LX														
MDC2	$\phi 20$	7	-	-	42	24	15	3.2	9.2	M 6 x 16	25.5	48	62	7.2	20.5	14.5	56.2	34.5	22.5	66.2	44.5	32.5	14	14.5	70.2	34.5	22.5	80.2	44.5	32.5		
	$\phi 25$	7	-	-	46	26	16.5	3.2	10.7	M 6 x 16	28	52	66	7.2	22.5	15	59.7	37.5	22.5	69.7	47.5	32.5	17.5	15	77.2	37.5	22.5	87.2	47.5	32.5		
	$\phi 32$	7	18.5	13	57	30	17	3.2	11.2	M 6 x 16	34	57	71	7.2	25	17	67.2	43	27	77.2	53	37	23.5	15	88.7	43	27	98.7	53	37		
MVC	$\phi 40$	7	18	13	64	33	18.2	3.2	11.2	M 6 x 16	40	64	78	7.2	25	17	73.7	49.5	33.5	83.7	59.5	43.5	23.5	15	95.2	49.5	33.5	105.2	59.5	43.5		
	$\phi 50$	9	22	14	78	39	22.7	3.2	14.7	M 8 x 20	50	79	95	8.2	29.5	18	76.7	50.5	27.5	86.7	60.5	37.5	28.5	15	102.2	50.5	27.5	112.2	60.5	37.5		
	$\phi 63$	11	26	16	91.5	46	25.2	3.2	16.2	M 10 x 25	60	95	113	9.2	31	18	83.2	56	30	93.2	66	40	28.5	15	108.7	56	30	118.7	66	40		
SMG	$\phi 80$	13	31.5	20.5	114	59	30.5	4.5	19.5	M 12 x 40	77	118	140	11.5	35	20	95	63.5	33.5	105	73.5	43.5	35.5	18	128.5	63.5	33.5	138.5	73.5	43.5		
	$\phi 100$	13	35	24	136	71	35.5	6	23	M 12 x 40	94	137	162	13	39	22	108	73	39	118	83	49	35.5	18	139.5	73	39	149.5	83	49		

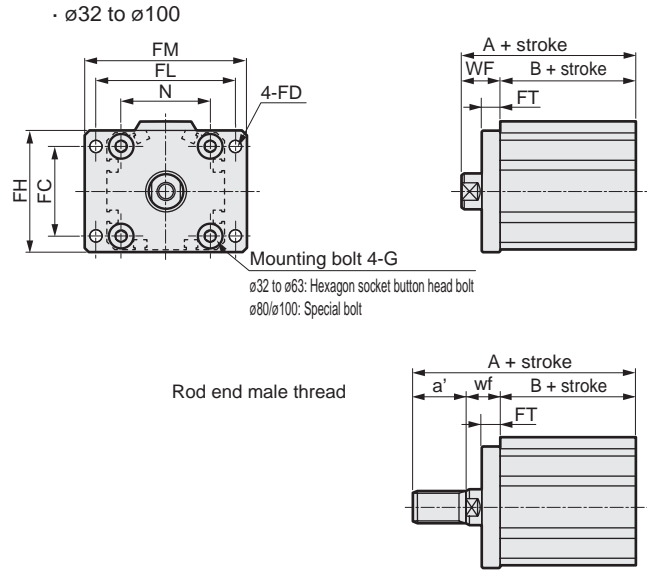
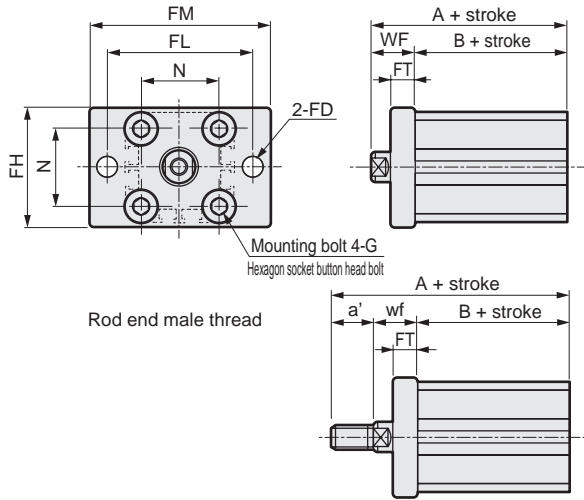
- Clevis bracket (CB)  
SSD2-KG5(L)-20 to 100 -CB  
•  $\phi 20/\phi 25$



Code	Common dimensions														Female thread						Male thread									
	Bore size (mm)	AC	CA	CB	CC	CD	D	E	G	H	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	A	B	CJ														
FJ	$\phi 20$	-	20	8.2	12	8	5	36	M 6 x 16	C4	-	25.5	16	4.5	66	34.5	57	76	44.5	67	14	4.5	80	34.5	57	90	44.5	67		
	$\phi 25$	-	24	10.2	14	10	5	40	M 6 x 16	C5	-	28	20	5	72.5	37.5	62.5	82.5	47.5	72.5	17.5	5	90	37.5	62.5	100	47.5	72.5		
	$\phi 32$	4.5	-	18.2	14	10	5	45	M 6 x 16	-	10	34	36	7	80	43	70	90	53	80	23.5	5	101.5	43	68	111.5	53	78		
Spd Contr	$\phi 40$	5	-	18.2	14	10	6	52	M 6 x 16	-	10	40	36	7	88.5	49.5	78.5	98.5	59.5	88.5	23.5	5	110	49.5	76.5	120	59.5	86.5		
	$\phi 50$	6	-	22.2	20	14	7	64	M 8 x 20	-	14	50	44	8	100.5	50.5	86.5	110.5	60.5	96.5	28.5	5	126	50.5	83.5	136	60.5	93.5		
	$\phi 63$	7	-	22.2	20	14	8	77	M 10 x 25	-	14	60	44	8	108	56	94	118	66	104	28.5	5	133.5	56	91	143.5	66	101		
	$\phi 80$	9	-	28.2	27	18	10	98	M 12 x 40	-	18	77	56	10	129.5	63.5	111.5	139.5	73.5	121.5	35.5	8	163	63.5	109.5	173	73.5	119.5		
Ending	$\phi 100$	12	-	32.2	31	22	13	117	M 12 x 40	-	22	94	64	12	152	73	130	162	83	140	35.5	8	183.5	73	126	193.5	83	136		

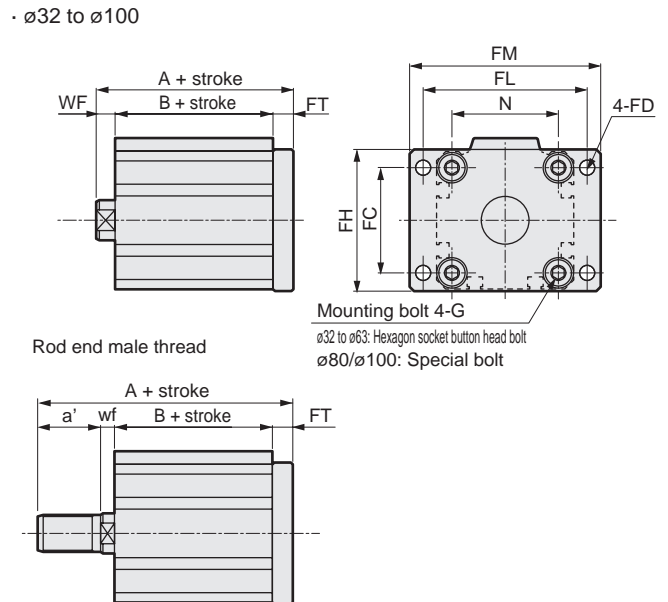
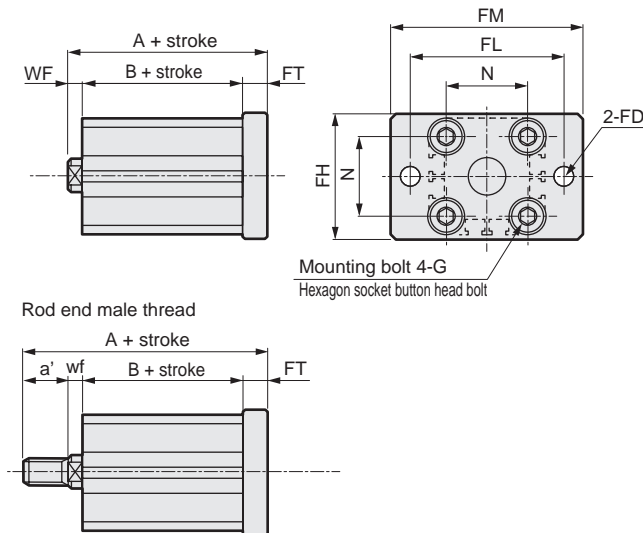
## Dimensions with mounting bracket

- Rod side flange (FA)
  - SSD2-KG5(L)-20 to 100 -FA
  - $\phi 20/\phi 25$

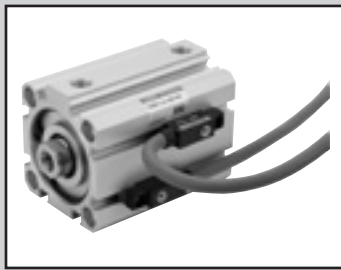


Code	Common dimensions								Female thread				Male thread							
	Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	No switch		With switch		a'	wf	No switch		With switch	
											A	B	A	B			A	B	A	B
$\phi 20$	-	6.6	39	48	60	8	25.5	M6x16	14.5	49	34.5	59	44.5	14	14.5	63	34.5	73	44.5	
$\phi 25$	-	6.6	42	52	64	8	28	M6x16	15	52.5	37.5	62.5	47.5	17.5	15	70	37.5	80	47.5	
$\phi 32$	34	5.5	48	56	65	8	34	M6x16	17	60	43	70	53	23.5	15	81.5	43	91.5	53	
$\phi 40$	40	5.5	54	62	72	8	40	M6x16	17	66.5	49.5	76.5	59.5	23.5	15	88	49.5	98	59.5	
$\phi 50$	50	6.6	67	76	89	9	50	M8x20	18	68.5	50.5	78.5	60.5	28.5	15	94	50.5	104	60.5	
$\phi 63$	60	9	80	92	108	9	60	M10x25	18	74	56	84	66	28.5	15	99.5	56	109.5	66	
$\phi 80$	77	11	99	116	134	11	77	M12x40	20	83.5	63.5	93.5	73.5	35.5	18	117	63.5	127	73.5	
$\phi 100$	94	11	117	136	154	11	94	M12x40	22	95	73	105	83	35.5	18	126.5	73	136.5	83	

- Head side flange (FB)
  - SSD2-KG5(L)-20 to 100 -FB
  - $\phi 20/\phi 25$



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
$\phi 20$	-	6.6	39	48	60	8	25.5	M6x16	4.5	47	34.5	57	44.5	14	4.5	61	34.5	71	44.5	
$\phi 25$	-	6.6	42	52	64	8	28	M6x16	5	50.5	37.5	60.5	47.5	17.5	5	68	37.5	78	47.5	
$\phi 32$	34	5.5	48	56	65	8	34	M6x16	7	58	43	68	53	23.5	5	79.5	43	89.5	53	
$\phi 40$	40	5.5	54	62	72	8	40	M6x16	7	64.5	49.5	74.5	59.5	23.5	5	86	49.5	96	59.5	
$\phi 50$	50	6.6	67	76	89	9	50	M8x20	8	67.5	50.5	77.5	60.5	28.5	5	93	50.5	103	60.5	
$\phi 63$	60	9	80	92	108	9	60	M10x25	8	73	56	83	66	28.5	5	98.5	56	108.5	66	
$\phi 80$	77	11	99	116	134	11	77	M12x40	10	84.5	63.5	94.5	73.5	35.5	8	118	63.5	128	73.5	
$\phi 100$	94	11	117	136	154	11	94	M12x40	12	96	73	106	83	35.5	8	127.5	73	137.5	83	



Compact cylinder double acting/single rod/with strong magnetic field proof switch

# SSD2-L4 Series

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



## Specifications

Item	SSD2-L4					
Bore size mm	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$	
Actuation	Double acting					
Working fluid	Compressed air					
Max. working pressure MPa	1.0 ( $\approx 150$ psi, 10 bar)					
Min. working pressure MPa	0.1 ( $\approx 15$ psi, 1 bar)			0.05 ( $\approx 7.3$ psi, 0.5 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	Rc1/8	Rc1/4			Rc3/8	
Stroke tolerance mm	$^{+1.0}_0$					
Working piston speed mm/s	50 to 500			50 to 300		
Cushion	None					
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)					
Allowable absorbed energy J	0.092	0.1	0.12	0.27	0.56	

## Stroke

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

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

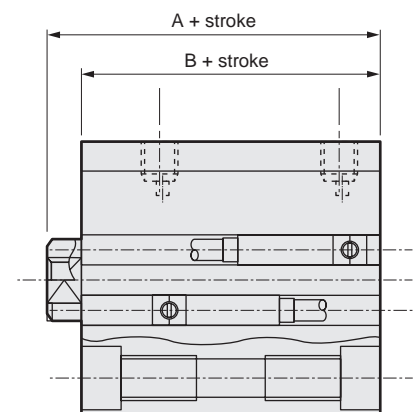
## Number of installed switches and min. stroke (mm)

Switch quantity	1	2
Switch model No.	V0	
Bore size (mm)		
$\varnothing 40$	20	20
$\varnothing 50$	20	20
$\varnothing 63$	20	20
$\varnothing 80$	20	20
$\varnothing 100$	20	20

## Custom stroke

### ● SSD2-L4 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
	40 to 100	1 to 99
Example of model No.	Model No.: SSD2-L4-40-38	
	A +2 mm spacer is added to the SSD2-L4-40-40 standard cylinder to create 38 mm stroke. B + stroke is 89.5mm.	



## Switch specifications

Item	2-wire reed	
	V0	
Applications	For relay, programmable controller	
Load voltage	12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA
Internal voltage drop	3.0 V or less (with 40 mA load current)	
Indicator	LED (Lit when ON)	
Leakage current	0 mA	
Weight	g 1 m:63 3 m:170 5 m:277	

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

(Unit: g)

Stroke (mm)	20	25	30	35	40	45	50	75	100
ø40	493	520	546	573	599	626	652	785	917
ø50	757	799	841	883	925	967	1009	1219	1429
ø63	1089	1145	1200	1256	1311	1367	1422	1700	1977
ø80	1822	1909	1996	2083	2170	2257	2344	2779	3214
ø100	2665	2779	2892	3006	3119	3233	3346	3914	4481

## Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.26x10 <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>	3.12x10 <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>	2.80x10 <sup>3</sup>
ø80	Push	2.51x10 <sup>2</sup>	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	2.27x10 <sup>2</sup>	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	3.93x10 <sup>2</sup>	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	3.57x10 <sup>2</sup>	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>

- 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-L4 Series

## How to order

SSD2-L4 - 50 - 40 - V0 - D - N - LB - I

Model No.

A Bore size

B Stroke

C Switch model No.

D Switch quantity

E Option

F Mounting bracket

G Accessory  
\*3

### ⚠ Precautions for model No. selection

- \*1 : The mounting bracket is included at shipment.
- \*2 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on page 1017. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
- \*3 : "I" and "Y" cannot be selected together.

### [Example of model No.]

**SSD2-L4-50-40-V0-D-N-LB-I**

Model: Compact cylinder

Double acting/single rod/with strong magnetic field proof switch

- A Bore size :  $\varnothing 50$  mm
- B Stroke : 40 mm
- C Switch model No.: Reed V0 switch, Lead wire length 1 m
- D Switch quantity : 2 pcs. included
- E Option : Rod end male thread
- F Mounting bracket: Axial foot
- G Accessory : Rod eye

## How to order mounting bracket

Bore size (mm)	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$
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-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

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

Code	Description				
<b>A Bore size (mm)</b>					
40	$\varnothing 40$				
50	$\varnothing 50$				
63	$\varnothing 63$				
80	$\varnothing 80$				
100	$\varnothing 100$				
<b>B Stroke (mm)</b>					
Bore size		Stroke *1	Custom stroke *2		
$\varnothing 40$ to $\varnothing 100$		20 to 100	In 1 mm increments		
*1 : Refer to page 1012 for the number of installed switches and the min. stroke. *2 : The total length when using a custom stroke is the same as that when using the next longer standard stroke.					
<b>C Switch model No.</b>					
Lead wire	Contact	Voltage		Indicator	Lead wire
Straight		AC	DC		
V0*	Reed	●	●	1-color LED	2-wire
<b>* Lead wire length</b>					
Blank	1 m (standard)				
3	3 m (option)				
5	5 m (option)				
<b>D Switch quantity</b>					
R	1 on rod side				
H	1 on head side				
D	2				
T	3				
<b>E Option</b>					
Blank	Rod end female thread				
N	Rod end male thread				
<b>F 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>G Accessory (available when rod end male thread "N" is selected)</b>					
I	Rod eye				
Y	Rod clevis (pin and snap ring included)				

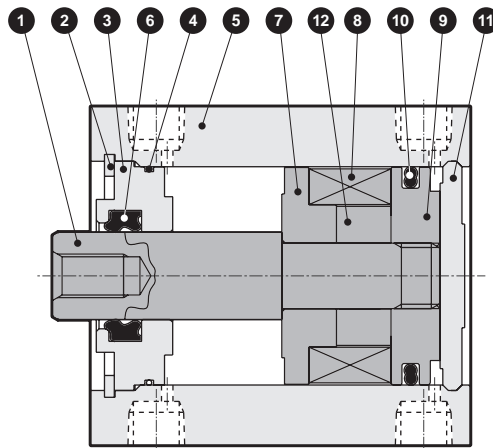
## How to order switch

SW - V0

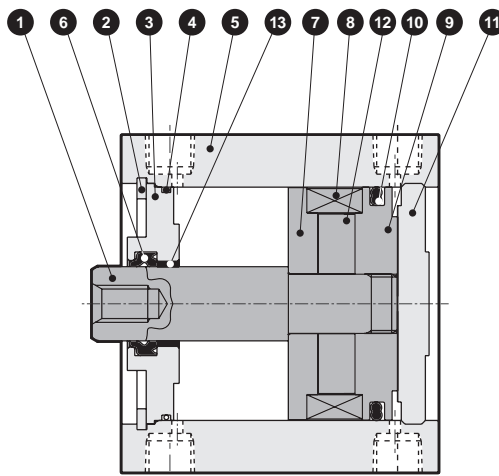
Switch model No.  
(Item C above)

### Internal structure and parts list

● SSD2-L4-40, 50



● SSD2-L4-63 to 100



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

### Repair parts list

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

SCP\*3

CMK2

CMA2

SCM

SCG

SCA2

SCS2

CKV2

CAV2/  
COVP/N2

**SSD2**

SSG

SSD

CAT

MDC2

MVC

SMG

MSD/  
MSDG

FC\*

STK

SRL3

SRG3

SRM3

SRT3

MRL2

MRG2

SM-25

ShkAbs

FJ

FK

Spd  
Contr

Ending

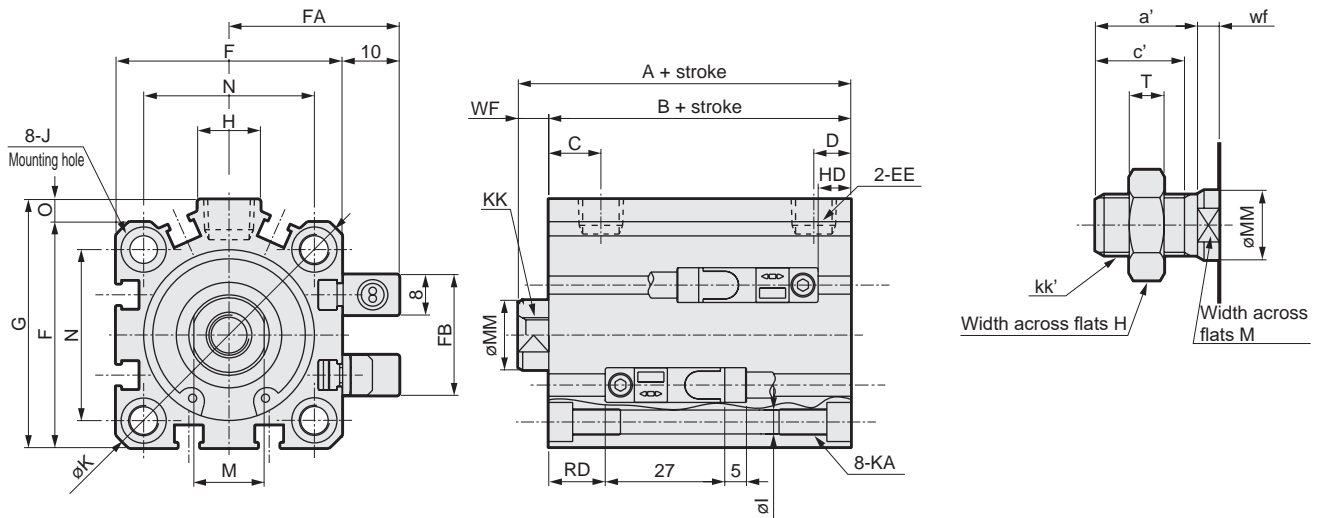


# SSD2-L4 Series

## Dimensions

● SSD2-L4-40 to 100

● Rod end male thread



Code	A	B	C	D	EE	F	FA	FB	G	H	I	J
Code												
Bore size (mm)												
ø40	56.5	49.5	12	8.5	Rc1/8	52	36	31	57	15	5.5	Spot face ø9 depth 5.5
ø50	58.5	50.5	10.5	10.5	Rc1/4	64	42	32	71	18	6.9	Spot face ø11 depth 6.5
ø63	64	56	13	11	Rc1/4	77	48.5	32	84	23	8.7	Spot face ø14 depth 9
ø80	73.5	63.5	16	13	Rc3/8	98	59	32	104	31	10.5	Spot face ø17.5 depth 11
ø100	85	73	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	Spot face ø17.5 depth 11

Code	K	KA	KK	M	MM	N	O	WF	HD	RD
Code										
Bore size (mm)										
ø40	69	M6 depth 11	M8 depth 13	14	16	40	5	7	7.5	13
ø50	86	M8 depth 13	M10 depth 15	17	20	50	7	8	8.5	13
ø63	103	M10 depth 25	M10 depth 15	17	20	60	7	8	13.5	13.5
ø80	132	M12 depth 28	M16 depth 21	22	25	77	6	10	18.5	16
ø100	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12	24	20

\*1 : To calculate A+ stroke 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 23 mm, apply the standard stroke 25 mm.

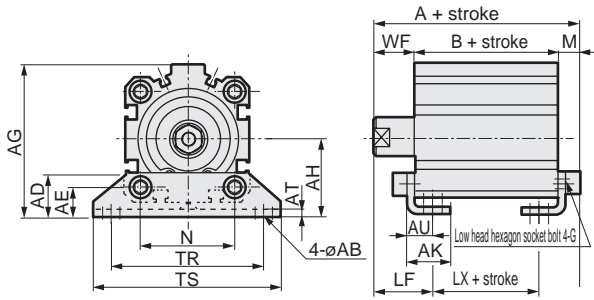
\*2 : For dimensions of individual accessories, refer to pages 1046 to 1049.

● Rod end male thread

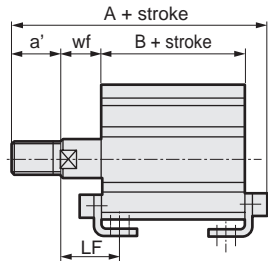
Code	a'	c'	H	kk'	M	MM	T	wf
Code								
Bore size (mm)								
ø40	23.5	20.5	22	M14x1.5	14	16	8	5
ø50	28.5	26	27	M18x1.5	17	20	11	5
ø63	28.5	26	27	M18x1.5	17	20	11	5
ø80	35.5	32.5	32	M22x1.5	22	25	13	8
ø100	35.5	32.5	41	M26x1.5	27	30	16	8

### Dimensions with mounting bracket

- Axial foot (LB)  
SSD2-L4-40 to 100 -LB



Rod end male thread

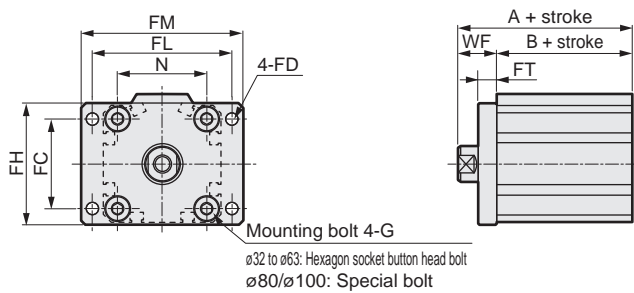


Code	Common dimensions													
	Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø40	7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64	78	7.2	25
ø50	9	22	14	78	39	22.7	3.2	14.7	M8x20	50	79	95	8.2	29.5
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10x25	60	95	113	9.2	31
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12x40	77	118	140	11.5	35
ø100	13	35	24	136	71	35.5	6	23	M12x40	94	137	162	13	39

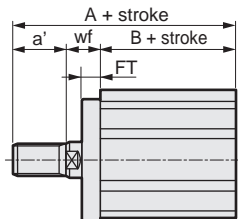
  

Code	Female thread			Male thread						
	Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø40	17	73.7	49.5	33.5	23.5	15	95.2	49.5	33.5	
ø50	18	76.7	50.5	27.5	28.5	15	102.7	50.5	27.5	
ø63	18	83.2	56	30	28.5	15	108.7	56	30	
ø80	20	95	63.5	33.5	35.5	18	128.5	63.5	33.5	
ø100	22	108	73	39	35.5	18	139.5	73	39	

- Rod side flange (FA)  
SSD2-L4-40 to 100 -FA

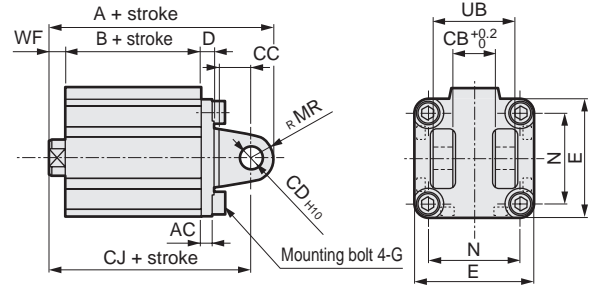


Rod end male thread

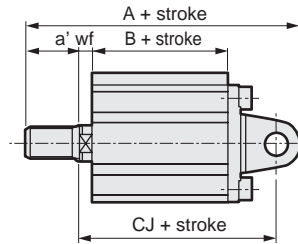


Code	Common dimensions								Female thread		Male thread				
	Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A
ø40	40	5.5	54	62	72	8	40	M6x16	17	66.5	49.5	23.5	15	88	49.5
ø50	50	6.6	67	76	89	9	50	M8x20	18	68.5	50.5	28.5	15	94	50.5
ø63	60	9	80	92	108	9	60	M10x25	18	74	56	28.5	15	99.5	56
ø80	77	11	99	116	134	11	77	M12x40	20	83.5	63.5	35.5	18	117	63.5
ø100	94	11	117	136	154	11	94	M12x40	22	95	73	35.5	18	126.5	73

- Clevis bracket (CB)  
SSD2-L4-40 to 100 -CB



Rod end male thread

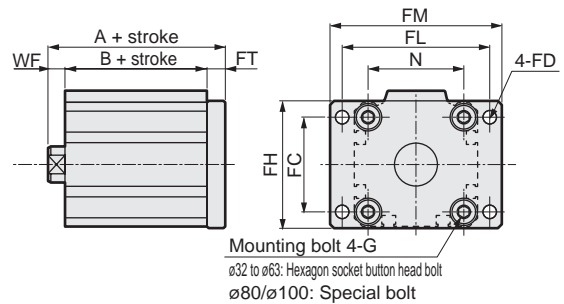


Code	Common dimensions									
	Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N
ø40	5	18.2	14	10	6	52	M6x16	10	40	36
ø50	6	22.2	20	14	7	64	M8x20	14	50	44
ø63	7	22.2	20	14	8	77	M10x25	14	60	44
ø80	9	28.2	27	18	10	98	M12x40	18	77	56
ø100	12	32.2	31	22	13	117	M12x40	22	94	64

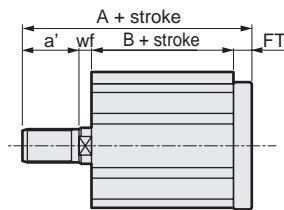
  

Code	Female thread			Male thread						
	Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø40	7	88.5	49.5	78.5	23.5	5	110	49.5	76.5	
ø50	8	100.5	50.5	86.5	28.5	5	126	50.5	83.5	
ø63	8	108	56	94	28.5	5	133.5	56	91	
ø80	10	129.5	63.5	111.5	35.5	8	163	63.5	109.5	
ø100	12	152	73	130	35.5	8	183.5	73	126	

- Head side flange (FB)  
SSD2-L4-40 to 100 -FB

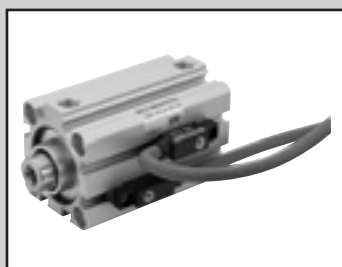


Rod end male thread



Code	Common dimensions								Female thread		Male thread				
	Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A
ø40	40	5.5	54	62	72	8	40	M6x16	7	64.5	49.5	23.5	5	86	49.5
ø50	50	6.6	67	76	89	9	50	M8x20	8	67.5	50.5	28.5	5	93	50.5
ø63	60	9	80	92	108	9	60	M10x25	8	73	56	28.5	5	98.5	56
ø80	77	11	99	116	134	11	77	M12x40	10	84.5	63.5	35.5	8	118	63.5
ø100	94	11	117	136	154	11	94	M12x40	12	96	73	35.5	8	127.5	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 with strong magnetic field proof switch/coil scraper

# SSD2-G1L4 Series

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

JIS symbol



## Specifications

Item	SSD2-G1L4					
Bore size mm	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$	
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	Rc1/8	Rc1/4			Rc3/8	
Stroke tolerance mm	$^{+1.0}_0$					
Working piston speed mm/s	50 to 500			50 to 300		
Cushion	None					
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)					
Allowable absorbed energy J	0.092	0.1	0.12	0.27	0.56	

## Stroke

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

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

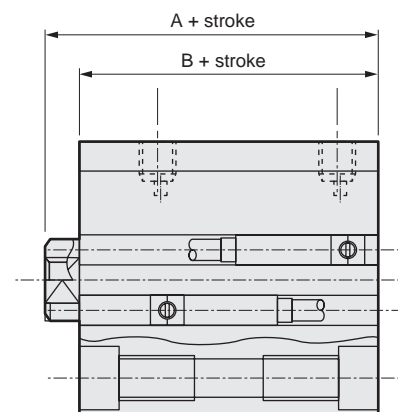
## Number of installed switches and min. stroke (mm)

Switch quantity	1	2	3
Switch model No.	V0		
Bore size (mm)			
$\varnothing 40$	20	20	35
$\varnothing 50$	20	20	35
$\varnothing 63$	20	20	35
$\varnothing 80$	20	20	35
$\varnothing 100$	20	20	35

## Custom stroke

### ● SSD2-G1L4 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
	40 to 100	1 to 99
Example of model No.	Model No.: SSD2-G1L4-40-38 A +2 mm spacer is added to the SSD2-G1L4-40-40 standard cylinder to create 38 mm stroke. B + stroke is 89.5mm.	



### Switch specifications

Item	2-wire reed	
	V0	
Applications	For relay, programmable controller	
Load voltage	12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA
Internal voltage drop	3.0 V or less (with 40 mA load current)	
Indicator	LED (Lit when ON)	
Leakage current	0 mA	
Weight	g 1 m:63 3 m:170 5 m:277	

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

(Unit: g)

Stroke (mm)	20	25	30	35	40	45	50	75	100
ø40	575	602	628	655	681	708	734	867	999
ø50	876	918	960	1002	1044	1086	1128	1338	1548
ø63	1240	1296	1351	1407	1462	1518	1573	1851	2128
ø80	2074	2161	2248	2335	2422	2509	2596	3031	3466
ø100	3000	3114	3227	3341	3454	3568	3681	4249	4816

### Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.88x10 <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>

- 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-G1L4 Series

## How to order

Model No. **SSD2-G1L4-50-40-V0-D-N-LB-I**

**A** Bore size

**B** Stroke

**C** Switch model No.

**D** Switch quantity

**E** Option

**F** Mounting bracket \*1

**G** Accessory \*2

### ⚠ Precautions for model No. selection

\*1 : The mounting bracket is included at shipment.  
\*2 : "I" and "Y" cannot be selected together.

[Example of model No.]

**SSD2-G1L4-50-40-V0-D-N-LB-I**

Model: Compact cylinder  
Double acting/with coil scraper/with strong magnetic field proof switch

- A** Bore size :  $\varnothing 50$  mm
- B** Stroke : 40 mm
- C** Switch model No. : Reed V0 switch, Lead wire length 1 m
- D** Switch quantity : 2 pcs. included
- E** Option : Rod end male thread
- F** Mounting bracket : Axial foot
- G** Accessory : Rod eye

## How to order mounting bracket

Bore size (mm)	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$
<b>Mounting bracket</b>					
Flange (FB)	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100
Clevis bracket (CB)	SSD2-CB-40	SSD2-CB-50	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100

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

Code	Description				
<b>A Bore size (mm)</b>					
40	$\varnothing 40$				
50	$\varnothing 50$				
63	$\varnothing 63$				
80	$\varnothing 80$				
100	$\varnothing 100$				
<b>B Stroke (mm)</b>					
<b>Bore size</b>		<b>Stroke *1</b>		<b>Custom stroke *2</b>	
$\varnothing 40$ to $\varnothing 100$		20 to 100		In 1 mm increments	
*1 : Refer to page 1018 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.					
<b>C Switch model No.</b>					
<b>Lead wire</b> Straight	<b>Contact</b>	<b>Voltage</b>		<b>Indicator</b>	<b>Lead wire</b>
		AC	DC		
V0*	Reed	●	●	1-color LED	2-wire
<b>* Lead wire length</b>					
Blank	1 m (standard)				
3	3 m (option)				
5	5 m (option)				
<b>D Switch quantity</b>					
R	1 on rod side				
H	1 on head side				
D	2				
T	3				
<b>E Option</b>					
Blank	Rod end female thread				
N	Rod end male thread				
<b>F Mounting bracket</b>					
Blank	Without mounting bracket				
LB	Axial foot (made-to-order product)				
CB	Clevis bracket (pin and snap ring included)				
FA	Rod side flange (made-to-order product)				
FB	Head side flange				
<b>G Accessory (available when rod end male thread "N" is selected)</b>					
I	Rod eye				
Y	Rod clevis (pin and snap ring included)				

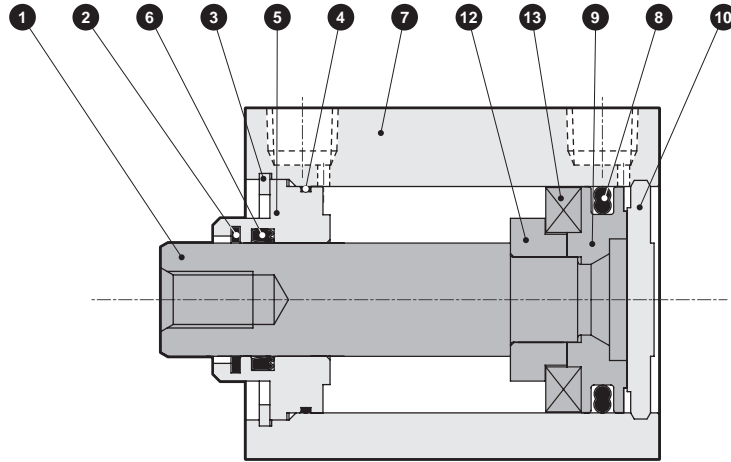
## How to order switch

**SW - V0**

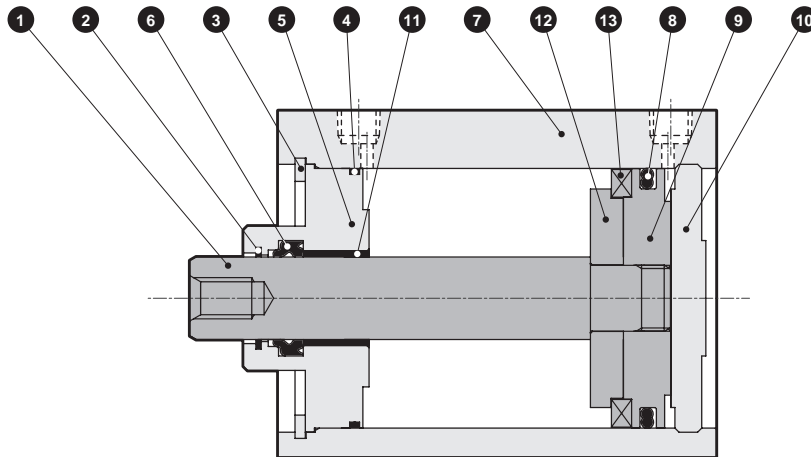
Switch model No.  
(Item C above)

### Internal structure and parts list

● SSD2-G1L4-40, 50



● SSD2-G1L4-63 to 100



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	8	Piston packing	Nitrile rubber	
2	Coil scraper	Phosphor bronze		9	Piston	Aluminum alloy	Chromate
3	C-snap ring for hole	Steel	Zinc phosphate	10	Cover	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		11	Bush	Oiles drymet	ø63 to ø100
5	Rod metal	Aluminum alloy	Chromate	12	Spacer	Aluminum alloy	
6	Rod packing	Nitrile rubber		13	Magnet	Plastic	
7	Body	Aluminum alloy	Hard alumite				

### Repair parts list

Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø40	SSD2-G1-40K	2 4 6 8
ø50	SSD2-G1-50K	
ø63	SSD2-G1-63K	
ø80	SSD2-G1-80K	
ø100	SSD2-G1-100K	

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

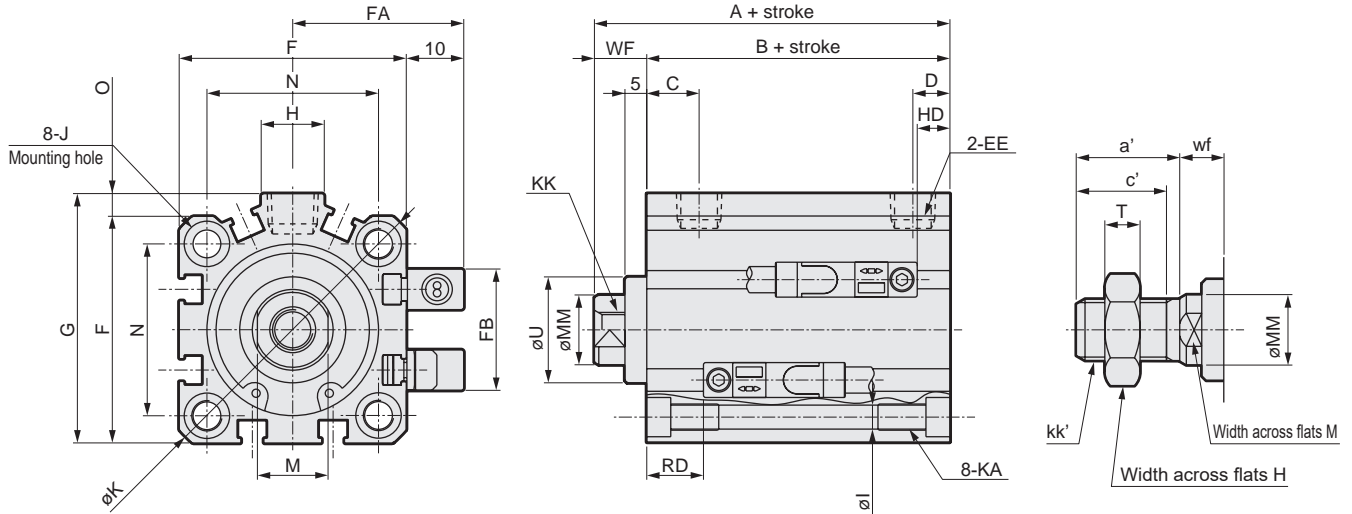
Ending

# SSD2-G1L4 Series

## Dimensions

● SSD2-G1L4-40 to 100

● Rod end male thread



Code	A	B	C	D	EE	F	FA	FB	G	H	I	J
Code												
Bore size (mm)												
ø40	61.5	49.5	12	8.5	Rc1/8	52	36	31	57	15	5.5	9 spot face depth 5.5
ø50	63.5	50.5	10.5	10.5	Rc1/4	64	42	32	71	18	6.9	11 spot face depth 6.5
ø63	69	56	13	11	Rc1/4	77	48.5	32	84	23	8.7	14 spot face depth 9
ø80	78.5	63.5	16	13	Rc3/8	98	59	32	104	31	10.5	17.5 spot face depth 11
ø100	90	73	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	17.5 spot face depth 11

Code	K	KA	KK	M	MM	N	O	U	WF	HD	RD
Code											
Bore size (mm)											
ø40	69	M6 depth 11	M8 depth 13	14	16	40	5	28 h9	12	7.5	13
ø50	86	M8 depth 13	M10 depth 15	17	20	50	7	35 h9	13	8.5	13
ø63	103	M10 depth 25	M10 depth 15	17	20	60	7	35 h9	13	13.5	13.5
ø80	132	M12 depth 28	M16 depth 21	22	25	77	6	43 h9	15	18.5	16
ø100	156	M12 depth 28	M20 depth 27	27	30	94	6.5	59 h9	17	24	20

\*1 : The A + stroke and B + stroke when using a custom stroke are the same as those when using the next longer standard stroke.

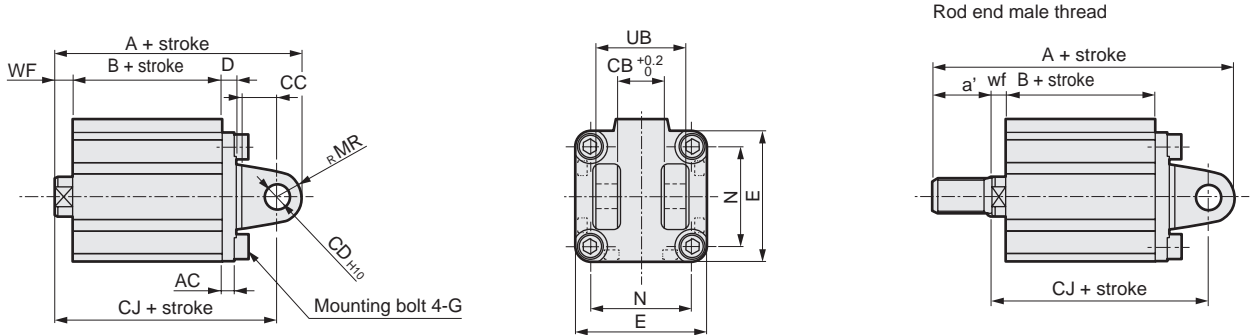
\*2: For dimensions of individual accessories, refer to pages 1046 to 1049.

● Rod end male thread

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

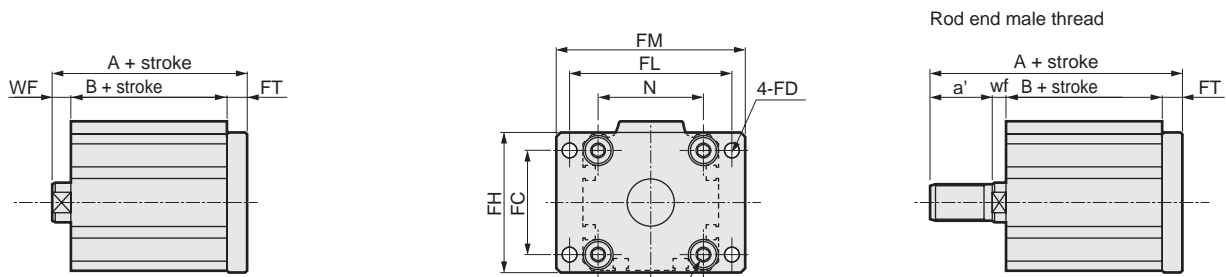
### Dimensions with mounting bracket

- Clevis bracket (CB)  
SSD2-G1L4-40 to 100 -CB



Code	Common dimensions										Female thread			Male thread					
	AC	CB	CC	CD	D	E	G	MR	N	UB	WF	A	B	CJ	a'	wf	A	B	CJ
ø40	5	18.2	14	10	6	52	M6x16	10	40	36	7	93.5	49.5	83.5	23.5	5	115	49.5	81.5
ø50	6	22.2	20	14	7	64	M8x20	14	50	44	8	105.5	50.5	91.5	28.5	5	131	50.5	88.5
ø63	7	22.2	20	14	8	77	M10x25	14	60	44	8	113	56	99	28.5	5	138.5	56	96
ø80	9	28.2	27	18	10	98	M12x40	18	77	56	10	134.5	63.5	116.5	35.5	8	168	63.5	114.5
ø100	12	32.2	31	22	13	117	M12x40	22	94	64	12	157	73	135	35.5	8	188.5	73	131

- Head side flange (FB)  
SSD2-G1L4-40 to 100 -FB



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

Code	Common dimensions								Female thread			Male thread			
	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø40	40	5.5	54	62	72	8	40	M6x16	7	69.5	49.5	23.5	5	91	49.5
ø50	50	6.6	67	76	89	9	50	M8x20	8	72.5	50.5	28.5	5	98	50.5
ø63	60	9	80	92	108	9	60	M10x25	8	78	56	28.5	5	103.5	56
ø80	77	11	99	116	134	11	77	M12x40	10	89.5	63.5	35.5	8	123	63.5
ø100	94	11	117	136	154	11	94	M12x40	12	101	73	35.5	8	132.5	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

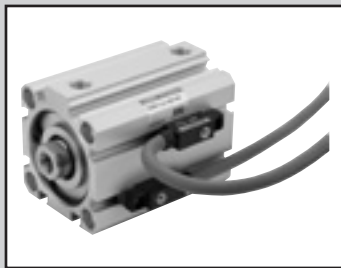
FJ

FK

Spd  
Contr

Ending





Compact cylinder double acting/high load/  
with strong magnetic field proof switch

# SSD2-KL4 Series

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

JIS symbol



## Specifications

Item	SSD2-KL4					
Bore size mm	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	
Actuation	Double acting					
Working fluid	Compressed air					
Max. working pressure MPa	1.0 ( $\approx 150$ psi, 10 bar)					
Min. working pressure MPa	0.1 ( $\approx 15$ psi, 1 bar)			0.05 ( $\approx 7.3$ psi, 0.5 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	Rc1/8	Rc1/4			Rc3/8	
Stroke tolerance mm	$^{+2.0}_0$					
Working piston speed mm/s	50 to 500			50 to 300		
Cushion	Rubber cushion					
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)					
Allowable absorbed energy J	0.63	0.98	1.56	2.51	3.92	

## Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\phi 40$	20/25/30/35/40 45/50/75/100	100	20
$\phi 50$			
$\phi 63$			
$\phi 80$			
$\phi 100$			

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

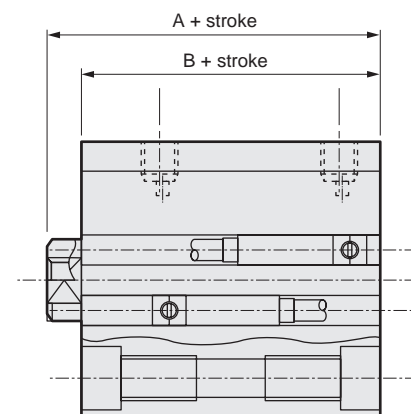
## Number of installed switches and min. stroke (mm)

Switch quantity	1	2	3
Switch model No.	V0		
Bore size (mm)			
$\phi 40$	20	20	35
$\phi 50$	20	20	35
$\phi 63$	20	20	35
$\phi 80$	20	20	35
$\phi 100$	20	20	35

## Custom stroke

### ● SSD2-KL4 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
	40 to 100	1 to 99
Example of model No.	Model No.: SSD2-KL4-40-38	
	A +2 mm spacer is added to the SSD2-KL4-40-40 standard cylinder to create 38 mm stroke. B + stroke is 99.5mm.	



### Switch specifications

Item	2-wire reed	
	V0	
Applications	For relay, programmable controller	
Load voltage	12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA
Internal voltage drop	3.0 V or less (with 40 mA load current)	
Indicator	LED (Lit when ON)	
Leakage current	0 mA	
Weight	g 1 m:63 3 m:170 5 m:277	

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

(Unit: g)

Stroke (mm)	20	25	30	35	40	45	50	75	100
ø40	546	573	599	626	652	679	705	838	970
ø50	841	883	925	967	1009	1051	1093	1303	1513
ø63	1199	1254	1309	1364	1419	1474	1529	1804	2079
ø80	1995	2082	2169	2256	2343	2430	2517	2952	3387
ø100	2893	3007	3120	3234	3347	3461	3574	4142	4709

### Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.26x10 <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>	3.12x10 <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>	2.80x10 <sup>3</sup>
ø80	Push	2.51x10 <sup>2</sup>	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	2.27x10 <sup>2</sup>	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	3.93x10 <sup>2</sup>	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	3.57x10 <sup>2</sup>	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>

- 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-KL4 Series

## How to order

SSD2-KL4-50-40-V0-D-N-LB-I

Model No.

A Bore size

B Stroke

C Switch model No.

D Switch quantity

E Option

F Mounting bracket

G Accessory

### ⚠ Precautions for model No. selection

- \*1 : The mounting bracket is included at shipment.
- \*2 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on page 1029. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
- \*3 : "I" and "Y" cannot be selected together.

### [Example of model No.]

**SSD2-KL4-50-40-V0-D-N-LB-I**

Model: Compact cylinder  
Double acting/single high load/  
with strong magnetic field proof switch

- A Bore size : ø50 mm
- B Stroke : 40 mm
- C Switch model No. : Reed V0 switch,  
Lead wire length 1 m
- D Switch quantity : 2 pcs. included
- E Option : Rod end male thread
- F Mounting bracket : Axial foot
- G Accessory : Rod eye

## How to order mounting bracket

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

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

Code	Description				
<b>A Bore size (mm)</b>					
40	ø40				
50	ø50				
63	ø63				
80	ø80				
100	ø100				
<b>B Stroke (mm)</b>					
<b>Bore size</b>		<b>Stroke *1</b>		<b>Custom stroke *2</b>	
ø40 to ø100		20 to 100		In 1 mm increments	
*1 : Refer to page 1024 for the number of installed switches and the min. stroke.					
*2 : The total length is the same as that of the next longer standard stroke.					
<b>C Switch model No.</b>					
<b>Lead wire</b> Straight	<b>Contact</b>	<b>Voltage</b>		<b>Indicator</b>	<b>Lead wire</b>
		AC	DC		
V0*	Reed	●	●	1-color LED	2-wire
<b>* Lead wire length</b>					
<b>Blank</b>	1 m (standard)				
3	3 m (option)				
5	5 m (option)				
<b>D Switch quantity</b>					
R	1 on rod side				
H	1 on head side				
D	2				
T	3				
<b>E Option</b>					
<b>Blank</b>	Rod end female thread				
N	Rod end male thread				
<b>F Mounting bracket</b>					
<b>Blank</b>	Without mounting bracket				
LB	Axial foot				
CB	Clevis bracket (pin and snap ring included)				
FA	Rod side flange				
FB	Head side flange				
<b>G Accessory (available when rod end male thread "N" is selected)</b>					
I	Rod eye				
Y	Rod clevis (pin and snap ring included)				

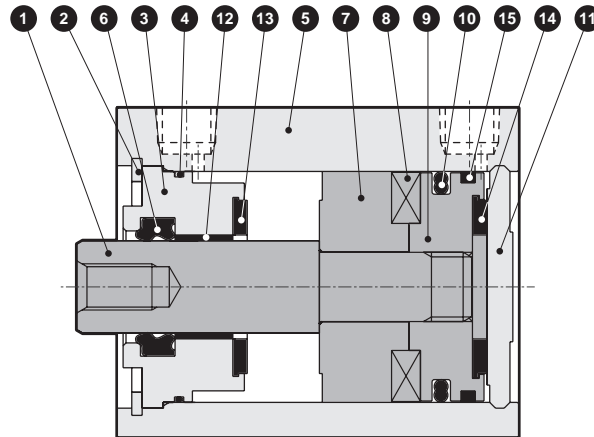
## How to order switch

SW - V0

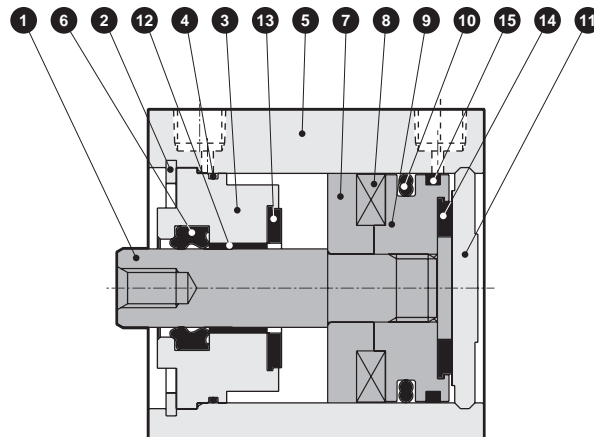
Switch model No.  
(Item C above)

### Internal structure and parts list

● SSD2-KL4-40, 50



● SSD2-KL4-63 to 100



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	
3	Rod metal	ø40, ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø40, ø50: Alumite ø63 to ø100: Chromate	10	Piston packing	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		11	Cover	Aluminum alloy	Alumite
5	Body	Aluminum alloy	Hard alumite	12	Bush	Oiles drymet	
6	Rod packing	Nitrile rubber		13	Cushion rubber (R)	Urethane rubber	
7	Spacer	ø40, ø50: Special resin ø63 to ø100: Aluminum alloy	ø63 to ø100: Chromate	14	Cushion rubber (H)	Urethane rubber	
				15	Wear ring	Polyacetal resin	

### Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø40	SSD2-K-40K	<div style="display: flex; flex-wrap: wrap; justify-content: center; gap: 10px;"> <span>4</span> <span>6</span> <span>10</span>  <span>13</span> <span>14</span> <span>15</span> </div>
ø50	SSD2-K-50K	
ø63	SSD2-K-63K	
ø80	SSD2-K-80K	
ø100	SSD2-K-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

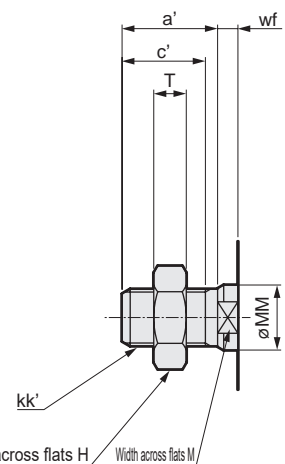
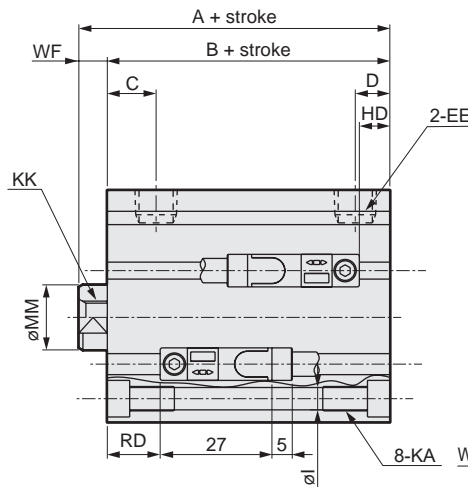
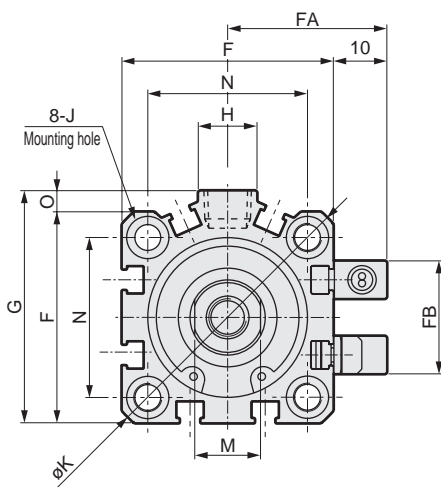
Ending

# SSD2-KL4 Series

## Dimensions

● SSD2-KL4-40 to 100

● Rod end male thread



Code	A	B	C	D	EE	F	FA	FB	G	H	I	J
Code												
Bore size (mm)												
ø40	66.5	59.5	12	8.5	Rc1/8	52	36	31	57	15	5.5	Spot face ø9 depth 5.5
ø50	68.5	60.5	10.5	10.5	Rc1/4	64	42	32	71	18	6.9	Spot face ø11 depth 6.5
ø63	74	66	13	11	Rc1/4	77	48.5	32	84	23	8.7	Spot face ø14 depth 9
ø80	83.5	73.5	16	13	Rc3/8	98	59	32	104	31	10.5	Spot face ø17.5 depth 11
ø100	95	83	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	Spot face ø17.5 depth 11

Code	K	KA	KK	M	MM	N	O	WF	HD	RD
Code										
Bore size (mm)										
ø40	69	M6 depth 11	M8 depth 13	14	16	40	5	7	12.5	18
ø50	86	M8 depth 13	M10 depth 15	17	20	50	7	8	13.5	18
ø63	103	M10 depth 25	M10 depth 15	17	20	60	7	8	18.5	18.5
ø80	132	M12 depth 28	M16 depth 21	22	25	77	6	10	23.5	21
ø100	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12	29	25

\*1 : The A + stroke and B + stroke when using a custom stroke are the same as those when using the next longer standard stroke.

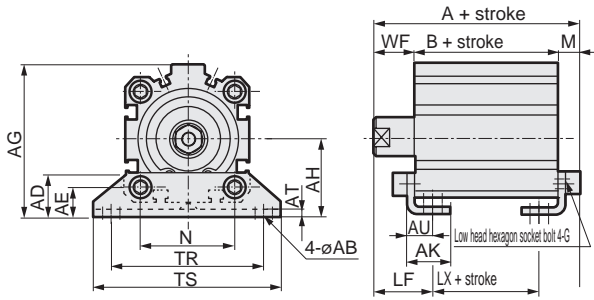
\*2: For dimensions of individual accessories, refer to pages 1046 to 1049.

● Rod end male thread

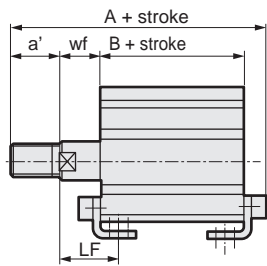
Code	a'	c'	H	kk'	M	MM	T	wf
Code								
Bore size (mm)								
ø40	23.5	20.5	22	M14x1.5	14	16	8	5
ø50	28.5	26	27	M18x1.5	17	20	11	5
ø63	28.5	26	27	M18x1.5	17	20	11	5
ø80	35.5	32.5	32	M22x1.5	22	25	13	8
ø100	35.5	32.5	41	M26x1.5	27	30	16	8

### Dimensions with mounting bracket

- Axial foot (LB)  
SSD2-KL4-40 to 100 -LB



Rod end male thread

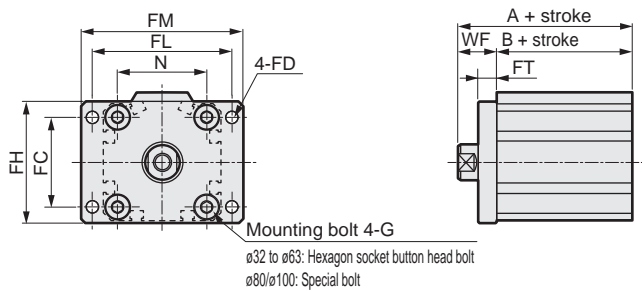


Code	Common dimensions													
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	LF
ø40	7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64	78	7.2	25
ø50	9	22	14	78	39	22.7	3.2	14.7	M8x20	50	79	95	8.2	29.5
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10x25	60	95	113	9.2	31
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12x40	77	118	140	11.5	35
ø100	13	35	24	136	71	35.5	6	23	M12x40	94	137	162	13	39

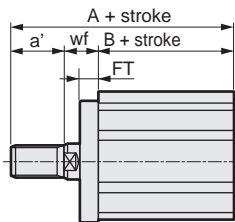
  

Code	Female thread				Male thread				
Bore size (mm)	WF	A	B	LX	a'	wf	A	B	LX
ø40	17	83.7	59.5	43.5	23.5	15	105.2	59.5	43.5
ø50	18	86.7	60.5	37.5	28.5	15	112.2	60.5	37.5
ø63	18	93.2	66	40	28.5	15	118.7	66	40
ø80	20	105	73.5	43.5	35.5	18	138.5	73.5	43.5
ø100	22	118	83	49	35.5	18	149.5	83	49

- Rod side flange (FA)  
SSD2-KL4-40 to 100 -FA

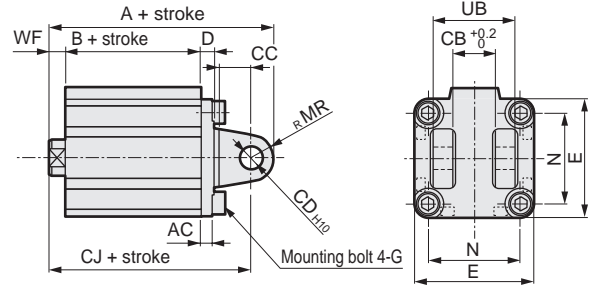


Rod end male thread

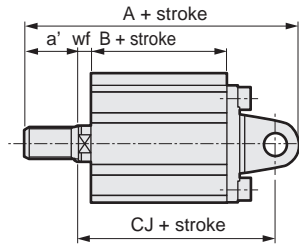


Code	Common dimensions								Female thread		Male thread				
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø40	40	5.5	54	62	72	8	40	M6x16	17	76.5	59.5	23.5	15	98	59.5
ø50	50	6.6	67	76	89	9	50	M8x20	18	78.5	60.5	28.5	15	104	60.5
ø63	60	9	80	92	108	9	60	M10x25	18	84	66	28.5	15	108.5	66
ø80	77	11	99	116	134	11	77	M12x40	20	93.5	73.5	35.5	18	127	73.5
ø100	94	11	117	136	154	11	94	M12x40	22	105	83	35.5	18	136.5	83

- Clevis bracket (CB)  
SSD2-KL4-40 to 100 -CB



Rod end male thread

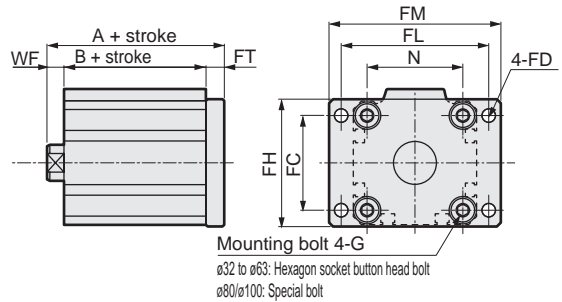


Code	Common dimensions									
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB
ø40	5	18.2	14	10	6	52	M6x16	10	40	36
ø50	6	22.2	20	14	7	64	M8x20	14	50	44
ø63	7	22.2	20	14	8	77	M10x25	14	60	44
ø80	9	28.2	27	18	10	98	M12x40	18	77	56
ø100	12	32.2	31	22	13	117	M12x40	22	94	64

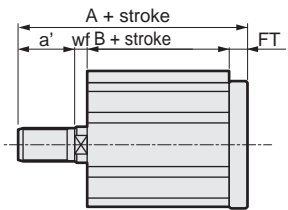
  

Code	Female thread				Male thread				
Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø40	7	98.5	59.5	88.5	23.5	5	120	59.5	86.5
ø50	8	110.5	60.5	96.5	28.5	5	136	60.5	93.5
ø63	8	118	66	104	28.5	5	143.5	66	101
ø80	10	139.5	73.5	121.5	35.5	8	173	73.5	119.5
ø100	12	162	83	140	35.5	8	193.5	83	136

- Head side flange (FB)  
SSD2-KL4-40 to 100 -FB

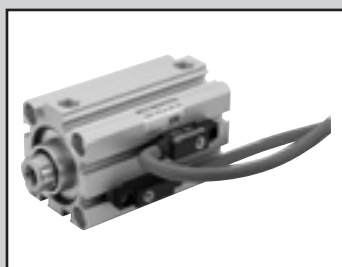


Rod end male thread



Code	Common dimensions								Female thread		Male thread				
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø40	40	5.5	54	62	72	8	40	M6x16	7	74.5	59.5	23.5	5	96	59.5
ø50	50	6.6	67	76	89	9	50	M8x20	8	77.5	60.5	28.5	5	103	60.5
ø63	60	9	80	92	108	9	60	M10x25	8	83	66	28.5	5	108.5	66
ø80	77	11	99	116	134	11	77	M12x40	10	94.5	73.5	35.5	8	128	73.5
ø100	94	11	117	136	154	11	94	M12x40	12	106	83	35.5	8	137.5	83

- 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/  
with strong magnetic field proof switch/with coil scraper

# SSD2-KG1L4 Series

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

JIS symbol



## Specifications

Item	SSD2-KG1L4					
Bore size mm	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$	
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	Rc1/8	Rc1/4			Rc3/8	
Stroke tolerance mm	$^{+2.0}_0$					
Working piston speed mm/s	50 to 500			50 to 300		
Cushion	Rubber cushion					
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)					
Allowable absorbed energy J	0.63	0.98	1.56	2.51	3.92	

## Stroke

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

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

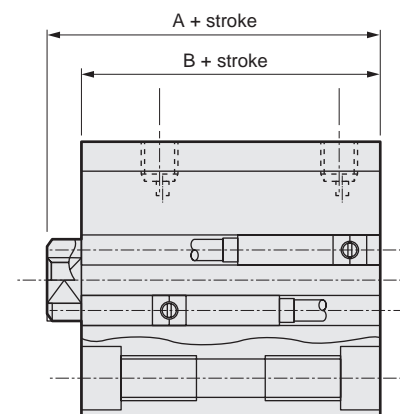
## Number of installed switches and min. stroke (mm)

Switch quantity	1	2	3
Switch model No.	V0		
Bore size (mm)			
$\varnothing 40$	20	20	35
$\varnothing 50$	20	20	35
$\varnothing 63$	20	20	35
$\varnothing 80$	20	20	35
$\varnothing 100$	20	20	35

## Custom stroke

### ● SSD2-KG1L4 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
	40 to 100	1 to 99
Example of model No.	Model No.: SSD2-KG1L4-40-38 A +2 mm spacer is added to the SSD2-KG1L4-40-40 standard cylinder to create 38 mm stroke. B + stroke is 99.5mm.	



### Switch specifications

Item	2-wire reed	
	V0	
Applications	For relay, programmable controller	
Load voltage	12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA
Internal voltage drop	3.0 V or less (with 40 mA load current)	
Indicator	LED (Lit when ON)	
Leakage current	0 mA	
Weight	g 1 m:63 3 m:170 5 m:277	

### Cylinder weight table

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

(Unit: g)

Stroke (mm)	20	25	30	35	40	45	50	75	100
ø40	628	655	681	708	734	761	787	920	1052
ø50	960	1002	1044	1086	1128	1170	1212	1422	1632
ø63	1350	1406	1461	1517	1572	1628	1683	1961	2238
ø80	2247	2334	2421	2508	2595	2682	2769	3204	3639
ø100	3228	3342	3455	3569	3682	3796	3909	4477	5044

### Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.88x10 <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>

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-KG1L4 Series

## How to order

SSD2-KG1L4-50-40-V0-D-N-LB-I

Model No.

A Bore size

B Stroke

C Switch model No.

D Switch quantity

E Option

F Mounting bracket

\*1

G Accessory

\*2

Code	Description				
<b>A Bore size (mm)</b>					
40	ø40				
50	ø50				
63	ø63				
80	ø80				
100	ø100				
<b>B Stroke (mm)</b>					
<b>Bore size</b>		<b>Stroke *1</b>		<b>Custom stroke *2</b>	
ø40 to ø100		20 to 100		In 1 mm increments	
*1: Refer to page 1030 for the number of installed switches and the min. stroke.					
*2: The total length is the same as that of the next longer standard stroke.					
<b>C Switch model No.</b>					
<b>Lead wire</b>	<b>Straight</b>	<b>Contact</b>	<b>Voltage</b>		<b>Indicator</b>
			AC	DC	
V0*		Reed	●	●	1-color LED
* Lead wire length					
<b>Blank</b>		1 m (standard)			
3		3 m (option)			
5		5 m (option)			
<b>D Switch quantity</b>					
R		1 on rod side			
H		1 on head side			
D		2			
T		3			
<b>E Option</b>					
<b>Blank</b>		Rod end female thread			
N		Rod end male thread			
<b>F Mounting bracket</b>					
<b>Blank</b>		Without mounting bracket			
LB		Axial foot (made-to-order product)			
CB		Clevis bracket (pin and snap ring included)			
FA		Rod side flange (made-to-order product)			
FB		Head side flange			
<b>G 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-KG1L4-50-40-V0-D-N-LB-I**

Model: Compact cylinder  
Double acting/high load/with coil scraper/with strong magnetic field proof switch

- A Bore size : ø50 mm
- B Stroke : 40 mm
- C Switch model No. : Reed V0 switch, Lead wire length 1 m
- D Switch quantity : 2 pcs. included
- E Option : Rod end male thread
- F Mounting bracket : Axial foot
- G Accessory : Rod eye

## How to order mounting bracket

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

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

## How to order switch

SW - V0

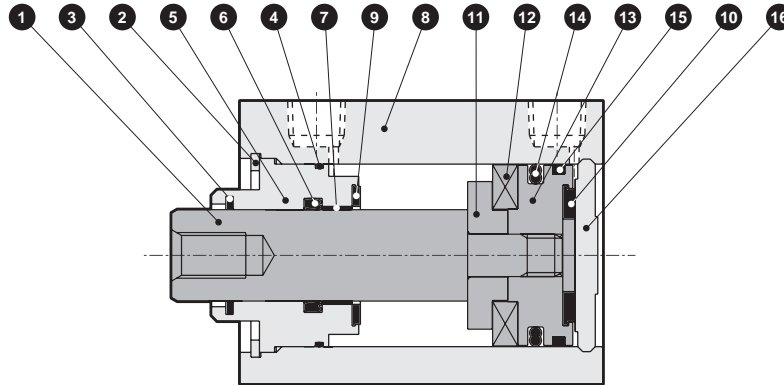
Switch model No.  
(Item C above)

# SSD2-KG1L4 Series

Double acting/high load/with strong magnetic field proof switch/coil scraper

## Internal structure and parts list

● SSD2-KG1L4-40 to 100



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	9	Cushion rubber R	Urethane rubber	
2	C-snap ring for hole	Steel	Zinc phosphate	10	Cushion rubber H	Urethane rubber	
3	Coil scraper	Phosphor bronze		11	Spacer	Aluminum alloy	
4	Rod metal gasket	Nitrile rubber		12	Magnet	Plastic	
5	Rod metal	ø40, ø50: Special aluminum ø63 to ø100: Aluminum alloy	ø40, ø50: Alumite ø63 to ø100: Chromate	13	Piston	Aluminum alloy	Chromate
6	Rod packing	Nitrile rubber		14	Piston packing	Nitrile rubber	
7	Bush	Oiles drymet		15	Wear ring	Polyacetal resin	
8	Body	Aluminum alloy	Hard alumite	16	Cover	Aluminum alloy	Alumite

## Repair parts list

Part name	Kit No.	Repair parts No.
Bore size (mm)		
ø40	SSD2-KG1-40K	
ø50	SSD2-KG1-50K	
ø63	SSD2-KG1-63K	3 4 6 9
ø80	SSD2-KG1-80K	10 14 15
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

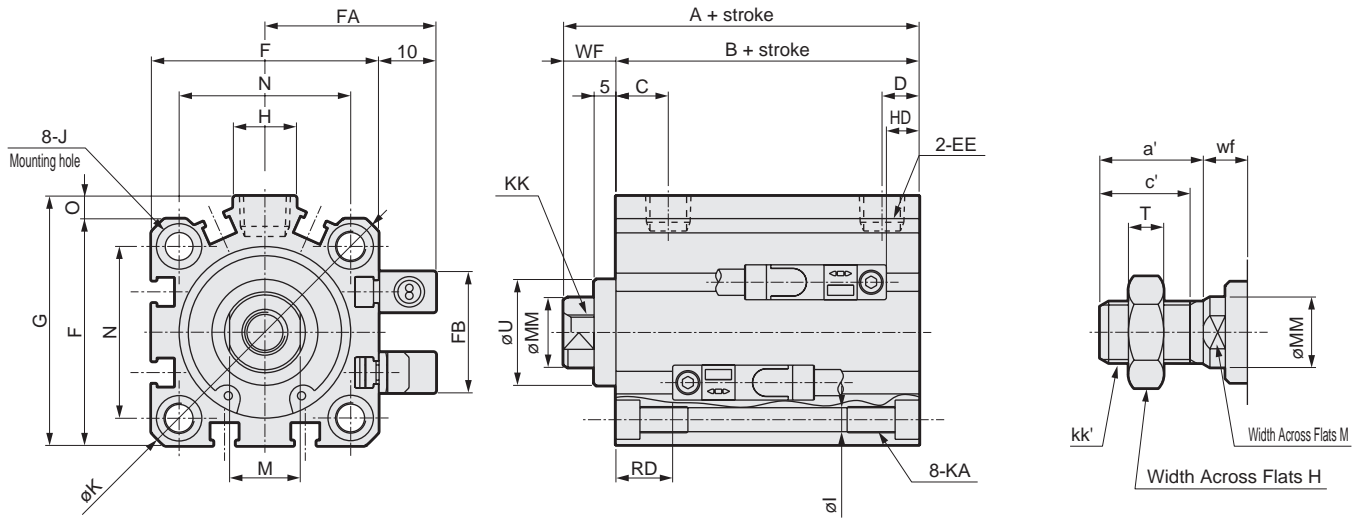
Ending

# SSD2-KG1L4 Series

## Dimensions

● SSD2-KG1L4-40 to 100

● Rod end male thread



Code	A	B	C	D	EE	F	FA	FB	G	H	I	J
<b>Bore size (mm)</b>												
ø40	71.5	59.5	12	8.5	Rc1/8	52	36	31	57	15	5.5	Spot face ø9 depth 5.5
ø50	73.5	60.5	10.5	10.5	Rc1/4	64	42	32	71	18	6.9	Spot face ø11 depth 6.5
ø63	79	66	13	11	Rc1/4	77	48.5	32	84	23	8.7	Spot face ø14 depth 9
ø80	88.5	73.5	16	13	Rc3/8	98	59	32	104	31	10.5	Spot face ø17.5 depth 11
ø100	100	83	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	Spot face ø17.5 depth 11

Code	K	KA	KK	M	MM	N	O	U	WF	HD	RD
<b>Bore size (mm)</b>											
ø40	69	M6 depth 11	M8 depth 13	14	16	40	5	28 h9	12	12.5	18
ø50	86	M8 depth 13	M10 depth 15	17	20	50	7	35 h9	13	13.5	18
ø63	103	M10 depth 25	M10 depth 15	17	20	60	7	35 h9	13	18.5	18.5
ø80	132	M12 depth 28	M16 depth 21	22	25	77	6	43 h9	15	23.5	21
ø100	156	M12 depth 28	M20 depth 27	27	30	94	6.5	59 h9	17	29	25

\*1: The A + stroke and B + stroke when using a custom stroke are the same as those when using the next longer standard stroke.

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

● Rod end male thread

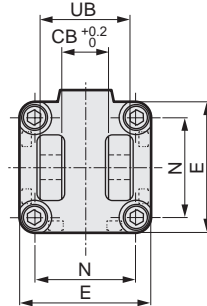
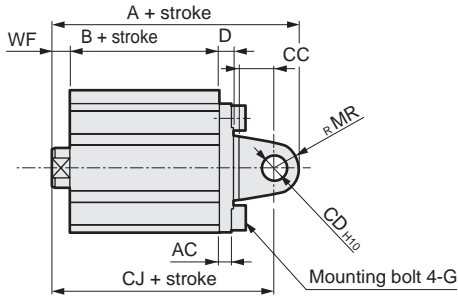
Code	a'	c'	H	kk'	M	MM	T	wf
<b>Bore size (mm)</b>								
ø40	23.5	20.5	22	M 14 x 1.5	14	16	8	10
ø50	28.5	26	27	M 18 x 1.5	17	20	11	10
ø63	28.5	26	27	M 18 x 1.5	17	20	11	10
ø80	35.5	32.5	32	M 22 x 1.5	22	25	13	13
ø100	35.5	32.5	41	M 26 x 1.5	27	30	16	13

# SSD2-KG1L4 Series

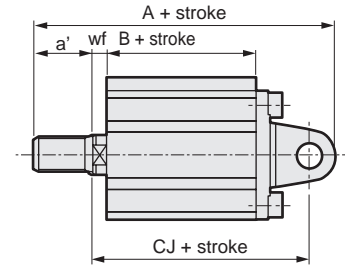
Double acting/high load/with AC magnetic field proof switch/coil scraper

## Dimensions with mounting bracket

- Clevis bracket (CB)  
SSD2-KG1L4-40 to 100 -CB

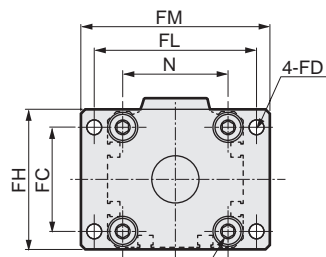
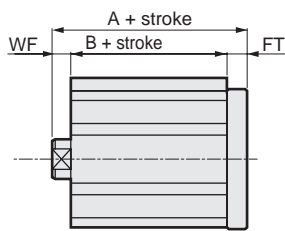


Rod end male thread



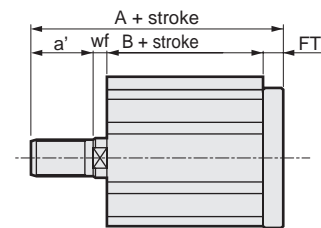
Code	Common dimensions										Female thread			Male thread					
	AC	CB	CC	CD	D	E	G	MR	N	UB	WF	A	B	CJ	a'	wf	A	B	CJ
ø40	5	18.2	14	10	6	52	M6x16	10	40	36	7	103.5	59.5	93.5	23.5	5	125	59.5	91.5
ø50	6	22.2	20	14	7	64	M8x20	14	50	44	8	115.5	60.5	101.5	28.5	5	141	60.5	98.5
ø63	7	22.2	20	14	8	77	M10x25	14	60	44	8	123	66	109	28.5	5	148.5	66	106
ø80	9	28.2	27	18	10	98	M12x40	18	77	56	10	144.5	73.5	126.5	35.5	8	178	73.5	124.5
ø100	12	32.2	31	22	13	117	M12x40	22	94	64	12	167	83	145	35.5	8	198.5	83	141

- Head side flange (FB)  
SSD2-KG1L4-40 to 100 -FB

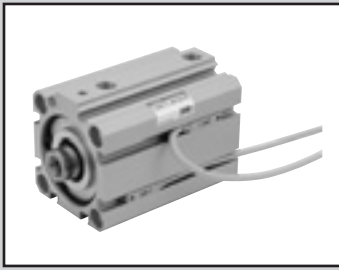


Mounting bolt 4-G  
ø32 to ø63: Hexagon socket button head bolt  
ø80/ø100: Special bolt

Rod end male thread



Code	Common dimensions								Female thread			Male thread			
	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
ø40	40	5.5	54	62	72	8	40	M6x16	7	79.5	59.5	23.5	5	101	59.5
ø50	50	6.6	67	76	89	9	50	M8x20	8	82.5	60.5	28.5	5	108	60.5
ø63	60	9	80	92	108	9	60	M10x25	8	88	66	28.5	5	113.5	66
ø80	77	11	99	116	134	11	77	M12x40	10	99.5	73.5	35.5	8	133	73.5
ø100	94	11	117	136	154	11	94	M12x40	12	111	83	35.5	8	142.5	83



Compact cylinder double acting/single rod

# SSD2-P7\*/P5\* Series

● Bore size:  $\phi 12/\phi 16/\phi 20/\phi 25/\phi 32/\phi 40/\phi 50/\phi 63/\phi 80/\phi 100/\phi 125/\phi 140/\phi 160$

JIS symbol



## Specifications

Item	SSD2-P7*/P5* SSD2-L-P7*/P5* (with switch)														
	mm	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	$\phi 125$	$\phi 140$	$\phi 160$	
Bore size	mm	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	$\phi 125$	$\phi 140$	$\phi 160$	
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			
Pressure relief port size								M5			Rc3/8				
Stroke tolerance	mm							$^{+1.0}_0$			$^{+2.0}_0$				
Working piston speed	mm/s	50 to 500						50 to 300							
Cushion		None											Rubber cushion		
Lubrication		Not available													
Allowable absorbed energy	J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56	6.52	6.52	7.78	

\*1: The  $\phi 32$  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)
$\phi 12$	5/10/15/20	30	1(5) The value in ( ) is for types with one or two switches.
$\phi 16$	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		
$\phi 63$	25/30/35		
$\phi 80$	40/45/50	300	
$\phi 100$	75/100		
$\phi 125$	10/20/30/40/50	300	
$\phi 140$	75/100/125/150		
$\phi 160$	175/200/250/300		

\*1: Availability of custom stroke

Custom stroke is available in 1 mm increments. Total length when using a custom stroke is different between  $\phi 12$  to  $\phi 100$  and  $\phi 125$  to  $\phi 160$ . Please be careful.

( $\phi 12$  to  $\phi 100$ ) The dimensions of the total length with the custom stroke are the same as the next longer standard stroke.

( $\phi 125$  to  $\phi 160$ ) Total length dimension with custom stroke is handled as custom stroke dedicated length.

\*2: Less than 5 mm with 1-color LED switch and less than 10 mm with 2-color LED, off-delay, T1\* or T8\* switch are not available.

## Switch specifications (F-switch)

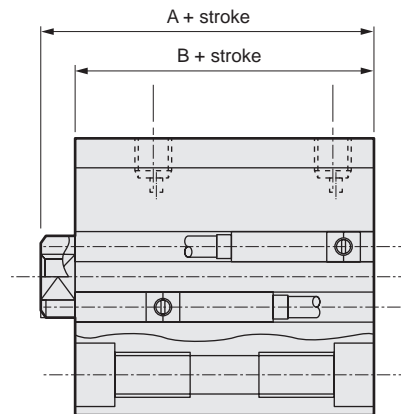
● 1-color/2-color LED

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 $\pm 10\%$		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 $\mu\text{A}$ or less		1 mA or less		10 $\mu\text{A}$ or less		
Weight	g				1 m:10	3 m:29			

## Custom stroke

● SSD2-P7\*, P5\* 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 100	1 to 99
Example of model No.	Model No.: SSD2-32-38-P7 A +2 mm spacer is added to the SSD2-32-40-P7 standard cylinder to create 38 mm stroke. B + stroke is 73mm.	



### 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				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: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.)

- ø12 to ø100

(Unit: g)

Stroke (mm)	5		10		15		20		25		30		35	
	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø12	66	107	74	116	83	125	91	133	100	142	108	150	-	-
ø16	92	138	103	148	113	158	124	169	135	180	146	191	-	-
ø20	130	185	142	217	155	230	168	243	180	255	193	268	206	281
ø25	181	272	196	287	212	303	228	319	244	335	259	350	275	366
ø32	254	368	276	390	298	412	320	434	341	455	363	477	385	499
ø40	373	516	400	543	426	569	453	596	480	623	506	649	533	676
ø50	-	-	691	885	733	927	775	969	817	1011	860	1054	902	1096
ø63	-	-	939	1218	994	1273	1049	1328	1104	1383	1159	1438	1215	1494
ø80	-	-	1911	2324	1998	2411	2084	2497	2171	2584	2257	2670	2344	2757
ø100	-	-	2625	3192	2739	3306	2852	3419	2966	3533	3080	3647	3194	3761

Stroke (mm)	40		45		50		75		100	
	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø12	-	-	-	-	-	-	-	-	-	-
ø16	-	-	-	-	-	-	-	-	-	-
ø20	219	294	232	307	245	320	-	-	-	-
ø25	291	382	307	398	322	413	-	-	-	-
ø32	407	521	429	543	450	564	558	672	665	779
ø40	559	702	586	729	612	755	745	888	877	1020
ø50	944	1138	986	1180	1028	1222	1238	1432	1448	1642
ø63	1270	1549	1325	1604	1380	1659	1655	1934	1930	2209
ø80	2431	2844	2518	2931	2604	3017	3037	3450	3469	3882
ø100	3307	3874	3421	3988	3535	4102	4105	4672	4675	5242

- ø125 to ø160

(Unit: kg)

Stroke (mm)	10		20		30		40		50		75		100	
	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø125	6.12	6.22	6.39	6.49	6.65	6.75	6.92	7.02	7.18	7.28	7.90	8.25	8.51	8.61
ø140	8.50	8.61	8.80	8.91	9.11	9.22	9.41	9.52	9.72	9.83	10.54	10.94	11.24	11.35
ø160	11.86	11.98	12.24	12.36	12.62	12.74	13.00	13.12	13.38	13.50	14.39	14.90	15.28	15.40

Stroke (mm)	125		150		175		200		250		300	
	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch	No switch	With switch
ø125	9.18	9.28	9.84	9.94	10.51	10.61	11.17	11.27	12.50	12.60	13.83	13.93
ø140	12.00	12.11	12.76	12.87	13.52	13.63	14.28	14.39	15.80	15.91	17.32	17.43
ø160	16.23	16.35	17.18	17.30	18.13	18.25	19.08	19.20	20.98	21.10	22.88	23.00

Note: Refer to Ending Pages 16 and 22 for weight of switches with 3 m and 5 m switch lead wire lengths.

# SSD2-P7\*/P5\* Series

## How to order

No switch (without magnet for switch)

**SSD2-12-5-N-P7**

With switch (built-in magnet for switch)

**SSD2-L-12-5-T0H-R-N-P7**

**A** Model No.

**B** Bore size

**C** Stroke  
\*1

**D** Switch

\* indicates the lead wire length.

\*2  
\*3  
\*4  
\*5

**E** Switch quantity

**F** Option

**G** Clean-room specifications  
\*6

## ⚠ Precautions for model No. selection

\*1 : Availability of custom stroke

Custom stroke is available in 1 mm increments. (Less than 5 mm with switch is not available.) Total length when using a custom stroke is different between  $\phi 12$  to  $\phi 100$  and  $\phi 125$  to  $\phi 160$ . Please be careful.

[ $\phi 12$  to  $\phi 100$ ]

The dimensions of the total length with the custom stroke are the same as the next longer standard stroke.

[ $\phi 125$  to  $\phi 160$ ]

Dedicated custom stroke.

\*2 : The T2YD\* switch cannot be mounted on the  $\phi 12$  and  $\phi 16$  bore sizes.

\*3 : The T8\* switch cannot be mounted on the  $\phi 12$  to  $\phi 32$  bore sizes.

\*4 : The F-switch can only be mounted on the piping port surface of bore sizes  $\phi 20$  and  $\phi 25$ .

\*5 : The F-switch with L type lead wire on  $\phi 20$  models cannot be selected on strokes of 15 mm or under.

\*6 : "P5" and "P51" are made-to-order products.

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

\*8 : F-switch cannot be selected.

[Example of model No.]

**SSD2-L-12-5-T0H-R-NP7**

- A** Model : Compact cylinder, standard
- B** Bore size :  $\phi 12$  mm
- C** Stroke : 5 mm
- D** Switch model No. : Reed switch T0H, lead wire length 1 m
- E** Switch quantity : 1 on rod side
- F** Option : Rod end male thread
- G** Clean-room specifications : Exhaust port

Code	Description																							
<b>A Model No.</b>																								
SSD2	Double acting/single rod																							
SSD2-L	Double acting/single rod/with switch																							
<b>B Bore size (mm)</b>																								
12	$\phi 12$																							
16	$\phi 16$																							
20	$\phi 20$																							
25	$\phi 25$																							
32	$\phi 32$																							
40	$\phi 40$																							
50	$\phi 50$																							
63	$\phi 63$																							
80	$\phi 80$																							
100	$\phi 100$																							
125	$\phi 125$																							
140	$\phi 140$																							
160	$\phi 160$																							
<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	ACDC		12	16	20	25	32	40	50	63	80	100	125	140	160		
-	F2S	Proximity	●	1-color LED	2-wire			●	●															
-	F3S		●		3-wire			●	●															
F2H*	F2V*		●		2-wire			●	●															
F3H*	F3V*	Proximity	●	1-color LED (PNP output)	3-wire			●	●															
F3PH*	F3PV*		●		3-wire			●	●															
F2YH*	F2YV*		●		2-wire			●	●															
F3YH*	F3YV*	Reed	●	2-color LED	3-wire			●	●															
T0H*	T0V*		●		2-wire			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		●		No indicator lamp	2-wire			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
T8H*	T8V*	Proximity	●	1-color LED	2-wire					●	●	●	●	●	●	●	●	●	●	●	●	●	●	
T1H*	T1V*		●		3-wire						●	●	●	●	●	●	●	●	●	●	●	●	●	●
T2H*	T2V*		●		1-color LED (PNP output) (custom)	3-wire						●	●	●	●	●	●	●	●	●	●	●	●	●
T3H*	T3V*	Proximity	●	2-color LED	2-wire			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
T3PH*	T3PV*		●		3-wire						●	●	●	●	●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*		●		2-wire							●	●	●	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*	Proximity	●	2-color LED	2-wire							●	●	●	●	●	●	●	●	●	●	●	●	
T3WH*	T3WV*		●		3-wire									●	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*		●		2-wire										●	●	●	●	●	●	●	●	●	●
T2YD*	-	Proximity	●	2-color LED	2-wire									●	●	●	●	●	●	●	●	●		
T2YDT*	-		●		AC magnetic field	2-wire										●	●	●	●	●	●	●	●	●
T2JH*	T2JV*	Proximity	●	1-color LED off-delay	2-wire										●	●	●	●	●	●	●	●	●	
T2YD*	-		●		AC magnetic field	2-wire											●	●	●	●	●	●	●	●

\* Lead wire length

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

**E Switch quantity**

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

**F Option**

Blank	Rod end female thread
N	Rod end male thread

**G Clean-room specifications**

	Structure	Material limitations
P7	Exhaust port	-
P71	Vacuum treatment	-
P5	Exhaust port	Copper/silicon/halogen-based materials (fluorine, chlorine, bromine) prohibited (custom)
P51	Vacuum treatment	Copper/silicon/halogen-based materials (fluorine, chlorine, bromine) prohibited (custom)

[Stroke table]

Stroke (mm)	Applicable bore size													
	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125	ø140	ø160	
Standard stroke	5	●	●	●	●	●	●							
	10	●	●	●	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●			
	40			●	●	●	●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●			
	50			●	●	●	●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●	●	●	●
	100					●	●	●	●	●	●	●	●	●
	125										●	●	●	●
	150										●	●	●	●
	175										●	●	●	●
	200										●	●	●	●
	250										●	●	●	●
300										●	●	●	●	
Min. stroke (mm)	1													
Max. stroke (mm)	30		50		100						300			
Custom stroke *1	In 1 mm increments													

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02x10 <sup>2</sup>	1.13x10 <sup>2</sup>
	Pull	-	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	30.2	40.2	60.3	80.4	1.01x10 <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>
ø125	Push	1.23x10 <sup>3</sup>	1.84x10 <sup>3</sup>	2.45x10 <sup>3</sup>	3.68x10 <sup>3</sup>	4.91x10 <sup>3</sup>	6.14x10 <sup>3</sup>	7.36x10 <sup>3</sup>	8.59x10 <sup>3</sup>	9.82x10 <sup>3</sup>	1.10x10 <sup>4</sup>	1.23x10 <sup>4</sup>
	Pull	1.13x10 <sup>3</sup>	1.70x10 <sup>3</sup>	2.26x10 <sup>3</sup>	3.39x10 <sup>3</sup>	4.52x10 <sup>3</sup>	5.65x10 <sup>3</sup>	6.79x10 <sup>3</sup>	7.92x10 <sup>3</sup>	9.05x10 <sup>3</sup>	1.02x10 <sup>4</sup>	1.13x10 <sup>4</sup>
ø140	Push	1.54x10 <sup>3</sup>	2.31x10 <sup>3</sup>	3.08x10 <sup>3</sup>	4.62x10 <sup>3</sup>	6.16x10 <sup>3</sup>	7.70x10 <sup>3</sup>	9.24x10 <sup>3</sup>	1.08x10 <sup>4</sup>	1.23x10 <sup>4</sup>	1.39x10 <sup>4</sup>	1.54x10 <sup>4</sup>
	Pull	1.44x10 <sup>3</sup>	2.16x10 <sup>3</sup>	2.89x10 <sup>3</sup>	4.33x10 <sup>3</sup>	5.77x10 <sup>3</sup>	7.22x10 <sup>3</sup>	8.66x10 <sup>3</sup>	1.01x10 <sup>4</sup>	1.15x10 <sup>4</sup>	1.30x10 <sup>4</sup>	1.44x10 <sup>4</sup>
ø160	Push	2.01x10 <sup>3</sup>	3.02x10 <sup>3</sup>	4.02x10 <sup>3</sup>	6.03x10 <sup>3</sup>	8.04x10 <sup>3</sup>	1.01x10 <sup>4</sup>	1.21x10 <sup>4</sup>	1.41x10 <sup>4</sup>	1.61x10 <sup>4</sup>	1.81x10 <sup>4</sup>	2.01x10 <sup>4</sup>
	Pull	1.88x10 <sup>3</sup>	2.83x10 <sup>3</sup>	3.77x10 <sup>3</sup>	5.65x10 <sup>3</sup>	7.54x10 <sup>3</sup>	9.42x10 <sup>3</sup>	1.13x10 <sup>4</sup>	1.32x10 <sup>4</sup>	1.51x10 <sup>4</sup>	1.70x10 <sup>4</sup>	1.88x10 <sup>4</sup>

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

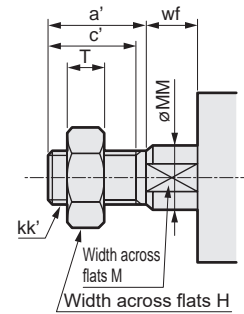
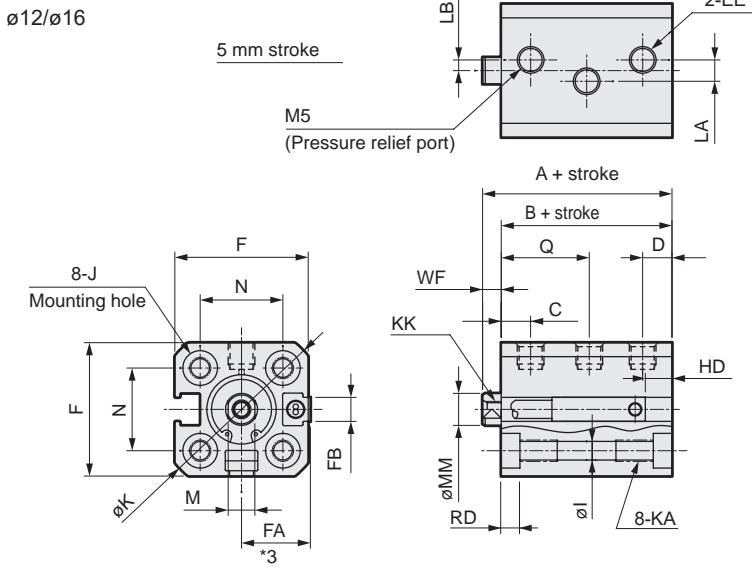


# SSD2-P7\*/P5\* Series

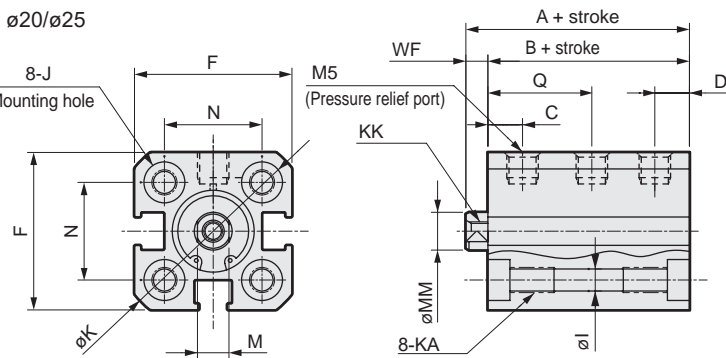
## Dimensions

● SSD2-L-12 to 25-P7\*/P5\* (with switch, TOH/V, T5H/V, T2H/V, T3H/V)

● Rod end male thread



● SSD2-12 to 25-P7\*/P5\* (without switch)



Code	No switch		Common dimensions with switch																		
	A <sup>*1</sup>	B <sup>*1</sup>	A	B	C	D	LA		LB		Q <sup>*4</sup>	EE	F	FA <sup>*3</sup>	FB	I	J	K	KA	KK	
	Bore size (mm)						≤5 St	Over 5 st	≤5 St	Over 5 st											
SRL3	ø12	30.5	27	35.5	32	5.5	5.5	4	0	2	0	16.5(16)	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6
	ø16	30.5	27	35.5	32	5.5	5.5	6	0	0	0	16.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8
SRG3	ø20	34	29.5	44	39.5	5.5	7	-	-	-	-	16.5	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M6 depth 7
	ø25	37.5	32.5	47.5	42.5	7	8.5	-	-	-	-	18	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12

Code	Common dimensions with switch				Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S		
	M	MM	N	WF	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	
SRT3	ø12	5	6	15.5	3.5	4	9	4	9	6	11	-	-	-	
	ø16	6	8	20	3.5	2	11.5	2	11.5	3	13.5	-	-	-	
MRL2	ø20	8	10	25.5	4.5	6	14.5	6	14.5	8	16.5	10.5	19	9.5	18
	ø25	10	12	28	5	8	16	8	16	10	18	12.5	20	11.5	19

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

\*4 : Dimensions in ( ) of code Q are when the value is for a 5 mm stroke without switch.

\*5 : Only F-switch is available for the ø20 or ø25 piping port surface.

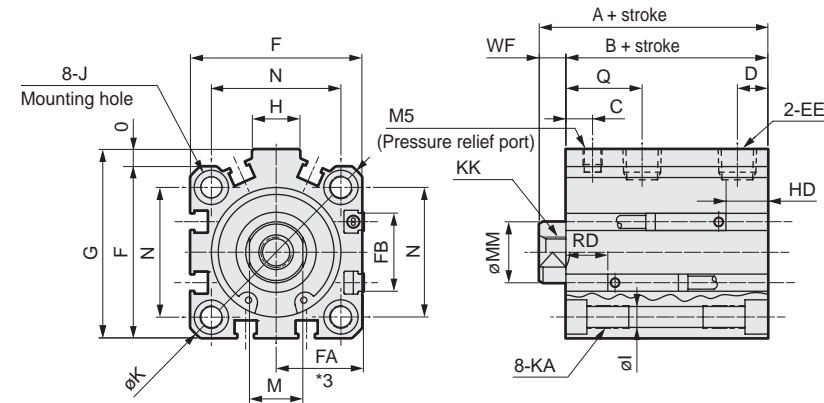
Code	Proximity T2YH/T2YV, T3YH/T3YV/T2JH/T2JV		Reed T8H/T8V		AC magnetic field proof T2YD/T2YDT/T1H/T1V	
	HD	RD	HD	RD	HD	RD
ø12	-	-	-	-	-	-
ø16	-	-	-	-	-	-
ø20	5	13.5	-	-	-	-
ø25	6.5	15	-	-	-	-

● Rod end male thread

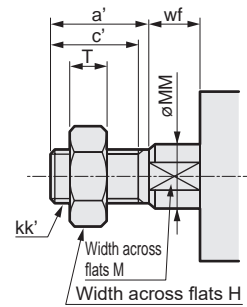
Code	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10x1.25	10	12	6	5

### Dimensions

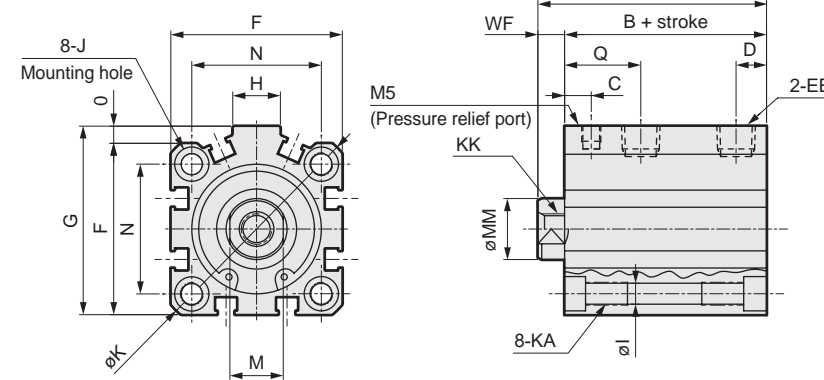
● SSD2-L-32 to 100-P7\*/P5\* (with switch, TOH/V, T5H/V, T2H/V, T3H/V)



● Rod end male thread



● SSD2-32 to 100-P7\*/P5\* (without switch)



Code	No switch		Common dimensions with switch													
	A <sup>*1, *4</sup>	B <sup>*1, *4</sup>	A <sup>*1</sup>	B <sup>*1</sup>	C	D <sup>*6</sup>	Q	EE	F	FA <sup>*3</sup>	FB	G	H	I	J	K
ø32	40(50)	33(43)	50	43	7	8(5.5)	20	Rc1/8 <sup>*5</sup>	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60
ø40	46.5(56.5)	39.5(49.5)	56.5	49.5	8.5	8	21.5	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69
ø50	48.5(58.5)	40.5(50.5)	58.5	50.5	9.5	10.5(9.5)	25	Rc1/4 <sup>*5</sup>	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86
ø63	54(64)	46(56)	64	56	10	11	25.5	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face depth 9	103
ø80	68.5(78.5)	58.5(68.5)	78.5	68.5	11.5	13	30	Rc3/8	98	49.5(53)	28.5	104	31	10.5	17.5 spot face depth 11	132
ø100	80(90)	68(78)	90	78	15.5	15	35	Rc3/8	117	59(62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156

Code	Common dimensions with switch							Reed TOH/TOV, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
	KA	KK	M	MM	N	O	WF	HD	RD	HD	RD	HD	RD
ø32	M6 depth 11	M8 depth 13	14	16	34	4.5	7	4	19.5	4	19.5	6	21.5
ø40	M6 depth 11	M8 depth 13	14	16	40	5	7	7	22	7	22	8.5	23.5
ø50	M8 depth 13	M10 depth 15	17	20	50	7	8	7.5	22.5	7.5	22.5	9	24
ø63	M10 depth 25	M10 depth 15	17	20	60	7	8	12.5	23	12.5	23	14	24.5
ø80	M12 depth 28	M16 depth 21	22	25	77	6	10	17.5	25.5	17.5	25.5	19	27
ø100	M12 depth 28	M20 depth 27	27	30	94	6.5	12	23	29.5	23	29.5	24.5	31

Code	Proximity T2YH/T2YV, T3YH/T3YV, T2JH/T2JV		Reed T8H/T8V		AC magnetic field proof T2YD, T2YD/T1H/T1V	
	HD	RD	HD	RD	HD	RD
ø32	3.5	18.5	-	-	3.5	18.5
ø40	5.5	20.5	1	16	5.5	20.5
ø50	6	21	1.5	16.5	6	21
ø63	11	21.5	6.5	17	11	21.5
ø80	16	24	11.5	19.5	16	24
ø100	21.5	28	17	23.5	21.5	28

- \*1 : To calculate A+ stroke 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 : Dimensions in ( ) of FA are for the L-shaped lead wire.
- \*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 Rc1/8.
- \*6 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

● Rod end male thread

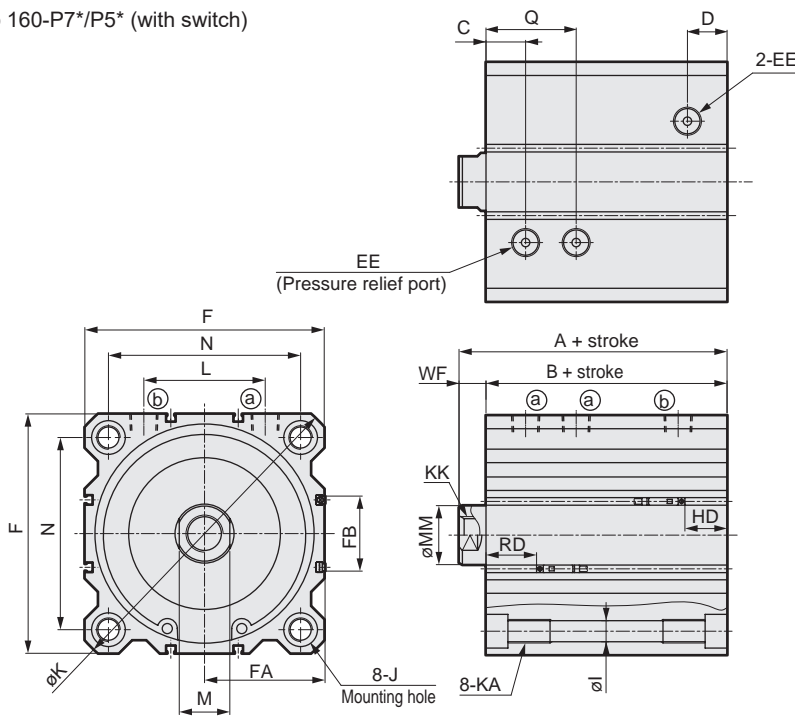
Code	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14x1.5	14	16	8	5
ø40	23.5	20.5	22	M14x1.5	14	16	8	5
ø50	28.5	26	27	M18x1.5	17	20	11	5
ø63	28.5	26	27	M18x1.5	17	20	11	5
ø80	35.5	32.5	32	M22x1.5	22	25	13	8
ø100	35.5	32.5	41	M26x1.5	27	30	16	8

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

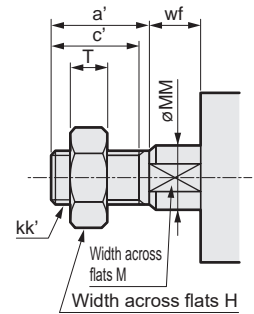
# SSD2-P7\*/P5\* Series

## Dimensions (ø125 to ø160)

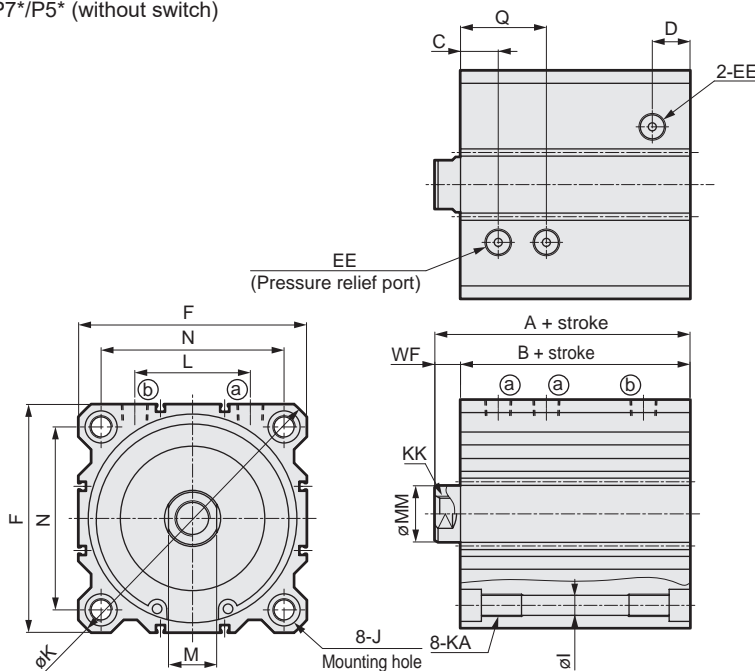
### ● SSD2-L-125 to 160-P7\*/P5\* (with switch)



### ● Rod end male thread



### ● SSD2-125 to 160-P7\*/P5\* (without switch)



Code	Common dimensions for types with/without switch																		
Bore size (mm)	A	B	C	D	EE	F	FA <sup>*2</sup>	FB	I	J	K	KA	KK	L	M	MM	N	Q	WF
ø125	118	102	23.5	23.5	Rc3/8	142	71.5(75)	44.5	12.5	20 spot face depth 13	190	M14 depth 25	M22 depth 30	72	30	35	114	53.5	16
ø140	128	112	27	27	Rc3/8	158	79.5(83)	44.5	12.5	20 spot face depth 13	210	M14 depth 25	M22 depth 30	80	30	35	128	57	16
ø160	143	126	30	30	Rc3/8	178	89.5(93)	48.5	14.7	23 spot face depth 15.2	238	M16 depth 28	M24 depth 33	90	36	40	144	65	17
Code	Reed T0H/T0V, T5H/T5V				Proximity T2H/T2V, T3H/T3V		Proximity T2YH/T2YV, T3YH/T3YV												
Bore size (mm)	HD		RD		HD		RD												
ø125	24.5		59.5		24.5		59.5												
ø140	31		63		31		63												
ø160	34		74		34		74												

● \*1 : Refer to page 1044 for HD , RD, and protruding dimensions of the 2-color LED switches.

● \*2 : Dimensions in ( ) of FA are for the L-shaped lead wire.

### Dimensions of rod end male thread

Code	a'	c'	H	kk'	M	MM	T	wf
Bore size (mm)								
ø125	45	42	46	M30x1.5	30	35	18	13
ø140	45	42	46	M30x1.5	30	35	18	13
ø160	50	47	55	M36x1.5	36	40	21	14

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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

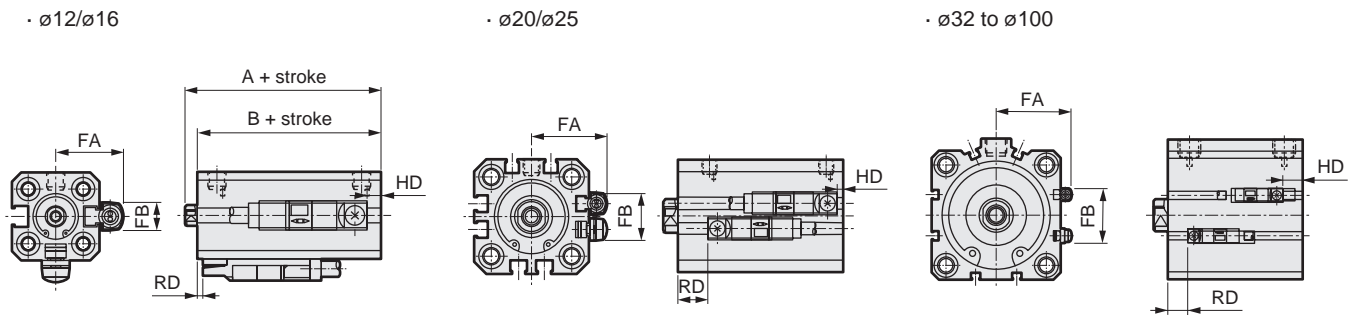
Spd  
Contr

Ending

# SSD2 Series

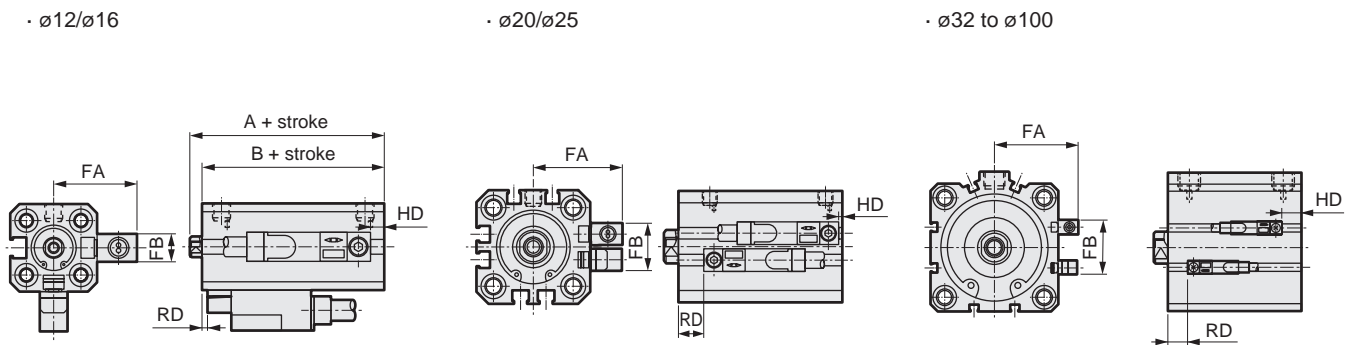
## SSD2 Series common dimensions (with 2-color LED, off-delay, AC magnetic field, T1\* and T8\* switches)

● SSD2-L-12 to 100 (with 2-color LED, off-delay, T8\* switches/T2YH/V, T3YH/V, T2JH/V, T8H/V)



Code	FA	FB	T2YH/V, T3YH/V, T2JH/V												T8H/V										
			SSD2-L, XL, YL		SSD2-DL <sup>*1</sup>		SSD2 (Long)-L <sup>*2</sup>		SSD2-ML		SSD2-GL		SSD2-G5L		SSD2-L, XL, YL, GL		SSD2-DL <sup>*1</sup>		SSD2-ML		SSD2 (Long)-L <sup>*2</sup>		SSD2-G5L		
			RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	
SSG	ø12	18.8	8	-	-	1	3.5	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	ø16	20.8	8	-	-	0.5	3.5	2.5	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SSD	ø20	24.3	16	6.5	2	5	8	14(8.5)	5.5(11)	10	1.5	16.5	2	-	-	-	-	0.5	3.5	-	-	9.5(4)	0(6.5)	-	-
	ø25	26.3	17	8.5	3	8	10	17.5(10.5)	5(12.5)	13	1.5	18.5	3	-	-	-	-	1.5	5.5	-	-	13(6)	0(8)	-	-
CAT	ø32	28.8	24	8.5	3.5	7.5	9.5	16(8)	8(14.5)	17.5	2	18.5	3.5	19.5	3.5	-	-	3	5	-	-	11.5(4)	2.5(10)	-	-
	ø40	32.3	31	10.5	5.5	10.5	15	24.5(15)	8(17.5)	10.5	5.5	10.5	5.5	20.5	5.5	6	1	6	10.5	6	1	20(10.5)	3.5(13)	16	1
MDC2	ø50	38.3	32	11	6	11	15	24.5(16)	8.5(17.5)	11	6	11	6	21	6	6.5	1.5	6.5	10.5	6.5	1.5	19.5(11)	4(13)	16.5	1.5
	ø63	44.8	32	11.5	11	11.5	16.5	18.5(13.5)	16(21.5)	11.5	11	11.5	11	21.5	11	7	6.5	7	12	7	6.5	13.5(8.5)	11.5(17)	17	6.5
MVC	ø80	55.3	32	14	16	14	21.5	22.5(17.5)	20.5(26.5)	-	-	14	16	28	16	9.5	11.5	9.5	17	-	-	17.5(12.5)	16(22)	23.5	11.5
	ø100	64.8	32	18	21.5	18	27	26.5(21.5)	26.5(32)	-	-	18	21.5	33.5	21.5	13.5	17	13.5	22.5	-	-	21.5(16.5)	22(27.5)	29	17

● SSD2-L-12 to 100 (for AC magnetic field, with T1\* switch, T2YD, T2YDT, T1H/V)



Code	FA	FB	SSD2-L, XL, YL		SSD2-DL <sup>*1</sup>		SSD2 (Long stroke)-L <sup>*2</sup>		SSD2-ML		SSD2-GL		SSD2-G5L	
			RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD
SM-25	ø12	23.8	8	-	-	1.5	4	3	1	-	-	-	-	-
	ø16	25.8	8	-	-	0.5	3.5	2.5	1.5	-	-	-	-	-
ShkAbs	ø20	29.3	16	6.5	2	5	8	14(8.5)	5.5(11)	10	1.5	16.5	2	-
	ø25	31.3	17	8.5	3	8	10	17.5(10.5)	5(12.5)	13	1.5	18.5	3	-
FJ	ø32	33.8	24	8.5	3.5	7.5	9.5	16(8)	8(14.5)	17.5	2	18.5	3.5	19.5
	ø40	37.3	31	10.5	5.5	10.5	15	24.5(15)	8(17.5)	10.5	5.5	10.5	5.5	20.5
FK	ø50	43.3	32	11	6	11	15	24.5(16)	8.5(17.5)	11	6	11	6	21
	ø63	49.8	32	11.5	11	11.5	16.5	18.5(13.5)	16(21.5)	11.5	11	11.5	11	21.5
Spd Contr	ø80	60.3	32	14	16	14	21.5	22.5(17.5)	20.5(26.5)	-	-	14	16	28
	ø100	69.8	32	18	21.5	18	27	26.5(21.5)	26.5(32)	-	-	18	21.5	33.5

\*1: The port surface with the mark is the "RD side".

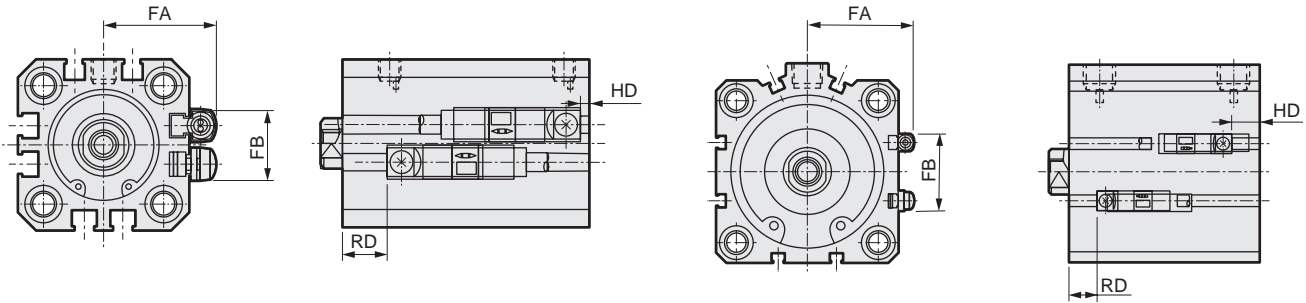
\*2: Dimensions in ( ) are for stroke over 100 for ø20, stroke over 150 for ø25 to ø50, and stroke over 200 for ø63 to ø100.

### SSD2-K Series common dimensions (with 2-color LED, off-delay, AC magnetic field, T1\* and T8\* switches)

- SSD2-KL-20 to 100 (with 2-color LED, off-delay, T8\* switches/T2YH/V, T3YH/V, T2JH/V, T8H/V)

·  $\varnothing 20/\varnothing 25$

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

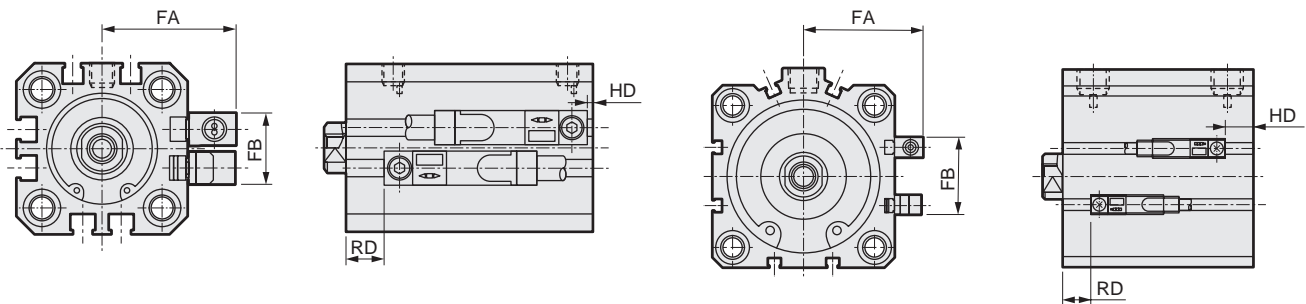


Code	FA	FB	T2YH/V, T3YH/V, T2JH/V		T8H/V	
			RD	HD	RD	HD
$\varnothing 20$	24.3	16	8	5.5	-	-
$\varnothing 25$	26.3	17	11.5	5	-	-
$\varnothing 32$	28.8	24	14	8	-	-
$\varnothing 40$	32.3	31	18	8	13.5	3.5
$\varnothing 50$	38.3	32	18.5	8.5	14	4
$\varnothing 63$	44.8	32	16.5	16	12	11.5
$\varnothing 80$	55.3	32	19	20.5	14.5	16
$\varnothing 100$	64.8	32	23	26.5	18.5	22

- SSD2-KL-20 to 100 (for AC magnetic field, with T1\* switch, T2YD, T2YDT, T1H/V)

·  $\varnothing 20/\varnothing 25$

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



Code	FA	FB	RD	HD
$\varnothing 20$	29.3	16	8	5.5
$\varnothing 25$	31.3	17	11.5	5
$\varnothing 32$	33.8	24	14	8
$\varnothing 40$	37.3	31	18	8
$\varnothing 50$	43.3	32	18.5	8.5
$\varnothing 63$	49.8	32	16.5	16
$\varnothing 80$	60.3	32	19	20.5
$\varnothing 100$	60.8	32	23	26.5

SCP\*3

CMK2

CMA2

SCM

SCG

SCA2

SCS2

CKV2

CAV2/  
COVP/N2

SSD2

SSG

SSD

CAT

MDC2

MVC

SMG

MSD/  
MSDG

FC\*

STK

SRL3

SRG3

SRM3

SRT3

MRL2

MRG2

SM-25

ShkAbs

FJ

FK

Spd  
Contr

Ending

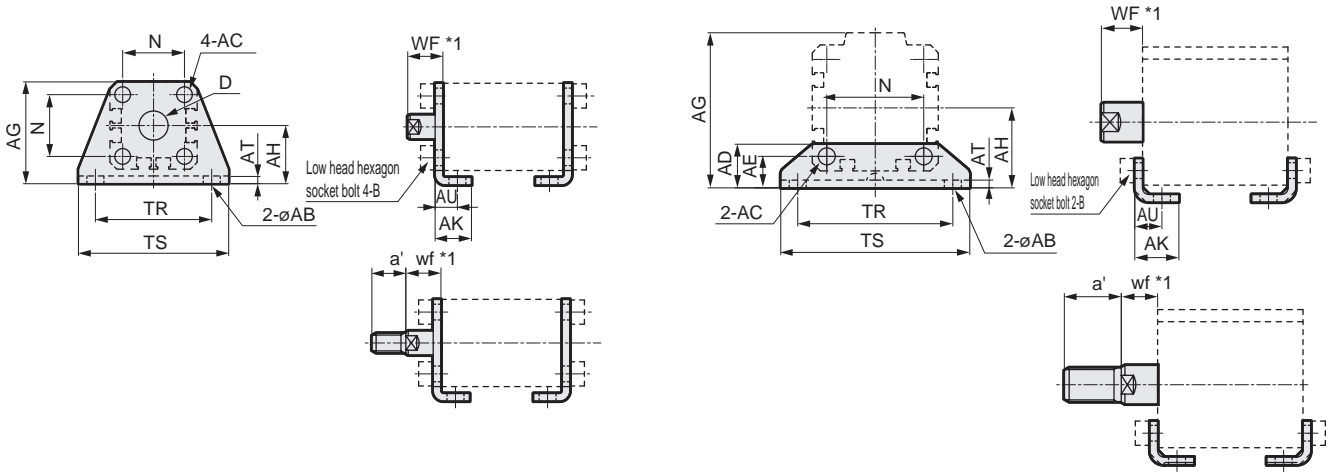


## Dimensions (Mounting bracket: LB)

- Axial foot (LB)
- $\phi 12$  to  $\phi 25$

·  $\phi 32$  to  $\phi 100$

Material: Steel  
Zinc  
chromate  
treatment



\*1: Hex socket mounting bolts are included.

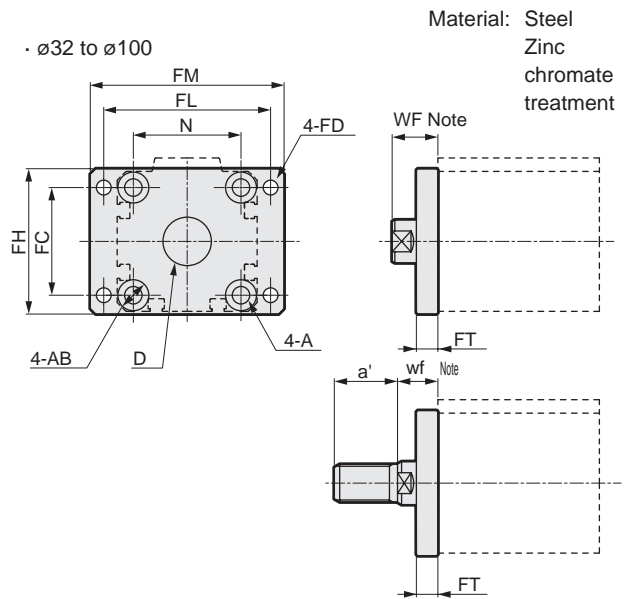
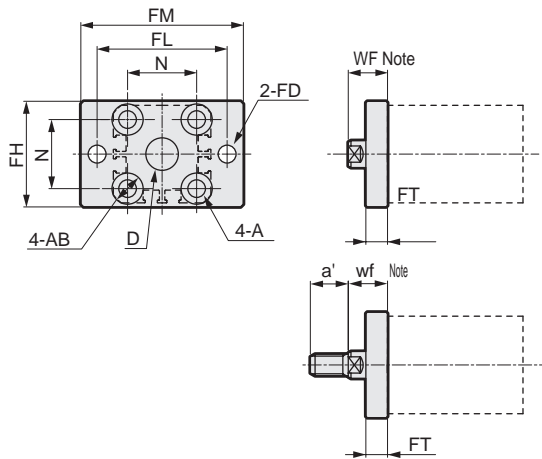
Model No.	Bore size	AB	AC	AD	AE	AG	AH	AK	AT	AU	B	D	N	TR	TS	WF	wf	a'	Weight (g)
SSD2-LB-12	$\phi 12$	5	4.5	-	-	29.5	17	12.5	2	8	M4x10	8	15.5	34	44	13.5	13.5	10.5	51
SSD2-LB-16	$\phi 16$	5	4.5	-	-	33.5	19	13	2	8	M4x10	10	20	38	48	13.5	13.5	12	61
SSD2-LB-20	$\phi 20$	7	6.5	-	-	42	24	15	3.2	9.2	M6x16	12	25.5	48	62	14.5	14.5	14	161
SSD2-LB-25	$\phi 25$	7	6.5	-	-	46	26	16.5	3.2	10.7	M6x16	14	28	52	66	15	15	17.5	176
SSD2-LB-32	$\phi 32$	7	7	18.5	13	57	30	17	3.2	11.2	M6x16	-	34	57	71	17	15	23.5	107
SSD2-LB-40	$\phi 40$	7	7	18	13	64	33	18.2	3.2	11.2	M6x16	-	40	64	78	17	15	23.5	121
SSD2-LB-50	$\phi 50$	9	9	22	14	78	39	22.7	3.2	14.7	M8x20	-	50	79	95	18	15	28.5	201
SSD2-LB-63	$\phi 63$	11	11	26	16	91.5	46	25.2	3.2	16.2	M10x25	-	60	95	113	18	15	28.5	314
SSD2-LB-80	$\phi 80$	13	13	31.5	20.5	114	59	30.5	4.5	19.5	M12x40	-	77	118	140	20	18	35.5	678
SSD2-LB-100	$\phi 100$	13	13	35	24	136	71	35.5	6	23	M12x40	-	94	137	162	22	18	35.5	1198

\*1: The WF/wf dimension of the cylinder for LB is set 10 mm longer than that of standard products. Contact CKD for the cylinder model No. when ordering individual cylinders and LB brackets.

\*2: The mounting brackets for SSD2 are the same dimensions as the compact mounting brackets for SSD. Check the General Catalog (CB-029SA) in order to avoid mistakes. (Example: SSD2-LB-32 is the same dimensions as SSD-LB2-32.)

## Dimensions (Mounting bracket: FA, FB)

- Rod side flange (FA)
  - $\phi 12$  to  $\phi 25$

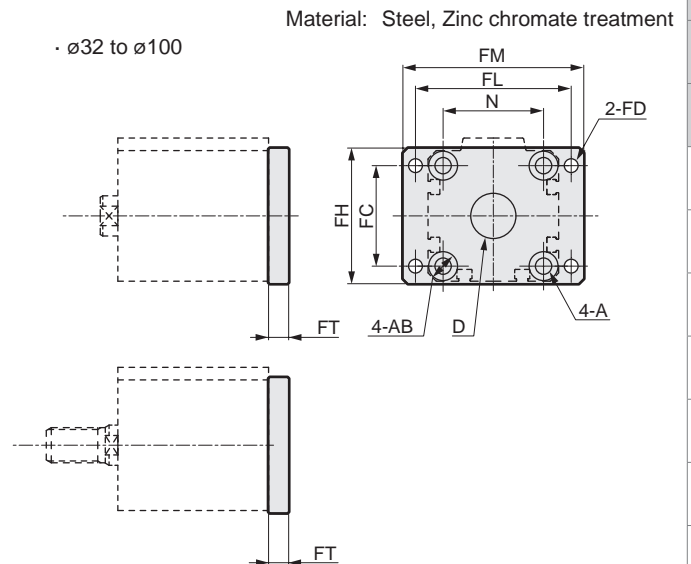
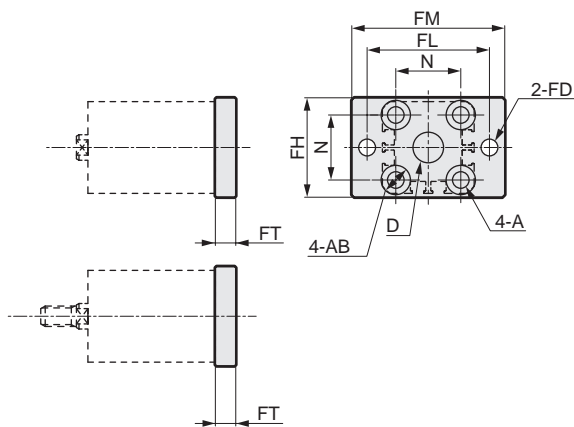


\*1: Mounting bolts are included.

Model No.	Bore size	FC	FD	FH	FL	FM	FT	A	AB	D	N	WF	wf	a'	Weight (g)
SSD2-FA-12	$\phi 12$	-	4.5	25	45	55	5.5	4.5	8.5 spot face depth 2.7	8	15.5	13.5	13.5	10.5	54
SSD2-FA-16	$\phi 16$	-	4.5	30	45	55	5.5	4.5	8.5 spot face depth 2.7	10	20	13.5	13.5	12	64
SSD2-FA-20	$\phi 20$	-	6.6	39	48	60	8	6.5	11.5 spot face depth 3.8	12	25.5	14.5	14.5	14	129
SSD2-FA-25	$\phi 25$	-	6.6	42	52	64	8	6.5	11.5 spot face depth 3.8	14	28	15	15	17.5	148
SSD2-FA-32	$\phi 32$	34	5.5	48	56	65	8	6.5	11.5 spot face depth 3.8	22	34	17	15	23.5	167
SSD2-FA-40	$\phi 40$	40	5.5	54	62	72	8	6.5	11.5 spot face depth 3.8	28	40	17	15	23.5	215
SSD2-FA-50	$\phi 50$	50	6.6	67	76	89	9	9	15 spot face depth 5	35	50	18	15	28.5	387
SSD2-FA-63	$\phi 63$	60	9	80	92	108	9	11	18 spot face depth 6	35	60	18	15	28.5	573
SSD2-FA-80	$\phi 80$	77	11	99	116	134	11	13	19 spot face depth 7.5	43	77	20	18	35.5	1132
SSD2-FA-100	$\phi 100$	94	11	117	136	154	11	13	19 spot face depth 7.5	59	94	22	18	35.5	1522

Note: The WF/wf dimension of the cylinder for FA is set 10 mm longer than that of standard products. Contact CKD for the cylinder model No. when ordering individual cylinders and FA brackets.

- Head side flange (FB)
  - $\phi 12$  to  $\phi 25$



\*1: Mounting bolts are included.

Model No.	Bore size	FC	FD	FH	FL	FM	FT	A	AB	D	N	Weight (g)
SSD2-FB-12	$\phi 12$	-	4.5	25	45	55	5.5	4.5	8.5 spot face depth 2.7	8	15.5	54
SSD2-FB-16	$\phi 16$	-	4.5	30	45	55	5.5	4.5	8.5 spot face depth 2.7	10	20	64
SSD2-FB-20	$\phi 20$	-	6.6	39	48	60	8	6.5	11.5 spot face depth 3.8	12	25.5	129
SSD2-FB-25	$\phi 25$	-	6.6	42	52	64	8	6.5	11.5 spot face depth 3.8	14	28	148
SSD2-FB-32	$\phi 32$	34	5.5	48	56	65	8	6.5	11.5 spot face depth 3.8	22	34	167
SSD2-FB-40	$\phi 40$	40	5.5	54	62	72	8	6.5	11.5 spot face depth 3.8	28	40	215
SSD2-FB-50	$\phi 50$	50	6.6	67	76	89	9	9	15 spot face depth 5	35	50	387
SSD2-FB-63	$\phi 63$	60	9	80	92	108	9	11	18 spot face depth 6	35	60	573
SSD2-FB-80	$\phi 80$	77	11	99	116	134	11	13	19 spot face depth 7.5	43	77	1132
SSD2-FB-100	$\phi 100$	94	11	117	136	154	11	13	19 spot face depth 7.5	59	94	1522

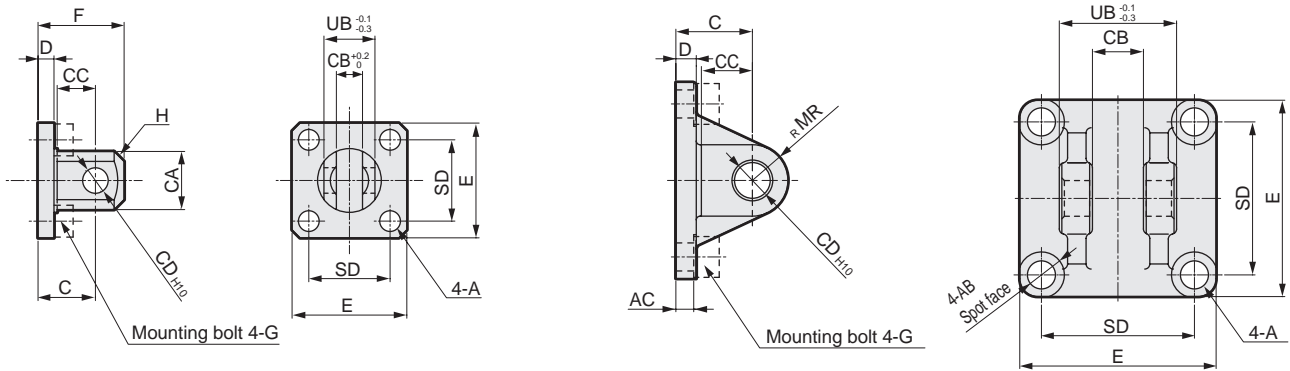
SCP\*3  
CMK2  
CMA2  
SCM  
SCG  
SCA2  
SCS2  
CKV2  
CAV2/  
COVP/N2  
**SSD2**  
SSG  
SSD  
CAT  
MDC2  
MVC  
SMG  
MSD/  
MSDG  
FC\*  
STK  
SRL3  
SRG3  
SRM3  
SRT3  
MRL2  
MRG2  
SM-25  
ShkAbs  
FJ  
FK  
Spd  
Contr  
Ending



## Dimensions (Mounting bracket: CB)

- Clevis bracket (CB)

Material: Cast iron  
Painted



\*1: Hex socket mounting bolts, pins, and snap rings are included.

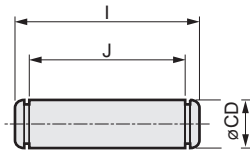
SSD2	Model No.	Bore size	A	AB	AC	C	CA	CB	CC	CD	D	E	F	G	H	MR	SD	UB	Weight (g)
SSG	SSD2-CB-12	ø12	4.5	-	-	14	12	5.2 <sup>+0.2</sup> <sub>0</sub>	7	5	4	25	20	M4x12	C1.5	-	15.5	10	28
SSD	SSD2-CB-16	ø16	4.5	-	-	15	15	6.6 <sup>+0.3</sup> <sub>0</sub>	8	5	5	29	21	M4x12	C2	-	20	12	43
	SSD2-CB-20	ø20	6.5	-	-	18	20	8.2 <sup>+0.2</sup> <sub>0</sub>	12	8	5	36	27	M6x16	C4	-	25.5	16	84
	SSD2-CB-25	ø25	6.5	-	-	20	24	10.2 <sup>+0.2</sup> <sub>0</sub>	14	10	5	40	30	M6x16	C5	-	28	20	110
CAT	SSD2-CB-32	ø32	6.6	13	4.5	20	-	18.2 <sup>+0.2</sup> <sub>0</sub>	14	10	5	45	30	M6x16	-	10	34	36	159
	SSD2-CB-40	ø40	6.6	14	5	22	-	18.2 <sup>+0.2</sup> <sub>0</sub>	14	10	6	52	32	M6x16	-	10	40	36	207
MDC2	SSD2-CB-50	ø50	9	16	6	28	-	22.2 <sup>+0.2</sup> <sub>0</sub>	20	14	7	64	42	M8x20	-	14	50	44	420
	SSD2-CB-63	ø63	11	18	7	30	-	22.2 <sup>+0.2</sup> <sub>0</sub>	20	14	8	77	44	M10x25	-	14	60	44	605
	SSD2-CB-80	ø80	13.5	23	9	38	-	28.2 <sup>+0.2</sup> <sub>0</sub>	27	18	10	98	56	M12x40	-	18	77	56	1222
MVC	SSD2-CB-100	ø100	13.5	20	12	45	-	32.2 <sup>+0.2</sup> <sub>0</sub>	31	22	13	117	67	M12x40	-	22	94	64	2031

\*1: The mounting brackets for SSD2 are the same dimensions as the compact mounting brackets for SSD.

Check the General Catalog (CB-029SA) in order to avoid mistakes.  
(Example: SSD2-CB-32 is the same dimensions as SSD-CB2-32.)

- Clevis bracket (CB) included pin dimensions table (P)

Material: Steel  
Zinc  
chromate  
treatment



Model No.	Applicable bore size	I	J	CD	Applicable snap ring	Weight (g)
SSD2-P-12	ø12	15.2	10.2	5 <sup>-0.01</sup> <sub>-0.028</sub>	E type 4	2.4
SSD2-P-16	ø16	18	13	5 <sup>-0.01</sup> <sub>-0.028</sub>	E type 4	2.8
SSD2-P-20	ø20	21	16.2	8 <sup>-0.025</sup> <sub>-0.047</sub>	C type for shaft 8	8.2
SSD2-P-25	ø25	25.6	20.2	10 <sup>-0.025</sup> <sub>-0.047</sub>	C type for shaft 10	16
SSD2-P-32	ø32/ø40	41.6	36.2	10 <sup>-0.025</sup> <sub>-0.047</sub>	C type for shaft 10	25
SSD2-P-50	ø50/ø63	50.6	44.2	14 <sup>-0.032</sup> <sub>-0.059</sub>	C type for shaft 14	60
SSD2-P-80	ø80	64	56.2	18 <sup>-0.032</sup> <sub>-0.059</sub>	C type for shaft 18	124
SSD2-P-100	ø100	72	64.2	22 <sup>-0.040</sup> <sub>-0.083</sub>	C type for shaft 22	213

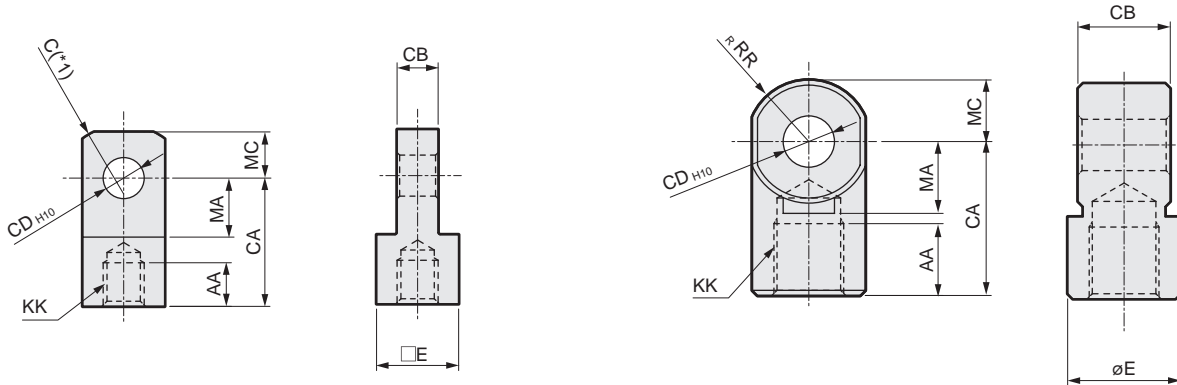
## Dimensions (Accessory: I, Y)



- Rod eye (I)
  - $\phi 12$  to  $\phi 25$

Material: Steel  
Zinc chromate treatment ·  $\phi 32$  to  $\phi 100$

Material: Cast iron  
Painted



\*1:  $\phi 20/25$  are SR RR

Model No.	Bore size	AA	CA	CB	CD	E	KK	MA	C	RR	MC	Weight (g)
SSD2-I-12	$\phi 12$	6	16	$5^{+0.2}_{-0.4}$	5	$\square 10$	M5x0.8	7	2	-	5.5	9
SSD2-I-16	$\phi 16$	8	25	$6.5^{+0.2}_{-0.4}$	5	$\square 12$	M6x1	14	2	-	7	21
SSD2-I-20	$\phi 20$	8.5	25	$8^{+0.2}_{-0.4}$	8	$\square 16$	M8x1.25	11.5	-	13.4	9	38
SSD2-I-25	$\phi 25$	10.5	30	$10^{+0.2}_{-0.4}$	10	$\square 20$	M10x1.25	14	-	17.1	11	71
SSD2-I-32	$\phi 32/\phi 40$	14	30	$18^{+0.3}_{-0.5}$	10	$\phi 22$	M14x1.5	14	-	12	12	74
SSD2-I-50	$\phi 50/\phi 63$	18	40	$22^{+0.3}_{-0.5}$	14	$\phi 28$	M18x1.5	20	-	16	16	155
SSD2-I-80	$\phi 80$	21	50	$28^{+0.3}_{-0.5}$	18	$\phi 38$	M22x1.5	27	-	21	21	380
SSD2-I-100	$\phi 100$	21	55	$32^{+0.3}_{-0.5}$	22	$\phi 44$	M26x1.5	31	-	24	24	550

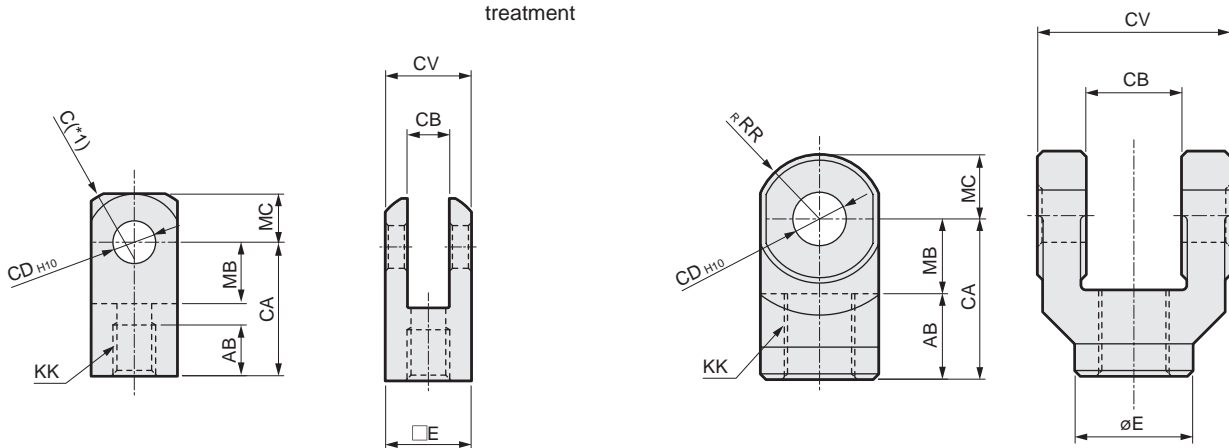
\*1: The accessories for SSD2 are the same dimensions as the compact accessories for SSD.

Check the General Catalog (CB-029SA) in order to avoid mistakes.  
(Example: SSD2-I-32 is the same dimensions as SSD-I2-32.)

- Rod clevis (Y)
  - $\phi 12$  to  $\phi 25$

Material: Steel  
Zinc chromate treatment ·  $\phi 32$  to  $\phi 100$

Material: Cast iron  
Painted



\*1:  $\phi 20/25$  are SR RR

\*2: A pin (including C-ring) is included.

\*3: The pins for the rod clevis are common with the pins for the clevis brackets.

Model No.	Bore size	AB	CA	CB	CD	CV	E	KK	MB	C	RR	MC	Weight (g)
SSD2-Y-12	$\phi 12$	6	16	$5^{+0.4}_{+0.2}$	5	10	$\square 10$	M5x0.8	7	2	-	5.5	12
SSD2-Y-16	$\phi 16$	11	21	$6.5^{+0.4}_{+0.2}$	5	12	$\square 12$	M6x1	10	2	-	7	20
SSD2-Y-20	$\phi 20$	13.5	25	$8^{+0.4}_{+0.2}$	8	16	$\square 16$	M8x1.25	11.5	-	13.4	9	45
SSD2-Y-25	$\phi 25$	16	30	$10^{+0.4}_{+0.2}$	10	20	$\square 20$	M10x1.25	14	-	17.1	11	84
SSD2-Y-32	$\phi 32/\phi 40$	16	30	$18^{+0.5}_{+0.3}$	10	36	$\phi 22$	M14x1.5	14	-	12	12	120
SSD2-Y-50	$\phi 50/\phi 63$	20	40	$22^{+0.5}_{+0.3}$	14	44	$\phi 28$	M18x1.5	20	-	16	16	257
SSD2-Y-80	$\phi 80$	23	50	$28^{+0.5}_{+0.3}$	18	56	$\phi 38$	M22x1.5	27	-	21	21	589
SSD2-Y-100	$\phi 100$	24	55	$32^{+0.5}_{+0.3}$	22	64	$\phi 44$	M26x1.5	31	-	24	24	933

\*1: The accessories for SSD2 are the same dimensions as the compact accessories for SSD.

Check the General Catalog (CB-029SA) in order to avoid mistakes.  
(Example: SSD2-Y-32 is the same dimensions as SSD-Y2-32.)

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