

Compact cylinder Double acting single rod type

# SSD 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

Descriptions	SSD SSD-L (with switch)														
	Bore size mm														
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													
Min. working pressure	MPa	0.1							0.05						
Withstanding pressure	MPa	1.6													
Ambient temperature	°C	-10 to 60 (no freezing)													
Port size		M5				Rc1/8		Rc1/4		Rc3/8					
Stroke length	Rubber cushioned									+2.0 0					
tolerance	mm	+1.0 0							-						
Working piston speed	mm/s	50 to 500							50 to 300						
Cushion		The type with rubber cushion or without rubber cushion can be selected.										Rubber cushioned (standard)			
Lubrication		Not required (when lubrication, use turbine oil Class 1 ISO VG32.)													
Allowable energy	Rubber cushioned	0.03	0.05	0.10	0.16	0.16	0.44	0.75	0.78	2.51	3.92	6.52	6.52	7.78	
absorption	J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56	-			

## Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	
$\phi$ 12	5, 10, 15, 20, 25, 30	Note 1) 30	1	
$\phi$ 16				
$\phi$ 20				
$\phi$ 25				
$\phi$ 32	5, 10, 15, 20, 25, 30, 40, 50	Note 1) 50		
$\phi$ 40				
$\phi$ 50				
$\phi$ 63				
$\phi$ 80	5, 10, 20, 30, 40, 50	Note 1) 50		
$\phi$ 100				
$\phi$ 125				10, 20, 30, 40
$\phi$ 140				
$\phi$ 160				
	90, 100			

Note 1: If the standard stroke is exceeded,  $\phi$ 12 to  $\phi$  100 diameter types will be high-load. Refer to page 748 for specifications.

Note 2: Refer to the switch quantity and min. stroke length on the next page when using cylinder with switch.

## Custom stroke length

### ● SSD Series

Descriptions	Standard products		Options	
	Standard stroke length spacer type		Dedicating body type (-S)	
Model no. display	Refer to how to order.		Indicate "S" in "Option" of how to order	
Manufacturing descriptions	A 1mm unit stroke is manufactured by using a spacer on the standard stroke unit.		A dedicated unit can be manufactured for the designated stroke.	
Stroke range	Bore size	Stroke range	Bore size	Stroke range
	12, 16	1 to 29	12, 16	6 (11) to 29 (Note 1)
	20 to 50	1 to 49	20 to 50	6 to 49
	63 to 100	1 to 49	63 to 100	6 to 49
	125 to 160	1 to 299 (Note 2)	125 to 160	1 to 299 (Note 2)
Example of model no.	Model no.: SSD-32-38 +2 mm spacer is provided on the standard cylinder SSD-32-40 to attain 38 mm stroke. B dimension is 63 mm.		Model no.: SSD-32-38-S Dedicating body for 38 stroke length is available. B dimension is 61 mm.	

Note 1: Values in parentheses apply to cylinders with switches.

Note 2: The dedicating type is used as standard for  $\phi$  125 to  $\phi$  160.

## Clean room specifications

(catalog No. CB-033SA)

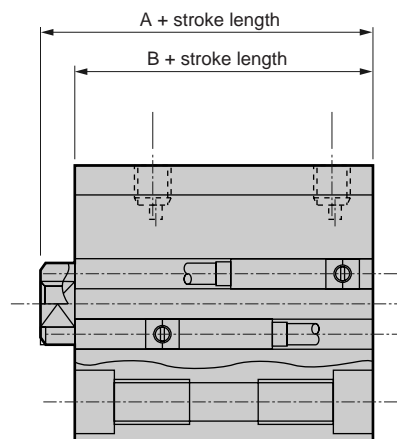
- Dust generation preventing structure for use in cleanrooms

SSD:

P7\*

SSD:

P5\*



### Switch quantity and min. stroke length (mm)

Switch quantity	1	2	3	4	5
Switch model no.	T*	T*	T*	T*	T*
Bore size (mm)					
φ 12	5	5	25	-	-
φ 16	5	5	25	-	-
φ 20	5	5	-	-	-
φ 25	5	5	35	50	-
φ 32	5	5	35	50	-
φ 40	5	5	35	50	-
φ 50	5	5	35	50	-
φ 63	5	5	35	50	-
φ 80	5	5	35	50	-
φ 100	5	5	35	50	-
φ 125	5	5	40	55	70
φ 140	5	5	40	55	70
φ 160	5	5	40	55	70

Note: Stroke less than 10 mm is not available for 2 color indicator, off-delay, strong magnetic field proof, or types with T1\* or T8\* switches.

### Switch specifications

● 1 color/2 color indicator/strong magnetic field proof 220 VAC is available for T0/T5 switches. Consult with CKD for working conditions.

Descriptions	Proximity 2-wire			Proximity 3-wire			Reed 2-wire				Proximity 2-wire			
	T1H, T1V	T2H, T2V, T2JH, T2JV	T2YH, T2YV	T3H, T3V	T3PH, T3PV (Custom order)	T3YH, T3YV	T0H, T0V	T5H, T5V		T8H, T8V		T2YD		
Applications	Programmable controller relay, small solenoid valve	Programmable controller dedicated		Programmable controller, relay			Programmable controller, relay	Programmable controller, relay, IC circuit (w/o indicator light), serial connection		Programmable controller, relay		Programmable controller dedicated		
Output method	-			NPN output	PNP output	NPN output	-							
Power voltage	-			10 to 28 VDC			-							
Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (Note 1)		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 10 mA	5 to 20 mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Without indicator light		LED (ON lighting)		Red/green LED (ON lighting)		
Leakage current	1 mA or less with 100 VAC 2 mA or less with 200 VAC	1 mA or less		10 μA or less			0 mA						1 mA or less	

● With preventive maintenance output

Descriptions	Proximity 3-wire		Proximity 4-wire		Proximity 3-wire		Proximity 4-wire		
	T2YFH/V		T3YFH/V		T2YMH/V		T3YMH/V		
Applications	Programmable controller dedicated		Programmable controller, relay		Programmable controller dedicated		Programmable controller, relay		
Output method	NPN output								
Light	Red/green LED (ON lighting)								
	Yellow LED (ON lighting)								
Regular output	Power voltage	-		10 to 28 VDC		-		10 to 28 VDC	
	Load voltage	10 to 30 VDC		30 VDC or less		10 to 30 VDC		30 VDC or less	
	Load current	5 to 20 mA		50 mA or less		5 to 20 mA		50 mA or less	
	Leakage current	1 mA or less		10 μA or less		1.2 mA or less		10 μA or less	
Preventive maintenance output	Load voltage	30 VDC or less							
	Load current	20 mA or less		50 mA or less		5 to 20 mA or less		50 mA or less	
	Leakage current	10 μA or less							

Note 1: Refer to Ending 1 for other switches.

Note 2: Max. load current above: 20 mA at 25 °C. The current will be lower than 20 mA if ambient temperature around switch is higher than 25 °C. (5 to 10 mA at 60 °C)

### Cylinder weight table (weight with switch includes weight with two cylinder switches)

● φ 12 to φ 100

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		40		50	
	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW
φ 12	36	86	44	86	53	95	61	103	70	112	72	114	-	-	-	-
φ 16	48	104	59	104	69	114	80	125	91	136	102	147	-	-	-	-
φ 20	63	118	75	150	88	163	101	176	113	188	126	201	-	-	-	-
φ 25	87	178	102	193	118	209	134	225	150	241	165	256	197	288	228	319
φ 32	122	236	144	258	166	280	188	302	209	323	231	345	275	389	318	432
φ 40	183	326	210	353	236	379	263	406	290	433	316	459	369	512	422	565
φ 50	299	493	341	535	383	577	425	619	467	661	510	704	594	788	678	872
φ 63	452	731	507	786	-	-	617	896	-	-	727	1006	838	1117	948	1227
φ 80	841	1254	928	1341	-	-	1101	1514	-	-	1274	1687	1448	1861	1621	2034
φ 100	1319	1886	1433	2000	-	-	1660	2227	-	-	1888	2455	2115	2682	2343	2910

● φ 125 to φ 160

(Unit: kg)

Stroke length (mm)	10		20		30		40		50		60		70		80		90		100	
	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW
φ 125	4.35	4.45	4.62	4.72	4.88	4.98	5.15	5.25	5.41	5.51	5.68	5.78	5.94	6.04	6.21	6.31	6.47	6.57	6.74	6.84
φ 140	6.33	6.44	6.63	6.74	6.94	7.05	7.24	7.35	7.55	7.66	7.85	7.96	8.16	8.27	8.46	8.57	8.77	8.88	9.07	9.18
φ 160	8.64	8.76	9.02	9.14	9.4	9.52	9.78	9.9	10.16	10.28	10.54	10.66	10.92	11.04	11.3	11.42	11.68	11.8	12.06	12.18

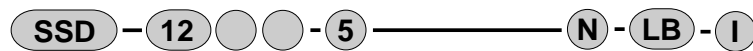
SSD\*2  
CMK2  
CMA2  
SCM  
SCG  
SCA2  
SCS  
CKV2  
CA/OV2  
SSD  
CAT  
MDC2  
MVC  
SMD2  
MSD\*  
FC\*  
STK  
ULK\*  
JSK/M2  
JSG  
JSC3  
USSD  
USC  
JSB3  
LMB  
STG  
STS/L  
LCS  
LCG  
LCM  
LCT  
LCY  
STR2  
UCA2  
HCM  
HCA  
SRL2  
SRG  
SRM  
SRT  
MRL2  
MRG2  
SM-25  
CAC3  
UCAC  
RCC2  
MFC  
SHC  
GLC

Ending

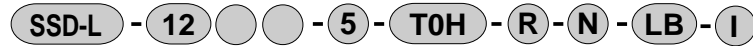
Compact cylinder  
Space saving structure

## How to order

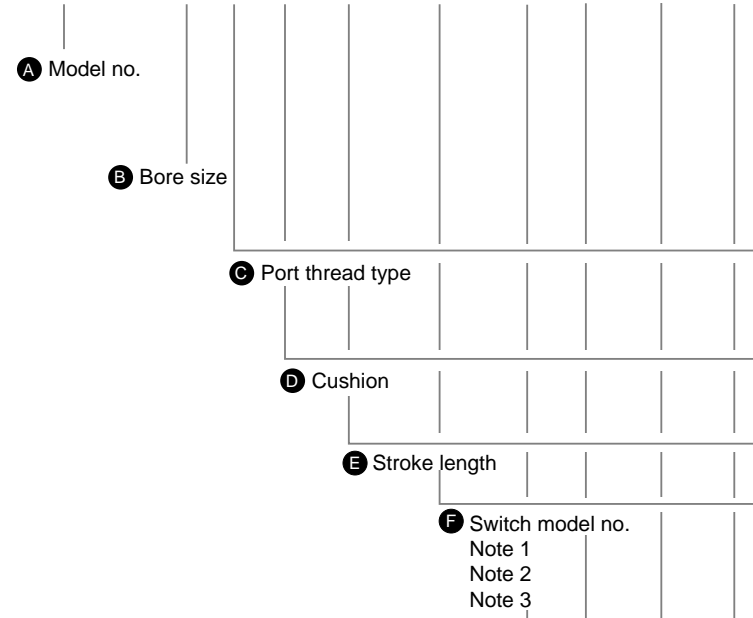
Without switch



With switch



2 color indicator type, off-delay type, with T1\* switch (only φ12, φ16)



### Caution for model No. selection

- Note 1: Switches other than listed **F** switch model No. are available. (custom order) Please refer to Ending 1 about details.
- Note 2: Strong magnetic field proof switches are not available for φ12, φ16.
- Note 3: T8\* switch is not available for φ12 to φ32
- Note 4: φ12 to φ25 piston rod material is stainless steel as standard. The snap ring is changed from copper to stainless steel. When the male thread rod end is selected, stainless steel nuts are provided.
- Note 5: Mounting bracket is attached at shipment.
- Note 6: When selecting LB2, FA, piston rod projecting dimension WF differs from standard. Refer to the dimensions on pages 939 to 940.
- Note 7: "I" and "Y" can not be selected at the same time.
- Note 8: Refer to Ending 89 about custom specifications of rod end form.
- Note 9: Refer to page 720 to 725 about available variation and positions.

<Example of model number>

**SSD-L-12-5-T0H-R-N-LB-I**

Model: Compact cylinder standard type

- B** Bore size : φ 12 mm
- C** Port thread type : Rc thread type
- D** Cushion : No cushion
- E** Stroke length : 5 mm
- F** Switch model no. : Reed switch T0H, lead wire length 1 m
- G** Switch quantity : One on rod end
- H** Option : Rod end male thread
- I** Mounting bracket : Axial foot
- J** Accessory : Rod eye

Symbol	Descriptions													
<b>A Model no.</b>														
<b>SSD</b>	Double acting single rod type													
<b>SSD-L</b>	Double acting single rod type with switch													
<b>SSD-L1</b>	φ 12, φ 16, 2 color indicator, off-delay type, with T1* switch													
<b>B Bore size (mm)</b>														
<b>12</b>	φ 12													
<b>16</b>	φ 16													
<b>20</b>	φ 20													
<b>25</b>	φ 25													
<b>32</b>	φ 32													
<b>40</b>	φ 40													
<b>50</b>	φ 50													
<b>63</b>	φ 63													
<b>80</b>	φ 80													
<b>100</b>	φ 100													
<b>125</b>	φ 125													
<b>140</b>	φ 140													
<b>160</b>	φ 160													
<b>C Port thread type</b>														
<b>Blank</b>	Rc thread													
<b>NN</b>	NPT thread (φ 32 and over) (custom order)													
<b>GN</b>	G thread (φ 32 and over) (custom order)													
<b>D Cushion</b>														
<b>Blank</b>	No cushion (φ 125 and over is rubber cushioned.)													
<b>D</b>	Rubber cushioned (φ 12 to φ 100)													
<b>E Stroke length (mm)</b>														
Refer to the following page stroke length table.														
<b>F Switch model no.</b>														
Axial lead wire	Radial lead wire	contact	Display	Lead Wire										
<b>T0H*</b>	<b>T0V*</b>	Reed	1 color indicator	2-wire										
<b>T5H*</b>	<b>T5V*</b>		Without indicator light											
<b>T8H*</b>	<b>T8V*</b>		1 color indicator											
<b>T1H*</b>	<b>T1V*</b>	Proximity	1 color indicator	2-wire										
<b>T2H*</b>	<b>T2V*</b>		1 color indicator (custom order)	3-wire										
<b>T3PH*</b>	<b>T3PV*</b>													
<b>T2YH*</b>	<b>T2YV*</b>		2 color indicator	2-wire										
<b>T3YH*</b>	<b>T3YV*</b>		2 color indicator (w/o light for preventive maintenance output)	3-wire										
<b>T2YFH*</b>	<b>T2YFV*</b>		2 color indicator (w/ light for preventive maintenance output)	4-wire										
<b>T2YMH*</b>	<b>T2YMV*</b>		2 color indicator (w/ light for preventive maintenance output (1 color))	3-wire										
<b>T3YMH*</b>	<b>T3YMV*</b>		Off-delay type	4-wire										
<b>T2JH*</b>	<b>T2JV*</b>		Switch for strong magnetic field	2-wire										
<b>T2YD*</b>	-													
<b>T2YDT*</b>	-													
<b>*Lead wire length</b>														
<b>Blank</b>	1 m (standard)													
<b>3</b>	3 m (option)													
<b>5</b>	5 m (option)													
<b>G Switch quantity</b>														
<b>R</b>	One on rod side													
<b>H</b>	One on head side													
<b>D</b>	2													
<b>H Option</b>														
	Bore size (mm)	12	16	20	25	32	40	50	63	80	100	125	140	160
<b>Blank</b>	Rod end female	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>N</b>	Rod end male	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>P6</b>	Copper and PTFE free specifications						Standard							
<b>S</b>	Custom stroke dedicating body	●	●	●	●	●	●	●	●	●	●	●	●	Standard
<b>M</b>	Piston rod (stainless steel)	●	●	●	●	●	●	●	●	●	●	●	●	
<b>I Mounting bracket</b>														
<b>LB</b>	Axial foot													
<b>LB2</b>	Axial foot (compact type)													
<b>CB</b>	Clevis (pin and snap ring attached)													
<b>CB2</b>	Clevis (compact type) (pin and snap ring attached)													
<b>FA</b>	Rod end flange type													
<b>FB</b>	Head end flange type													
<b>J Accessory (permissible if rod end male thread "N" was selected.)</b>														
<b>I</b>	Rod eye													
<b>I2</b>	Rod eye (compact type)													
<b>Y</b>	Rod clevis (pin and snap ring attached)													
<b>Y2</b>	Rod clevis (compact type) (pin and snap ring attached)													

### (Stroke length table)

Stroke length (mm)		Applicable bore size												
		φ 12	φ 16	φ 20	φ 25	φ 32	φ 40	φ 50	φ 63	φ 80	φ 100	φ 125	φ 140	φ 160
Standard stroke length	5	●	●	●	●	●	●	●	●	●	●			
	10	●	●	●	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●						
	20	●	●	●	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●						
	30	●	●	●	●	●	●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●	●	●	●
	60										●	●	●	●
	70	High load (K) applies if the standard stroke is exceeded. Refer to page 748 for the specifications and pages 754 to 757 for the dimensions.										●	●	●
	80											●	●	●
	90											●	●	●
100	●											●	●	
Min. stroke length (mm) Note 1		1												
Max. stroke length (mm)		30			50						300			
Custom stroke length Note 2		Per 1 mm increment												

Note 1: Stroke less than 5 mm for 1 color indicator and stroke less than 10 mm is not available for 2 color indicator, off-delay, strong magnetic field proof, or types with T1\* or T8\* switches.  
Refer to page 735 for switch quantity and min. stroke length.

Note 2: Custom stroke availability for φ 12 to φ 100 and φ 125 to φ 160 differs as shown below.

(φ 12 to φ 100)

Total length of the custom stroke is the same as the next larger standard stroke.

(φ 125 to φ 160)

When custom stroke is selected, total length dimensions will be dedicated for the custom stroke.

### How to order switch



Switch model no.

(Item (F) on previous page)

### How to order mounting bracket

Bore size (mm)	φ 12	φ 16	φ 20	φ 25	φ 32	φ 40	φ 50
Mounting bracket							
Foot (LB)	SSD-LB-12	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50
Foot (LB2)	SSD-LB2-12	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50
Flange (FA/FB)	SSD-FA-12	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50
Clevis (CB)	SSD-CB-12	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50
Clevis (CB2)	SSD-CB2-12	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50
Bore size (mm)	φ 63	φ 80	φ 100	φ 125	φ 140	φ 160	
Mounting bracket							
Foot (LB)	SSD-LB-63	SSD-LB-80	SSD-LB-100	SSD-LB-125	SSD-LB-140	SSD-LB-160	
Foot (LB2)	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100	-	-	-	
Flange (FA/FB)	SSD-FA-63	SSD-FA-80	SSD-FA-100	-	-	-	
Clevis (CB)	SSD-CB-63	SSD-CB-80	SSD-CB-100	SSD-CB-125	SSD-CB-140	SSD-CB-160	
Clevis (CB2)	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100	-	-	-	

Note 1: 2 pcs./set is applied for a foot type mounting bracket.

- SCP\*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD**
- CAT
- MDC2
- MVC
- SMD2
- MSD\*
- FC\*
- STK
- ULK\*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

Compact cylinder  
Space saving structure

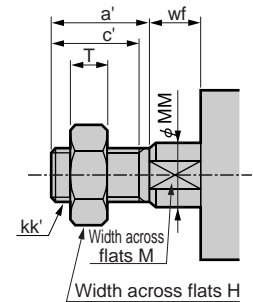
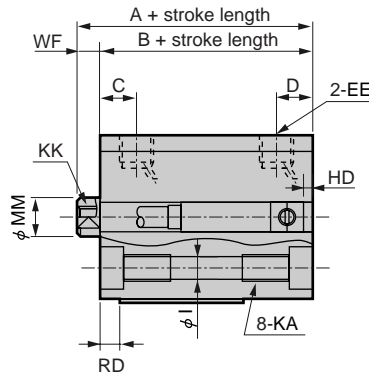
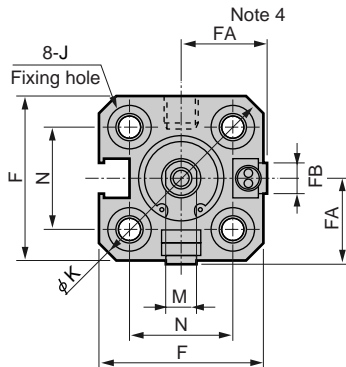
### Dimensions



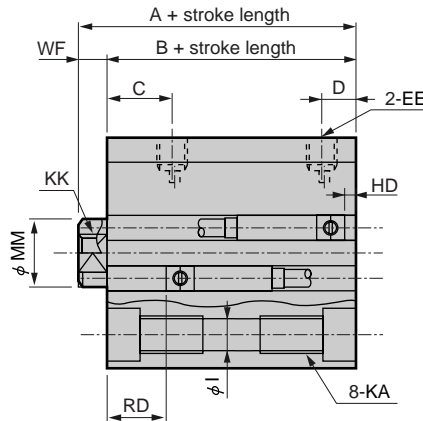
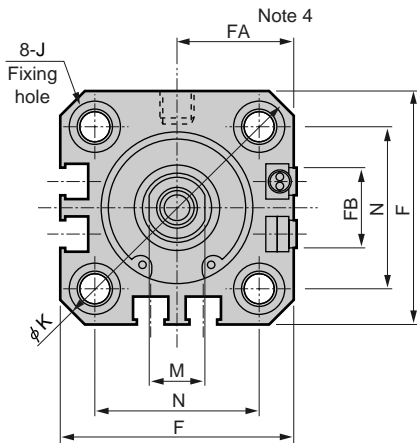
● SSD-L-12 to 25 (with T0H/V, T5H/V, T2H/V, T3H/V switch)

● Rod end male thread

φ 12, φ 16



φ 20, φ 25



Symbol	Dimensions for common, types with switch																
	A <sup>Note 1</sup>	B <sup>Note 1</sup>	C	D	EE	F	FA <sup>Note 4</sup>	FB	I	J	K	KA	KK	M	MM	N	WF
φ12	25.5	22	5.5	5.5	M5	25	13 (16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
φ16	25.5	22	5.5	5.5	M5	29	15 (18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
φ20	34	29.5	8	5.5	M5	36	18.5 (22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
φ25	37.5	32.5	11	6	M5	40	20.5 (24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 11	10	12	28	5
Switch dimension	Reed T0H/T0V, T5H/T5V				Proximity T2H/T2V, T3H/T3V												
	HD <sup>Note 2</sup>		RD <sup>Note 2</sup>		HD <sup>Note 2</sup>		RD <sup>Note 2</sup>										
φ12	0		2.5		0		2.5										
φ16	0		2		0		2										
φ20	3		6.5		3		6.5										
φ25	3		9.5		3		9.5										

● When stroke length 5 mm, the dimensions are as followings.

Bore size	A + stroke length	B + stroke length
φ12	35.5	32
φ16	35.5	32

● Rod end male thread

Symbol	a'	c'	H	kk'	M	MM	T	wf
φ 12	10.5	9	8	M5	5	6	3.2	3.5
φ 16	12	10	8	M6	6	8	3.6	3.5
φ 20	14	12	13	M8	8	10	5	4.5
φ 25	17.5	15	17	M10 x 1.25	10	12	6	5

Note 1: When calculating custom stroke dimensions of <A+stroke length> and <B+stroke length>, the length is calculated by inputting the following increment of standard stroke length but not inputting the custom stroke length. (E.g.) For 7 mm custom stroke, the length is calculated by inputting standard stroke length 10 mm.

Note 2: For φ 12, φ 16 cylinders with switch and stroke length 5mm, refer to the table about <A+stroke length> and <B+stroke length>.

Note 3: HD and RD dimensions for the 5 stroke will differ from these due to manufacturing.

Note 4: Refer to page 926 for HD/RD, and projection dimensions of the 2 color indicator, off delay, strong magnetic field proof, or T1\* and T8\* switch.

Note 5: Dimensions in ( ) are the values when radial lead wire.

Note 6: Refer to pages 935 to 942 for dimension drawings of types with accessories and dimension drawings of discrete accessories.

- SCP\*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD**
- CAT
- MDC2
- MVC
- SMD2
- MSD\*
- FC\*
- STK
- ULK\*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC

Ending  
Compact cylinder  
Space saving structure

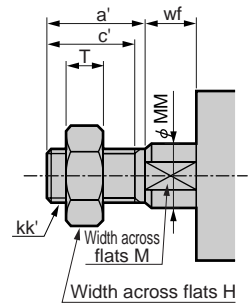
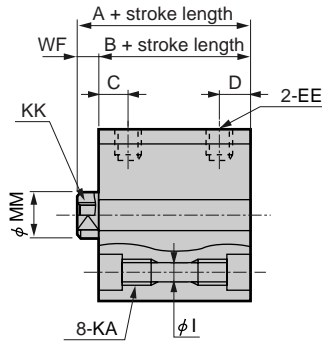
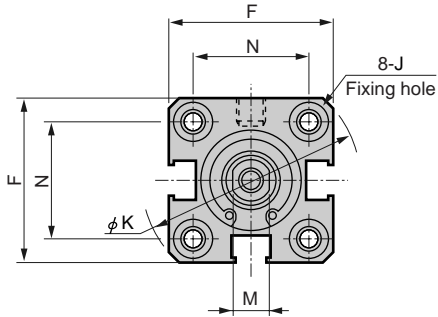
## Dimensions



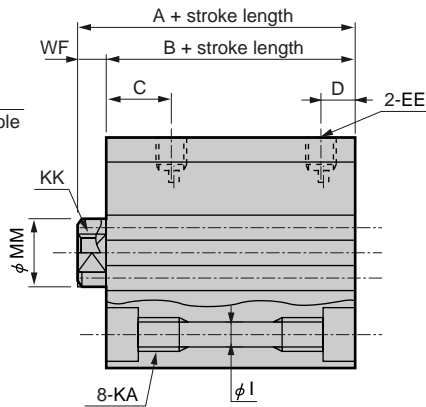
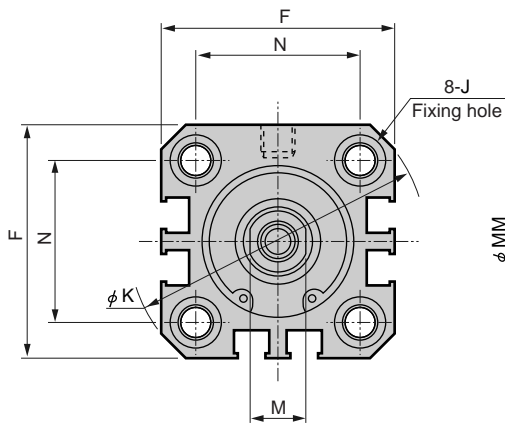
● SSD-12 to 25 (without switch)

● Rod end male thread

φ 12, φ 16



φ 20, φ 25



Symbol	Dimensions for types without switch, common														
Bore size (mm)	A <sup>Note 1</sup>	B <sup>Note 1</sup>	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
φ12	20.5	17	5.5	5.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
φ16	20.5	17	5.5	5.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
φ20	24	19.5	8	5.5	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
φ25	27.5	22.5	11	6	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 11	10	12	28	5

● Rod end male thread

Symbol	a'	c'	H	kk'	M	MM	T	wf
Bore size (mm)								
φ 12	10.5	9	8	M5	5	6	3.2	3.5
φ 16	12	10	8	M6	6	8	3.6	3.5
φ 20	14	12	13	M8	8	10	5	4.5
φ 25	17.5	15	17	M10 x 1.25	10	12	6	5

Note 1: When calculating custom stroke dimensions of <A+stroke length> and <B+stroke length>, the length is calculated by inputting the following increment of standard stroke length but not inputting the custom stroke length.

(E.g.) For 7 mm custom stroke, the length is calculated by inputting standard stroke length 10 mm.

Note 2: Refer to pages 932 to 945 for dimension drawings of types with accessories and dimension drawings of discrete accessories.

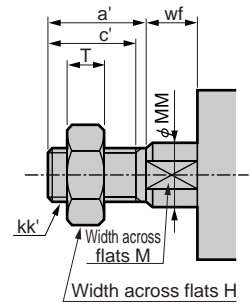
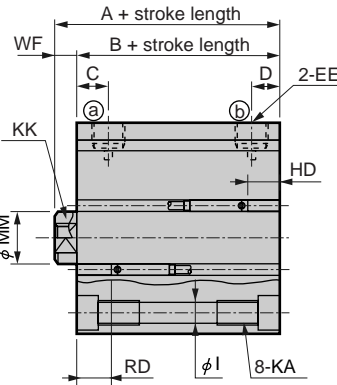
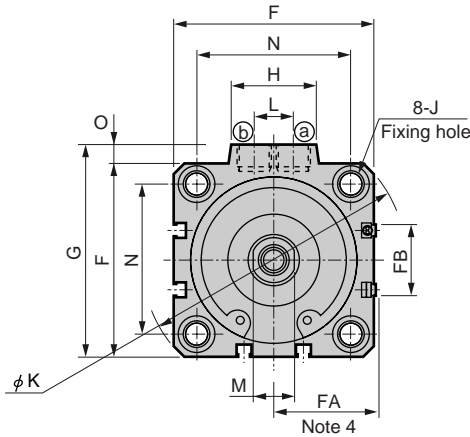


### Dimensions

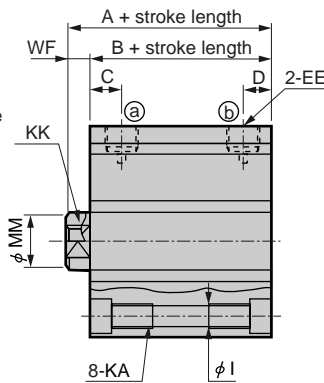
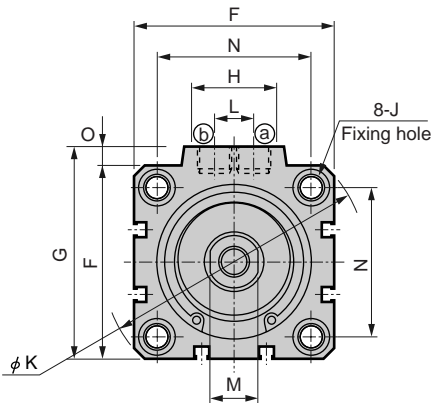


● SSD-L-32 to 100 (with T0H/V, T5H/V, T2H/V, T3H/V switch)

● Rod end male thread



● SSD-32 to 100 (without switch)



Symbol	Without switch		Dimensions for common, types with switch																				
	A <sup>*1</sup>	B <sup>*1</sup>	A <sup>*1</sup>	B <sup>*1</sup>	C	D	EE	F	FA <sup>Note 4</sup>	FB	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
φ32	30	23	40	33	8	8	Rc1/8	45	23 (26.5)	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
φ40	36.5	29.5	46.5	39.5	12	8.5	Rc1/8	52	26.5 (30)	27.5	57	24	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
φ50	38.5	30.5	48.5	40.5	10.5	10.5	Rc1/4	64	32.5 (36)	28.5	71	33	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
φ63	44	36	54	46	13	11	Rc1/4	77	39 (42.5)	28.5	84	33	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8
φ80	53.5	43.5	63.5	53.5	16	13	Rc3/8	98	49.5 (53)	28.5	104	38	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10
φ100	65	53	75	63	23	15	Rc3/8	117	59 (62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	15	27	30	94	6.5	12
Switch dimension	Reed T0H/T0V, T5H/T5V						Proximity T2H/T2V, T3H/T3V																
Bore size (mm)	HD <sup>Note 2</sup>		RD <sup>Note 2</sup>		HD <sup>Note 2</sup>		RD <sup>Note 2</sup>		HD <sup>Note 2</sup>		RD <sup>Note 2</sup>		HD <sup>Note 2</sup>		RD <sup>Note 2</sup>								
φ32	3.5		9		3.5		9		3.5		9		3.5		9								
φ40	7		12		7		12		7		12		7		12								
φ50	7.5		12.5		7.5		12.5		7.5		12.5		7.5		12.5								
φ63	12.5		13		12.5		13		12.5		13		12.5		13								
φ80	17.5		15.5		17.5		15.5		17.5		15.5		17.5		15.5								
φ100	23		19.5		23		19.5		23		19.5		23		19.5								

Note 1: When calculating custom stroke dimensions of <A+stroke length> and <B+stroke length>, the length is calculated by inputting the following increment of standard stroke length but not inputting the custom stroke length. (E.g.) For 7 mm custom stroke, the length is calculated by inputting standard stroke length 10 mm.

Note 2: HD and RD dimensions for the 5 stroke will differ from these due to manufacturing.

Note 3: Refer to page 927 for HD/RD, and projection dimensions of the 2 color indicator, off delay, strong magnetic field proof, or T1\* and T8\* switch.

Note 4: Dimensions shown in ( ) of FA are for a dimension of radial lead wire.

Note 5: Refer to pages 932 to 945 for dimension drawings of types with accessories and dimension drawings of discrete accessories.

● Rod end male thread

Symbol	a'	c'	H	kk'	M	MM	T	wf
φ 32	23.5	20.5	22	M14 x 1.5	14	16	8	5
φ 40	23.5	20.5	22	M14 x 1.5	14	16	8	5
φ 50	28.5	26	27	M18 x 1.5	17	20	11	5
φ 63	28.5	26	27	M18 x 1.5	17	20	11	5
φ 80	35.5	32.5	32	M22 x 1.5	22	25	13	8
φ 100	35.5	32.5	41	M26 x 1.5	27	30	16	8

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
<b>SSD</b>
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
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MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC

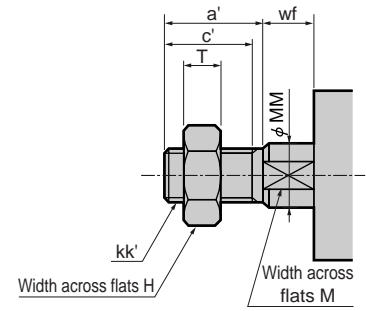
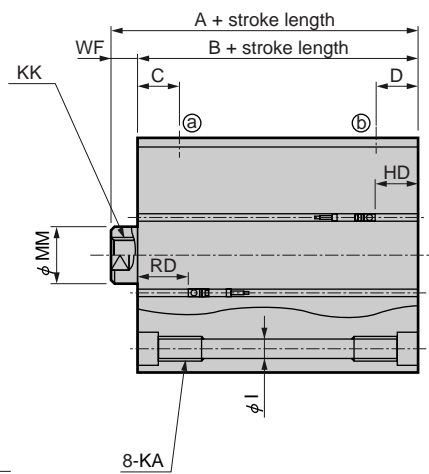
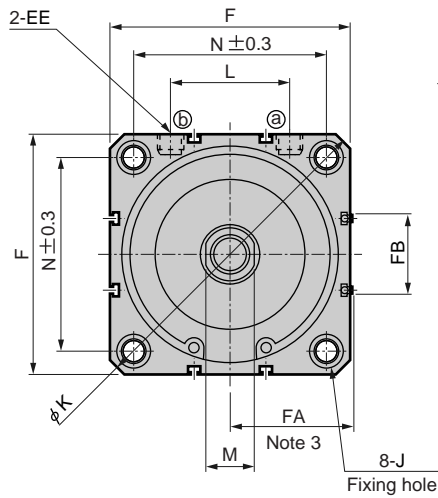
Ending  
Compact cylinder  
Space saving structure

## Dimensions

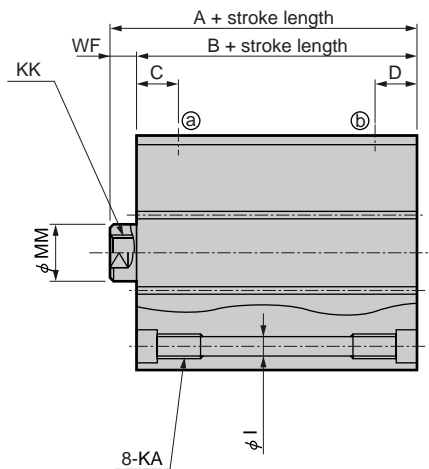
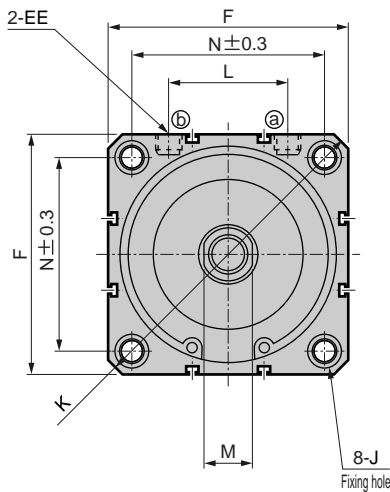


● SSD-L-125 to 160 (double acting with switch)

● Rod end male thread



● SSD-125 to 160 (double acting)



Symbol	Dimensions for common, types with switch												
Bore size (mm)	A	B	C	D	EE	F	FA	FB	I	J	K	KA	KK
φ 125	88	72	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
φ 140	98	82	27	27	Rc3/8	158	79.5 (83)	44.5	12.5	20 spot face depth 13	210	M14 depth 25	M22 depth 30
φ 160	108	91	30	30	Rc3/8	178	89.5 (93)	48.5	14.5	23 spot face depth 15.2	238	M16 depth 28	M24 depth 33
Switch dimension						Reed T0H/T0V, T5H/T5V				Proximity T2H/T2V, T3H/T3V			
Bore size (mm)	L	M	MM	N	WF	HD	RD	HD	RD	HD	RD	HD	RD
φ 125	72	30	35	114	16	24.5	29.5	24.5	29.5				
φ 140	80	30	35	128	16	31	33	31	33				
φ 160	90	36	40	144	17	34	39	34	39				

- Note 1: Refer to Ending 36 for the HD/RD and projecting dimensions of 2 color indicators with preventive maintenance output.
- Note 2: Consult with CKD for projecting dimensions of 2 color indicators with preventive maintenance output.
- Note 3: Dimensions shown in ( ) of FA are for a dimension of radial lead wire.
- Note 4: Refer to pages 932 to 945 for dimension drawings of types with accessories and dimension drawings of discrete accessories.

Rod end male thread section dimensions table

Symbol	a'	c'	H	kk'	M	MM	T	wf
φ 125	45	42	46	M30 x 1.5	30	35	18	13
φ 140	45	42	46	M30 x 1.5	30	35	18	13
φ 160	50	47	55	M36 x 1.5	36	40	21	14

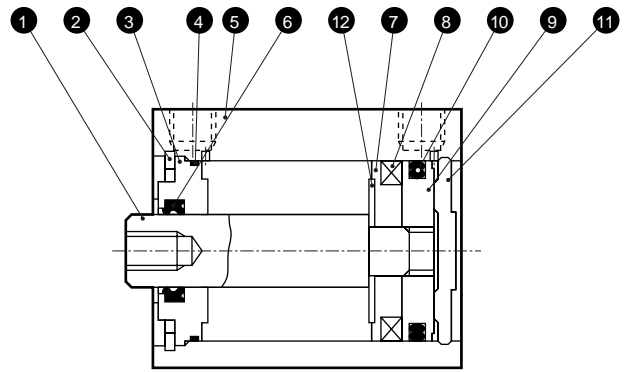
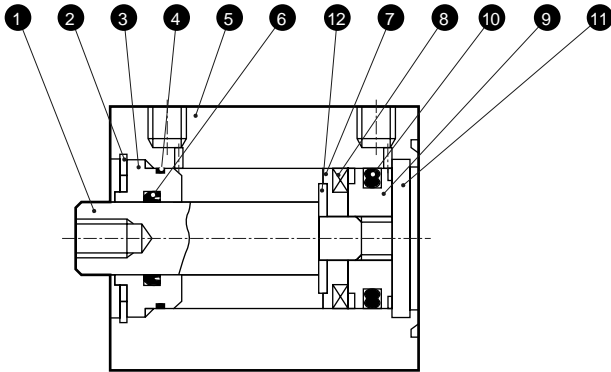


## Internal structure and parts list ( $\phi 12$ to $\phi 50$ ) (without cushion)

- SCP\*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD**
- CAT
- MDC2
- MVC
- SMD2
- MSD\*
- FC\*
- STK
- ULK\*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
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- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

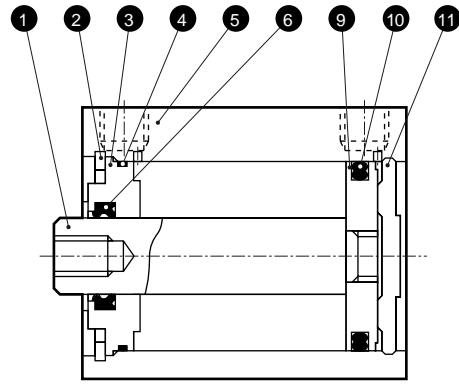
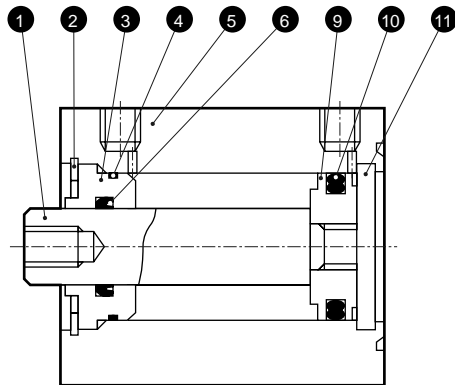
● SSD-L-12 to 25 (double acting with switch)

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



● SSD-12 to 25 (double acting)

● SSD-32 to 50 (double acting)



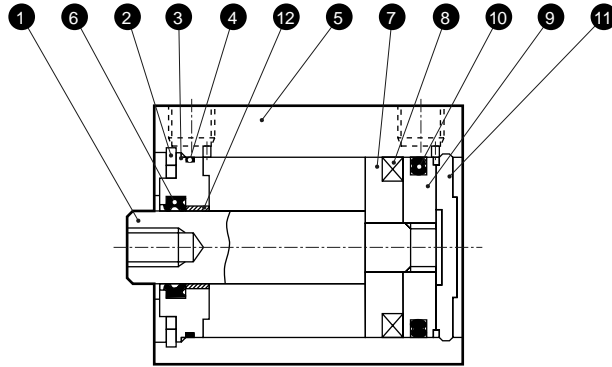
No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	$\phi 12$ to $\phi 25$ : Stainless steel $\phi 32$ to $\phi 50$ : Steel	$\phi 16$ to $\phi 50$ : Industrial chrome plated	7	Spacer	$\phi 12$ : aluminum alloy $\phi 16$ to $\phi 50$ : Special plastic	Chromate ( $\phi 12$ )
2	C type snap ring	Steel	Phosphoric acid zinc	8	Magnet	Plastic	
3	Rod bushing	Special aluminum	Alumite	9	Piston	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		10	Piston packing seal	Nitrile rubber	
5	Main body	Aluminum alloy	Hard alumite	11	Cover	$\phi 12$ to $\phi 25$ : Stainless steel $\phi 32$ to $\phi 50$ : Aluminum alloy	$\phi 32$ to $\phi 50$ : Alumite
6	Rod packing seal	Nitrile rubber		12	Spacer washer	Stainless steel	$\phi 20$ to $\phi 50$

### Repair parts list

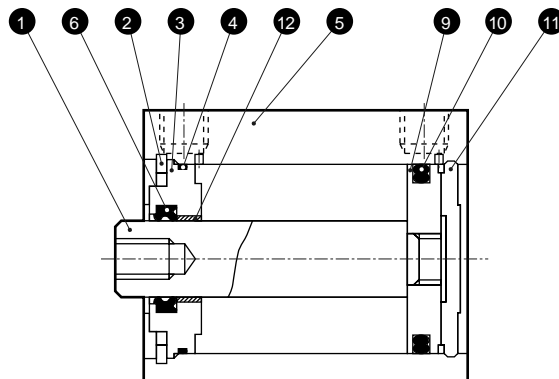
Bore size (mm)	Kit No.	Repair parts number
$\phi 12$	SSD-12K	
$\phi 16$	SSD-16K	
$\phi 20$	SSD-20K	
$\phi 25$	SSD-25K	4 6 10
$\phi 32$	SSD-32K	
$\phi 40$	SSD-40K	
$\phi 50$	SSD-50K	

### Internal structure and parts list ( $\phi 63$ to $\phi 100$ ) (Without cushion)

- SSD-L-63 to 100 (double acting with switch)



- SSD-63 to 100 (double acting)



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plated	7	Spacer	Aluminum alloy	Chromate
2	C type snap ring	Steel	Phosphoric acid zinc	8	Magnet	Plastic	
3	Rod bushing	Aluminum alloy	Chromate	9	Piston	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		10	Piston packing seal	Nitrile rubber	
5	Main body	Aluminum alloy	Hard alumite	11	Cover	Aluminum alloy	Alumite
6	Rod packing seal	Nitrile rubber		12	Bush	Oilless dry met	Note 1

Note 1 : For copper and PTFE free specifications, steel is used.

### Repair parts list

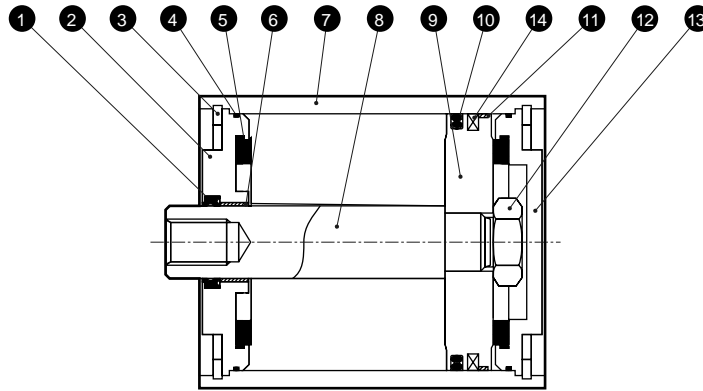
Bore size (mm)	Kit No.	Repair parts number
$\phi 63$	SSD-63K	
$\phi 80$	SSD-80K	4 6 10
$\phi 100$	SSD-100K	

SCP\*2  
CMK2  
CMA2  
SCM  
SCG  
SCA2  
SCS  
CKV2  
CA/OV2  
**SSD**  
CAT  
MDC2  
MVC  
SMD2  
MSD\*  
FC\*  
STK  
ULK\*  
JSK/M2  
JSG  
JSC3  
USSD  
USC  
JSB3  
LMB  
STG  
STS/L  
LCS  
LCG  
LCM  
LCT  
LCY  
STR2  
UCA2  
HCM  
HCA  
SRL2  
SRG  
SRM  
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SM-25  
CAC3  
UCAC  
RCC2  
MFC  
SHC  
GLC  
Ending

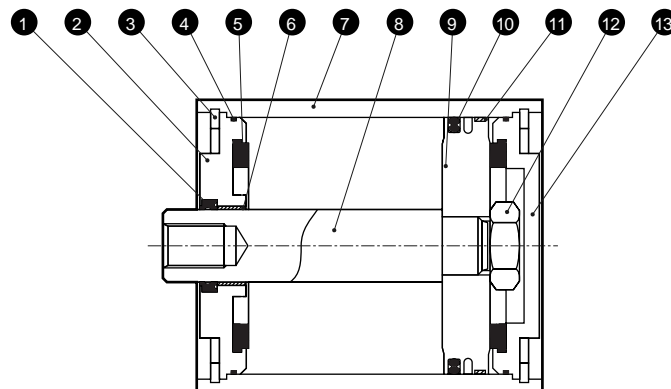
Compact cylinder  
Space saving structure

## Internal structure and parts list ( $\phi 125$ to $\phi 160$ ) (with cushion)

● SSD-L- $\phi 125$  to  $\phi 160$  (double acting single rod type/with switch)



● SSD-L- $\phi 125$  to  $\phi 160$  (double acting single rod type)



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Rod packing seal	Nitrile rubber		9	Piston	Aluminum alloy die-casting	
2	Rod bushing	Aluminum alloy	Chromate	10	Piston packing seal	Nitrile rubber	
3	C type snap ring	Steel	Phosphoric acid zinc	11	Wear ring	Acetar resin	
4	Metal gasket	Nitrile rubber		12	Hexagon nut	Steel	Zinc chromate
5	Cushion rubber	Urethane rubber		13	Base plate	Aluminum alloy	Chromate
6	Bush	Oilless dry met		14	Magnet	Rubber	Only SSD-L
7	Body	Aluminum alloy	Hard alumite				
8	Piston rod	Steel	Industrial chrome plated				

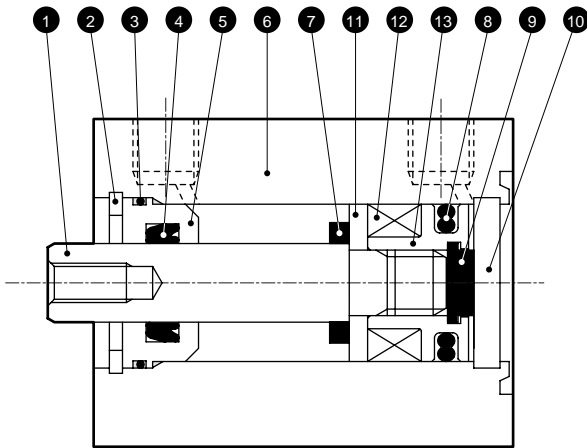
### Repair parts list

Bore size (mm)	Kit No.	Repair parts number
$\phi 125$	SSD-125K	1 4 5 10 11
$\phi 140$	SSD-140K	
$\phi 160$	SSD-160K	

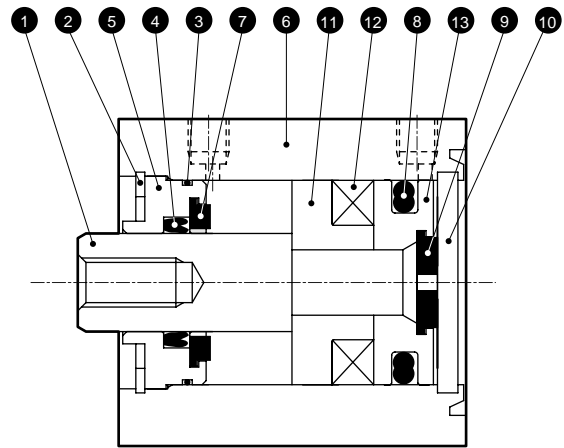
Note 1: Specify kit No. when placing an order.

### Internal structure and parts list (φ12 to φ32) (with rubber cushion)

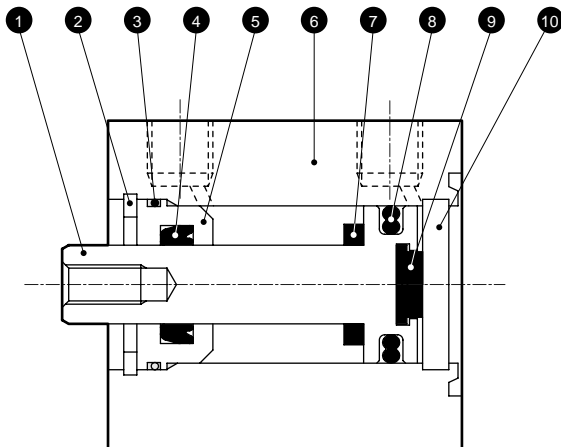
● SSD-L-12D (double acting with switch)



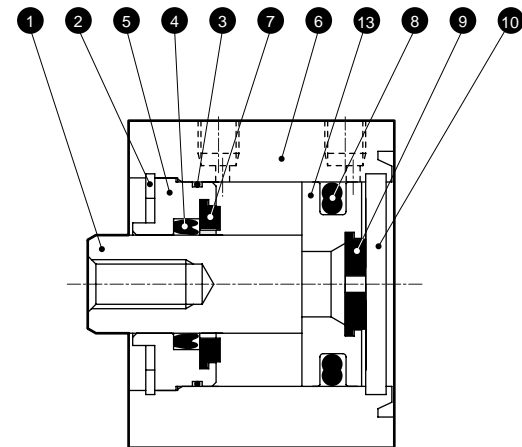
● SSD-L-16D to 32D (double acting with switch)



● SSD-12D (double acting)



● SSD-16D to 32D (double acting)



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	φ 12 to φ 25: Stainless steel φ 32: Steel	φ 16 to φ 32 Industrial chrome plated	8	Piston packing seal	Nitrile rubber	
2	C type snap ring	Steel	Phosphoric acid zinc	9	Cushion rubber (H)	Urethane rubber	
3	Rod metal gasket	Nitrile rubber		10	Cover	φ 12 to φ 25: Stainless steel φ 32: Aluminum alloy	φ 32: Alumite
4	Rod packing seal	Nitrile rubber		11	Spacer	Aluminum alloy	Chromate
5	Rod bushing	Aluminum alloy	Alumite	12	Magnet	Plastic	
6	Body	Aluminum alloy	Hard alumite	13	Piston	Aluminum alloy	Chromate
7	Cushion rubber (R)	Urethane rubber					

### Repair parts list

Bore size (mm)	Kit No.	Repair parts number
φ12	SSD-12DK	3, 4, 7, 8, 9
φ16	SSD-16DK	
φ20	SSD-20DK	
φ25	SSD-25DK	
φ32	SSD-32DK	

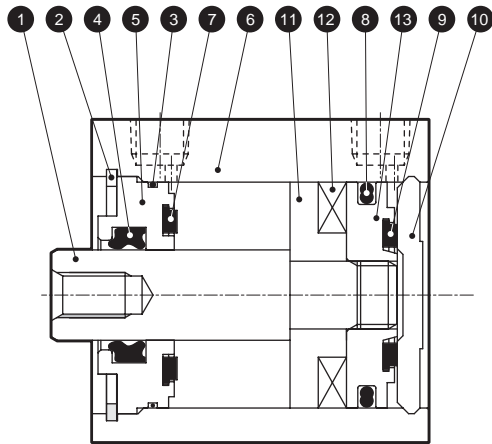
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
<b>SSD</b>
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Compact cylinder  
Space saving structure

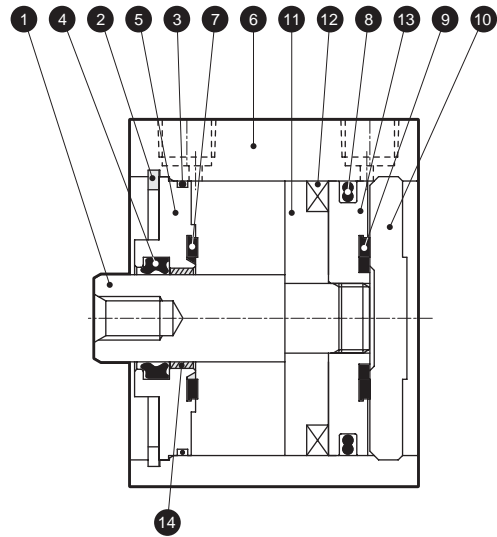
## Internal structure and parts list ( $\phi 40$ to $\phi 100$ ) (with rubber cushion)

- SCP\*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD**
- CAT
- MDC2
- MVC
- SMD2
- MSD\*
- FC\*
- STK
- ULK\*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

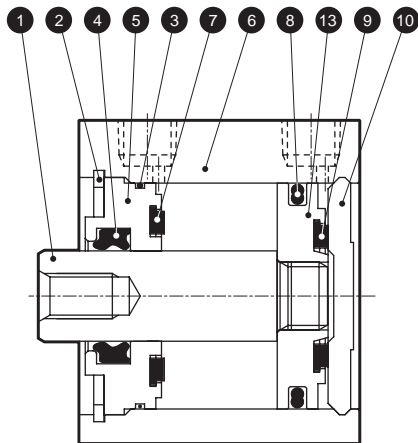
● SSD-L-40D and 50D (double acting with switch)



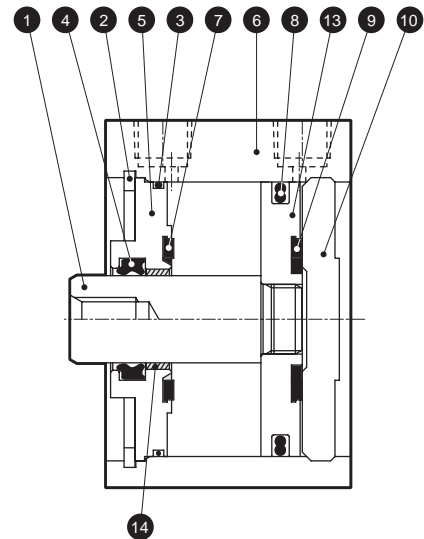
● SSD-L-63D to 100D (double acting with switch)



● SSD-40/50D (double acting)



● SSD-63D to 100D (double acting)



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plated	8	Piston packing seal	Nitrile rubber	
2	C type snap ring	Steel	Phosphoric acid zinc	9	Cushion rubber (H)	Urethane rubber	
3	Rod metal gasket	Nitrile rubber		10	Cover	Aluminum alloy	Alumite
4	Rod packing seal	Nitrile rubber		11	Spacer	Aluminum alloy	Chromate
5	Rod bushing	Aluminum alloy	$\phi 40$ to $\phi 50$ : Alumite $\phi 63$ to $\phi 100$ : Chromate	12	Magnet	Plastic	
6	Body	Aluminum alloy	Hard alumite	13	Piston	Aluminum alloy	Chromate
7	Cushion rubber (R)	Urethane rubber		14	Bush	DU dry bearing	$\phi 63$ to $\phi 100$

### Repair parts list

Bore size (mm)	Kit No.	Repair parts number
$\phi 40$	SSD-40DK	3, 4, 7, 8, 9
$\phi 50$	SSD-50DK	
$\phi 63$	SSD-63DK	
$\phi 80$	SSD-80DK	
$\phi 100$	SSD-100DK	