

Compact cylinder double acting/single rod

# SSD2 Series

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

JIS symbol



## Specifications

Item	SSD2											
	SSD2-L (with switch)											
Bore size mm	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$		
Actuation	Double acting											
Working fluid	Compressed air											
Max. working pressure MPa	1.0											
Min. working pressure MPa	0.1						0.05					
Proof pressure MPa	1.6											
Ambient temperature °C	-10 to 60 (no freezing)											
Port size	M5				Rc1/8 *1		Rc1/4		Rc3/8			
Stroke tolerance mm	With rubber cushion											
	Without cushion											
Working piston speed mm/s	50 to 500						50 to 300					
Cushion	With or without cushion can be selected											
Lubrication	Not required (use turbine oil class 1 ISO VG32 if lubrication is necessary)											
Allowable absorbed Energy J	With rubber cushion		0.03	0.05	0.10	0.16	0.16	0.44	0.75	0.78	2.51	3.92
	Without cushion		0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

\*1: The  $\phi 32$  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
$\phi 16$	25/30		
$\phi 20$	5/10/15/20/25	50	
$\phi 25$	30/35/40/45/50		
$\phi 32$	5/10/15/20/25/30/	100	
$\phi 40$	35/40/45/50/75/100		
$\phi 50$	10/15/20/25	30/35/40/45/50	
$\phi 63$	75/100		
$\phi 80$			
$\phi 100$			

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

\*2: If the stroke exceeds the max. stroke, refer to the long stroke on page 792.

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

## Min. stroke with switch (With 2 switches)

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
$\phi 12$	10 (5)	5
$\phi 16$		
$\phi 20$	5	
$\phi 25$		
$\phi 32$		
$\phi 40$		
$\phi 50$		
$\phi 63$		
$\phi 80$		
$\phi 100$		

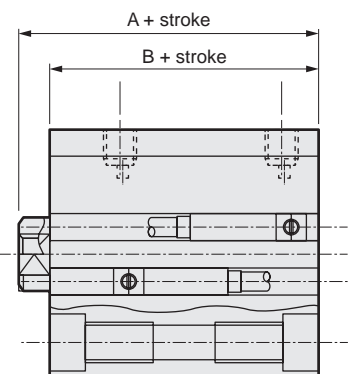
\*1: Less than 10mm stroke of 2-color LED, off-delay, AC magnetic field proof with T1\*, T8\* switches are not available.

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

## Custom stroke

### ● SSD2 Series

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





# SSD2 Series

## How to order

No switch (without magnet for switch)

**SSD2** - 12 - 5 - N - LB - I

With switch (built-in magnet for switch)

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

**A** Model No.

**B** Bore size

**C** Port thread

**D** Cushion

**E** Stroke

**F** Switch model No.

\*1

\*2

\*3

\*8

\*9

**G** Switch quantity

**H** Option

\*4

### ⚠ Precautions for model No. selection

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

\*2 : The T8\* switch cannot be mounted on the ø12 to ø32 bore sizes.

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

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

\*5 : The mounting bracket is included at shipment.

\*6 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 761, 763, 765 and 766. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.

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

\*8 : The F-switch with L type lead wire on ø20 models cannot be selected on strokes of 15 mm or under.

\*9 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

\*10 : Refer to pages 750 and 751 for combinations of variations/options.

\*11 : F-switch cannot be selected.

[Example of model No.]

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

Model: Compact cylinder, standard

**B** Bore size : ø12 mm

**C** Port thread : Rc thread

**D** Cushion : No cushion

**E** Stroke : 10mm

**F** Switch model No. : Reed switch T0H, lead wire length 1 m

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

**H** Option : Rod end male thread

**I** Mounting bracket : Axial foot

**J** Accessory : Rod eye

**I** Mounting bracket

\*5

\*6

**J** Accessory

\*7

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	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

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

<b>D Cushion</b>	
Blank	Without cushion
D	With rubber cushion

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

<b>F Switch model No.</b>		<b>Bore size</b>													
Axial lead wire	Radial lead wire	Contact	Voltage AC DC	Indicator	Lead wire	12	16	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*	Proximity	●	1-color LED (PNP output) (custom)	3-wire										
F2YH*	F2YV*		2-wire												
F3YH*	F3YV*		3-wire												
T0H*	T0V*	Reed	●	1-color LED	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		2-wire												
T8H*	T8V*		2-wire		1-color LED										
T1H*	T1V*	Proximity	●	1-color LED	2-wire	●	●	●	●	●	●	●	●	●	●
T2H*	T2V*		3-wire												
T3H*	T3V*		2-wire												
T3PH*	T3PV*	Proximity	●	1-color LED (PNP output)	3-wire	●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*		2-wire												
T2YH*	T2YV*		3-wire												
T3WH*	T3WV*	Proximity	●	2-color LED	2-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*		3-wire												
T2YD*	-		2-wire												
T2YDT*	-	Proximity	●	2-color LED for AC magnetic field	2-wire	●	●	●	●	●	●	●	●	●	●
T2JH*	T2JV*		2-wire		1-color LED off-delay										

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

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

<b>H Option</b>		<b>Bore size (mm)</b>													
Blank	Rod end female thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●
N	Rod end male thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●
P6	Copper and PTFE free specifications	Supported as standard													
M *4	Piston rod material (stainless steel)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
S	Dedicated unit for custom stroke	●	●	●	●	●	●	●	●	●	●	●	●	●	●
P4	Specifications for	●	●	●	●	●	●	●	●	●	●	●	●	●	●
P40	rechargeable battery	●	●	●	●	●	●	●	●	●	●	●	●	●	●

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

### [Stroke table]

Stroke (mm)	Applicable bore size										
	12	16	20	25	32	40	50	63	80	100	
Standard stroke	5	●	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●
	100					●	●	●	●	●	●
Min. stroke (mm) *1	1										
Max. stroke (mm)	30		50			100					
Custom stroke *2	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 752 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.

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

### How to order switch

**SW - T0H**

Switch model No.  
(Item ㉔ on page 754)

### How to order mounting bracket

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

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

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

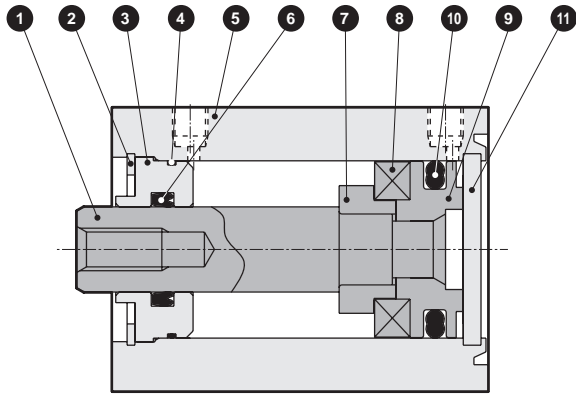
- Design compatible with rechargeable battery manufacturing process

**SSD2**..... **P4\***

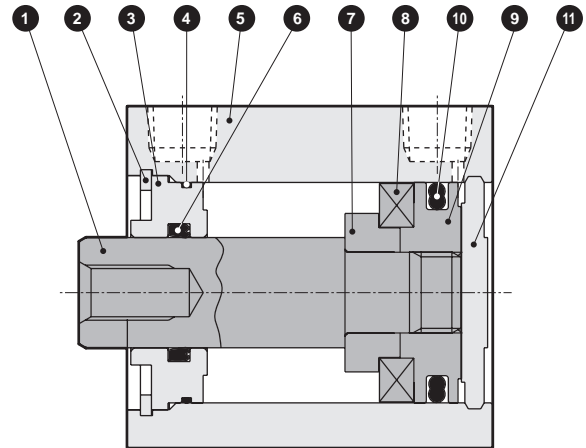
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
<b>SSD2</b>
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

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

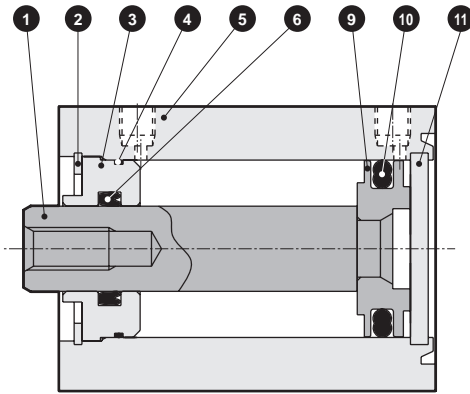
● SSD2-L-12 to 25 (double acting/with switch)



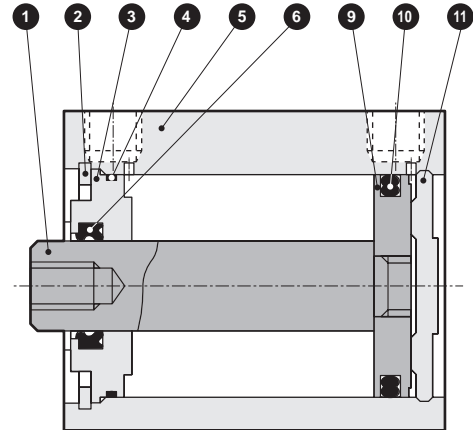
● SSD2-L-32 to 50 (double acting/with switch)



● SSD2-12 to 25 (double acting)



● SSD2-32 to 50 (double acting)



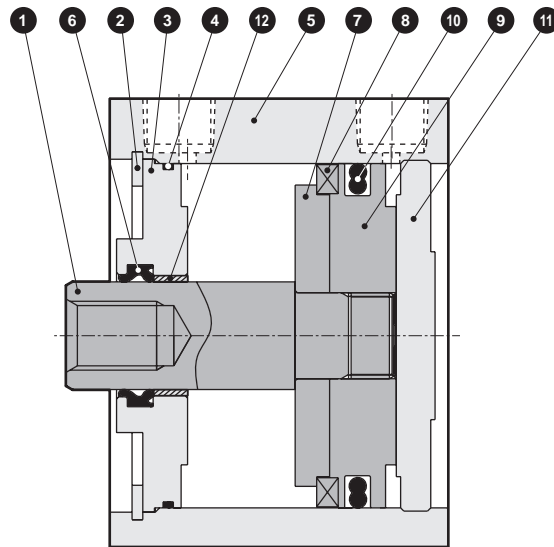
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating	7	Spacer	Aluminum alloy	ø12 to ø32: Chromate
2	C-snap ring	Steel	Zinc phosphate	8	Magnet	Plastic	
3	Rod metal	Special aluminum	Alumite	9	Piston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

### Repair parts list

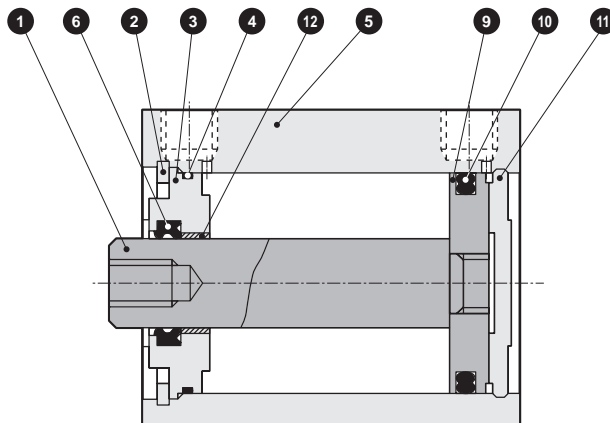
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-12K	4 6 10
ø16	SSD2-16K	
ø20	SSD2-20K	
ø25	SSD2-25K	
ø32	SSD2-32K	
ø40	SSD2-40K	
ø50	SSD2-50K	

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

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



● SSD2-63 to 100 (double acting)



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

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

### Repair parts list

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

SCP\*3

CMK2

CMA2

SCM

SCG

SCA2

SCS2

CKV2

CAV2/  
COVP/N2

**SSD2**

SSG

SSD

CAT

MDC2

MVC

SMG

MSD/  
MSDG

FC\*

STK

SRL3

SRG3

SRM3

SRT3

MRL2

MRG2

SM-25

ShkAbs

FJ

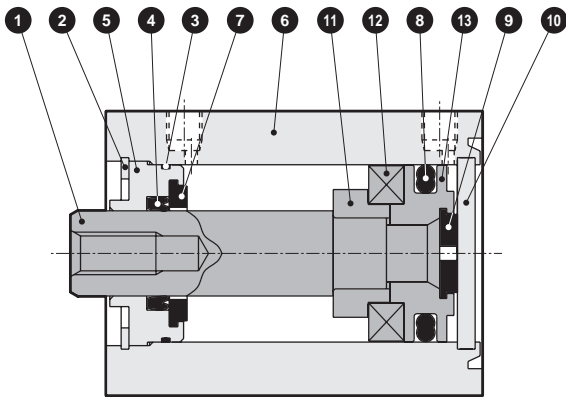
FK

Spd  
Contr

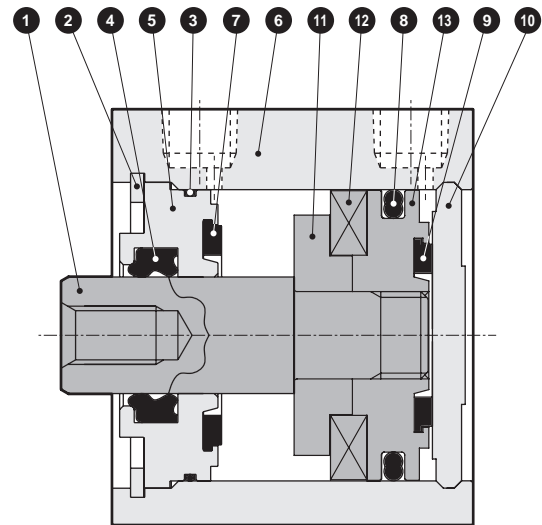
Ending

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

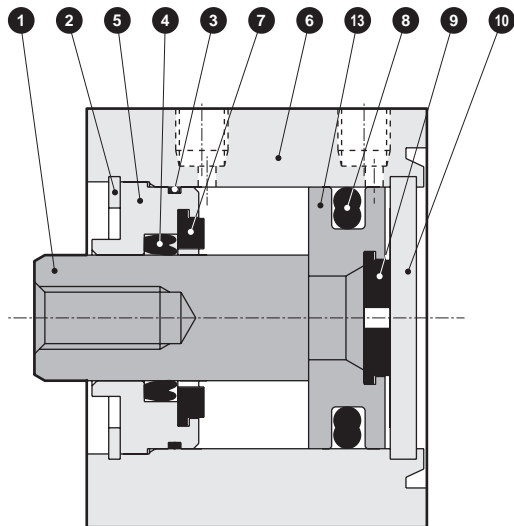
● SSD2-L-12D to 32D (double acting/with switch)



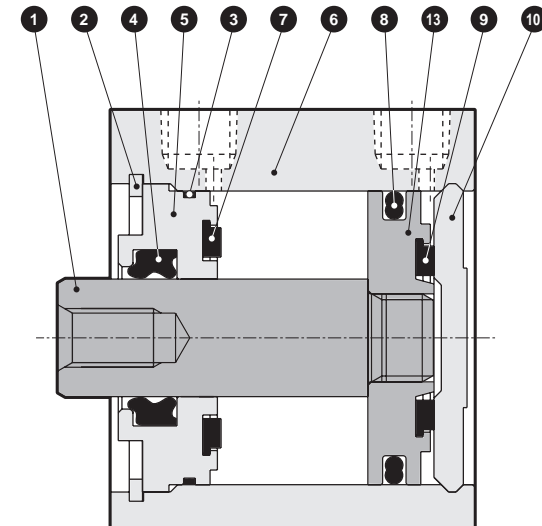
● SSD2-L-40D to 50D (double acting/with switch)



● SSD2-12D to 32D (double acting)



● SSD2-40D, 50D (double acting)



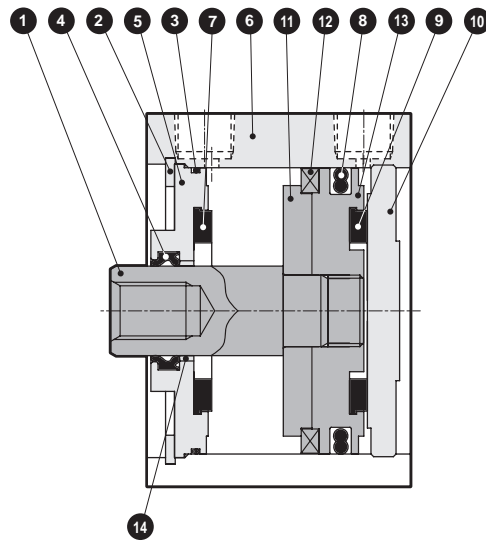
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating	8	Piston packing	Nitrile rubber	
2	C-snap ring	Steel	Zinc phosphate	9	Cushion rubber (H)	Urethane rubber	
3	Rod metal gasket	Nitrile rubber		10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

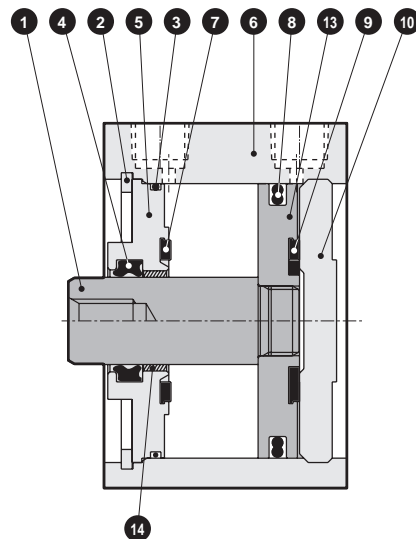
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-12DK	3 4 7 8 9
ø16	SSD2-16DK	
ø20	SSD2-20DK	
ø25	SSD2-25DK	
ø32	SSD2-32DK	
ø40	SSD2-40DK	
ø50	SSD2-50DK	

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

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



● SSD2-63D to 100D (double acting)



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

### Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø63	SSD2-63DK	
ø80	SSD2-80DK	3 4 7 8 9
ø100	SSD2-100DK	

SCP\*3

CMK2

CMA2

SCM

SCG

SCA2

SCS2

CKV2

CAV2/  
COVP/N2

**SSD2**

SSG

SSD

CAT

MDC2

MVC

SMG

MSD/  
MSDG

FC\*

STK

SRL3

SRG3

SRM3

SRT3

MRL2

MRG2

SM-25

ShkAbs

FJ

FK

Spd  
Contr

Ending



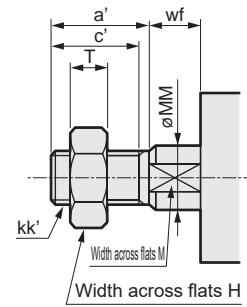
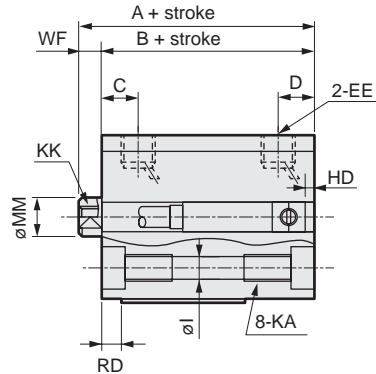
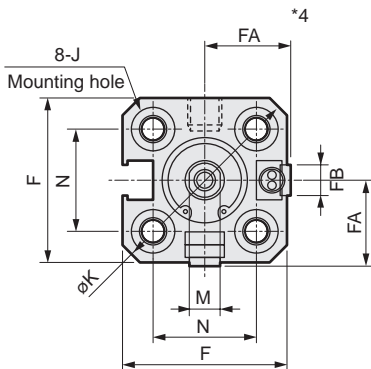
# SSD2 Series

## Dimensions

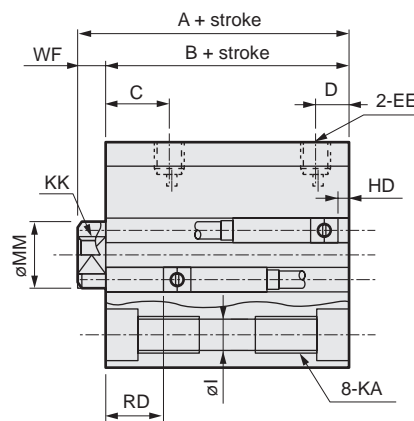
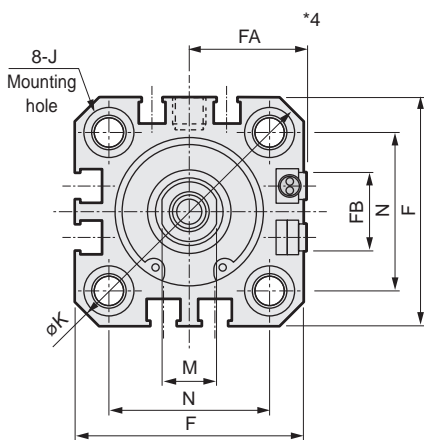


● SSD2-L-12 to 25 (with switch, TOH/V, T5H/V, T2H/V, T3H/V)  
 ø12/ø16

● Rod end male thread



ø20/ø25



Code		Common dimensions with switch																
Bore size (mm)	A <sup>*1</sup>	B <sup>*1</sup>	C	D	EE	F	FA <sup>*4</sup>	FB	I	J	K	KA	KK	M	MM	N	WF	
ø12	25.5	22	5.5	5.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5	
ø16	25.5	22	5.5	5.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5	
ø20	34	29.5	8	5.5	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5	
ø25	37.5	32.5	11	6	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5	
Switch dimensions	Reed TOH/TOV, T5H/T5V <sup>*6</sup>				Proximity T2H/T2V, T3H/T3V <sup>*6</sup>				Proximity T2WH/T2WV, T3WH/T3WV <sup>*6</sup>				Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV				Proximity F2S/F3S	
	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD				
ø12	1.5(0)	1.5(3)	1.5(0)	1.5(3)	3.5(2)	3.5(5)												
ø16	0	4	0	4.5	1	6												
ø20	3	7.5	3	7.5	5	9.5	7.5	12	6.5	11								
ø25	4	9.5	4	9.5	6	11.5	8.5	14	7.5	13								

\*1 : To calculate A + stroke 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.

· For ø16: A + stroke = 35.5 B + stroke = 32

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

· For ø16: A + stroke = 32.5 B + stroke = 29

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

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

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

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

\*6 : Dimensions in ( ) of codes HD and RD are for the type with rubber cushion.

\*7 : Only F-switch is available for the ø20 or ø25 piping port surface.

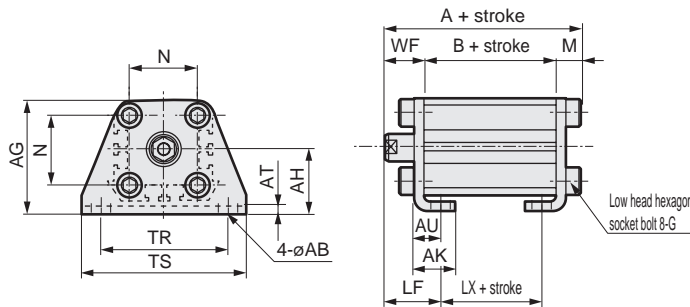
● Rod end male thread

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

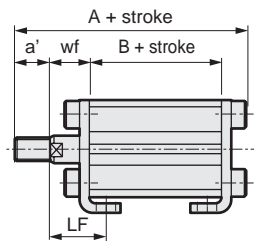
### Dimensions with mounting bracket



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



Rod end male thread

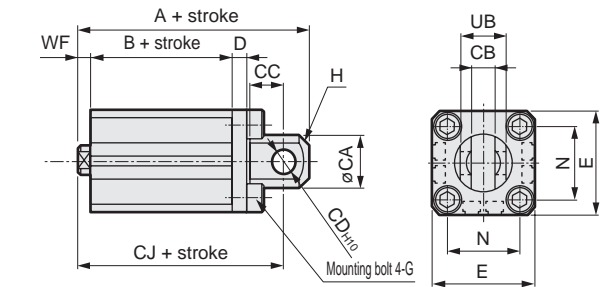


Code	Common dimensions						Female thread					
	Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8	
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8	
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2	
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2	

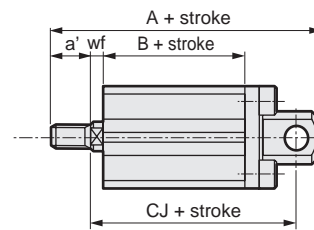
  

Code	Male thread											
	Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	40.3	22	10	10.5	13.5	19.5	50.8	22	10	
ø16	13.5	19.5	40.3	22	10	12	13.5	19.5	52.3	22	10	
ø20	14.5	20.5	51.2	29.5	17.5	14	14.5	20.5	65.2	29.5	17.5	
ø25	15	22.5	54.7	32.5	17.5	17.5	15	22.5	72.2	32.5	17.5	

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



Rod end male thread

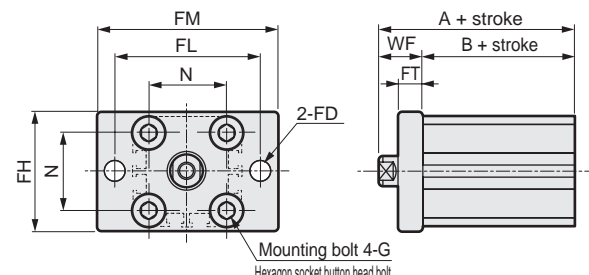


Code	Common dimensions									
	Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N
ø12	12	5.2 <sup>+0.2</sup> <sub>0</sub>	7	5	4	25	M4x12	C1.5	15.5	10 <sup>-0.1</sup> <sub>-0.3</sub>
ø16	15	6.6 <sup>+0.3</sup> <sub>0</sub>	8	5	5	29	M4x12	C2	20	12 <sup>-0.1</sup> <sub>-0.4</sub>
ø20	20	8.2 <sup>+0.2</sup> <sub>0</sub>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

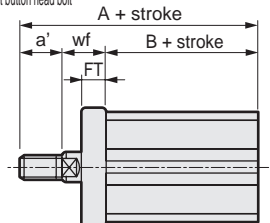
  

Code	Female thread			Male thread						
	Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø12	3.5	45.5	22	39.5	10.5	3.5	56	22	39.5	
ø16	3.5	46.5	22	40.5	12	3.5	58.5	22	40.5	
ø20	4.5	61	29.5	52	14	4.5	75	29.5	52	
ø25	5	67.5	32.5	57.5	17.5	5	85	32.5	57.5	

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



Rod end male thread

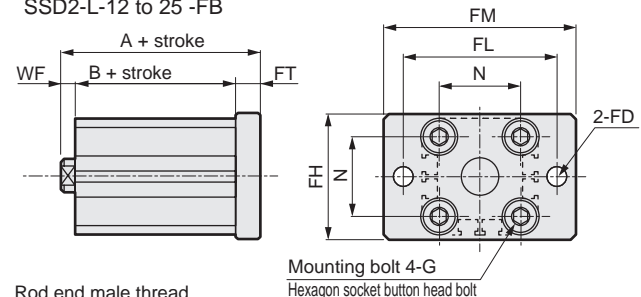


Code	Common dimensions							
	Bore size (mm)	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4x12	
ø16	4.5	30	45	55	5.5	20	M4x12	
ø20	6.6	39	48	60	8	25.5	M6x16	
ø25	6.6	42	52	64	8	28	M6x16	

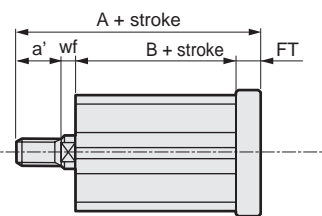
  

Code	Female thread			Male thread				
	Bore size (mm)	WF	A	B	a'	wf	A	B
ø12	13.5	35.5	22	10.5	13.5	46	22	
ø16	13.5	35.5	22	12	13.5	47.5	22	
ø20	14.5	44	29.5	14	14.5	58	29.5	
ø25	15	47.5	32.5	17.5	15	65	32.5	

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



Rod end male thread



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

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

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

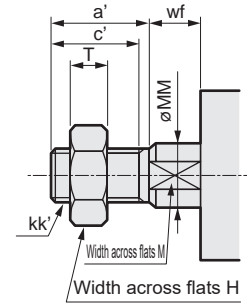
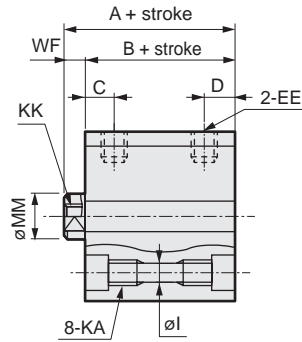
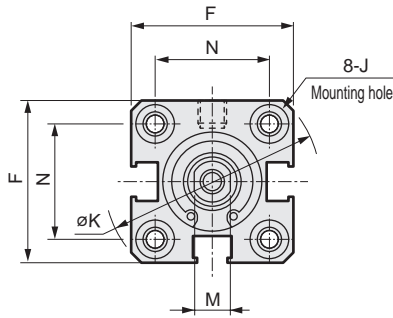
## Dimensions



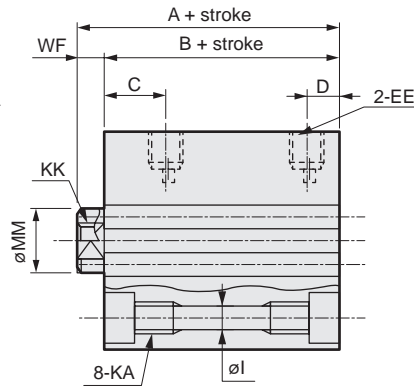
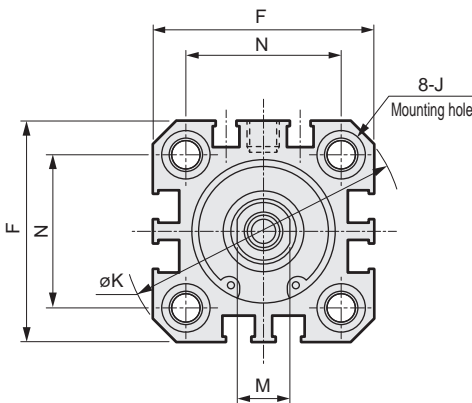
● SSD2-12 to 25 (without switch)

● Rod end male thread

ø12/ø16



ø20/ø25



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

● Rod end male thread

Code	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

\*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.

· For ø16: A + stroke = 30.5 / B + stroke = 27

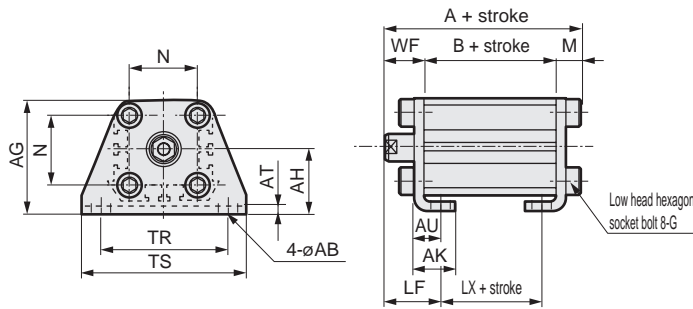
When you have selected "S" (dedicated unit for custom stroke), apply the custom stroke of 7 mm.

· For ø16: A + stroke = 27.5 / B + stroke = 24

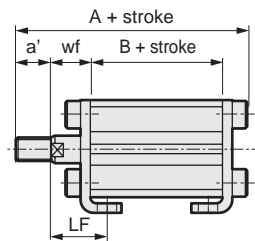
\*2: For dimensions of individual accessories, refer to pages 1046 to 1049.

### Dimensions with mounting bracket

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



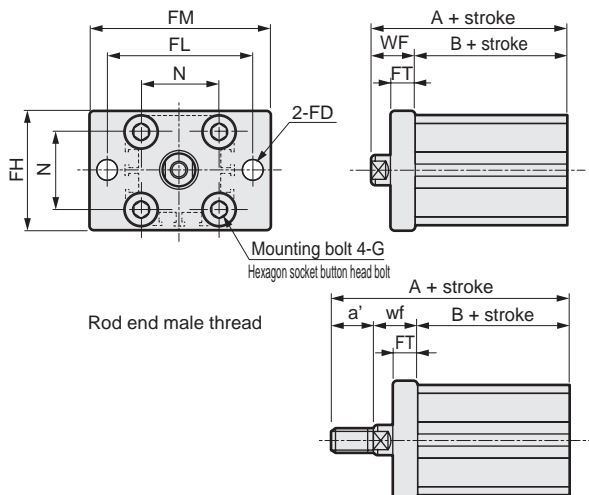
Rod end male thread



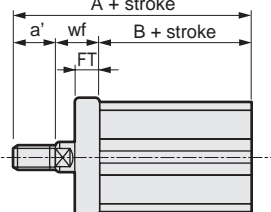
Code	Common dimensions										Female thread			
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M			
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8			
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8			
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2			
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2			
Code	Male thread													
Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B	LX			
ø12	13.5	19.5	35.3	17	5	10.5	13.5	19.5	45.8	17	5			
ø16	13.5	19.5	35.3	17	5	12	13.5	19.5	47.3	17	5			
ø20	14.5	20.5	41.2	19.5	7.5	14	14.5	20.5	55.2	19.5	7.5			
ø25	15	22.5	44.7	22.5	7.5	17.5	15	22.5	62.2	22.5	7.5			

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

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

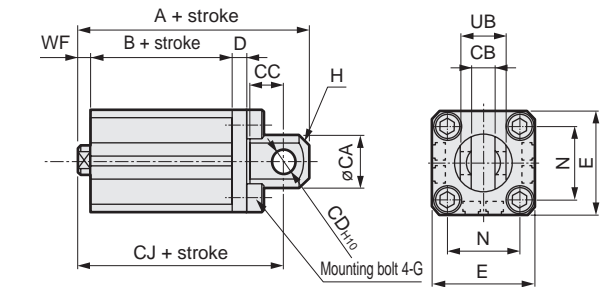


Rod end male thread

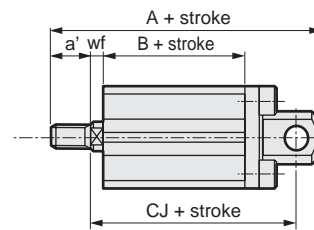


Code	Common dimensions						
Bore size (mm)	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4x12
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16
Code	Female thread				Male thread		
Bore size (mm)	WF	A	B	a'	wf	A	B
ø12	13.5	30.5	17	10.5	13.5	41	17
ø16	13.5	30.5	17	12	13.5	42.5	17
ø20	14.5	34	19.5	14	14.5	48	19.5
ø25	15	37.5	22.5	17.5	15	55	22.5

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

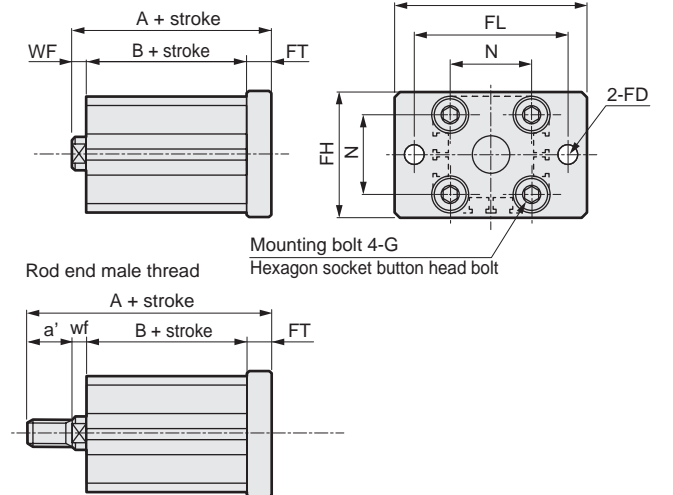


Rod end male thread

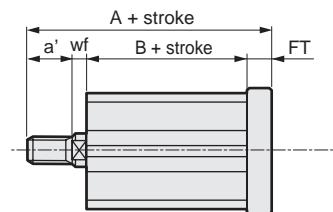


Code	Common dimensions									
Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	5.2 <sup>+0.2</sup>	7	5	4	25	M4x12	C1.5	15.5	10 <sup>-0.1</sup> <sub>0.3</sub>
ø16	15	6.6 <sup>+0.3</sup>	8	5	5	29	M4x12	C2	20	12 <sup>-0.1</sup> <sub>0.4</sub>
ø20	20	8.2 <sup>+0.2</sup>	12	8	5	36	M6x16	C4	25.5	16 <sup>-0.1</sup> <sub>0.3</sub>
ø25	24	10.2 <sup>+0.2</sup>	14	10	5	40	M6x16	C5	28	20 <sup>-0.1</sup> <sub>0.3</sub>
Code	Female thread					Male thread				
Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ	
ø12	3.5	40.5	17	34.5	10.5	3.5	51	17	34.5	
ø16	3.5	41.5	17	35.5	12	3.5	53.5	17	35.5	
ø20	4.5	51	19.5	42	14	4.5	65	19.5	42	
ø25	5	57.5	22.5	47.5	17.5	5	75	22.5	47.5	

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



Rod end male thread



Code	Common dimensions						
Bore size (mm)	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4x12
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16
Code	Female thread				Male thread		
Bore size (mm)	WF	A	B	a'	wf	A	B
ø12	3.5	26	17	10.5	3.5	36.5	17
ø16	3.5	26	17	12	3.5	38	17
ø20	4.5	32	19.5	14	4.5	46	19.5
ø25	5	35.5	22.5	17.5	5	53	22.5

SCP\*3

CMK2

CMA2

SCM

SCG

SCA2

SCS2

CKV2

CAV2/COVP/N2

**SSD2**

SSG

SSD

CAT

MDC2

MVC

SMG

MSD/MSDG

FC\*

STK

SRL3

SRG3

SRM3

SRT3

MRL2

MRG2

SM-25

ShkAbs

FJ

FK

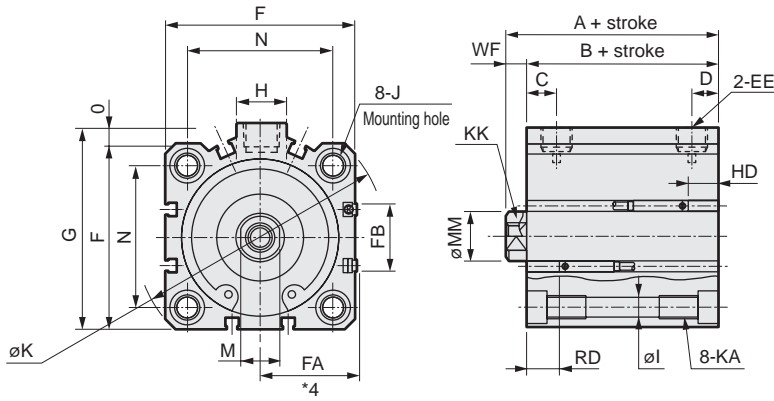
Spd Contr

Ending

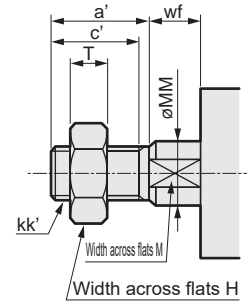
## Dimensions



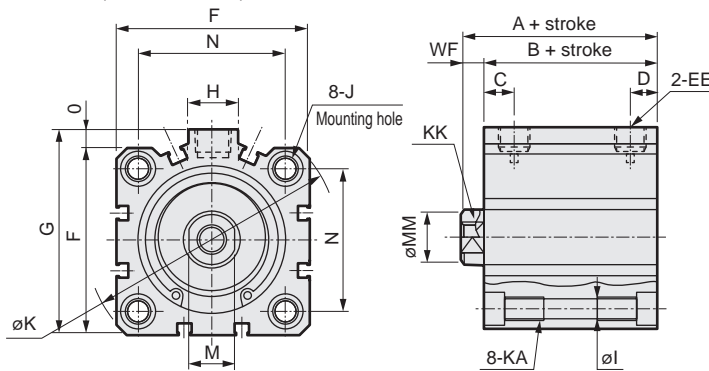
### ● SSD2-L-32 to 100 (with switch, TOH/V, T5H/V, T2H/V, T3H/V)



### ● Rod end male thread



### ● SSD2-32 to 100 (without switch)



Code	No switch		Common dimensions with switch																			
	A <sup>*1, *6</sup>	B <sup>*1, *6</sup>	A <sup>*1</sup>	B <sup>*1</sup>	C <sup>*8</sup>	D <sup>*8</sup>	EE	F	FA <sup>*4</sup>	FB	G	H	I	J	K	KA	KK	M	MM	N	O	WF
ø32	30(40)	23(33)	40	33	8(10)	8(5.5)	Rc1/8 <sup>7</sup>	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face Depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7
ø40	36.5(46.5)	29.5(39.5)	46.5	39.5	12(11.5)	8.5(8)	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face Depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7
ø50	38.5(48.5)	30.5(40.5)	48.5	40.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face Depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8
ø63	44(54)	36(46)	54	46	13	11	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face Depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	8
ø80	53.5(63.5)	43.5(53.5)	63.5	53.5	16	13	Rc3/8	98	49.5(53)	28.5	104	31	10.5	17.5 spot face Depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	10
ø100	65(75)	53(63)	75	63	23	15	Rc3/8	117	59(62.5)	28.5	123.5	38	10.5	17.5 spot face Depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12
Switch dimensions	Reed T0H/T0V, T5H/T5V						Proximity T2H/T2V, T3H/T3V						Proximity T2WH/T2WV, T3WH/T3WV									
	HD <sup>*2</sup>		RD <sup>*2</sup>		HD <sup>*2</sup>		RD <sup>*2</sup>		HD		RD											
ø32	4		9.5		4		9.5		6		11.5											
ø40	7		12		7		12		8.5		13.5											
ø50	7.5		12.5		7.5		12.5		9		14											
ø63	12.5		13		12.5		13		14		14.5											
ø80	17.5		15.5		17.5		15.5		19		17											
ø100	23		19.5		23		19.5		24.5		21											

\*1 : To calculate A + stroke 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.

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

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

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

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

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

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

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

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

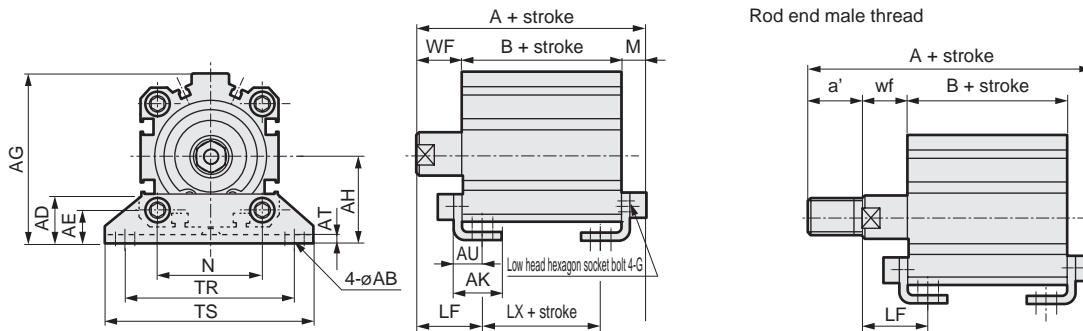
\*7 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.\*8 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

### ● Rod end male thread

Code	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14x1.5	14	16	8	5
ø40	23.5	20.5	22	M14x1.5	14	16	8	5
ø50	28.5	26	27	M18x1.5	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

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



Code	Common dimensions										Female thread						No switch			With switch		
	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	WF	LF	A	B	LX	A	B	LX	
ø32	7	18.5	13	57	30	17	3.2	11.2	M6x16	34	57	71	7.2	17	25	47.2(57.2)	23(33)	7(17)	57.2	33	17	
ø40	7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64	78	7.2	17	25	53.7(63.7)	29.5(39.5)	13.5(23.5)	63.7	39.5	23.5	
ø50	9	22	14	78	39	22.7	3.2	14.7	M8x20	50	79	95	8.2	18	29.5	56.7(66.7)	30.5(40.5)	7.5(17.5)	66.7	40.5	17.5	
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10x25	60	95	113	9.2	18	31	63.2(73.2)	36(46)	10(20)	73.2	46	20	
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12x40	77	118	140	11.5	20	35	75(85)	43.5(53.5)	13.5(23.5)	85	53.5	23.5	
ø100	13	35	24	136	71	35.5	6	23	M12x40	94	137	162	13	22	39	88(98)	53(63)	19(29)	98	63	29	

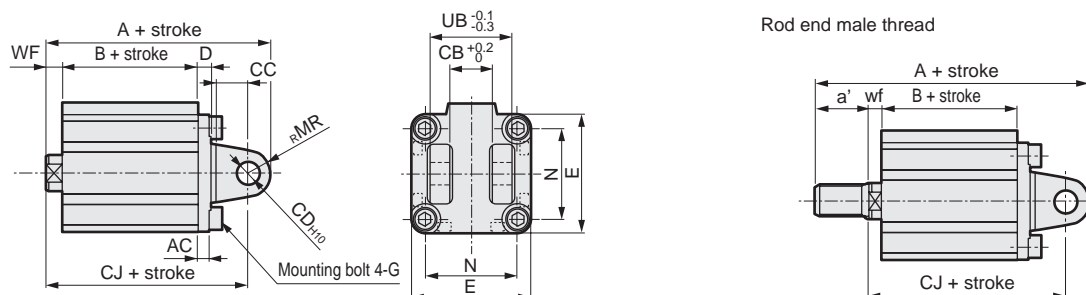
  

Code	Male thread			No switch			With switch		
	a'	wf	LF	A	B	LX	A	B	LX
ø32	23.5	15	23	68.7(78.7)	23(33)	7(17)	78.7	33	17
ø40	23.5	15	23	75.2(85.2)	29.5(39.5)	13.5(23.5)	85.2	39.5	23.5
ø50	28.5	15	26.5	82.2(92.2)	30.5(40.5)	7.5(17.5)	92.2	40.5	17.5
ø63	28.5	15	28	88.7(98.7)	36(46)	10(20)	98.7	46	20
ø80	35.5	18	33	108.5(118.5)	43.5(53.5)	13.5(23.5)	118.5	53.5	23.5
ø100	35.5	18	35	119.5(129.5)	53(63)	19(29)	129.5	63	29

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

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

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



Code	Common dimensions										Female thread						Male thread								
	AC	CB	CC	CD	D	E	G	MR	N	UB	WF	No switch			With switch			a'	wf	No switch			With switch		
Bore size (mm)												A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø32	4.5	18.2	14	10	5	45	M6x16	10	34	36	7	60(70)	23(33)	50	70	33	60	23.5	5	81.5(91.5)	23(33)	48	91.5	33	58
ø40	5	18.2	14	10	6	52	M6x16	10	40	36	7	68.5(78.5)	29.5(39.5)	58.5	78.5	39.5	68.5	23.5	5	90(100)	29.5(39.5)	56.5	100	39.5	66.5
ø50	6	22.2	20	14	7	64	M8x20	14	50	44	8	80.5(90.5)	30.5(40.5)	66.5	90.5	40.5	76.5	28.5	5	106(116)	30.5(40.5)	63.5	116	40.5	73.5
ø63	7	22.2	20	14	8	77	M10x25	14	60	44	8	88(98)	36(46)	74	98	46	84	28.5	5	113.5(123.5)	36(46)	71	123.5	46	81
ø80	9	28.2	27	18	10	98	M12x40	18	77	56	10	109.5(119.5)	43.5(53.5)	91.5	119.5	53.5	101.5	35.5	8	143(153)	43.5(53.5)	89.5	153	53.5	99.5
ø100	12	32.2	31	22	13	117	M12x40	22	94	64	12	132(142)	53(63)	110	142	63	120	35.5	8	163.5(173.5)	53(63)	106	173.5	63	116

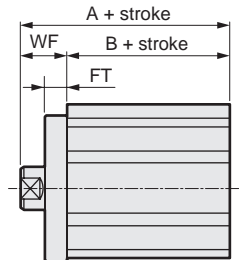
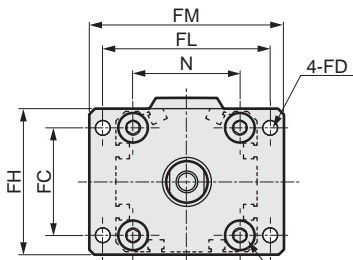
\* Dimensions in ( ) are for strokes of more than 50 mm.

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

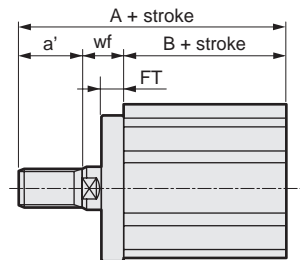
## Dimensions



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



Rod end male thread

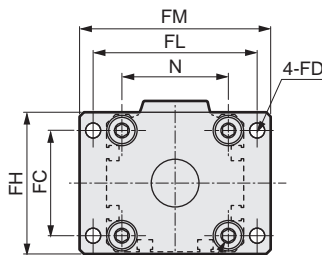
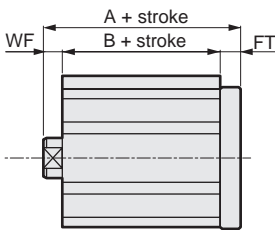


Mounting bolt 4-G  
 ø32 to ø63: Hexagon socket button head bolt  
 ø80/ø100: Special bolt

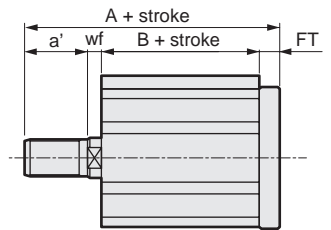
Code	Common dimensions								Female thread				Male thread							
	Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	No switch		With switch		a'	wf	No switch		With switch	
											A	B	A	B			A	B	A	B
SSD	ø32	34	5.5	48	56	65	8	34	M6x16	17	40(50)	23(33)	50	33	23.5	15	61.5(71.5)	23(33)	71.5	33
SSG	ø40	40	5.5	54	62	72	8	40	M6x16	17	46.5(56.5)	29.5(39.5)	56.5	39.5	23.5	15	68(78)	29.5(39.5)	78	39.5
SSD	ø50	50	6.6	67	76	89	9	50	M8x20	18	48.5(58.5)	30.5(40.5)	58.5	40.5	28.5	15	74(84)	30.5(40.5)	84	40.5
SSD	ø63	60	9	80	92	108	9	60	M10x25	18	54(64)	36(46)	64	46	28.5	15	79.5(89.5)	36(46)	89.5	46
CAT	ø80	77	11	99	116	134	11	77	M12x40	20	63.5(73.5)	43.5(53.5)	73.5	53.5	35.5	18	97(107)	43.5(53.5)	107	53.5
SSD	ø100	94	11	117	136	154	11	94	M12x40	22	75(85)	53(63)	85	63	35.5	18	106.5(116.5)	53(63)	116.5	63

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

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



Rod end male thread



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

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
SM-25	ø32	34	5.5	48	56	65	8	34	M6x16	7	38(48)	23(33)	48	33	23.5	5	59.5(69.5)	23(33)	69.5	33
SM-25	ø40	40	5.5	54	62	72	8	40	M6x16	7	44.5(54.5)	29.5(39.5)	54.5	39.5	23.5	5	66(76)	29.5(39.5)	76	39.5
ShkAbs	ø50	50	6.6	67	76	89	9	50	M8x20	8	47.5(57.5)	30.5(40.5)	57.5	40.5	28.5	5	73(83)	30.5(40.5)	83	40.5
ShkAbs	ø63	60	9	80	92	108	9	60	M10x25	8	53(63)	36(46)	63	46	28.5	5	78.5(88.5)	36(46)	88.5	46
FJ	ø80	77	11	99	116	134	11	77	M12x40	10	64.5(74.5)	43.5(53.5)	74.5	53.5	35.5	8	98(108)	43.5(53.5)	108	53.5
FJ	ø100	94	11	117	136	154	11	94	M12x40	12	76(86)	53(63)	86	63	35.5	8	107.5(117.5)	53(63)	117.5	63

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

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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





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

# SSD2 Series

● Bore size:  $\varnothing 125/\varnothing 140/\varnothing 160/\varnothing 180/\varnothing 200$

JIS symbol



## Specifications

Item	SSD2 SSD2-L (with switch)					
	$\varnothing 125$	$\varnothing 140$	$\varnothing 160$	$\varnothing 180$	$\varnothing 200$	
Bore size mm	$\varnothing 125$	$\varnothing 140$	$\varnothing 160$	$\varnothing 180$	$\varnothing 200$	
Actuation	Double acting					
Working fluid	Compressed air					
Max. working pressure MPa	1.0 ( $\approx 150$ psi, 10 bar)			0.7 ( $\approx 100$ psi, 7 bar)		
Min. working pressure MPa	0.05 ( $\approx 7.3$ psi, 0.5 bar)					
Proof pressure MPa	1.6 ( $\approx 230$ psi, 16 bar)			1.05 ( $\approx 150$ psi, 10.5 bar)		
Ambient temperature $^{\circ}\text{C}$	-10 ( $14^{\circ}\text{F}$ ) to 60 ( $140^{\circ}\text{F}$ ) (no freezing)					
Port size	Rc3/8			Rc1/2		
Stroke tolerance mm	$^{+2.0}_0$					
Working piston speed mm/s	50 to 300			20 to 300		
Cushion	With rubber cushion (standard)					
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)					
Allowable absorbed energy J	With rubber cushion Without cushion	6.52	6.52	7.78	12.4	-

## Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\varnothing 125$	10, 20, 30, 40, 50 75, 100, 125, 150 175, 200, 250, 300	300	1
$\varnothing 140$			
$\varnothing 160$			
$\varnothing 180$			
$\varnothing 200$			

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

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

Switch quantity	1	2	3	4	5
Switch model No.	T*	T*	T*	T*	T*
Bore size (mm)					
$\varnothing 125$	5	5	40	55	70
$\varnothing 140$	5	5	40	55	70
$\varnothing 160$	5	5	40	55	70
$\varnothing 180$	5	5	40	55	70
$\varnothing 200$	5	5	40	55	70

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

### Switch specifications

● 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		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:33 3 m:87 5 m:142		1 m:61 3 m:166 5 m:272				

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

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

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

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

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

(Unit: kg)

Stroke (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	4.58	4.68	4.85	4.95	5.11	5.21	5.38	5.48	5.64	5.74	6.30	6.40	6.97	7.07
ø140	6.36	6.47	6.66	6.77	6.97	7.08	7.27	7.38	7.58	7.69	8.34	8.45	9.10	9.21
ø160	8.64	8.76	9.02	9.14	9.40	9.52	9.78	9.90	10.16	10.28	11.11	11.23	12.06	12.18
ø180	12.98	13.06	13.38	13.46	13.78	13.86	14.18	14.26	14.58	14.66	15.59	15.67	16.59	16.67
ø200	17.23	17.31	17.69	17.77	18.16	18.24	18.62	18.70	19.08	19.16	20.23	20.31	21.39	21.47

Stroke (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	7.63	7.73	8.30	8.40	8.96	9.06	9.62	9.72	10.95	11.05	12.27	12.37
ø140	9.86	9.97	10.63	10.74	11.39	11.50	12.15	12.26	13.68	13.79	15.20	15.31
ø160	13.01	13.13	13.96	14.08	14.91	15.03	15.86	15.98	17.76	17.88	19.66	19.78
ø180	17.59	17.67	18.59	18.67	19.60	19.68	20.60	20.68	22.60	22.68	24.61	24.69
ø200	22.54	22.62	23.70	23.78	24.85	24.93	26.01	26.09	28.32	28.40	30.63	30.71

### Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø125	Push	1.23x10 <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>
ø180	Push	2.54x10 <sup>3</sup>	3.82x10 <sup>3</sup>	5.09x10 <sup>3</sup>	7.63x10 <sup>3</sup>	1.02x10 <sup>4</sup>	1.27x10 <sup>4</sup>	1.53x10 <sup>4</sup>	1.78x10 <sup>4</sup>	-	-	-
	Pull	2.39x10 <sup>3</sup>	3.58x10 <sup>3</sup>	4.77x10 <sup>3</sup>	7.16x10 <sup>3</sup>	9.54x10 <sup>3</sup>	1.19x10 <sup>4</sup>	1.43x10 <sup>4</sup>	1.67x10 <sup>4</sup>	-	-	-
ø200	Push	3.14x10 <sup>3</sup>	4.71x10 <sup>3</sup>	6.28x10 <sup>3</sup>	9.43x10 <sup>3</sup>	1.26x10 <sup>4</sup>	1.57x10 <sup>4</sup>	1.89x10 <sup>4</sup>	2.20x10 <sup>4</sup>	-	-	-
	Pull	3.02x10 <sup>3</sup>	4.52x10 <sup>3</sup>	6.03x10 <sup>3</sup>	9.05x10 <sup>3</sup>	1.21x10 <sup>4</sup>	1.51x10 <sup>4</sup>	1.81x10 <sup>4</sup>	2.11x10 <sup>4</sup>	-	-	-

# SSD2 (Large bore size) Series

## How to order

No switch (without magnet for switch)

**SSD2** - **125** - **50** - **N**

With switch (built-in magnet for switch)

**SSD2-L** - **200** - **100** - **T0H** - **R** - **N**

**A** Model No.

**B** Bore size

**C** Port thread

**D** Stroke

**E** Switch model No.

\*1

**F** Switch quantity

**G** Option

### ⚠ Precautions for model No. selection

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

### [Example of model No.]

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

Model: Compact cylinder, standard

**B** Bore size : 125 mm

**C** Port thread : Rc thread

**D** Stroke : 50mm

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

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

**G** Option : Rod end male thread

Code	Description						
<b>A Model No.</b>							
<b>SSD2</b>	Double acting/single rod						
<b>SSD2-L</b>	Double acting/single rod/with switch						
<b>B Bore size (mm)</b>							
<b>125</b>	ø125						
<b>140</b>	ø140						
<b>160</b>	ø160						
<b>180</b>	ø180						
<b>200</b>	ø200						
<b>C Port thread</b>							
<b>Blank</b>	Rc thread						
<b>NN</b>	NPT thread (ø125 to ø160) (made-to-order product)						
<b>GN</b>	G thread (ø125 to ø160) (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 Line	
			AC	DC			
Straight	L-shaped	Reed	●	●	1-color LED	2-wire	
			●	●	No indicator lamp		
			●	●	1-color LED		
			●	□	1-color LED	2-wire	
			□	●			
		Proximity	□	□	●	1-color LED	3-wire
				□	●		
				□	●	2-color LED	2-wire
				□	●		
				□	●		
□	●	1-color LED off-delay	2-wire				
□	●	2-color LED for AC magnetic field	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>P4</b>	Specifications for rechargeable battery						
<b>P40</b>							

### [Stroke table]

Stroke (mm)	Applicable bore size					
	ø125	ø140	ø160	ø180	ø200	
Standard stroke	10	●	●	●	●	●
	20	●	●	●	●	●
	30	●	●	●	●	●
	40	●	●	●	●	●
	50	●	●	●	●	●
	75	●	●	●	●	●
	100	●	●	●	●	●
	125	●	●	●	●	●
	150	●	●	●	●	●
	175	●	●	●	●	●
	200	●	●	●	●	●
	250	●	●	●	●	●
	300	●	●	●	●	●
Min. stroke (mm) *1	1					
Max. stroke (mm)	300					
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 768 for the number of installed switches and the min. stroke.

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

### How to order switch

**SW - T0H**

Switch model No.  
(Item ㊦ on page 770)

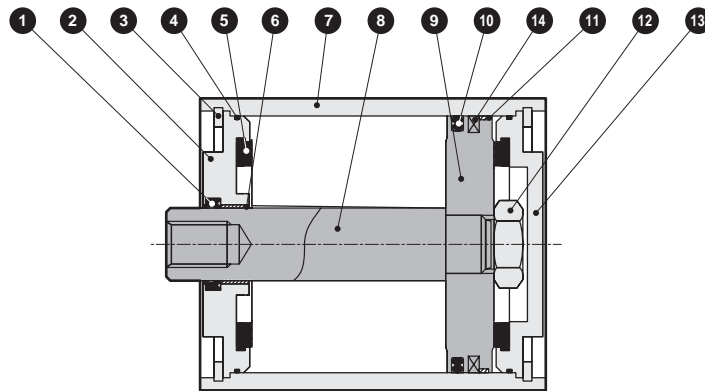
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/ COVP/N2
<b>SSD2</b>
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/ MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

# SSD2 (Large bore size) Series

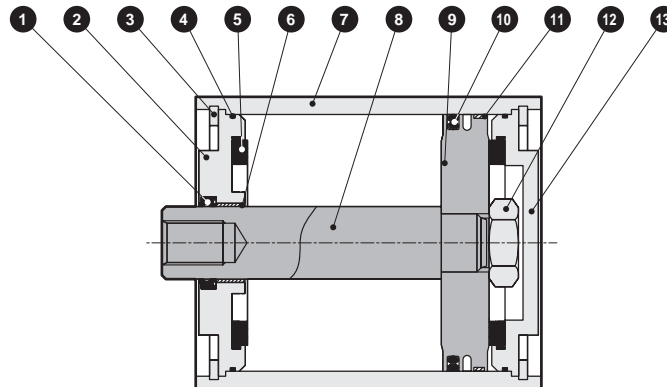
SCP\*3  
CMK2  
CMA2  
SCM  
SCG  
SCA2  
SCS2  
CKV2  
CAV2/  
COVPIN2  
SSD2  
SSG  
SSD  
CAT  
MDC2  
MVC  
SMG  
MSD/  
MSDG  
FC\*  
STK  
SRL3  
SRG3  
SRM3  
SRT3  
MRL2  
MRG2  
SM-25  
ShkAbs  
FJ  
FK  
Spd  
Contr  
Ending

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

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



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



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

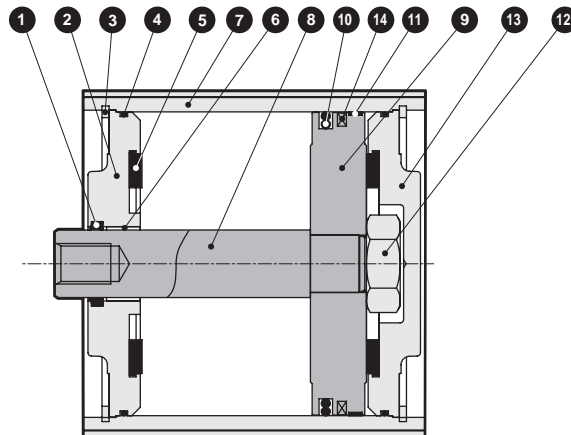
## Repair parts list

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

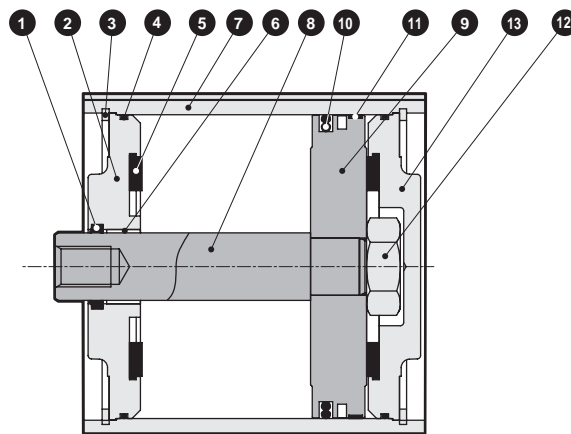
\*1: Specify the kit No. when placing an order.

## Internal structure and parts list (ø180, ø200)

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



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



### Parts list

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

### Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø180	SSD2-180K	1 4 5 10 11
ø200	SSD2-200K	

SCP\*3

CMK2

CMA2

SCM

SCG

SCA2

SCS2

CKV2

CAV2/  
COVP/N2**SSD2**

SSG

SSD

CAT

MDC2

MVC

SMG

MSD/  
MSDG

FC\*

STK

SRL3

SRG3

SRM3

SRT3

MRL2

MRG2

SM-25

ShkAbs

FJ

FK

Spd  
Contr

Ending

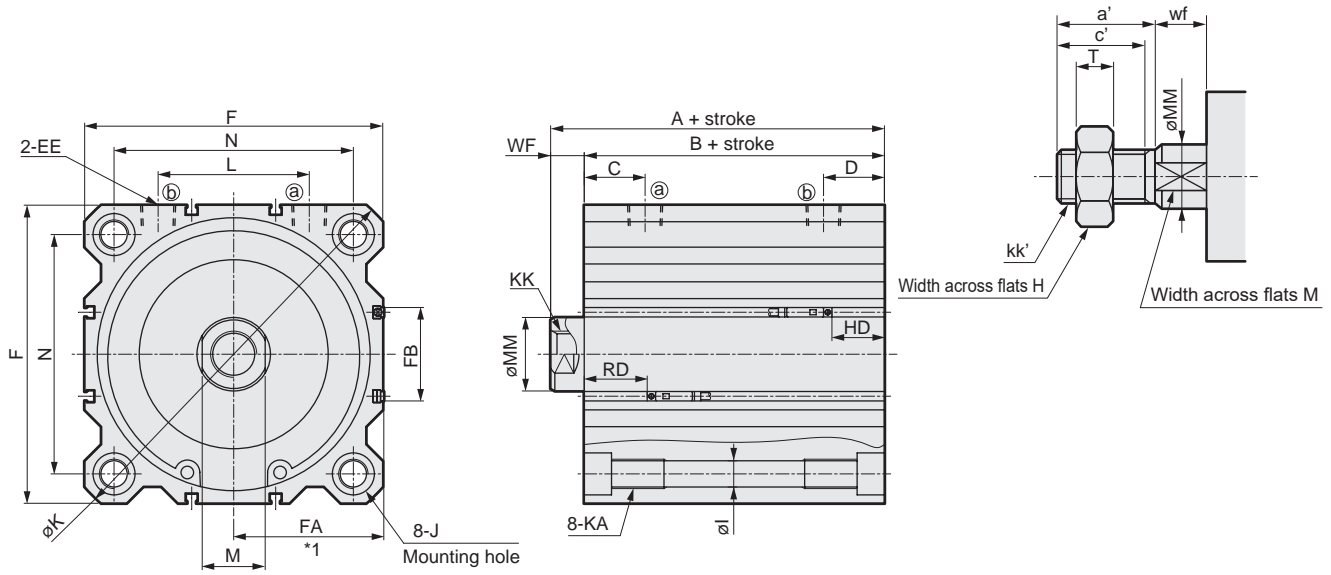
# SSD2 (Large bore size) Series

## Dimensions (ø125 to ø160)



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

● Rod end male thread



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

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

\*1: Dimensions in ( ) of FA are for the L-shaped lead wire.

### Dimensions of rod end male thread

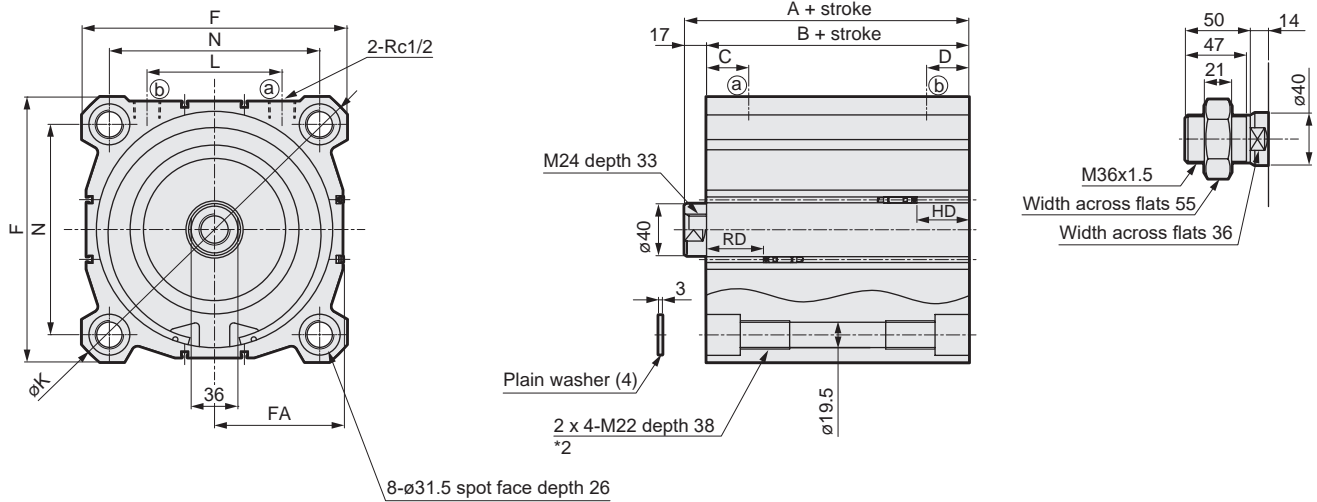
Code	a'	c'	H	kk'	M	MM	T	wf
ø125	45	42	46	M30x1.5	30	35	18	13
ø140	45	42	46	M30x1.5	30	35	18	13
ø160	50	47	55	M36x1.5	36	40	21	14

### Dimensions (ø180, ø200)



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

● Rod end male thread



Code	A	B	C	D	F	K	L	N							
Bore size (mm)															
ø180	119	102	32.5	32.5	204	270	104	162							
ø200	126	109	33.5	33.5	226	300	110	182							
Code	T0H/V, T2H/V, T3H/V, T5H/V			T2YH/V, T3YH/V, T2JH/V			T1H/V, T2YD			T2WH/V, T3WH/V			T8H/V		
Bore size (mm)	HD	RD	FA <sup>*1</sup>	HD	RD	FA <sup>*1</sup>	HD	RD	FA <sup>*1</sup>	HD	RD	FA <sup>*1</sup>	HD	RD	FA <sup>*1</sup>
ø180	39.5	43.5	99 (102.5)	38.5	42.5	104.5 (107.5)	38.5	42.5	110 (113)	41.5	45.5	99 (102.5)	33.5	37.5	104.5 (107.5)
ø200	44.5	45.5	109.5 (113)	43.5	44.5	115 (118)	43.5	44.5	120.5 (123.5)	46.5	47.5	109.5 (113)	38.5	39.5	115 (118)

\*1: Dimensions in ( ) of FA are for the L-shaped lead wire.

\*2: 2x4-M22 through hole for 20 mm or less stroke.

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

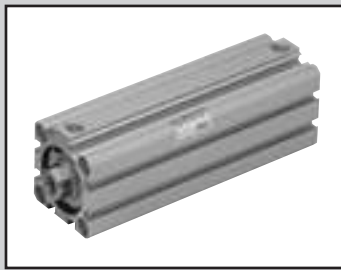
FJ

FK

Spd  
Contr

Ending





Compact cylinder, double acting/single rod/high load

# SSD2-K Series

- Bore size:  $\phi 12/\phi 16/\phi 20/\phi 25/\phi 32$   
 $\phi 40/\phi 50/\phi 63/\phi 80/\phi 100$



## Specifications

Item	SSD2-K SSD2-KL (with switch)											
	mm		$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Bore size	mm		$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Actuation	Double acting											
Working fluid	Compressed air											
Max. working pressure	MPa	1.0 ( $\approx 150$ psi, 10 bar)										
Min. working pressure	MPa	0.1 ( $\approx 15$ 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		M5				Rc1/8		Rc1/4		Rc3/8		
Stroke tolerance	mm	+2.0 0										
Working piston speed	mm/s	50 to 500							50 to 300			
Cushion		Rubber cushion										
Lubrication		Not required (use turbine oil ISO VG32 if necessary for lubrication)										
Allowable absorbed energy	J	0.04	0.09	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92	

## Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\phi 12$	5/10/15/20	30	1
$\phi 16$	25/30		
$\phi 20$	5/10/15/20/25	50	
$\phi 25$	30/35/40/45/50		
$\phi 32$	5/10/15/20/25/30/	100	
$\phi 40$	35/40/45/50/75/100		
$\phi 50$	10/15/20/25		
$\phi 63$	30/35/40/45/50		
$\phi 80$	75/100		
$\phi 100$			

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

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

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

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
$\phi 12$	10(5)	5
$\phi 16$		
$\phi 20$	5	
$\phi 25$		
$\phi 32$		
$\phi 40$		
$\phi 50$		
$\phi 63$		
$\phi 80$		
$\phi 100$		

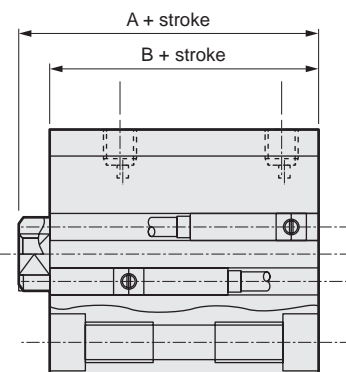
\*1: Less than 10 mm with the 2-color LED, off-delay, AC magnetic field proof, T1\* or T8\* switch is not available.

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

## Custom stroke

### ● SSD2-K Series

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



### 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/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V	T8H/T8V		T2YD(*4) T2YDT		
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller				For programmable controller, relay				For programmable controller, relay	For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay	For programmable controller	
Output method	-		NPN output		PNP output	PNP output	PNP output	PNP output	-					-	
Pwr. supp. V.	-		10 to 28 VDC		10 to 28 VDC				-					-	
Load voltage	85 to 265 VAC	10 to 30 VDC	24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)		100 mA or less	50 mA or less			5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	No indicator lamp	LED (Lit when ON)		Red/green LED (Lit when ON)		
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less		10 µA or less				0 mA					1 mA or less		
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80	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											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02x10 <sup>2</sup>	1.13x10 <sup>2</sup>
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.61x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.01x10 <sup>2</sup>
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.36x10 <sup>2</sup>	1.51x10 <sup>2</sup>
ø20	Push	-	31.4	47.1	62.8	94.2	1.26x10 <sup>2</sup>	1.57x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.20x10 <sup>2</sup>	2.51x10 <sup>2</sup>	2.83x10 <sup>2</sup>	3.14x10 <sup>2</sup>
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.65x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.12x10 <sup>2</sup>	2.36x10 <sup>2</sup>
ø25	Push	-	49.1	73.6	98.2	1.47x10 <sup>2</sup>	1.96x10 <sup>2</sup>	2.45x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.44x10 <sup>2</sup>	3.93x10 <sup>2</sup>	4.42x10 <sup>2</sup>	4.91x10 <sup>2</sup>
	Pull	-	37.8	56.7	75.6	1.13x10 <sup>2</sup>	1.51x10 <sup>2</sup>	1.89x10 <sup>2</sup>	2.27x10 <sup>2</sup>	2.64x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.40x10 <sup>2</sup>	3.78x10 <sup>2</sup>
ø32	Push	-	80.4	1.21x10 <sup>2</sup>	1.61x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.22x10 <sup>2</sup>	4.02x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.63x10 <sup>2</sup>	6.43x10 <sup>2</sup>	7.24x10 <sup>2</sup>	8.04x10 <sup>2</sup>
	Pull	-	60.3	90.5	1.21x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.62x10 <sup>2</sup>	4.22x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.43x10 <sup>2</sup>	6.03x10 <sup>2</sup>
ø40	Push	-	1.26x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.51x10 <sup>2</sup>	3.77x10 <sup>2</sup>	5.03x10 <sup>2</sup>	6.28x10 <sup>2</sup>	7.54x10 <sup>2</sup>	8.80x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.13x10 <sup>3</sup>	1.26x10 <sup>3</sup>
	Pull	-	1.06x10 <sup>2</sup>	1.58x10 <sup>2</sup>	2.11x10 <sup>2</sup>	3.17x10 <sup>2</sup>	4.22x10 <sup>2</sup>	5.28x10 <sup>2</sup>	6.33x10 <sup>2</sup>	7.39x10 <sup>2</sup>	8.44x10 <sup>2</sup>	9.50x10 <sup>2</sup>	1.06x10 <sup>3</sup>
ø50	Push	-	1.96x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.93x10 <sup>2</sup>	5.89x10 <sup>2</sup>	7.85x10 <sup>2</sup>	9.82x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.37x10 <sup>3</sup>	1.57x10 <sup>3</sup>	1.77x10 <sup>3</sup>	1.96x10 <sup>3</sup>
	Pull	-	1.65x10 <sup>2</sup>	2.47x10 <sup>2</sup>	3.30x10 <sup>2</sup>	4.95x10 <sup>2</sup>	6.60x10 <sup>2</sup>	8.25x10 <sup>2</sup>	9.90x10 <sup>2</sup>	1.15x10 <sup>3</sup>	1.32x10 <sup>3</sup>	1.48x10 <sup>3</sup>	1.65x10 <sup>3</sup>
ø63	Push	1.56x10 <sup>2</sup>	3.12x10 <sup>2</sup>	4.68x10 <sup>2</sup>	6.23x10 <sup>2</sup>	9.35x10 <sup>2</sup>	1.25x10 <sup>3</sup>	1.56x10 <sup>3</sup>	1.87x10 <sup>3</sup>	2.18x10 <sup>3</sup>	2.49x10 <sup>3</sup>	2.81x10 <sup>3</sup>	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>

# SSD2-K Series

## How to order

No switch (without magnet for switch)

SSD2-K - 12 - 10 - N - LB - I

With switch (built-in magnet for switch)

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

A Bore size

B Port thread

C Stroke

D Switch model No.

- \*1
- \*2
- \*3
- \*8
- \*9

E Switch quantity

F Option

G Mounting bracket  
\*5 \*6

### ⚠ Precautions for model No. selection

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

### [Example of model No.]

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

Model: Compact cylinder, high load

- A Bore size : ø12 mm
- B Port thread : Rc thread
- C Stroke : 10mm
- D Switch model No. : Reed T0H switch  
· Lead wire 1 m

- E Switch quantity : 1 on rod side
- F Option : Rod end male thread

H Accessory

\*7

Code	Description
<b>A Bore size (mm)</b>	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

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

<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												
			AC	DC			12	16	20	25	32	40	50	63	80	100			
Straight	L-shaped	Proximity	●	●	1-color LED	2-wire		●	●										
						3-wire		●	●										
F2H*	F2V*	●	●	2-wire			●	●											
F3H*	F3V*	●	●	3-wire			●	●											
F3PH*	F3PV*	●	●	3-wire			●	●											
F2YH*	F2YV*	●	●	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	2-wire								●	●	●	●	●	
T1H*	T1V*	●	●	●	1-color LED	2-wire								●	●	●	●	●	
T2H*	T2V*	●	●	●	1-color LED	2-wire	●	●	●	●	●	●	●	●	●	●	●	●	
T3H*	T3V*	●	●	●	1-color LED (PNP output)	3-wire	●	●	●	●	●	●	●	●	●	●	●	●	
T3PH*	T3PV*	●	●	●	1-color LED (PNP output)	3-wire	●	●	●	●	●	●	●	●	●	●	●	●	
T2WH*	T2WV*	Proximity	●	●	2-color LED	2-wire	●	●	●	●	●	●	●	●	●	●	●	●	
T2YH*	T2YV*	●	●	2-wire			●	●	●	●	●	●	●	●	●	●	●	●	●
T3WH*	T3WV*	●	●	3-wire			●	●	●	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*	●	●	●	2-color LED	3-wire								●	●	●	●	●	
T2YD*	-	●	●	2-wire			●	●	●	●	●	●	●	●	●	●	●	●	●
T2YDT*	-	●	●	●	AC magnetic field	2-wire								●	●	●	●	●	
T2JH*	T2JV*	●	●	●	1-color LED off-delay	2-wire								●	●	●	●	●	

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

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

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

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

### [Stroke table]

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

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

Refer to page 776 for the min. stroke with switch.

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

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

### How to order switch

SW - T0H

Switch model No.  
(Item ① on page 778)

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

(Unit: g)

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

### How to order mounting bracket

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

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

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

- Design compatible with rechargeable battery manufacturing process

SSD2-K----- P4\*

SCP\*3

CMK2

CMA2

SCM

SCG

SCA2

SCS2

CKV2

CAV2/  
COVP/N2

SSD2

SSG

SSD

CAT

MDC2

MVC

SMG

MSD/  
MSDG

FC\*

STK

SRL3

SRG3

SRM3

SRT3

MRL2

MRG2

SM-25

ShkAbs

FJ

FK

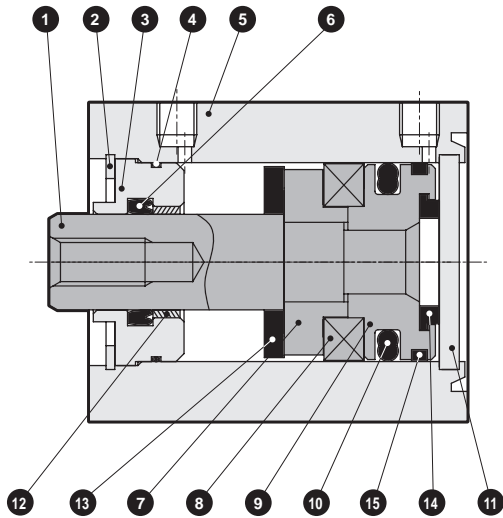
Spd  
Contr

Ending

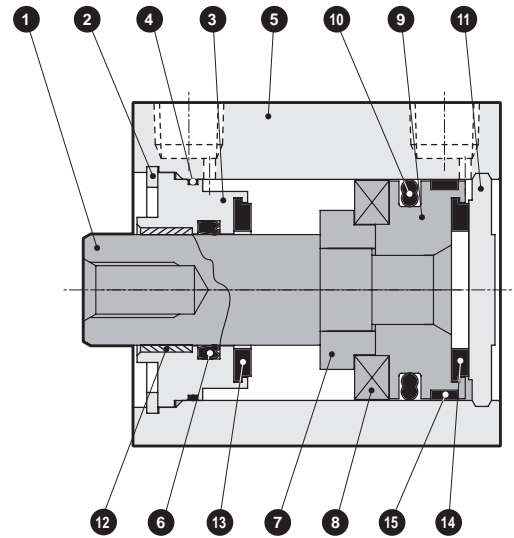
# SSD2-K Series

## Internal structure and parts list

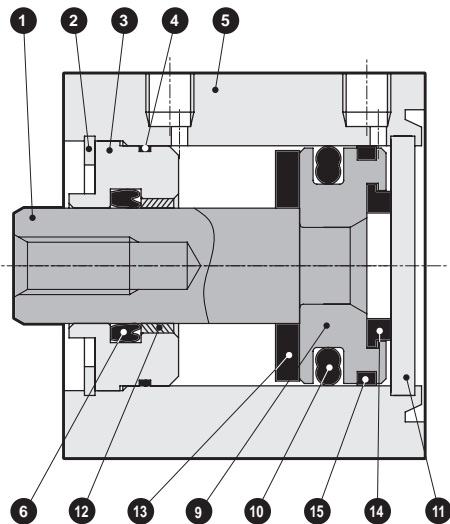
● SSD2-KL-12 to 25 (double acting/single rod/with switch)



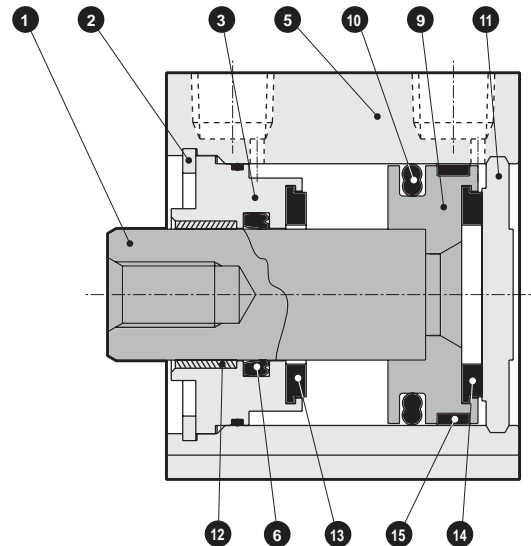
● SSD2-KL-32 (double acting/single rod high load/with switch)



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



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



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

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

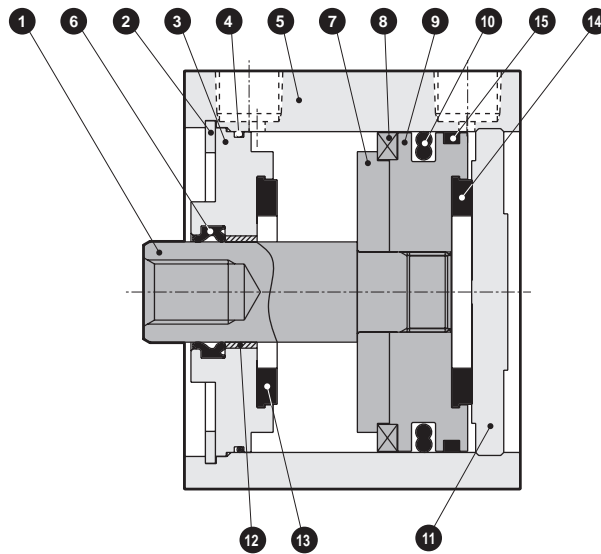
\*2: Chromate-coated for ø32.

## Repair parts list

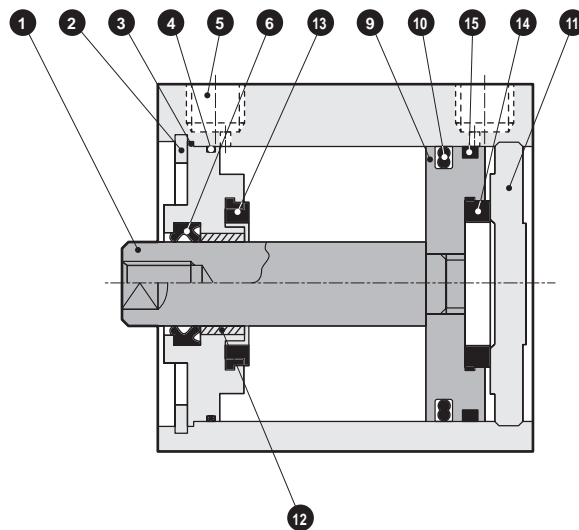
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-K-12K	
ø16	SSD2-K-16K	
ø20	SSD2-K-20K	
ø25	SSD2-K-25K	
ø32	SSD2-K-32K	

### Internal structure and parts list

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



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



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

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

\*2: Chromate-coated for ø40 and ø50.

### Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø40	SSD2-K-40K	
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-K Series

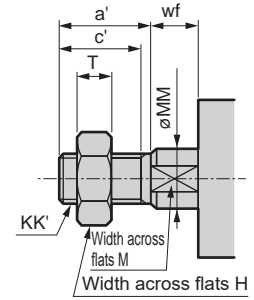
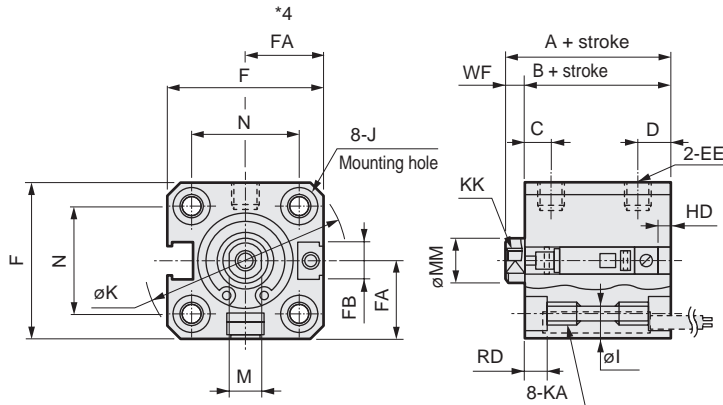
## Dimensions



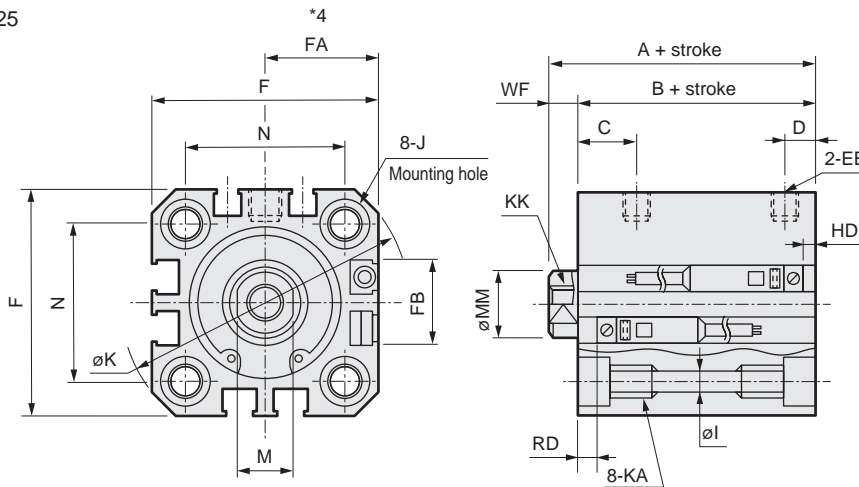
● SSD2-KL-12 to 25 (with switch)

● Rod end male thread

ø12/ø16



ø20/ø25



· Precautions regarding the switch mounting groove

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

Code	Common dimensions with switch																	
	A <sup>*1</sup>	B <sup>*1</sup>	C	D	EE	F	FA <sup>*3</sup>	FB	I	J	K	KA	KK	M	MM	N	WF	
STK	ø12	30.5	27	5.5	5.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
	ø16	30.5	27	5.5	5.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
SRL3	ø20	39	34.5	8	5.5	M5	36	18.5(22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
	ø25	42.5	37.5	11	6	M5	40	20.5(24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5
Switch dimensions	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S									
	Bore size (mm)	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD							
SRG3	ø12	4.5	3.5	4.5	3.5	6.5	5.5											
	ø16	3	5	3	5	5	7											
SRM3	ø20	6.5	9	6.5	9	8.5	11	11	13.5	10	12.5							
	ø25	6	12.5	6	12.5	8	14.5	10.5	17	9.5	16							

\*1: To calculate A + stroke 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.

· For ø16: A + stroke = 40.5 B + stroke = 37

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

· For ø16: A + stroke = 37.5 B + stroke = 34

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

\*3: Refer to page 1045 for protruding dimensions of the 2-color LED, off-delay, AC magnetic field tolerant, 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.

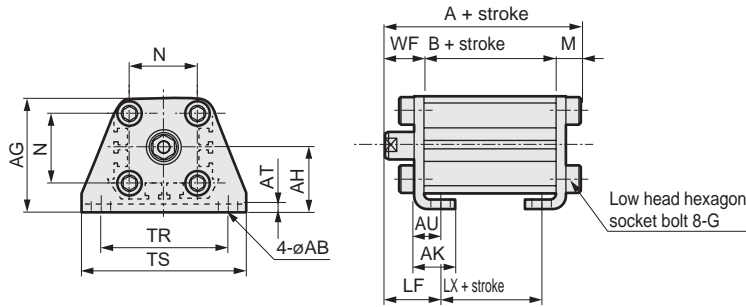
● Dimensions of rod end male thread part

Code	a'	c'	H	kk'	M	MM	T	wf
FK	Bore size (mm)							
	ø12	10.5	9	8	M5	5	6	3.2
Spd Contr	ø16	12	10	10	M6	6	8	3.6
	ø20	14	12	13	M8	8	10	5
Ending	ø25	17.5	15	17	M10x1.25	10	12	6

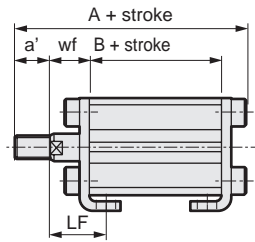
### Dimensions with mounting bracket



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



Rod end male thread

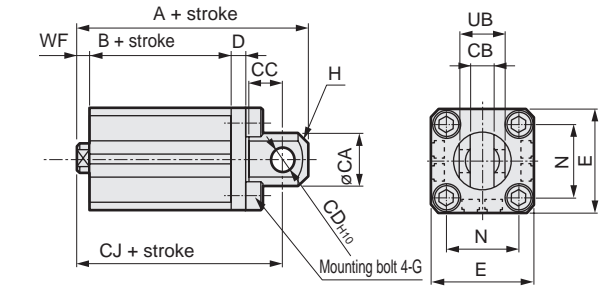


Code	Common dimensions						Female thread				
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2

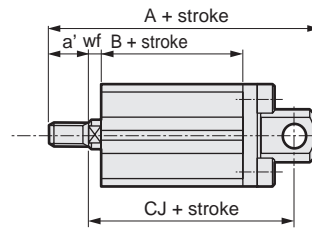
  

Code	Male thread										
Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	45.3	27	15	10.5	13.5	19.5	55.8	27	15
ø16	13.5	19.5	45.3	27	15	12	13.5	19.5	57.3	27	15
ø20	14.5	20.5	56.2	34.5	22.5	14	14.5	20.5	70.2	34.5	22.5
ø25	15	22.5	59.7	37.5	22.5	17.5	15	22.5	77.2	37.5	22.5

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



Rod end male thread

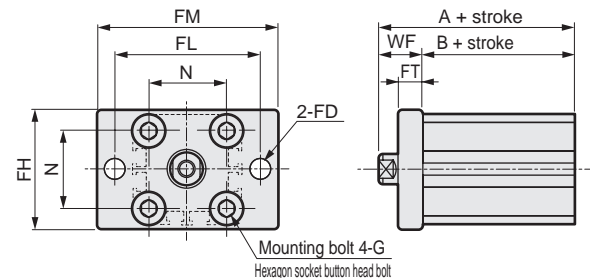


Code	Common dimensions									
Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	5.2 <sup>+0.2</sup> <sub>0</sub>	7	5	4	25	M4x12	C1.5	15.5	10 <sup>3.1</sup> <sub>3.4</sub>
ø16	15	6.6 <sup>+0.3</sup> <sub>0</sub>	8	5	5	29	M4x12	C2	20	12 <sup>3.1</sup> <sub>3.4</sub>
ø20	20	8.2 <sup>+0.2</sup> <sub>0</sub>	12	8	5	36	M6x16	C4	25.5	16 <sup>3.1</sup> <sub>3.3</sub>
ø25	24	10.2 <sup>+0.2</sup> <sub>0</sub>	14	10	5	40	M6x16	C5	28	20 <sup>3.1</sup> <sub>3.3</sub>

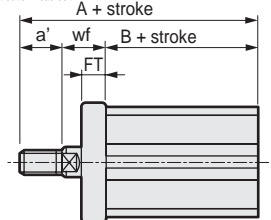
  

Code	Female thread				Male thread				
Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø12	3.5	50.5	27	44.5	10.5	3.5	61	27	44.5
ø16	3.5	51.5	27	45.5	12	3.5	63.5	27	45.5
ø20	4.5	66	34.5	57	14	4.5	80	34.5	57
ø25	5	72.5	37.5	62.5	17.5	5	90	37.5	62.5

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



Rod end male thread

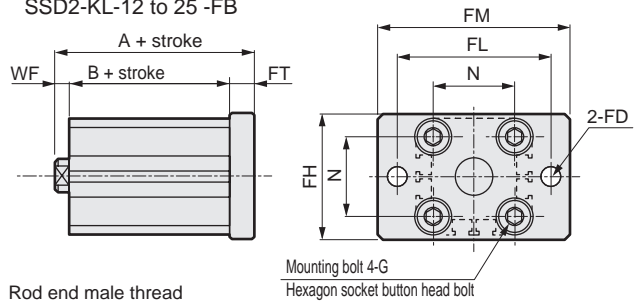


Code	Common dimensions						
Bore size (mm)	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4x12
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16

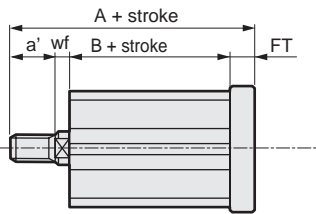
  

Code	Female thread				Male thread		
Bore size (mm)	WF	A	B	a'	wf	A	B
ø12	13.5	40.5	27	10.5	13.5	51	27
ø16	13.5	40.5	27	12	13.5	52.5	27
ø20	14.5	49	34.5	14	14.5	63	34.5
ø25	15	52.5	37.5	17.5	15	70	37.5

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



Rod end male thread



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

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



# SSD2-K Series

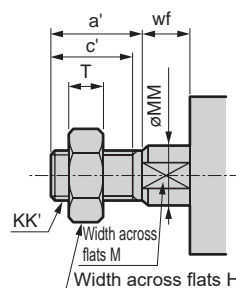
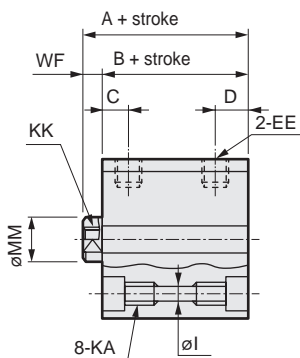
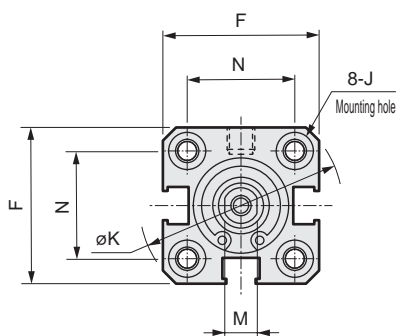
## Dimensions



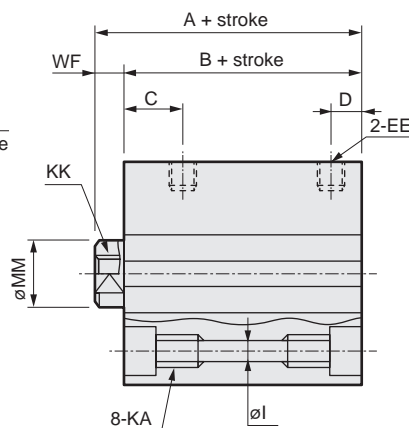
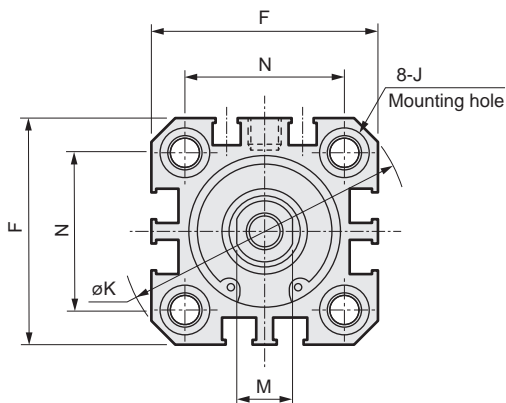
● SSD2-K-12 to 25 (without switch)

● Rod end male thread

ø12/ø16



ø20/ø25



Code	Dimensions without switch and common dimensions															
	Bore size (mm)	A <sup>*1</sup>	B <sup>*1</sup>	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
SRG3	ø12	25.5	22	5.5	5.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
SRM3	ø16	25.5	22	5.5	5.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
SRT3	ø20	29	24.5	8	5.5	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
SRL3	ø25	32.5	27.5	11	6	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

\*1 : To calculate A+ stroke 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.

• For ø16: A + stroke = 35.5 B + stroke = 32

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

• For ø16: A + stroke = 32.5 B + stroke = 29

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

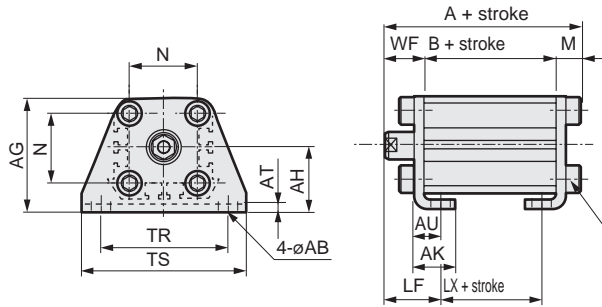
● Dimensions of rod end male thread part

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

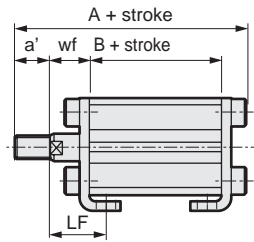
### Dimensions with mounting bracket



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



Rod end male thread

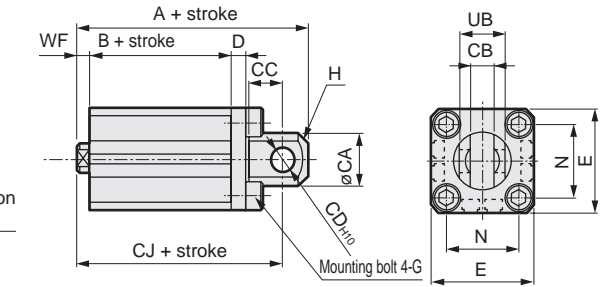


Code	Common dimensions										Female thread		
	Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M	
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8		
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8		
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2		
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2		

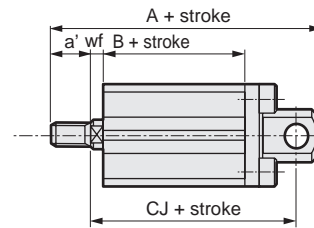
  

Code	Male thread										
	Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B
ø12	13.5	19.5	40.3	22	10	10.5	13.5	19.5	50.8	22	10
ø16	13.5	19.5	40.3	22	10	12	13.5	19.5	52.3	22	10
ø20	14.5	20.5	46.2	24.5	12.5	14	14.5	20.5	60.2	24.5	12.5
ø25	15	22.5	49.7	27.5	12.5	17.5	15	22.5	67.2	27.5	12.5

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



Rod end male thread

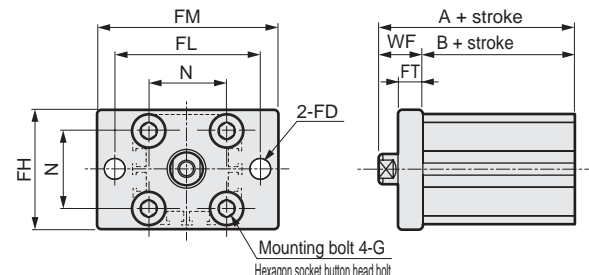


Code	Common dimensions										
	Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	5.2 <sup>+0.2</sup>	7	5	4	25	M4x12	C1.5	15.5	10 <sup>-0.1</sup>	10 <sup>-0.3</sup>
ø16	15	6.6 <sup>+0.3</sup>	8	5	5	29	M4x12	C2	20	12 <sup>-0.1</sup>	12 <sup>-0.4</sup>
ø20	20	8.2 <sup>+0.2</sup>	12	8	5	36	M6x16	C4	25.5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

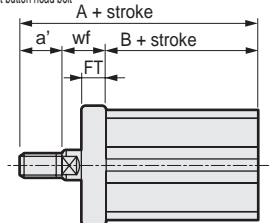
  

Code	Female thread					Male thread				
	Bore size (mm)	WF	A	B	CJ	a'	wf	A	B	CJ
ø12	3.5	45.5	22	39.5	10.5	3.5	56	22	39.5	
ø16	3.5	46.5	22	40.5	12	3.5	58.5	22	40.5	
ø20	4.5	56	24.5	47	14	4.5	70	24.5	47	
ø25	5	62.5	27.5	52.5	17.5	5	80	27.5	52.5	

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



Rod end male thread

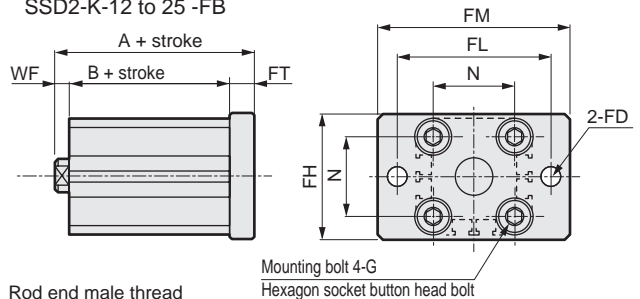


Code	Common dimensions						
	Bore size (mm)	FD	FH	FL	FM	FT	N
ø12	4.5	25	45	55	5.5	15.5	M4x12
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16

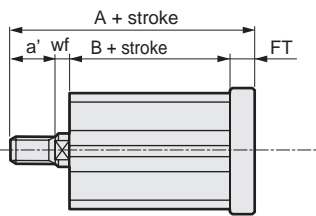
  

Code	Female thread				Male thread		
	Bore size (mm)	WF	A	B	a'	wf	A
ø12	13.5	35.5	22	10.5	13.5	46	22
ø16	13.5	35.5	22	12	13.5	47.5	22
ø20	14.5	39	24.5	14	14.5	53	24.5
ø25	15	42.5	27.5	17.5	15	60	27.5

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



Rod end male thread



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

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

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

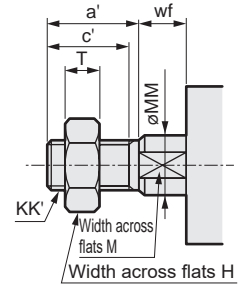
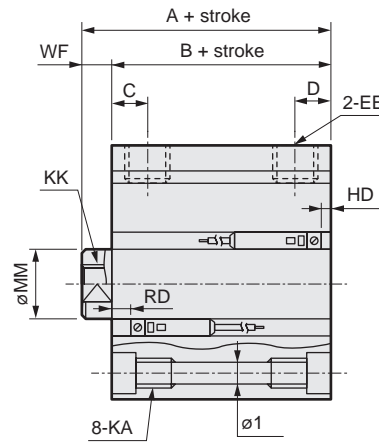
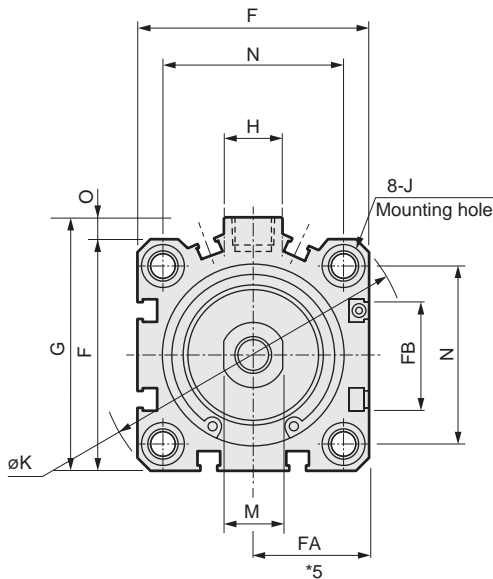
# SSD2-K Series

## Dimensions



● SSD2-KL-32 to 100 (with switch)

● Rod end male thread



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

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

\*1 : To calculate A + stroke 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.

· For ø40: A + stroke = 60 B + stroke = 53

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

· For ø40: A + stroke = 57 B + stroke = 50

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

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

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

\*5 : Dimensions in ( ) of FA are for the L-shaped lead wire.

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

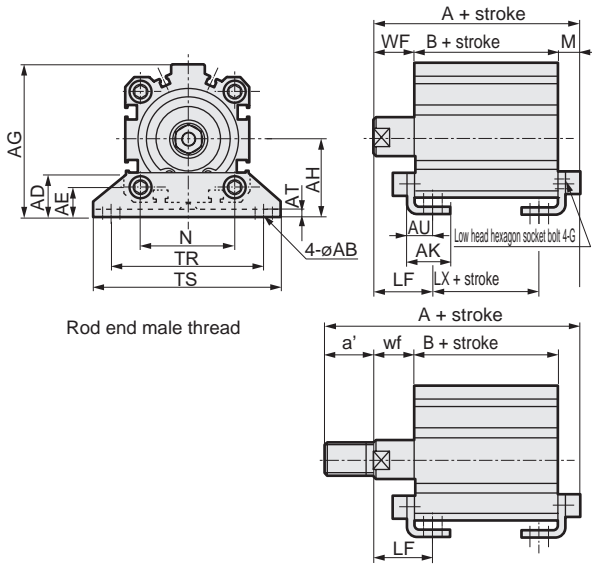
● Dimensions of rod end male thread part

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

### Dimensions with mounting bracket



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

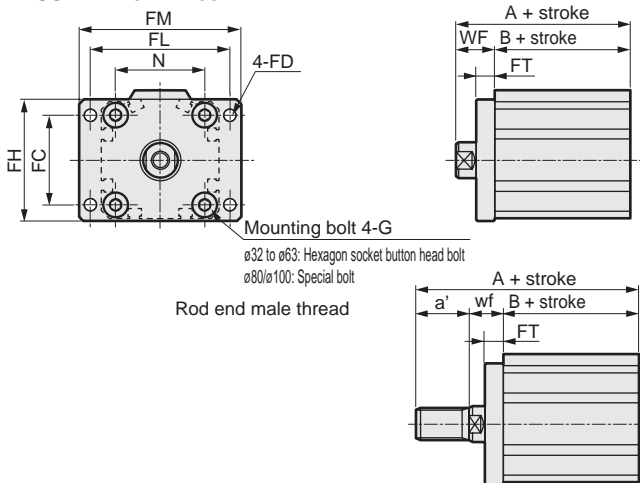


Code	Common dimensions							Female thread					
	Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS
ø32	7	18.5	13	57	30	17	3.2	11.2	M6x16	34	57	71	
ø40	7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64	78	
ø50	9	22	14	78	39	22.7	3.2	14.7	M8x20	50	79	95	
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10x25	60	95	113	
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12x40	77	118	140	
ø100	13	35	24	136	71	35.5	6	23	M12x40	94	137	162	

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

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

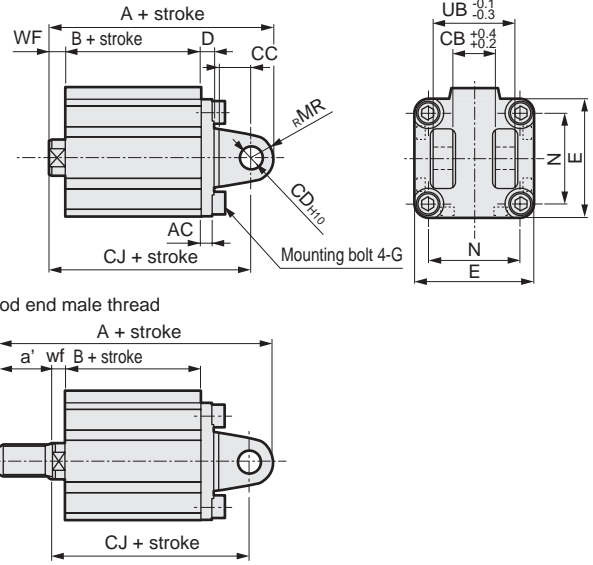


Code	Common dimensions							
	Bore size (mm)	FC	FD	FH	FL	FM	FT	N
ø32	34	5.5	48	56	65	8	34	M6x16
ø40	40	5.5	54	62	72	8	40	M6x16
ø50	50	6.6	67	76	89	9	50	M8x20
ø63	60	9	80	92	108	9	60	M10x25
ø80	77	11	99	116	134	11	77	M12x40
ø100	94	11	117	136	154	11	94	M12x40

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

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



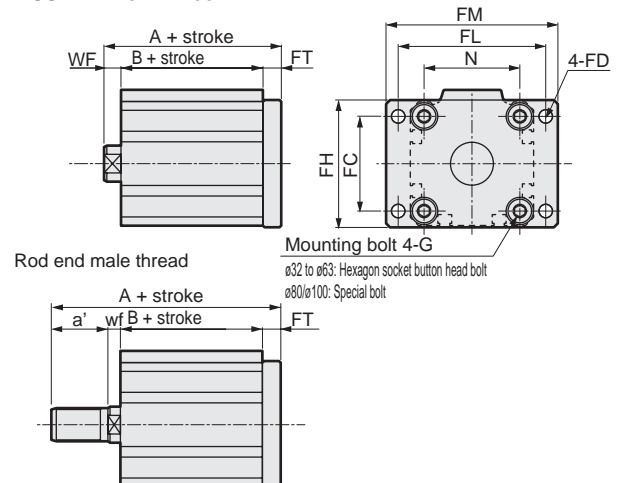
Code	Common dimensions									
	Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N
ø32	4.5	18.2	14	10	5	45	M6x16	10	34	36
ø40	5	18.2	14	10	6	52	M6x16	10	40	36
ø50	6	22.2	20	14	7	64	M8x20	14	50	44
ø63	7	22.2	20	14	8	77	M10x25	14	60	44
ø80	9	28.2	27	18	10	98	M12x40	18	77	56
ø100	12	32.2	31	22	13	117	M12x40	22	94	64

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

\* A pin and a snap ring are included.

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



Code	Common dimensions							
	Bore size (mm)	FC	FD	FH	FL	FM	FT	N
ø32	34	5.5	48	56	65	8	34	M6x16
ø40	40	5.5	54	62	72	8	40	M6x16
ø50	50	6.6	67	76	89	9	50	M8x20
ø63	60	9	80	92	108	9	60	M10x25
ø80	77	11	99	116	134	11	77	M12x40
ø100	94	11	117	136	154	11	94	M12x40

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

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

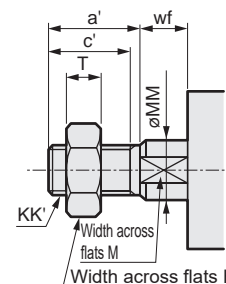
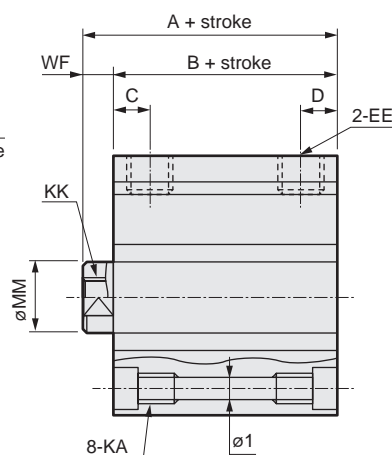
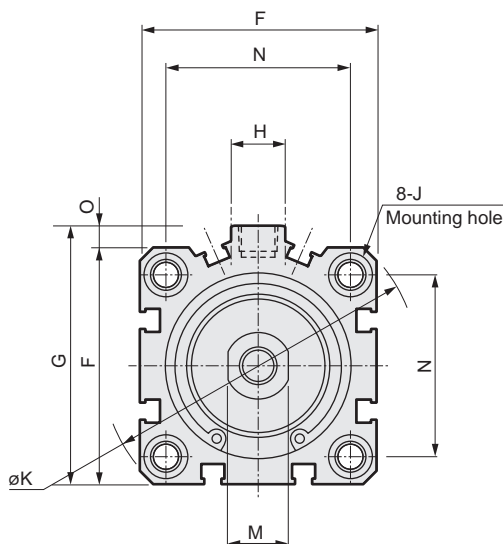
# SSD2-K Series

## Dimensions



● SSD2-K-32 to 100 (without switch)

● Rod end male thread



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

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

\*1 : To calculate A + stroke 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.

· For ø40: A + stroke = 50 B + stroke = 43

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

· For ø40: A + stroke = 47 B + stroke = 40

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

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

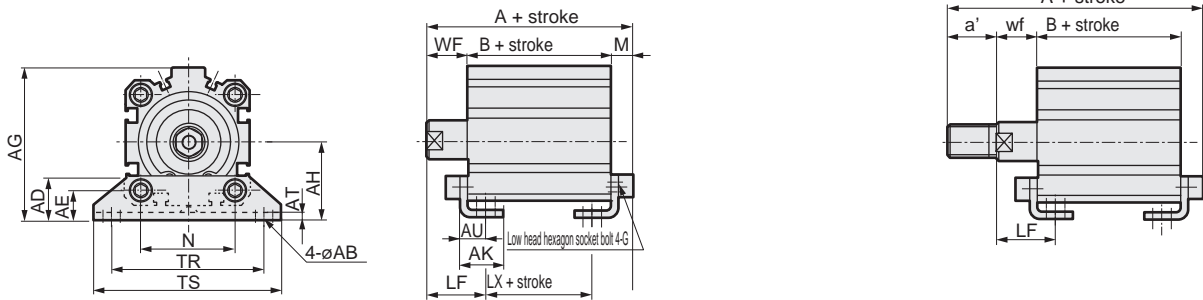
● Dimensions of rod end male thread part

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

### Dimensions with mounting bracket



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



Code	Common dimensions													Female thread			
	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	WF	LF	A	B
ø32	7	18.5	13	57	30	17	3.2	11.2	M6x16	34	57	71	7.2	17	25	57.2(67.2)	33(43)
ø40	7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64	78	7.2	17	25	63.7(73.7)	39.5(49.5)
ø50	9	22	14	78	39	22.7	3.2	14.7	M8x20	50	79	95	8.2	18	29.5	66.7(76.7)	40.5(50.5)
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10x25	60	95	113	9.2	18	31	73.2(83.2)	46(56)
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12x40	77	118	140	11.5	20	35	85(95)	53.5(63.5)
ø100	13	35	24	136	71	35.5	6	23	M12x40	94	137	162	13	22	39	98(108)	63(73)

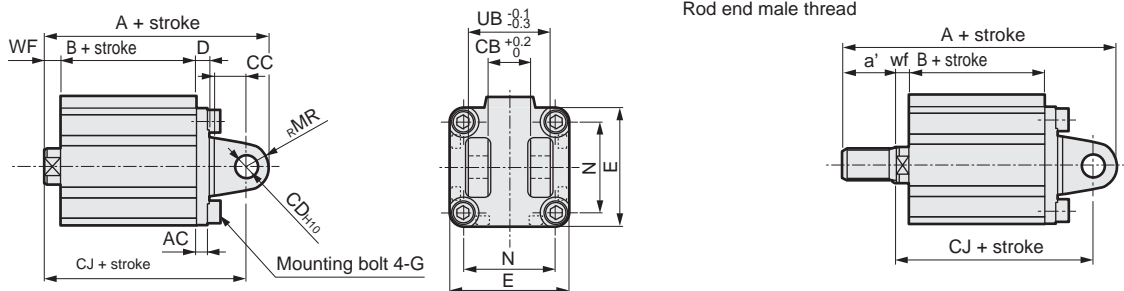
  

Code	Male thread						
	LX	a'	wf	LF	A	B	LX
ø32	17(27)	23.5	15	23	78.7(88.7)	33(43)	17(27)
ø40	23.5(33.5)	23.5	15	23	85.2(95.2)	39.5(49.5)	23.5(33.5)
ø50	17.5(27.5)	28.5	15	26.5	92.2(102.2)	40.5(50.5)	17.5(27.5)
ø63	20(30)	28.5	15	28	98.7(108.7)	46(56)	20(30)
ø80	23.5(33.5)	35.5	18	33	118.5(128.5)	53.5(63.5)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

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

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

- Clevis bracket (CB) without switch  
SSD2-K-32 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
ø32	4.5	18.2	14	10	5	45	M6x16	10	34	36	7	70(80)	33(43)	60	23.5	5	91.5(101.5)	33(43)	58
ø40	5	18.2	14	10	6	52	M6x16	10	40	36	7	78.5(88.5)	39.5(49.5)	68.5	23.5	5	100(110)	39.5(49.5)	66.5
ø50	6	22.2	20	14	7	64	M8x20	14	50	44	8	90.5(100.5)	40.5(50.5)	76.5	28.5	5	116(126)	40.5(50.5)	73.5
ø63	7	22.2	20	14	8	77	M10x25	14	60	44	8	98(108)	46(56)	84	28.5	5	123.5(133.5)	46(56)	81
ø80	9	28.2	27	18	10	98	M12x40	18	77	56	10	119.5(129.5)	53.5(63.5)	101.5	35.5	8	153(163)	53.5(63.5)	99.5
ø100	12	32.2	31	22	13	117	M12x40	22	94	64	12	142(152)	63(73)	120	35.5	8	173.5(183.5)	63(73)	116

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

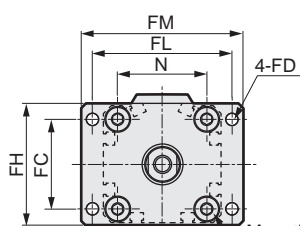
- SCP\*3
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS2
- CKV2
- CAV2/  
COVP/N2
- SSD2
- SSG
- SSD
- CAT
- MDC2
- MVC
- SMG
- MSD/  
MSDG
- FC\*
- STK
- SRL3
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- ShkAbs
- FJ
- FK
- Spd  
Contr
- Ending

# SSD2-K Series

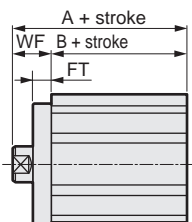


## Dimensions with mounting bracket

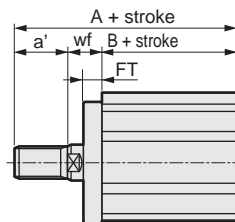
- Rod side flange (FA) without switch  
SSD2-K-32 to 100 -FA



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



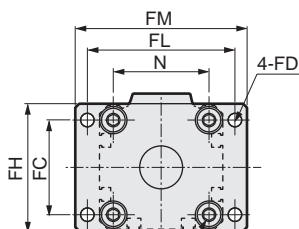
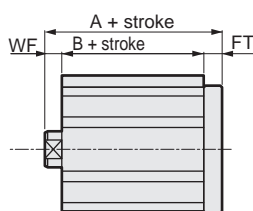
Rod end male thread



Code	Common dimensions								Female thread			Male thread				
	Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
SSD2	ø32	34	5.5	48	56	65	8	34	M6x16	17	50(60)	33(43)	23.5	15	71.5(81.59)	33(43)
SSG	ø40	40	5.5	54	62	72	8	40	M6x16	17	56.5(66.5)	39.5(49.5)	23.5	15	78(88)	39.5(49.5)
SSD	ø50	50	6.6	67	76	89	9	50	M8x20	18	58.5(68.5)	40.5(50.5)	28.5	15	84(94)	40.5(50.5)
	ø63	60	9	80	92	108	9	60	M10x25	18	64(74)	46(56)	28.5	15	89.5(99.5)	46(56)
CAT	ø80	77	11	99	116	134	11	77	M12x40	20	73.5(83.5)	53.5(63.5)	35.5	18	107(117)	53.5(63.5)
	ø100	94	11	117	136	154	11	94	M12x40	22	85(95)	63(73)	35.5	18	116.5(126.5)	63(73)

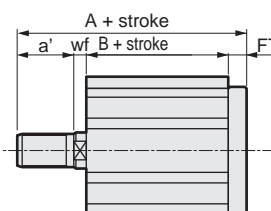
\* Dimensions in ( ) are for strokes of more than 50 mm.

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



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

Rod end male thread



Code	Common dimensions								Female thread			Male thread				
	Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	A	B	a'	wf	A	B
MRG2	ø32	34	5.5	48	56	65	8	34	M6x16	7	48(58)	33(43)	23.5	5	69.5(79.5)	33(43)
SM-25	ø40	40	5.5	54	62	72	8	40	M6x16	7	54.5(64.5)	39.5(49.5)	23.5	5	76(86)	39.5(49.5)
ShkAbs	ø50	50	6.6	67	76	89	9	50	M8x20	8	57.5(67.5)	40.5(50.5)	28.5	5	83(93)	40.5(50.5)
	ø63	60	9	80	92	108	9	60	M10x25	8	63(73)	46(56)	28.5	5	88.5(98.5)	46(56)
FJ	ø80	77	11	99	116	134	11	77	M12x40	10	74.5(84.5)	53.5(63.5)	35.5	8	108(118)	53.5(63.5)
	ø100	94	11	117	136	154	11	94	M12x40	12	86(96)	63(73)	35.5	8	117.5(127.5)	63(73)

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

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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

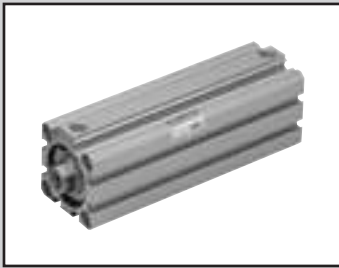
FJ

FK

Spd  
Contr

Ending





Compact cylinder double acting/single rod/long stroke

# SSD2 Series (long stroke)

- Bore size:  $\varnothing 12/\varnothing 16/\varnothing 20/\varnothing 25/\varnothing 32$   
 $\varnothing 40/\varnothing 50/\varnothing 63/\varnothing 80/\varnothing 100$



## Specifications

Item	SSD2										
	SSD2-L (with switch)										
Bore size mm	$\varnothing 12$	$\varnothing 16$	$\varnothing 20$	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$	
Actuation	Double acting										
Working fluid	Compressed air										
Max. working pressure MPa	1.0 ( $\approx 150$ psi, 10 bar)										
Min. working pressure MPa	0.1 ( $\approx 15$ 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	M5				Rc1/8		Rc1/4		Rc3/8		
Stroke tolerance mm	+2.0 0										
Working piston speed mm/s	50 to 500							50 to 300			
Cushion	Rubber cushion										
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)										
Allowable absorbed energy J	0.04	0.09	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92	

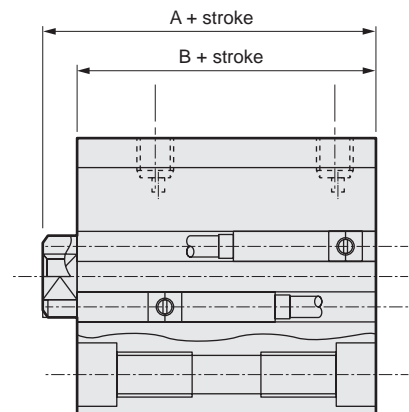
## Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)
$\varnothing 12$	35/40/45/50/75/100	100
$\varnothing 16$		
$\varnothing 20$	75/100/125/150/175/200	200
$\varnothing 25$	75/100/125/150/175/200/250/300	300
$\varnothing 32$	125/150/175/200/250/300	
$\varnothing 40$		
$\varnothing 50$		
$\varnothing 63$		
$\varnothing 80$		
$\varnothing 100$		

## Custom stroke

### ● SSD2 Series

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



## 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		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											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02x10 <sup>2</sup>	1.13x10 <sup>2</sup>
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.61x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.01x10 <sup>2</sup>
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.36x10 <sup>2</sup>	1.51x10 <sup>2</sup>
ø20	Push	-	31.4	47.1	62.8	94.2	1.26x10 <sup>2</sup>	1.57x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.20x10 <sup>2</sup>	2.51x10 <sup>2</sup>	2.83x10 <sup>2</sup>	3.14x10 <sup>2</sup>
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.65x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.12x10 <sup>2</sup>	2.36x10 <sup>2</sup>
ø25	Push	-	49.1	73.6	98.2	1.47x10 <sup>2</sup>	1.96x10 <sup>2</sup>	2.45x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.44x10 <sup>2</sup>	3.93x10 <sup>2</sup>	4.42x10 <sup>2</sup>	4.91x10 <sup>2</sup>
	Pull	-	37.8	56.7	75.6	1.13x10 <sup>2</sup>	1.51x10 <sup>2</sup>	1.89x10 <sup>2</sup>	2.27x10 <sup>2</sup>	2.64x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.40x10 <sup>2</sup>	3.78x10 <sup>2</sup>
ø32	Push	-	80.4	1.21x10 <sup>2</sup>	1.61x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.22x10 <sup>2</sup>	4.02x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.63x10 <sup>2</sup>	6.43x10 <sup>2</sup>	7.24x10 <sup>2</sup>	8.04x10 <sup>2</sup>
	Pull	-	60.3	90.5	1.21x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.62x10 <sup>2</sup>	4.22x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.43x10 <sup>2</sup>	6.03x10 <sup>2</sup>
ø40	Push	-	1.26x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.51x10 <sup>2</sup>	3.77x10 <sup>2</sup>	5.03x10 <sup>2</sup>	6.28x10 <sup>2</sup>	7.54x10 <sup>2</sup>	8.80x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.13x10 <sup>3</sup>	1.26x10 <sup>3</sup>
	Pull	-	1.06x10 <sup>2</sup>	1.58x10 <sup>2</sup>	2.11x10 <sup>2</sup>	3.17x10 <sup>2</sup>	4.22x10 <sup>2</sup>	5.28x10 <sup>2</sup>	6.33x10 <sup>2</sup>	7.39x10 <sup>2</sup>	8.44x10 <sup>2</sup>	9.50x10 <sup>2</sup>	1.06x10 <sup>3</sup>
ø50	Push	-	1.96x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.93x10 <sup>2</sup>	5.89x10 <sup>2</sup>	7.85x10 <sup>2</sup>	9.82x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.37x10 <sup>3</sup>	1.57x10 <sup>3</sup>	1.77x10 <sup>3</sup>	1.96x10 <sup>3</sup>
	Pull	-	1.65x10 <sup>2</sup>	2.47x10 <sup>2</sup>	3.30x10 <sup>2</sup>	4.95x10 <sup>2</sup>	6.60x10 <sup>2</sup>	8.25x10 <sup>2</sup>	9.90x10 <sup>2</sup>	1.15x10 <sup>3</sup>	1.32x10 <sup>3</sup>	1.48x10 <sup>3</sup>	1.65x10 <sup>3</sup>
ø63	Push	1.56x10 <sup>2</sup>	3.12x10 <sup>2</sup>	4.68x10 <sup>2</sup>	6.23x10 <sup>2</sup>	9.35x10 <sup>2</sup>	1.25x10 <sup>3</sup>	1.56x10 <sup>3</sup>	1.87x10 <sup>3</sup>	2.18x10 <sup>3</sup>	2.49x10 <sup>3</sup>	2.81x10 <sup>3</sup>	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>

# SSD2 (Long stroke) Series

## How to order

No switch (without magnet for switch)

**SSD2** - **12** - **100** - **N** - **LB** - **I**

With switch (built-in magnet for switch)

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

**A** Bore size

**B** Port thread

**C** Stroke

**D** Switch model No.

\*1

\*2

\*3

\*8

**E** Switch quantity

**F** Option  
\*4

**G** Mounting bracket  
\*5  
\*6

### ⚠ Precautions for model No. selection

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

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

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

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

\*5 : The mounting bracket is included at shipment.

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

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

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

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

\*10 : F-switch cannot be selected.

### [Example of model No.]

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

Model: Compact cylinder, long stroke

**A** Bore size : ø12 mm

**B** Port thread : Rc thread

**C** Stroke : 100mm

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

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

**F** Option : Rod end male thread

**H** Accessory

\*7

Code	Description
<b>A Bore size (mm)</b>	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

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

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

<b>D Switch model No.</b>		Lead wire	Indicator	Bore size												
Lead wire Straight	Lead wire L-shaped			Contact	Voltage AC	DC	wire	12	16	20	25	32	40	50	63	80
-	F2S*	Proximity	1-color LED	●	●	2-wire			●							
-	F3S*					3-wire			●							
F2H*	F2V*	Proximity	1-color LED	●	●	2-wire			●							
F3H*	F3V*					3-wire			●							
F3PH*	F3PV*	Proximity	1-color LED (PNP output) (custom)	●	●	3-wire			●							
F2YH*	F2YV*					Proximity	2-color LED	●	●	2-wire			●			
F3YH*	F3YV*	3-wire			●											
T0H*	T0V*	Reed	1-color LED	●	●	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*					Reed	No indicator lamp	●	●	2-wire	●	●	●	●	●	●
T8H*	T8V*	Reed	1-color LED	●	●					2-wire			●			
T1H*	T1V*					Reed	1-color LED	●	●	2-wire			●			
T2H*	T2V*	Reed	1-color LED	●	●					2-wire	●	●	●	●	●	●
T3H*	T3V*					Reed	1-color LED (PNP output)	●	●	3-wire	●	●	●	●	●	●
T2WH*	T2WV*	Proximity	2-color LED	●	●					2-wire	●	●	●	●	●	●
T2YH*	T2YV*					Proximity	2-color LED	●	●	3-wire	●	●	●	●	●	●
T3WH*	T3WV*	Proximity	2-color LED	●	●					3-wire	●	●	●	●	●	●
T3YH*	T3YV*					Proximity	2-color LED	●	●	2-wire			●			
T2YD*	-	Proximity	2-color LED	●	●					2-wire			●			
T2YDT*	-					Proximity	AC magnetic field	●	●	2-wire			●			
T2JH*	T2JV*	2-wire			●											

<b>* Lead wire length</b>	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) <span style="float:right">*10</span>

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

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

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

### [Stroke table]

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

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

### How to order switch

SW - TOH

Switch model No.  
(Item ① on page 794)

### Cylinder weight table

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

(Unit: g)

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

### How to order mounting bracket

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

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

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 (Long stroke) Series

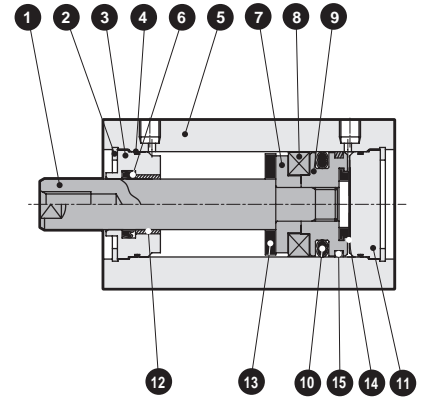
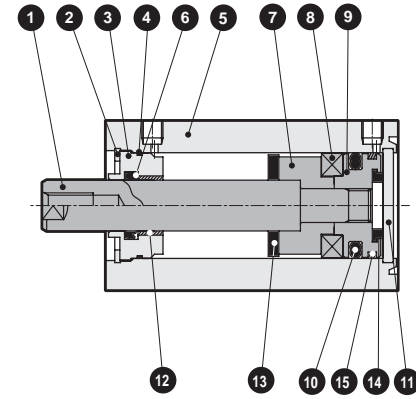
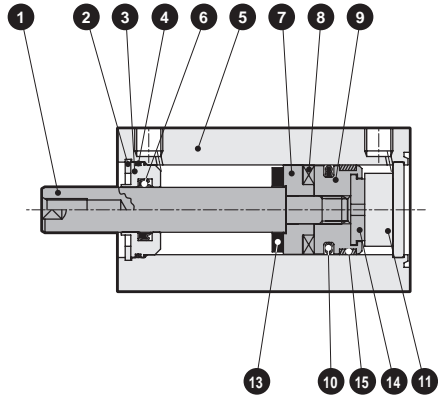
## Internal structure and parts list

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

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

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

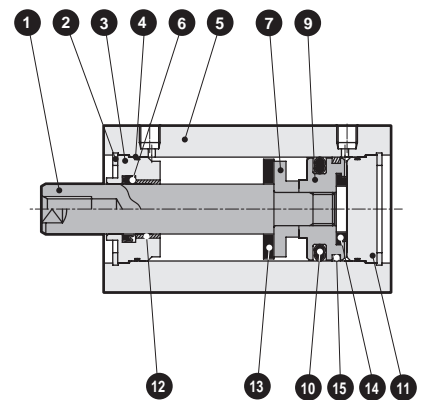
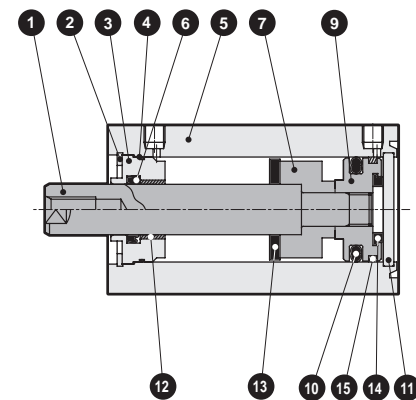
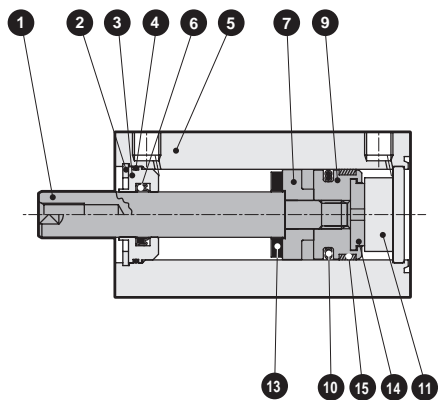
ø20: Over 100 to 200 mm stroke  
ø25: Over 150 to 300 mm stroke  
ø32 to ø50: Over 150 to 300 mm stroke  
ø63 to ø100: Over 200 to 300 mm stroke



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

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

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



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

\*1: For ø20 with more than 100 mm stroke and ø25 with more than 150 mm stroke, the standard cover material is aluminum alloy with chromate coating noted in remarks.

\*2: Material is steel for copper and PTFE free specifications.

## Repair parts list

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

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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 (Long stroke) Series

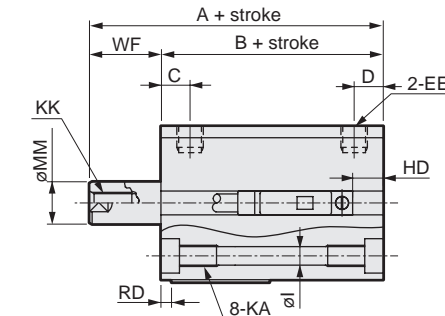
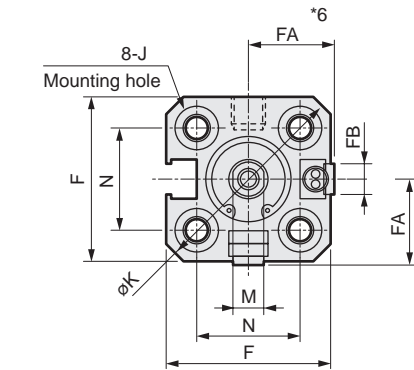
## Dimensions



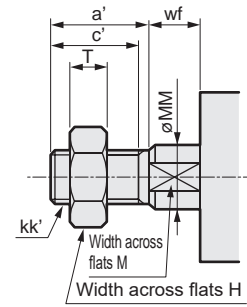
### ● SSD2 (long stroke) -(L)-12 to 25

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

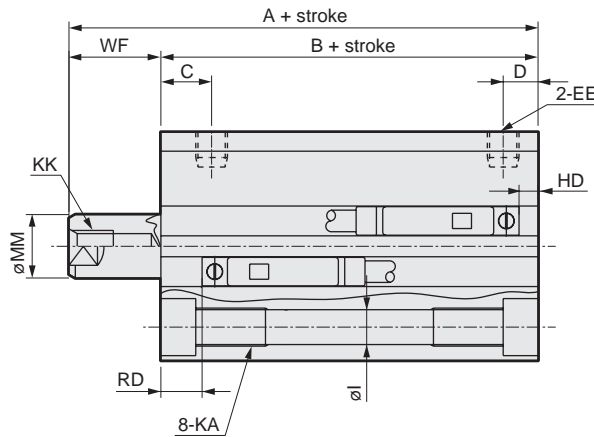
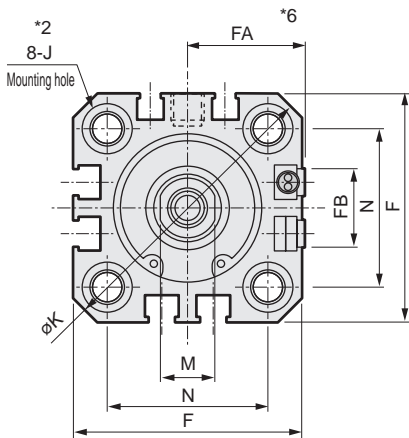
ø12/ø16



### ● Rod end male thread



ø20/ø25



Precautions regarding the switch mounting groove

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

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

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

\*1 : To calculate A + stroke 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 70 mm, apply the standard stroke 75 mm.

\*2 : No spot facing J for ø20 with more than 100 mm stroke and ø25 with more than 150 mm stroke.

\*3 : Values in ( ) are for ø20 with more than 100 mm stroke and ø25 with more than 150 mm stroke.

\*4 : Refer to page 1044 for HD and RD dimensions of the 2-color LED, off-delay, AC magnetic field tolerant, T1\* and T8\* switches.

\*5 : Refer to page 1044 for protruding dimensions of the 2-color LED, off-delay, AC magnetic field tolerant, T1\* and T8\* switches.

\*6 : Dimensions in ( ) of FA are for the L-shaped lead wire.

\*7 : For dimensions of individual accessories, refer to pages 1046 to 1049.

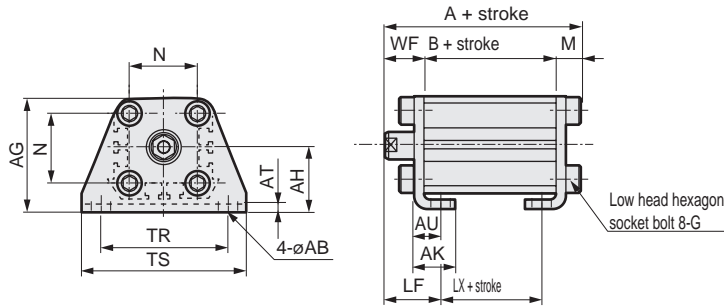
### ● Dimensions of rod end male thread part

Code	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	13.5
ø16	12	10	10	M6	6	8	3.6	13.5
ø20	14	12	13	M8	8	10	5	14.5
ø25	17.5	15	17	M10x1.25	10	12	6	15

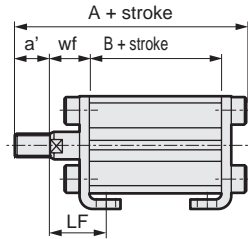
### Dimensions with mounting bracket



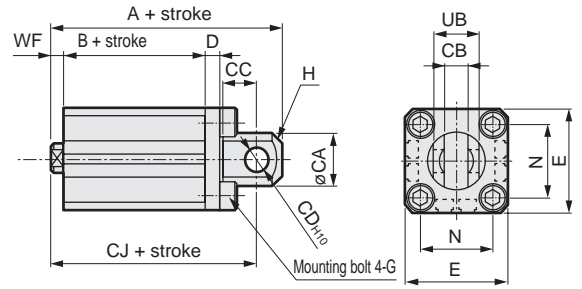
- Axial foot (LB)  
SSD2-(L)-12 to 25 -LB



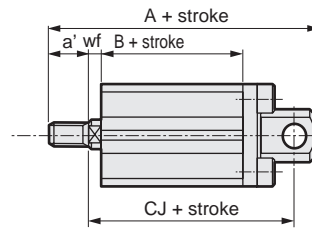
Rod end male thread



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



Rod end male thread



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

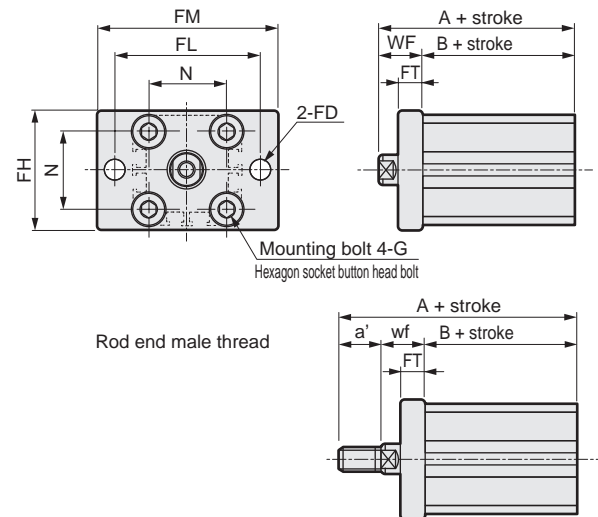
Code	Male thread			Without/with switch		
Bore size (mm)	WF	LF	LX	a'	wf	LF
ø12	13.5	19.5	50.3	32	20	10.5
ø16	13.5	19.5	50.3	32	20	12
ø20	14.5	20.5	62.7	41	29	14
ø25	15	22.5	66.2	44	29	17.5

Code	Common dimensions									
Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	5.2 <sup>+0.2</sup> <sub>0</sub>	7	5	4	25	M4x12	C1.5	15.5	10 <sup>+1.1</sup> <sub>-0.3</sub>
ø16	15	6.6 <sup>+0.3</sup> <sub>0</sub>	8	5	5	29	M4x12	C2	20	12 <sup>+1.4</sup> <sub>-0.4</sub>
ø20	20	8.2 <sup>+0.2</sup> <sub>0</sub>	12	8	5	36	M6x16	C4	25.5	16 <sup>+1.1</sup> <sub>-0.3</sub>
ø25	24	10.2 <sup>+0.2</sup> <sub>0</sub>	14	10	5	40	M6x16	C5	28	20 <sup>+1.3</sup> <sub>-0.3</sub>

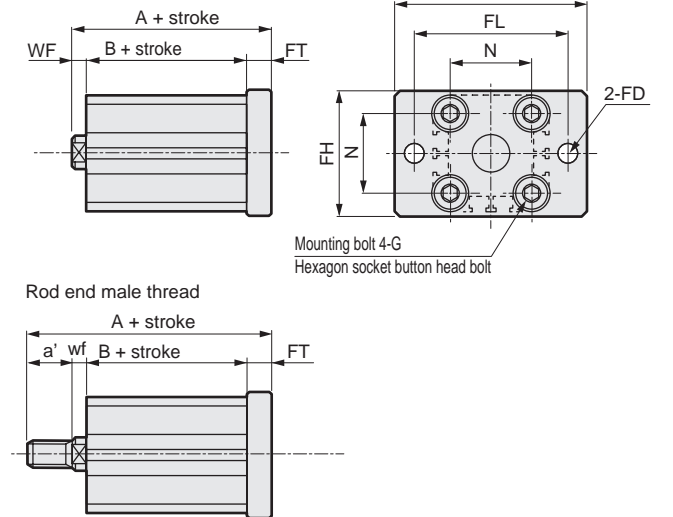
Code	Female thread			Male thread		
Bore size (mm)	WF	Without/with switch	Without/with switch	a'	wf	Without/with switch
		A	B			A
						B
						CJ
ø12	13.5	65.5	32	59.5	10.5	13.5
ø16	13.5	66.5	32	60.5	12	13.5
ø20	14.5	82.5	41	73.5	14	14.5
ø25	15	89	44	79	15	106.5

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



Rod end male thread

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



Rod end male thread

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

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

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

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

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 (Long stroke) Series

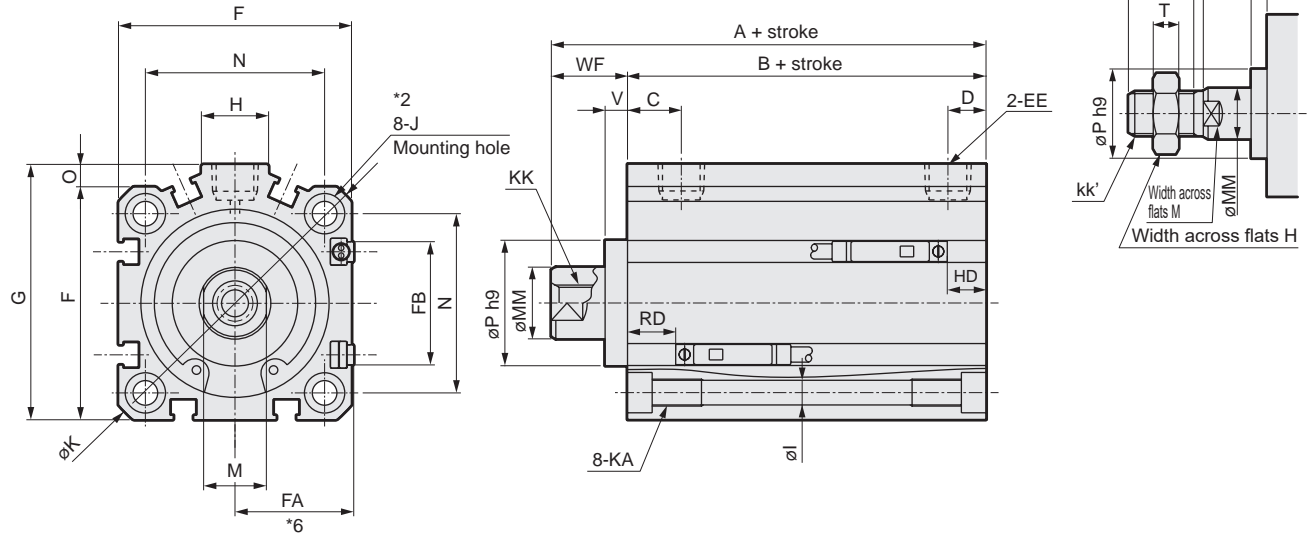
## Dimensions



● SSD2 (long stroke) -(L)-32 to 100

● Rod end male thread

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



Code	Common dimensions with switch																					
	A <sup>*1</sup>	B <sup>*1</sup>	C	D <sup>*3</sup>	EE	F	FA <sup>*6</sup>	FB	G	H	I	J	K	KA	KK	M	MM	N	O	P	V	WF
∅32	62.5	45.5	8	8	Rc1/8	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	22	5	17
∅40	72	55	12	8.5(12)	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	28	5	17
∅50	73.5	55.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	35	5	18
∅63	75	57	13	11(13)	Rc1/4	77	39(42.5)	28.5	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	17	20	60	7	35	5	18
∅80	86	66	16	13(16)	Rc3/8	98	49.5(53)	28.5	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	22	25	77	6	43	5	20
∅100	97.5	75.5	23	15(23)	Rc3/8	117	59(62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	27	30	94	6.5	59	5	22
Switch dimensions	Reed T0H/T0V, T5H/T5V *3						Proximity T2H/T2V, T3H/T3V *3				Proximity T2WH/T2WV, T3WH/T3WV *3											
	HD		RD		HD		RD		HD		RD											
∅32	8.5(16)		18(10)		8.5(16)		18(10)		10(17.5)		19.5(12)											
∅40	9.5(19)		26.5(16.5)		9.5(19)		26.5(16.5)		11(20.5)		28(18.5)											
∅50	10(19)		26(17)		10(19)		26(17)		11.5(20.5)		27.5(19)											
∅63	17.5(23)		20(14.5)		17.5(23)		20(14.5)		19(24.5)		21.5(16.5)											
∅80	22.5(28)		24(18.5)		22.5(28)		24(18.5)		24(29.5)		25.5(20.5)											
∅100	28(33.5)		28(22.5)		28(33.5)		28(22.5)		29.5(35)		29.5(24.5)											

\*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 121 mm, apply the standard stroke 125 mm.

\*2 : No spot facing J for ∅32 to ∅50 with more than 150 mm stroke and ∅63 to ∅100 with more than 200 mm stroke.

\*3 : Values in ( ) are for ∅32 to ∅50 with more than 150 mm stroke and ∅63 to ∅100 with more than 200 mm stroke.

\*4 : Refer to page 1044 for HD and RD dimensions of the 2-color LED, off-delay, AC magnetic field tolerant, T1\* and T8\* switches.

\*5 : Refer to page 1044 for protruding dimensions of the 2-color LED, off-delay, AC magnetic field tolerant, T1\* and T8\* switches.

\*6 : Dimensions in ( ) of FA are for the L-shaped lead wire.

\*7 : For dimensions of individual accessories, refer to pages 1046 to 1049.

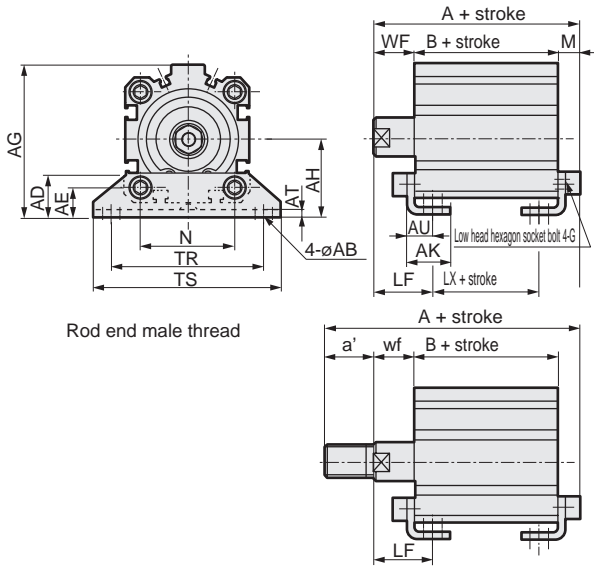
● Dimensions of rod end male thread part

Code	a'	c'	H	kk'	M	MM	T	wf
∅32	23.5	20.5	22	M14x1.5	14	16	8	15
∅40	23.5	20.5	22	M14x1.5	14	16	8	15
∅50	28.5	26	27	M18x1.5	17	20	11	15
∅63	28.5	26	27	M18x1.5	17	20	11	15
∅80	35.5	32.5	32	M22x1.5	22	25	13	18
∅100	35.5	32.5	41	M26x1.5	27	30	16	18

### Dimensions with mounting bracket



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

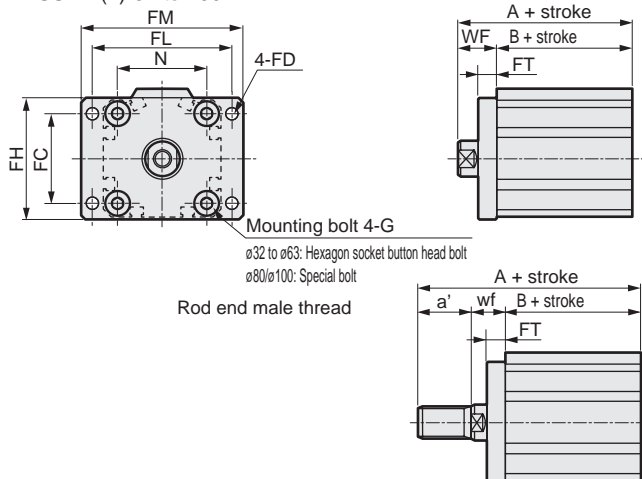


Code		Common dimensions										Female thread				
Bore size (mm)		AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS			
φ32		7	18.5	13	57	30	17	3.2	11.2	M6x16	34	57	71			
φ40		7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64	78			
φ50		9	22	14	78	39	22.7	3.2	14.7	M8x20	50	79	95			
φ63		11	26	16	91.5	46	25.2	3.2	16.2	M10x25	60	95	113			
φ80		13	31.5	20.5	114	59	30.5	4.5	19.5	M12x40	77	118	140			
φ100		13	35	24	136	71	35.5	6	23	M12x40	94	137	162			

Code		Male thread											
Bore size (mm)		M	WF	LF	Without/with switch			a'	wf	LF	Without/with switch		
					A	B	LX				A	B	LX
					φ32	7.2	17				25	69.7	45.5
φ40	7.2	17	25	79.2	55	39	23.5	15	23	100.7	55	39	
φ50	8.2	18	29.5	81.7	55.5	32.5	28.5	15	26.5	107.2	55.5	32.5	
φ63	9.2	18	31	84.2	57	31	28.5	15	28	109.7	57	31	
φ80	11.5	20	35	97.5	66	36	35.5	18	33	131	66	36	
φ100	13	22	39	110.5	75.5	41.5	35.5	18	35	142	75.5	41.5	

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

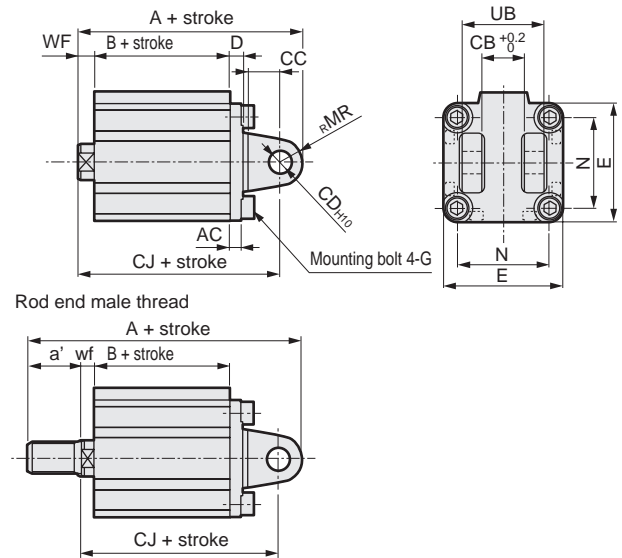


Code		Common dimensions							
Bore size (mm)		FC	FD	FH	FL	FM	FT	N	G
φ32		34	5.5	48	56	65	8	34	M6x16
φ40		40	5.5	54	62	72	8	40	M6x16
φ50		50	6.6	67	76	89	9	50	M8x20
φ63		60	9	80	92	108	9	60	M10x25
φ80		77	11	99	116	134	11	77	M12x40
φ100		94	11	117	136	154	11	94	M12x40

Code		Female thread				Male thread			
Bore size (mm)		WF	Without/with switch		a'	wf	Without/with switch		
			A	B			A	B	
			φ32	17			62.5	45.5	23.5
φ40	17	72	55	23.5	15	93.5	55		
φ50	18	73.5	55.5	28.5	15	99	55.5		
φ63	18	75	57	28.5	15	100.5	57		
φ80	20	86	66	35.5	18	119.5	66		
φ100	22	97.5	75.5	35.5	18	129	75.5		

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

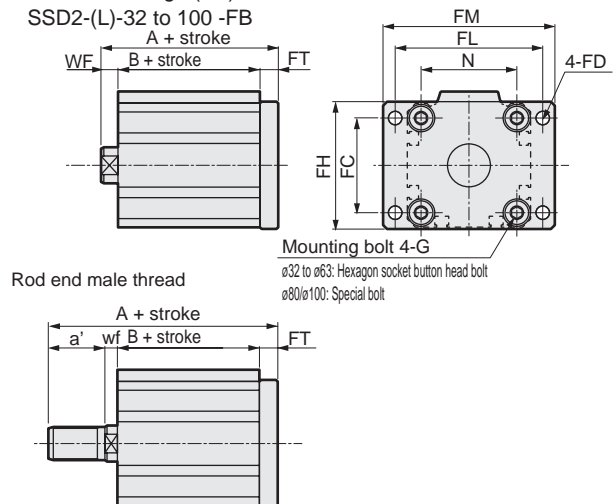


Code		Common dimensions									
Bore size (mm)		AC	CB	CC	CD	D	E	G	MR	N	UB
φ32		4.5	18.2	14	10	5	45	M6x16	10	34	36
φ40		5	18.2	14	10	6	52	M6x16	10	40	36
φ50		6	22.2	20	14	7	64	M8x20	14	50	44
φ63		7	22.2	20	14	8	77	M10x25	14	60	44
φ80		9	28.2	27	18	10	98	M12x40	18	77	56
φ100		12	32.2	31	22	13	117	M12x40	22	94	64

Code		Female thread					Male thread				
Bore size (mm)		WF	Without/with switch			CJ	a'	wf	Without/with switch		
			A	B	LX				A	B	CJ
			φ32	17	92.5				45.5	82.5	23.5
φ40	17	104	55	94	23.5	15	125.5	55	92		
φ50	18	115.5	55.5	101.5	28.5	15	141	55.5	98.5		
φ63	18	119	57	105	28.5	15	144.5	57	102		
φ80	20	142	66	124	35.5	18	175.5	66	122		
φ100	22	164.5	75.5	142.5	35.5	18	196	75.5	138.5		

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



Code		Common dimensions							
Bore size (mm)		FC	FD	FH	FL	FM	FT	N	G
φ32		34	5.5	48	56	65	8	34	M6x16
φ40		40	5.5	54	62	72	8	40	M6x16
φ50		50	6.6	67	76	89	9	50	M8x20
φ63		60	9	80	92	108	9	60	M10x25
φ80		77	11	99	116	134	11	77	M12x40
φ100		94	11	117	136	154	11	94	M12x40

Code		Female thread				Male thread			
Bore size (mm)		WF	Without/with switch		a'	wf	Without/with switch		
			A	B			A	B	
			φ32	17			70.5	45.5	23.5
φ40	17	80	55	23.5	15	101.5	55		
φ50	18	82.5	55.5	28.5	15	108	55.5		
φ63	18	84	57	28.5	15	109.5	57		
φ80	20	97	66	35.5	18	130.5	66		
φ100	22	108.5	75.5	35.5	18	140	75.5		

Compact cylinder single acting/push

# SSD2-X Series

Single acting/pull/with switch

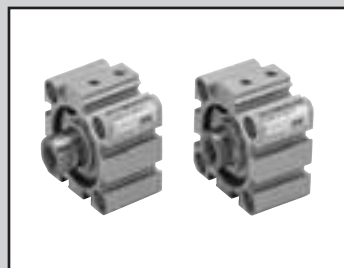
# SSD2-Y Series

● Bore size:  $\varnothing 12/\varnothing 16/\varnothing 20/\varnothing 25/\varnothing 32/\varnothing 40/\varnothing 50$

JIS symbol SSD2-X



SSD2-Y



## Specifications

Item	SSD2-X SSD2-XL (with switch)				SSD2-Y SSD2-YL (with switch)			
	$\varnothing 12$	$\varnothing 16$	$\varnothing 20$	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$	$\varnothing 50$	
Bore size mm	$\varnothing 12$	$\varnothing 16$	$\varnothing 20$	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$	$\varnothing 50$	
Actuation	SSD2-X, XL: single acting/push, SSD2-Y, YL: single acting/pull							
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)	0.17 ( $\approx 25$ psi, 1.7 bar)	0.12 ( $\approx 17$ psi, 1.2 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 *2		Rc1/4		
Stroke tolerance mm	+1.0 0							
Working piston speed mm/s	50 to 500							
Cushion	None							
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)							
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	

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

\*2: The  $\varnothing 32$  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)
$\varnothing 12$	5, 10	10	5
$\varnothing 16$			
$\varnothing 20$			
$\varnothing 25$			
$\varnothing 32$			
$\varnothing 40$	10, 20	20	10
$\varnothing 50$			

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

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

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

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
$\varnothing 12$	10 *2	5
$\varnothing 16$		
$\varnothing 20$	5	
$\varnothing 25$		
$\varnothing 32$		
$\varnothing 40$	10	10
$\varnothing 50$		

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

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

## SSD2-X/SSD2-Y spring load

(Unit: N)

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

## Switch specifications (F-switch)

● 1-color/2-color 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/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V	T8H/T8V	T2YD(*4) T2YDT			
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller		For programmable controller, relay				For programmable controller, relay	For programmable controller, relay, IC circuit (no indicator lamp), serial connection	For programmable controller, relay		For programmable controller			
Output method	-		-		NPN output	PNP output	NPN output	NPN output	-			-			
Pwr. supp. V.	-		-		10 to 28 VDC				-			-			
Load voltage	85 to 265 VAC	10 to 30 VDC	24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)		100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator	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	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		20	
	No switch	With switch	No switch	With switch	No switch	With switch
ø12	40	80	49	89	-	-
ø16	52	92	64	104	-	-
ø20	74	114	89	129	-	-
ø25	107	147	127	167	-	-
ø32	155	195	183	223	-	-
ø40	249	289	285	325	-	-
ø50	-	-	459	499	572	612

## Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02x10 <sup>2</sup>	1.13x10 <sup>2</sup>
	Pull	-	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	40.2	60.3	80.4	1.01x10 <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	-	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	-	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	1.21x10 <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>

# SSD2-X Y Series

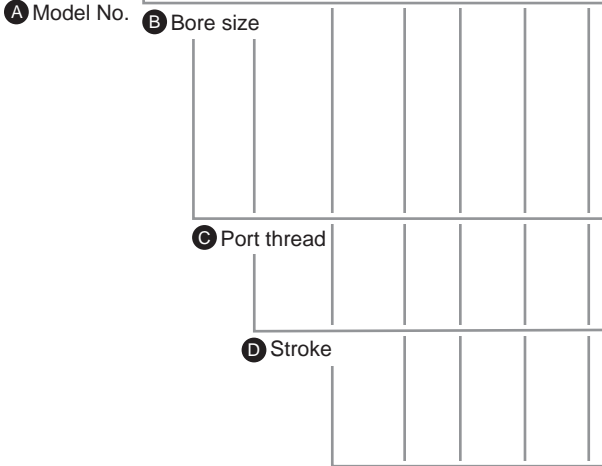
## How to order

No switch (without magnet for switch)

SSD2-X - 12 - 5 - N - LB - I

With switch (built-in magnet for switch)

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



## ⚠ Precautions for model No. selection

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

[Example of model No.]

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

Model: Compact cylinder

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

- H Mounting bracket : \*5  
\*6

- I Accessory : \*7

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

B Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50

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

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

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

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

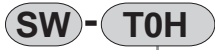
F Switch quantity	
R	1 on rod side
H	1 on head side
D	2

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

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

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

### How to order switch



Switch model No.  
(Item ㊦ on page 804)

### How to order mounting bracket

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

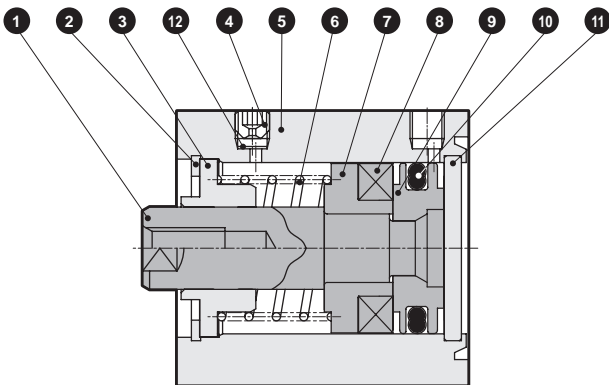
\*1: The foot mounting bracket is provided as 2 pcs./set.

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

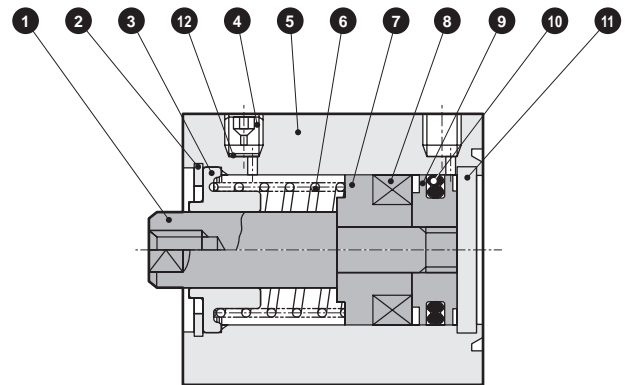
# SSD2-X Series

## Internal structure and parts list

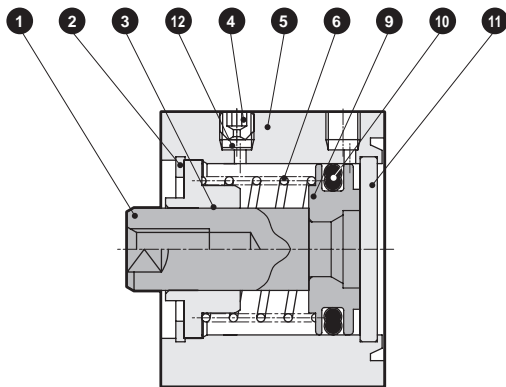
● SSD2-XL-12 to 32 (single acting/push/with switch)



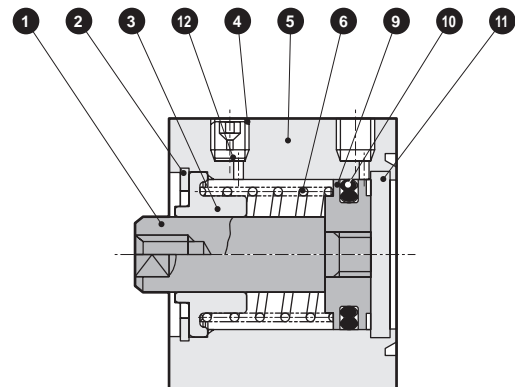
● SSD2-XL-40, 50 (single acting/push/with switch)



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



● SSD2-X-40, 50 (single acting/push)



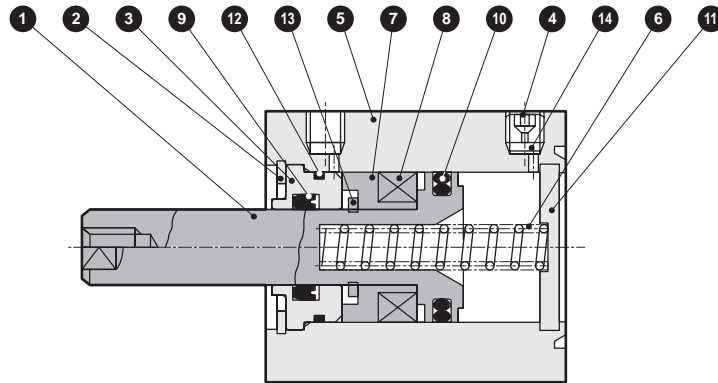
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating	7	Spacer	Aluminum alloy	Chromate
2	C-snap ring	Steel	Zinc phosphate	8	Magnet	Plastic	
3	Rod metal	Special aluminum	Alumite	9	Piston	Aluminum alloy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

## Repair parts list

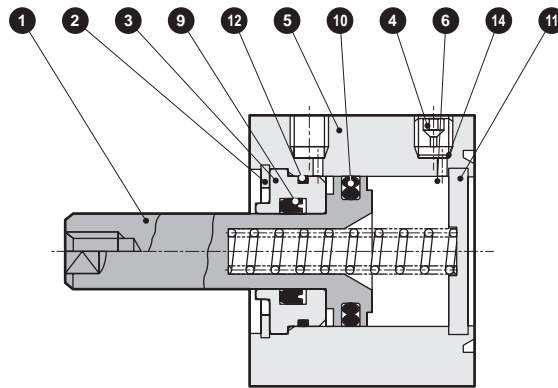
Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-X-12K	10
ø16	SSD2-X-16K	
ø20	SSD2-X-20K	
ø25	SSD2-X-25K	
ø32	SSD2-X-32K	
ø40	SSD2-X-40K	
ø50	SSD2-X-50K	

### Internal structure and parts list

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



● SSD2-Y (single acting/pull)



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

### Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-Y-12K	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">9</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">10</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">12</span>
ø16	SSD2-Y-16K	
ø20	SSD2-Y-20K	
ø25	SSD2-Y-25K	
ø32	SSD2-Y-32K	
ø40	SSD2-Y-40K	
ø50	SSD2-Y-50K	

SCP\*3

CMK2

CMA2

SCM

SCG

SCA2

SCS2

CKV2

CAV2/  
COVP/N2**SSD2**

SSG

SSD

CAT

MDC2

MVC

SMG

MSD/  
MSDG

FC\*

STK

SRL3

SRG3

SRM3

SRT3

MRL2

MRG2

SM-25

ShkAbs

FJ

FK

Spd  
Contr

Ending



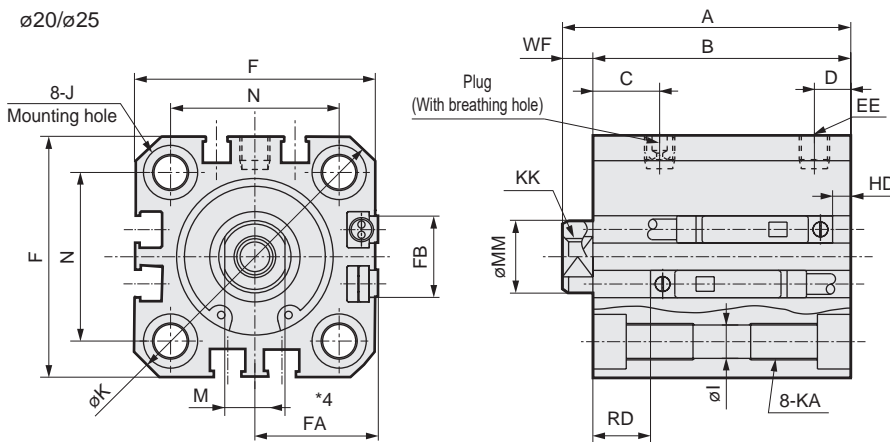
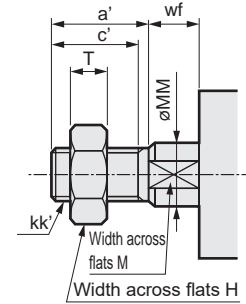
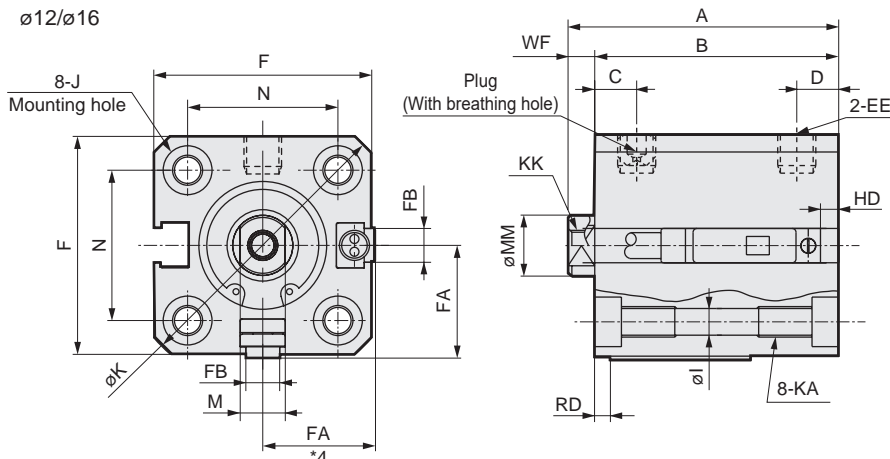
# SSD2-X Series

## Dimensions



● SSD2-XL-12 to 25 (with switch)

● Rod end male thread



Code		Common dimensions with switch																	
Bore size (mm)		A	B	C	D	EE	F	FA <sup>*4</sup>	FB	I	J	K	KA	KK	M	MM	N	WF	
STK	Stroke	5	30.5	27	5.5	5.5	M5	25	13 (16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
		10	35.5	32															
SRL3	Stroke	5	30.5	27	5.5	5.5	M5	29	15 (18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
		10	35.5	32															
SRG3	Stroke	5	39	34.5	8	5.5	M5	36	18.5 (22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
		10	44	39.5															
SRM3	Stroke	5	42.5	37.5	11	6	M5	40	20.5 (24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5
		10	47.5	42.5															
Switch dimensions	Bore size (mm)	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S									
		HD	RD	HD	RD	HD	RD	HD	RD	HD	RD								
SRT3	Stroke	0	3	0	3	2	5												
		0	4	0	4.5	1	6												
MRL2	Stroke	3	7.5	3	7.5	5	9.5	7.5	12	6.5	11								
		4	9.5	4	9.5	6	11.5	8.5	14	7.5	13								
MRG2	Stroke	3	7.5	3	7.5	5	9.5	7.5	12	6.5	11								
		4	9.5	4	9.5	6	11.5	8.5	14	7.5	13								

\*1 : Only F-switch is available for the  $\phi 20$  or  $\phi 25$  piping port surface.

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

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

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

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

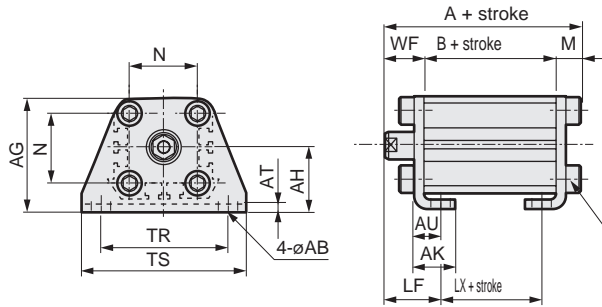
● Rod end male thread

Code	a'	c'	H	kk'	M	MM	T	wf
Spd Contr	$\phi 12$	10.5	9	8	M5	5	6	3.2
Ending	$\phi 16$	12	10	10	M6	6	8	3.5
	$\phi 20$	14	12	13	M8	8	10	4.5
	$\phi 25$	17.5	15	17	M10x1.25	10	12	5

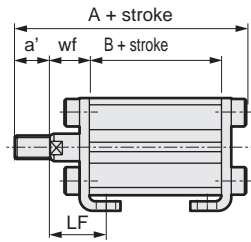
### Dimensions with mounting bracket



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



Rod end male thread

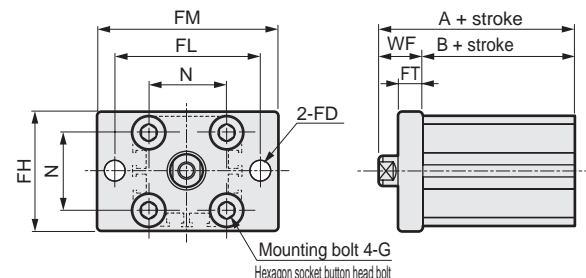


Code	Common dimensions										Female thread		
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M		
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8		
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8		
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2		
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2		

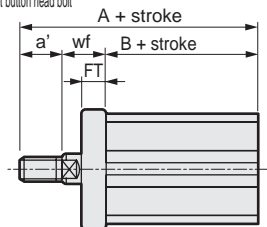
  

Code	Male thread										
	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	40.3	22	10	10.5	13.5	19.5	50.8	22	10
ø16	13.5	19.5	40.3	22	10	12	13.5	19.5	52.3	22	10
ø20	14.5	20.5	51.2	29.5	17.5	14	14.5	20.5	65.2	29.5	17.5
ø25	15	22.5	54.7	32.5	17.5	17.5	15	22.5	72.2	32.5	17.5

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



Rod end male thread

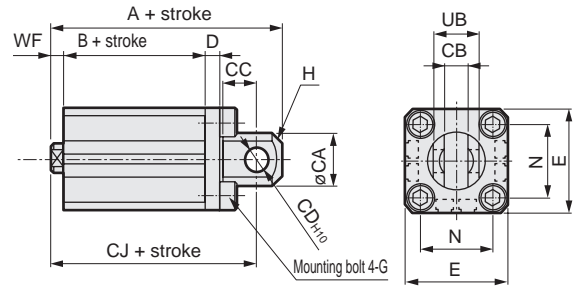


Code	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4x12
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16

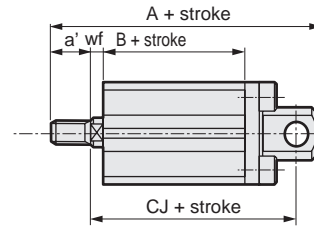
  

Code	Female thread				Male thread		
	WF	A	B	a'	wf	A	B
ø12	13.5	35.5	22	10.5	13.5	46	22
ø16	13.5	35.5	22	12	13.5	47.5	22
ø20	14.5	44	29.5	14	14.5	58	29.5
ø25	15	47.5	32.5	17.5	15	65	32.5

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



Rod end male thread

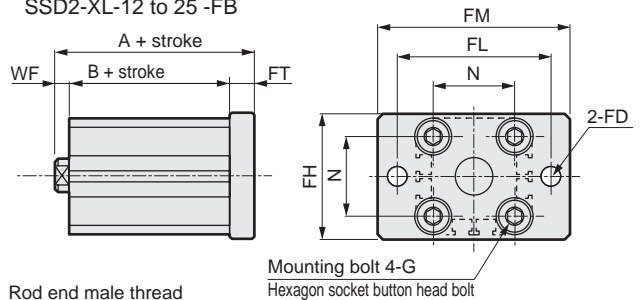


Code	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	5.2 <sup>+0.2</sup>	7	5	4	25	M4x12	C1.5	15.5	10 <sup>+0.1</sup> <sub>-0.3</sub>
ø16	15	6.6 <sup>+0.3</sup>	8	5	5	29	M4x12	C2	20	12 <sup>+0.1</sup> <sub>-0.4</sub>
ø20	20	8.2 <sup>+0.2</sup>	12	8	5	36	M6x16	C4	25.5	16 <sup>+0.1</sup> <sub>-0.3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

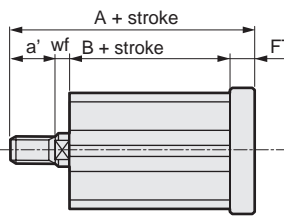
  

Code	Female thread					Male thread				
	WF	With switch			a'	wf	With switch			
		A	B	CJ			A	B	CJ	
ø12	3.5	45.5	22	39.5	10.5	3.5	56	22	39.5	
ø16	3.5	46.5	22	40.5	12	3.5	58.5	22	40.5	
ø20	4.5	61	29.5	52	14	4.5	75	29.5	52	
ø25	5	67.5	32.5	57.5	17.5	5	85	32.5	57.5	

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



Rod end male thread



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

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

- 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-X Series

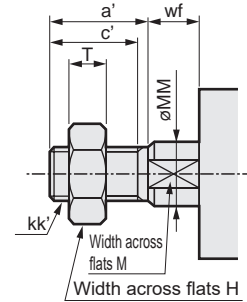
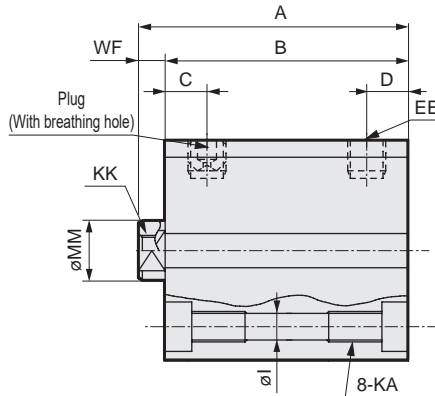
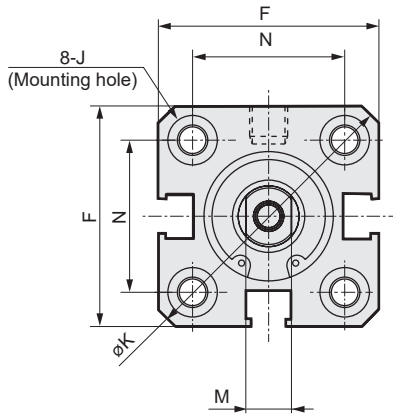
## Dimensions



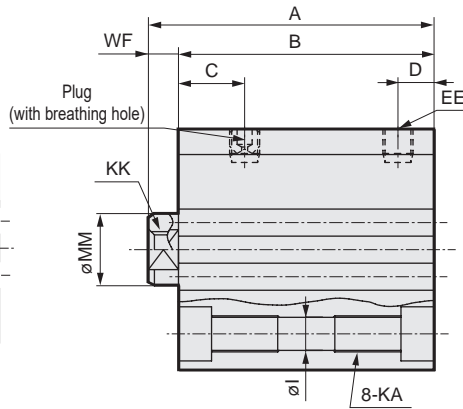
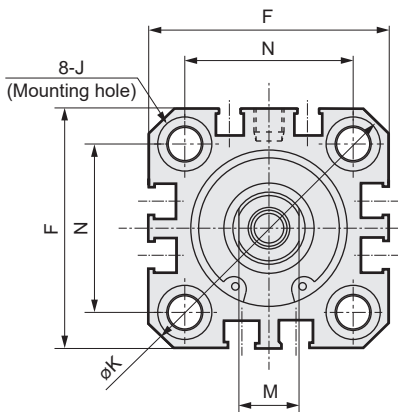
● SSD2-X-12 to 25 (without switch)

● Rod end male thread

ø12/ø16



ø20/ø25



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

● Dimensions of rod end male thread part

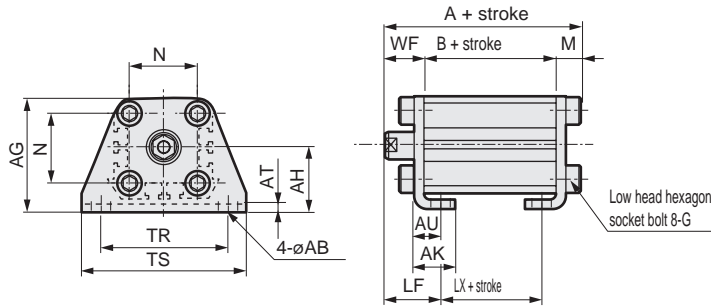
Code	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10x1.25	10	12	6	5

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

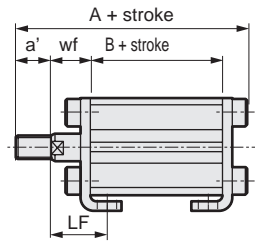
### Dimensions with mounting bracket



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



Rod end male thread



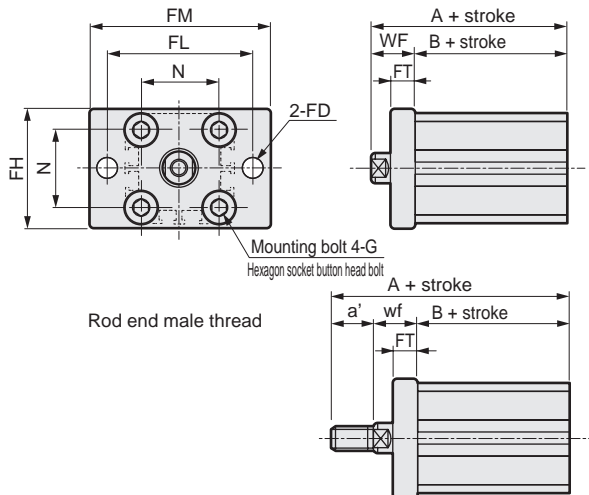
Code	Common dimensions										Female thread		
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M		
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8		
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8		
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2		
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2		

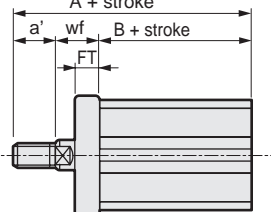
Code	Male thread										
Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	35.3	17	5	10.5	13.5	19.5	45.8	17	5
ø16	13.5	19.5	35.3	17	5	12	13.5	19.5	47.3	17	5
ø20	14.5	20.5	41.2	19.5	7.5	14	14.5	20.5	55.2	19.5	7.5
ø25	15	22.5	44.7	22.5	7.5	17.5	15	22.5	62.2	22.5	7.5

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

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



Rod end male thread

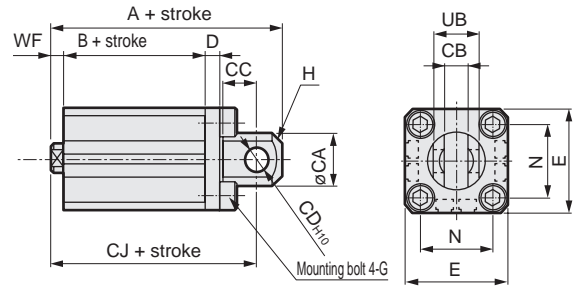


Code	Common dimensions						
Bore size (mm)	FD	FH	FL	FM	FT	N	G
ø12	4.5	25	45	55	5.5	15.5	M4x12
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16

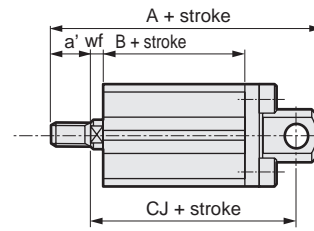
  

Code	Female thread				Male thread		
Bore size (mm)	WF	A	B	a'	wf	A	B
ø12	13.5	30.5	17	10.5	13.5	41	17
ø16	13.5	30.5	17	12	13.5	42.5	17
ø20	14.5	34	19.5	14	14.5	48	19.5
ø25	15	37.5	22.5	17.5	15	55	22.5

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



Rod end male thread

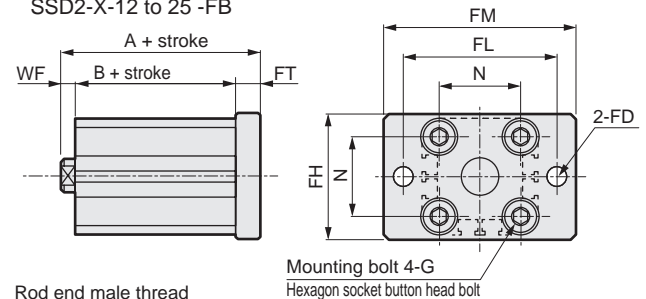


Code	Common dimensions									
Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N	UB
ø12	12	5.2 <sup>+0.2</sup> <sub>0</sub>	7	5	4	25	M4x12	C1.5	15.5	10 <sup>-0.1</sup> <sub>-0.3</sub>
ø16	15	6.6 <sup>+0.3</sup> <sub>0</sub>	8	5	5	29	M4x12	C2	20	12 <sup>-0.1</sup> <sub>-0.4</sub>
ø20	20	8.2 <sup>+0.2</sup> <sub>0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

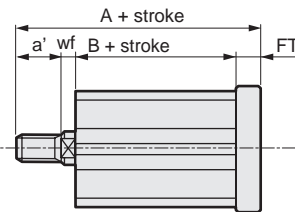
  

Code	Female thread					Male thread				
Bore size (mm)	WF	No switch			a'	wf	No switch			
		A	B	CJ			A	B	CJ	
ø12	3.5	40.5	17	34.5	10.5	3.5	51	17	34.5	
ø16	3.5	41.5	17	35.5	12	3.5	53.5	17	35.5	
ø20	4.5	51	19.5	42	14	4.5	65	19.5	42	
ø25	5	57.5	22.5	47.5	17.5	5	75	22.5	47.5	

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



Rod end male thread



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

Code	Female thread				Male thread		
Bore size (mm)	WF	No switch		a'	wf	No switch	
		A	B			A	B
ø12	3.5	26	17	10.5	3.5	36.5	17
ø16	3.5	26	17	12	3.5	38	17
ø20	4.5	32	19.5	14	4.5	46	19.5
ø25	5	35.5	22.5	17.5	5	53	22.5

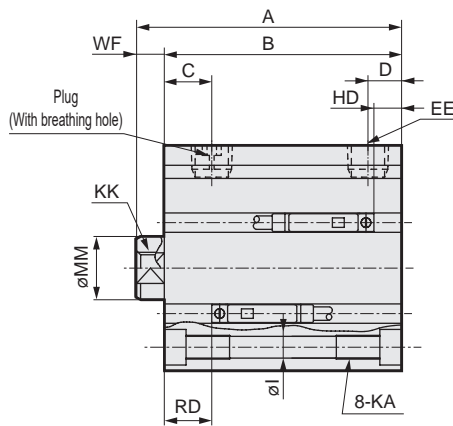
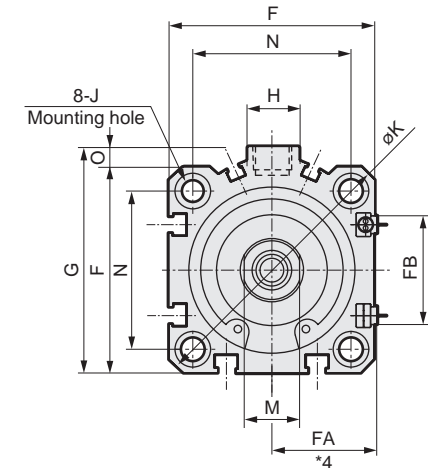
SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/COVP/N2
<b>SSD2</b>
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

# SSD2-X Series

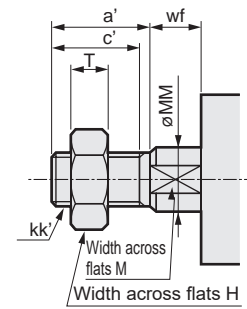
## Dimensions



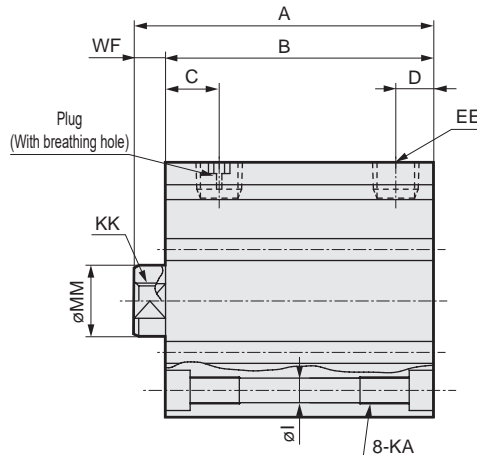
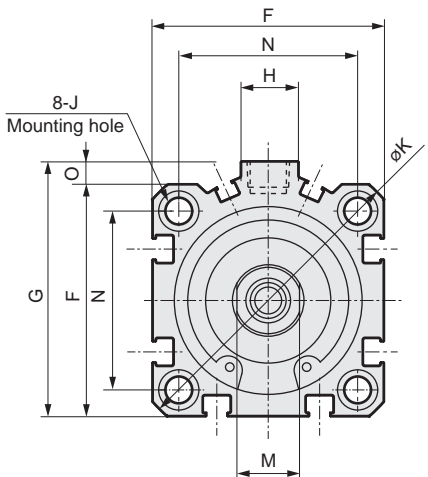
### ● SSD2-XL-32 to 50 (with switch)



### ● Rod end male thread



### ● SSD2-X-32 to 50 (without switch)



Code		No switch		Common dimensions with switch																					
Bore size (mm)		A	B	A	B	C <sup>*7</sup>	D <sup>*7</sup>	EE <sup>*6</sup>	F	FA <sup>*4</sup>	FB	G	H	I	J	K	KA	KK	M	MM	N	O	WF		
SRL3	ø32	Stroke	5	35	28	45	38	8	8	Rc1/8	45	23(26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	14	16	34	4.5	7
		Stroke	10	40	33	50	43	(10)	(5.5)																
SRG3	ø40	Stroke	5	41.5	34.5	51.5	44.5	12	8.5	Rc1/8	52	26.5(30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	14	16	40	5	7
		Stroke	10	46.5	39.5	56.5	49.5	(11.5)	(8)																
SRM3	ø50	Stroke	10	48.5	40.5	58.5	50.5	10.5	10.5	Rc1/4	64	32.5(36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	17	20	50	7	8
		Stroke	20	58.5	50.5	68.5	60.5																		
SRT3	Switch dimensions	Reed T0H/T0V, T5H/T5V					Proximity T2H/T2V, T3H/T3V					Proximity T2WH/T2WV, T3WH/T3WV													
MRL2	Bore size (mm)	HD <sup>*2</sup>		RD <sup>*2</sup>		HD <sup>*2</sup>		RD <sup>*2</sup>		HD		RD		HD		RD									
MRG2	ø32	4		9.5		4		9.5		6		11.5		8		5									
	ø40	7		12		7		12		8.5		13.5		11		7									
	ø50	7.5		12.5		7.5		12.5		9		14		11		7									

\*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 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.\*7 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

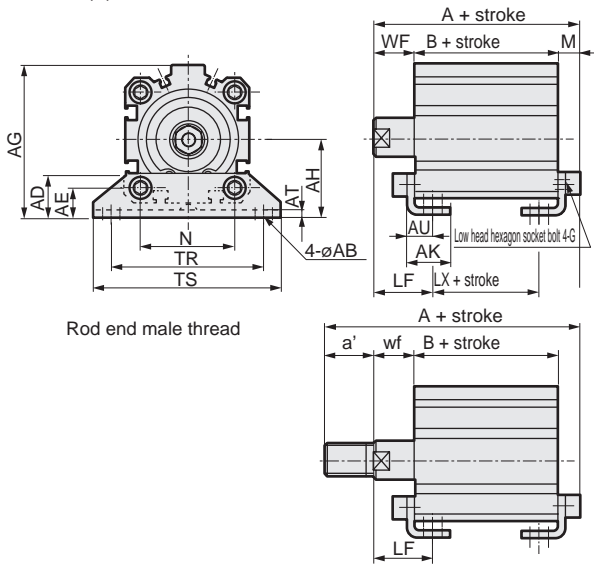
### ● Rod end male thread

Code	a'	c'	H	kk'	M	MM	T	wf	
Spd Contr	ø32	23.5	20.5	22	M14x1.5	14	16	8	5
	ø40	23.5	20.5	22	M14x1.5	14	16	8	5
Ending	ø50	28.5	26	27	M18x1.5	17	20	11	5

## Dimensions with mounting bracket



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



Code	Common dimensions							Female thread				
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	
ø32	7	18.5	13	57	30	17	3.2	11.2	M6x16	34	57	
ø40	7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64	
ø50	9	22	14	78	39	22.7	3.2	14.7	M8x20	50	79	

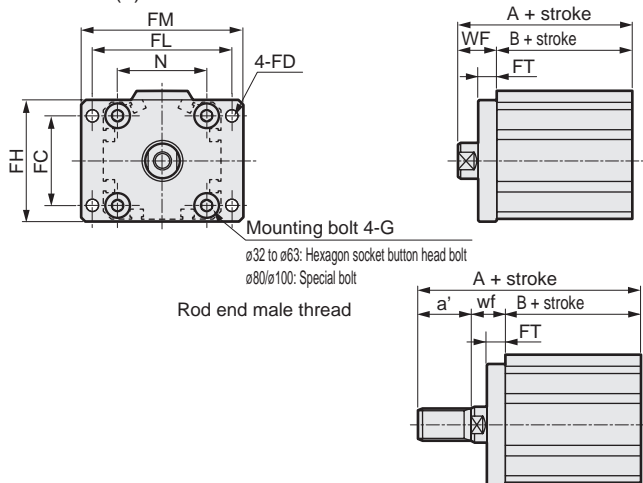
Code	Common dimensions				No switch			With switch		
Bore size (mm)	TS	M	WF	LF	A	B	LX	A	B	LX
ø32	71	7.2	17	25	47.2(57.2)	23(33)	7(17)	57.2	33	17
ø40	78	7.2	17	25	53.7(63.7)	29.5(39.5)	13.5(23.5)	63.7	39.5	23.5
ø50	95	8.2	18	29.5	56.7(66.7)	30.5(40.5)	7.5(17.5)	66.7	40.5	17.5

Code	Male thread			No switch			With switch		
Bore size (mm)	a'	wf	LF	A	B	LX	A	B	LX
ø32	23.5	15	23	68.7(78.7)	23(33)	7(17)	78.7	33	17
ø40	23.5	15	23	75.2(85.2)	29.5(39.5)	13.5(23.5)	85.2	39.5	23.5
ø50	28.5	15	26.5	82.2(92.2)	30.5(40.5)	7.5(17.5)	92.2	40.5	17.5

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

- Rod side flange (FA)  
SSD2-X(L)-32 to 50 -FA



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

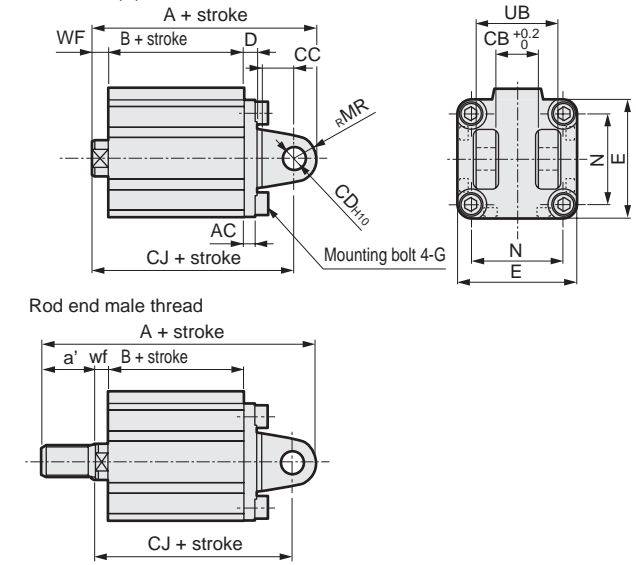
Code	Female thread			
Bore size (mm)	WF	No switch		With switch
		A	B	A B
ø32	17	40(50)	23(33)	50 33
ø40	17	46.5(56.5)	29.5(39.5)	56.5 39.5
ø50	18	48.5(58.5)	30.5(40.5)	58.5 40.5

Code	Male thread				
Bore size (mm)	a'	wf	No switch		With switch
			A	B	A B
ø32	23.5	15	61.5(71.5)	23(33)	71.5 33
ø40	23.5	15	68(78)	29.5(39.5)	78 39.5
ø50	28.5	15	74(84)	30.5(40.5)	84 40.5

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

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



Code	Common dimensions									
Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB
ø32	4.5	18.2	14	10	5	45	M6x16	10	34	36
ø40	5	18.2	14	10	6	52	M6x16	10	40	36
ø50	6	22.2	20	14	7	64	M8x20	14	50	44

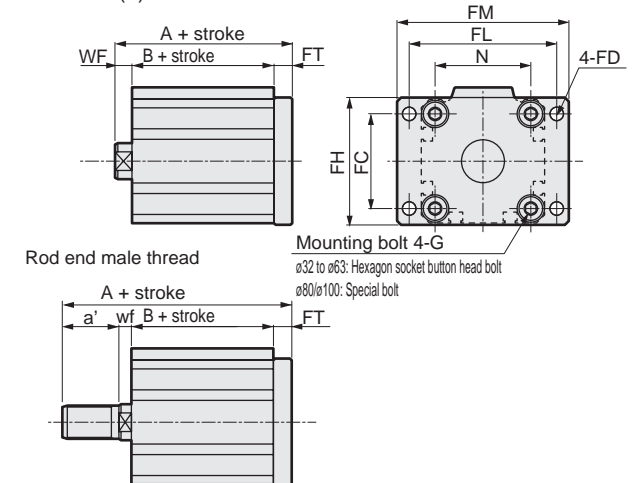
  

Code	Female thread					
Bore size (mm)	WF	No switch			With switch	
		A	B	CJ	A	B
ø32	7	60	23	50	70	33
ø40	7	68.5	29.5	58.5	78.5	39.5
ø50	8	80.5	30.5	66.5	90.5	40.5

Code	Male thread					
Bore size (mm)	a'	wf	No switch			With switch
			A	B	CJ	A B
ø32	23.5	5	81.5	23	48	91.5 33 58
ø40	23.5	5	90	29.5	56.5	100 39.5 66.5
ø50	28.5	5	106	30.5	63.5	116 40.5 73.5

- Head side flange (FB)  
SSD2-X(L)-32 to 50 -FB



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

Code	Female thread			
Bore size (mm)	WF	No switch		With switch
		A	B	A B
ø32	7	38	23	48 33
ø40	7	44.5	29.5	54.5 39.5
ø50	8	47.5	30.5	57.5 40.5

Code	Male thread				
Bore size (mm)	a'	wf	No switch		With switch
			A	B	A B
ø32	23.5	5	59.5	23	69.5 33
ø40	23.5	5	66	29.5	76 39.5
ø50	28.5	5	73	30.5	83 40.5

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

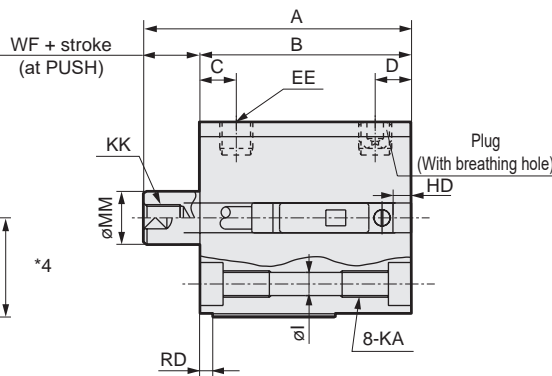
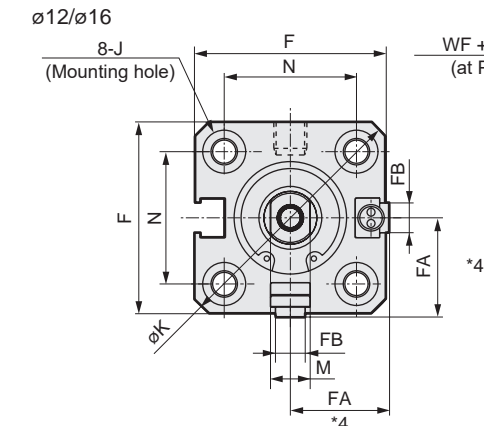
- SCP\*3
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS2
- CKV2
- CAV2/COVP/N2
- SSD2**
- SSG
- SSD
- CAT
- MDC2
- MVC
- SMG
- MSD/MSDG
- FC\*
- STK
- SRL3
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- ShkAbs
- FJ
- FK
- Spd Contr
- Ending

# SSD2-Y Series

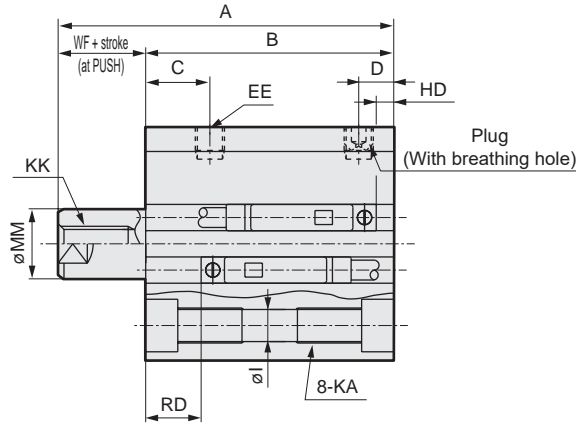
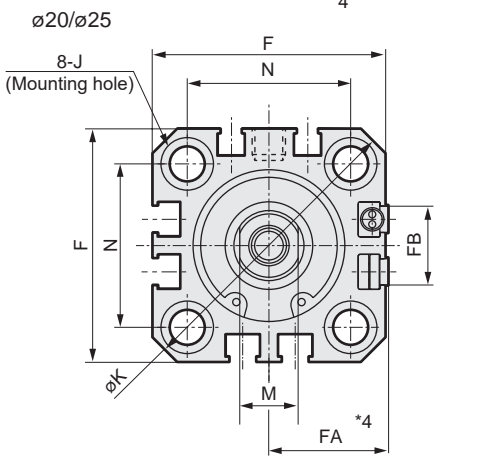
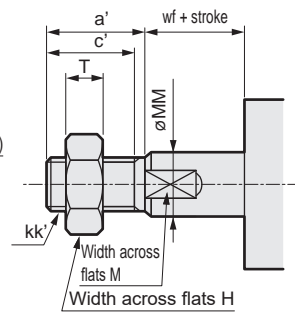
## Dimensions



### ● SSD2-YL-12 to 25 (with switch)



### ● Rod end male thread



Code		Common dimensions with switch																		
Bore size (mm)		A	B	C	D	EE	F	FA <sup>*4</sup>	FB	I	J	K	KA	KK	M	MM	N	WF		
STK	ø12	Stroke	5	35.5	27	5.5	5.5	M5	25	13(16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 Depth 7	M3 Depth 6	5	6	15.5	3.5
		Stroke	10	45.5	32															
SRL3	ø16	Stroke	5	35.5	27	5.5	5.5	M5	29	15(18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 Depth 7	M4 Depth 8	6	8	20	3.5
		Stroke	10	45.5	32															
SRG3	ø20	Stroke	5	44	34.5	8	5.5	M5	36	18.5(22)	12.5	5.5	9 spot face Depth 5.5	47	M6 Depth 11	M5 Depth 7	8	10	25.5	4.5
		Stroke	10	54	39.5															
SRM3	ø25	Stroke	5	47.5	37.5	11	6	M5	40	20.5(24)	13.5	5.5	9 spot face Depth 5.5	51	M6 Depth 11	M6 Depth 12	10	12	28	5
		Stroke	10	57.5	42.5															
Switch dimensions	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S											
	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD										
MRL2	ø12	1.5	1.5	1.5	1.5	3.5	3.5													
MRG2	ø16	0	4	0	4.5	1	6													
	ø20	3	7.5	3	7.5	5	9.5	7.5	12	6.5	11									
SM-25	ø25	4	9.5	4	9.5	6	11.5	8.5	14	7.5	13									

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

\*2 : HD and RD dimensions for 5 mm stroke 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.

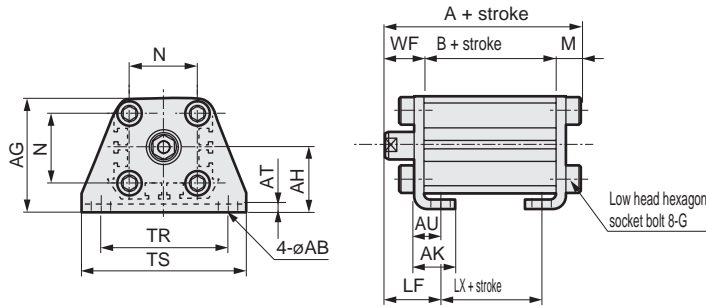
### ● Rod end male thread

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

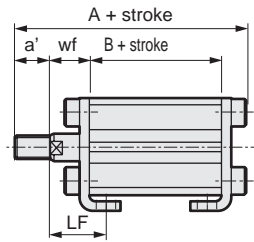
### Dimensions with mounting bracket



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



Rod end male thread

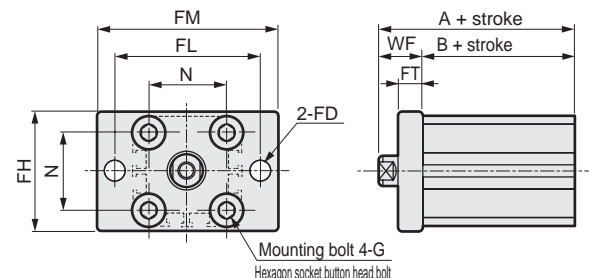


Code	Common dimensions										Female thread	
	Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8	
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8	
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2	
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2	

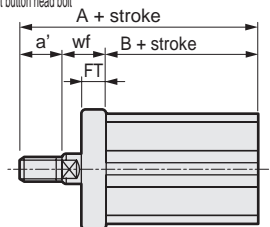
  

Code	Male thread											
	Bore size (mm)	WF	LF	A	B	LX	a'	wf	LF	A	B	LX
ø12	13.5	19.5	40.3	22	10	10.5	13.5	19.5	50.8	22	10	
ø16	13.5	19.5	40.3	22	10	12	13.5	19.5	52.3	22	10	
ø20	14.5	20.5	51.2	29.5	17.5	14	14.5	20.5	65.2	29.5	17.5	
ø25	15	22.5	54.7	32.5	17.5	17.5	15	22.5	72.2	32.5	17.5	

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



Rod end male thread

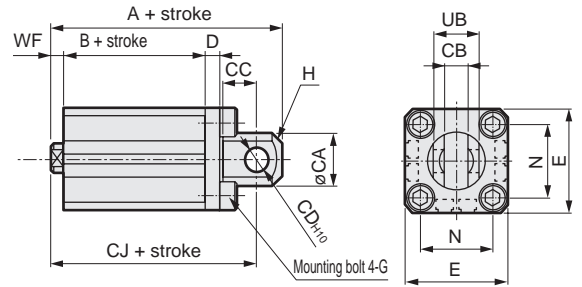


Code	Common dimensions						
	Bore size (mm)	FD	FH	FL	FM	FT	N
ø12	4.5	25	45	55	5.5	15.5	M4x12
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16

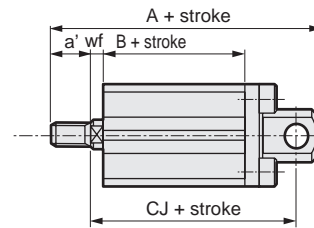
  

Code	Female thread				Male thread			
	Bore size (mm)	WF	A	B	a'	wf	A	B
ø12	13.5	35.5	22	10.5	13.5	46	22	
ø16	13.5	35.5	22	12	13.5	47.5	22	
ø20	14.5	44	29.5	14	14.5	58	29.5	
ø25	15	47.5	32.5	17.5	15	65	32.5	

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



Rod end male thread

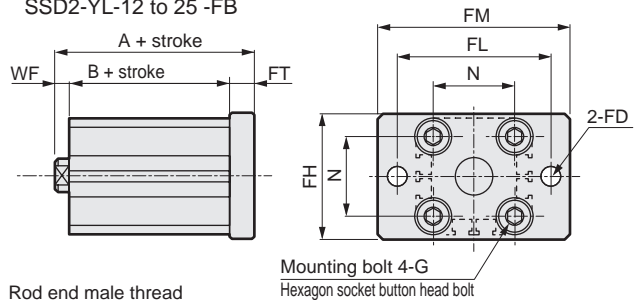


Code	Common dimensions									
	Bore size (mm)	CA	CB	CC	CD	D	E	G	H	N
ø12	12	5.2 <sup>+0.2</sup> <sub>0</sub>	7	5	4	25	M4x12	C1.5	15.5	10 <sup>+0.1</sup> <sub>-0.1</sub>
ø16	15	6.6 <sup>+0.3</sup> <sub>0</sub>	8	5	5	29	M4x12	C2	20	12 <sup>+0.1</sup> <sub>-0.1</sub>
ø20	20	8.2 <sup>+0.2</sup> <sub>0</sub>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

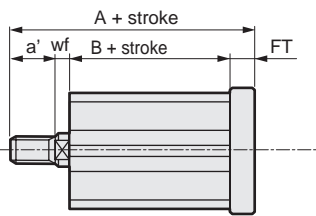
  

Code	Female thread					Male thread				
	Bore size (mm)	WF	With switch			a'	wf	With switch		
			A	B	CJ			A	B	CJ
ø12	3.5	45.5	22	39.5	10.5	3.5	56	22	39.5	
ø16	3.5	46.5	22	40.5	12	3.5	58.5	22	40.5	
ø20	4.5	61	29.5	52	14	4.5	75	29.5	52	
ø25	5	67.5	32.5	57.5	17.5	5	85	32.5	57.5	

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



Rod end male thread



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

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

- 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-Y Series

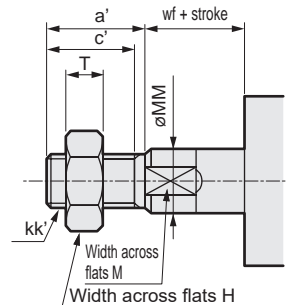
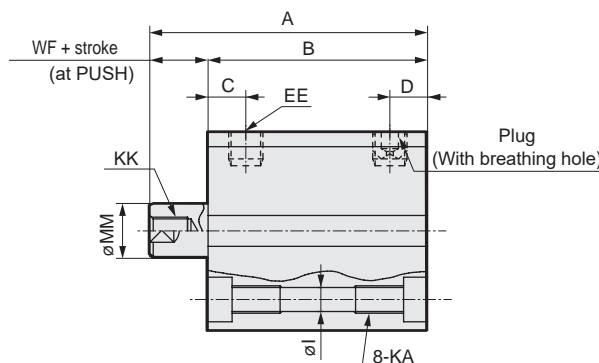
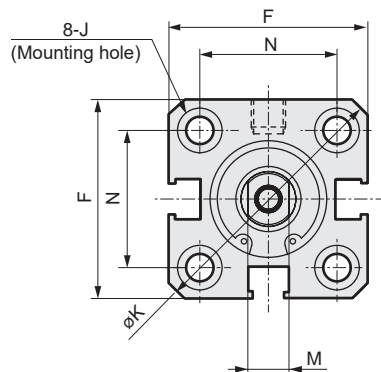
## Dimensions



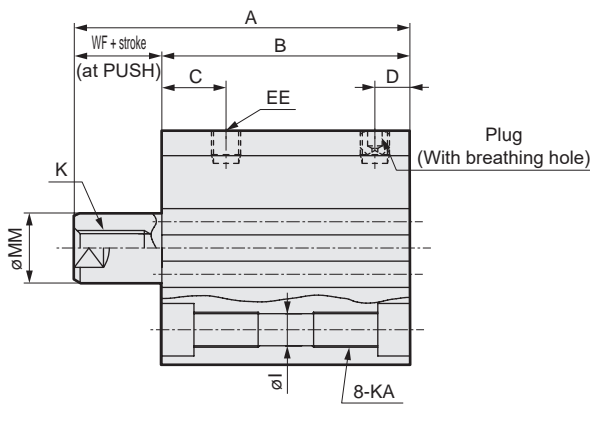
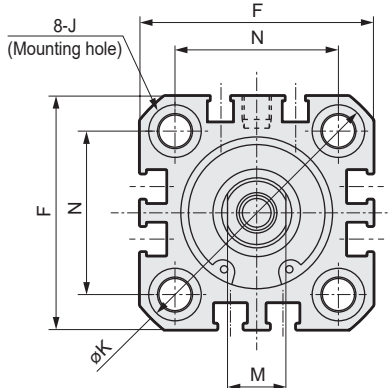
● SSD2-Y-12 to 25 (without switch)

● Rod end male thread

ø12/ø16



ø20/ø25



Code		No switch															
Bore size (mm)		A	B	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF	
ø12	Stroke	5	30.5	22	5.5	5.5	M5	25	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
		10	40.5	27													3.5
ø16	Stroke	5	30.5	22	5.5	5.5	M5	29	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
		10	40.5	27													3.5
ø20	Stroke	5	34	24.5	8	5.5	M5	36	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
		10	44	29.5													4.5
ø25	Stroke	5	37.5	27.5	11	6	M5	40	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5
		10	47.5	32.5													5

● Dimensions of rod end male thread part

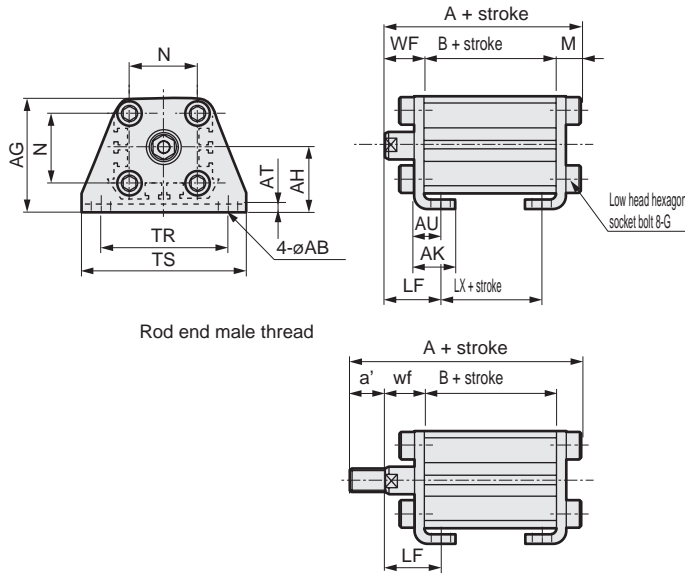
Code	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10x1.25	10	12	6	5

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

### Dimensions with mounting bracket

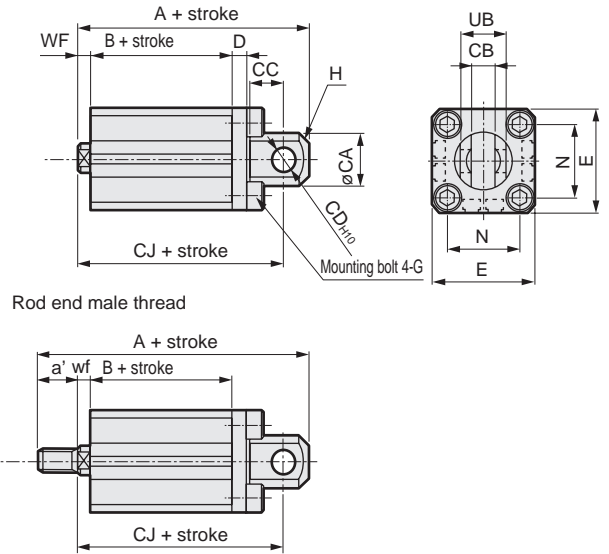


- Axial foot (LB) without switch  
SSD2-Y-12 to 25 -LB



Rod end male thread

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



Rod end male thread

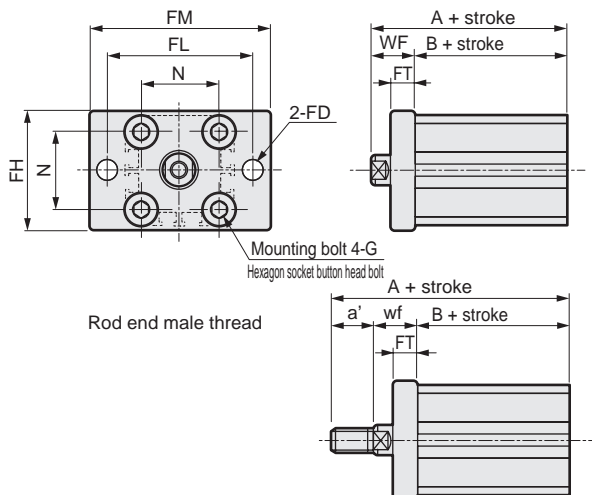
Code	Common dimensions										Female thread		
Bore size (mm)	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M		
ø12	5	29.5	17	12.5	2	8	M4x10	15.5	34	44	4.8		
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8		
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2		
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2		

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

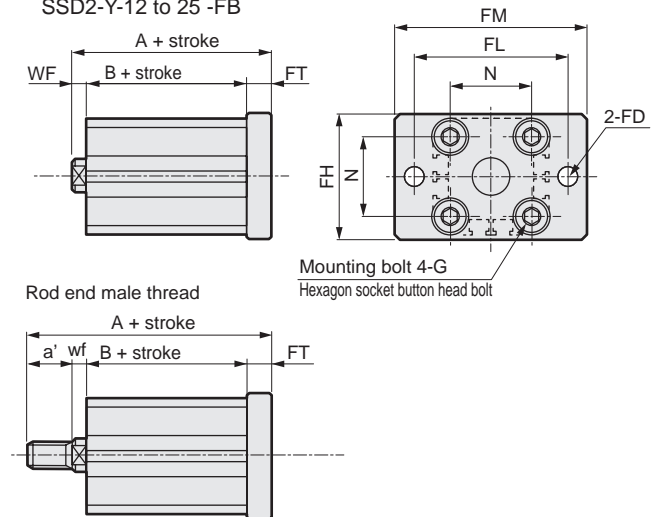
Note: ø20: LB cannot be selected for 5 mm stroke.

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



Rod end male thread

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



Rod end male thread

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

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

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

Code	Female thread				Male thread		
Bore size (mm)	WF	No switch		a'	wf	No switch	
		A	B			A	B
ø12	3.5	26	17	10.5	3.5	36.5	17
ø16	3.5	26	17	12	3.5	38	17
ø20	4.5	32	19.5	14	4.5	46	19.5
ø25	5	35.5	22.5	17.5	5	53	22.5

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

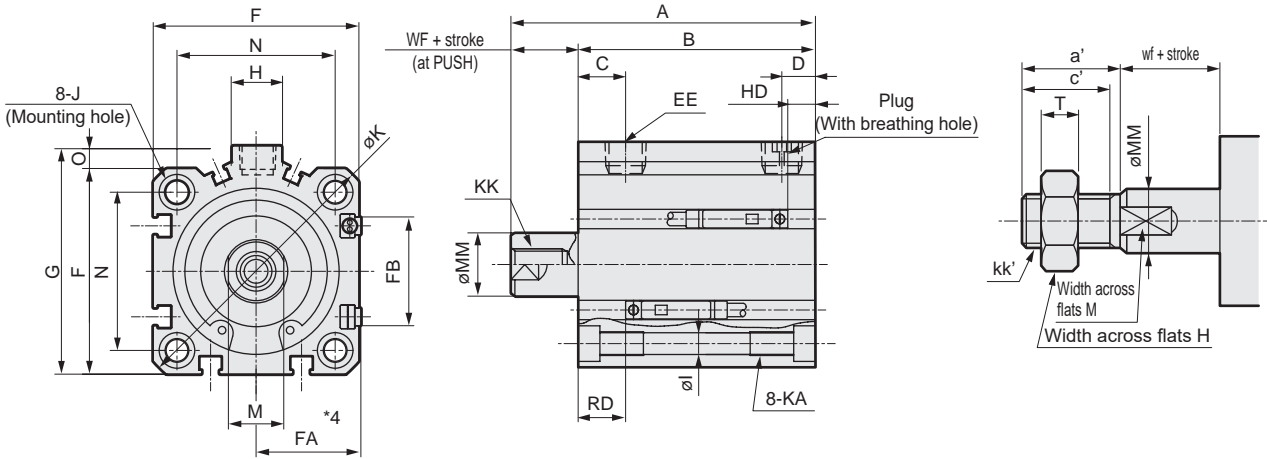
# SSD2-Y Series

## Dimensions

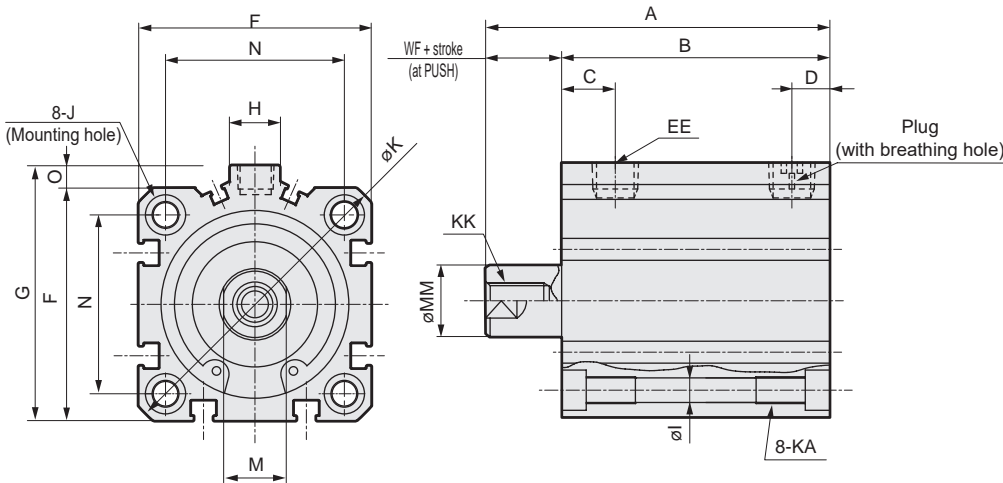


### ● SSD2-YL-32 to 50 (with switch)

### ● Rod end male thread



### ● SSD2-Y-32 to 50 (without switch)



Code		No switch		Common dimensions with switch																				
Bore size (mm)		A	B	A	B	C <sup>*6</sup>	D <sup>*6</sup>	EE <sup>*5</sup>	F	FA <sup>*3</sup>	FB	G	H	I	J	K	KA	KK	M	MM	N	O	WF	
ø32	Stroke	5	40	28	50	38	8	8	Rc1/8	45	23	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60	M6 Depth 11	M8 Depth 13	14	16	34	4.5	7
		10	50	33	60	43	(10)	(5.5)			(26.5)													
ø40	Stroke	5	46.5	34.5	56.5	44.5	12	8.5	Rc1/8	52	26.5	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 Depth 11	M8 Depth 13	14	16	40	5	7
		10	56.5	39.5	66.5	49.5	(11.5)	(18)			(30)													
ø50	Stroke	10	58.5	40.5	68.5	50.5	10.5	10.5	Rc1/4	64	32.5	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 Depth 13	M10 Depth 15	17	20	50	7	8
		20	78.5	50.5	88.5	60.5					(36)													
Switch dimensions		Reed T0H/T0V, T5H/T5V				Proximity T2H/T2V, T3H/T3V				Proximity T2WH/T2WV, T3WH/T3WV														
Bore size (mm)		HD <sup>*1</sup>		RD <sup>*1</sup>		HD <sup>*1</sup>		RD <sup>*1</sup>		HD		RD												
ø32		4		9.5		4		9.5		6		11.5												
ø40		7		12		7		12		8.5		13.5												
ø50		7.5		12.5		7.5		12.5		9		14												

\*1 : HD and RD dimensions for 5 mm stroke differ from these dimensions according to the setting.

\*2: 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.

\*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 : The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5.\*6 : Dimensions in ( ) of codes C and D are when the value is for a 5 mm stroke without switch.

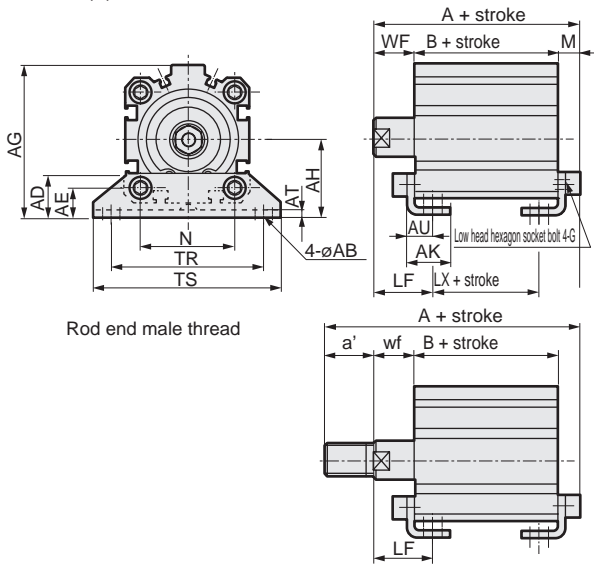
### ● Rod end male thread

Code	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

## Dimensions with mounting bracket



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



Code	Common dimensions										Female thread		
	Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	
ø32	7	18.5	13	57	30	17	3.2	11.2	M6x16	34	57		
ø40	7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64		
ø50	9	22	14	78	39	22.7	3.2	14.7	M8x20	50	79		

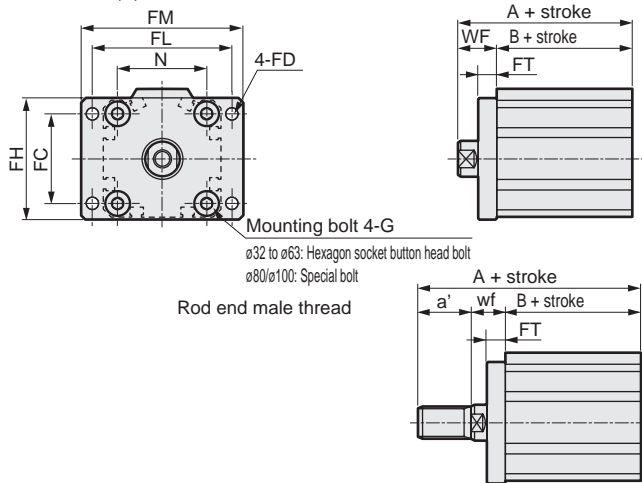
Code	Bore size (mm)	TS	M	WF	LF	No switch			With switch		
						A	B	LX	A	B	LX
ø32	71	7.2	17	25	47.2(57.2)	23(33)	7(17)	57.2	33	17	
ø40	78	7.2	17	25	53.7(63.7)	29.5(39.5)	13.5(23.5)	63.7	39.5	23.5	
ø50	95	8.2	18	29.5	56.7(66.7)	30.5(40.5)	7.5(17.5)	66.7	40.5	17.5	

Code	Bore size (mm)	Male thread			No switch			With switch		
		a'	wf	LF	A	B	LX	A	B	LX
ø32	23.5	15	23	68.7(78.7)	23(33)	7(17)	78.7	33	17	
ø40	23.5	15	23	75.2(85.2)	29.5(39.5)	13.5(23.5)	85.2	39.5	23.5	
ø50	28.5	15	26.5	82.2(92.2)	30.5(40.5)	7.5(17.5)	92.2	40.5	17.5	

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

- Rod side flange (FA)  
SSD2-Y(L)-32 to 50 -FA



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

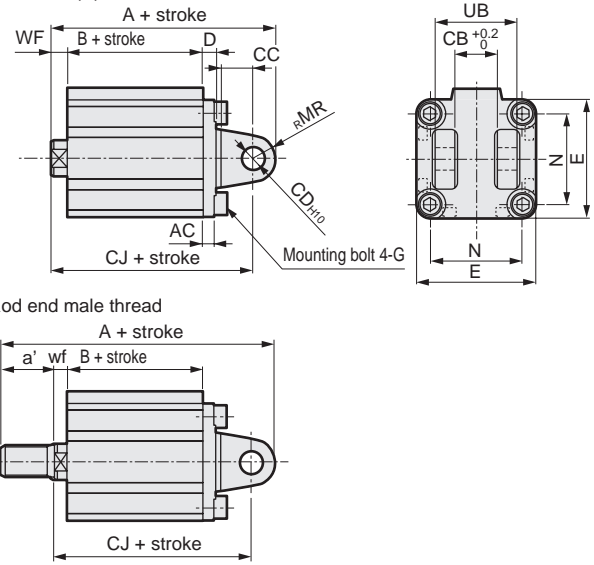
Code	Bore size (mm)	WF	No switch		With switch	
			A	B	A	B
ø32	17	17	40(50)	23(33)	50	33
ø40	17	17	46.5(56.5)	29.5(39.5)	56.5	39.5
ø50	18	18	48.5(58.5)	30.5(40.5)	58.5	40.5

Code	Bore size (mm)	Male thread			No switch			With switch		
		a'	wf	LF	A	B	LX	A	B	LX
ø32	23.5	15	23	61.5(71.5)	23(33)	7(17)	71.5	33	17	
ø40	23.5	15	23	68(78)	29.5(39.5)	13.5(23.5)	78	39.5	23.5	
ø50	28.5	15	26.5	74(84)	30.5(40.5)	7.5(17.5)	84	40.5	17.5	

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

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



Code	Common dimensions											
	Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB	
ø32	4.5	18.2	14	10	5	45	M6x16	10	34	36		
ø40	5	18.2	14	10	6	52	M6x16	10	40	36		
ø50	6	22.2	20	14	7	64	M8x20	14	50	44		

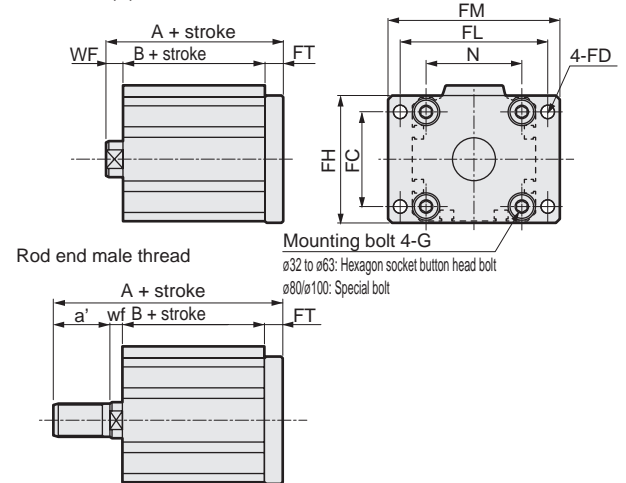
  

Code	Bore size (mm)	WF	No switch			With switch		
			A	B	CJ	A	B	CJ
ø32	7	60	23	50	70	33	60	
ø40	7	68.5	29.5	58.5	78.5	39.5	68.5	
ø50	8	80.5	30.5	66.5	90.5	40.5	76.5	

Code	Bore size (mm)	Male thread			No switch			With switch		
		a'	wf	LF	A	B	CJ	A	B	CJ
ø32	23.5	5	81.5	23	48	91.5	33	58		
ø40	23.5	5	90	29.5	56.5	100	39.5	66.5		
ø50	28.5	5	106	30.5	63.5	116	40.5	73.5		

- Head side flange (FB)  
SSD2-Y(L)-32 to 50 -FB



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

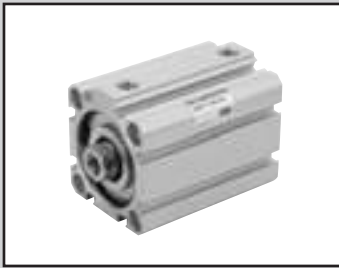
  

Code	Bore size (mm)	WF	No switch		With switch	
			A	B	A	B
ø32	7	38	23	48	33	
ø40	7	44.5	29.5	54.5	39.5	
ø50	8	47.5	30.5	57.5	40.5	

Code	Bore size (mm)	Male thread			No switch			With switch		
		a'	wf	LF	A	B	LX	A	B	LX
ø32	23.5	5	59.5	23	69.5	33				
ø40	23.5	5	66	29.5	76	39.5				
ø50	28.5	5	73	30.5	83	40.5				

- 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/heat resistant

# SSD2-T1 Series

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

JIS symbol



## Specifications

Item	SSD2-T1										
Bore size mm	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	
Actuation	Double acting										
Working fluid	Compressed air										
Max. working pressure MPa	1.0 ( $\approx 150$ psi, 10 bar)										
Min. working pressure MPa	0.1 ( $\approx 15$ psi, 1 bar)						0.05 ( $\approx 7.3$ psi, 0.5 bar)				
Proof pressure MPa	1.6 ( $\approx 230$ psi, 16 bar)										
Ambient temperature $^{\circ}\text{C}$	5 ( $41^{\circ}\text{F}$ ) to 150 ( $302^{\circ}\text{F}$ )										
Port size	M5				Rc1/8 *1		Rc1/4		Rc3/8		
Stroke tolerance mm	$^{+1.0}$ <sub>0</sub>										
Working piston speed mm/s	50 to 500						50 to 300				
Cushion	None										
Lubrication	Not available										
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56	

\*1: The  $\phi 32$  bore size with a 5 mm stroke has a port size of M5.

## Stroke

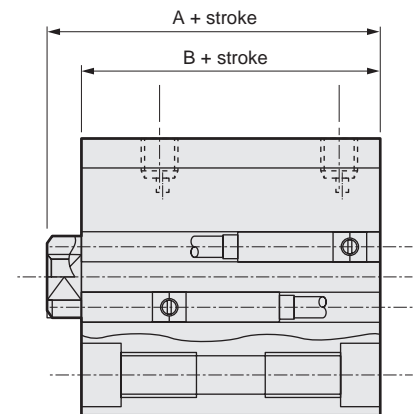
Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\phi 12$	5/10/15/20	30	1
$\phi 16$	25/30		
$\phi 20$	5/10/15/20/25	50	
$\phi 25$	30/35/40/45/50		
$\phi 32$	5/10/15/20/25/30/	100	
$\phi 40$	35/40/45/50/75/100		
$\phi 50$	10/15/20/25		
$\phi 63$	30/35/40/45/50		
$\phi 80$	75/100		
$\phi 100$			

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

## Custom stroke

● SSD2-T1 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-T32-38 A +2 mm spacer is added to the SSD2-T32-40 standard cylinder to create 38 mm stroke. B + stroke is 63 mm.	

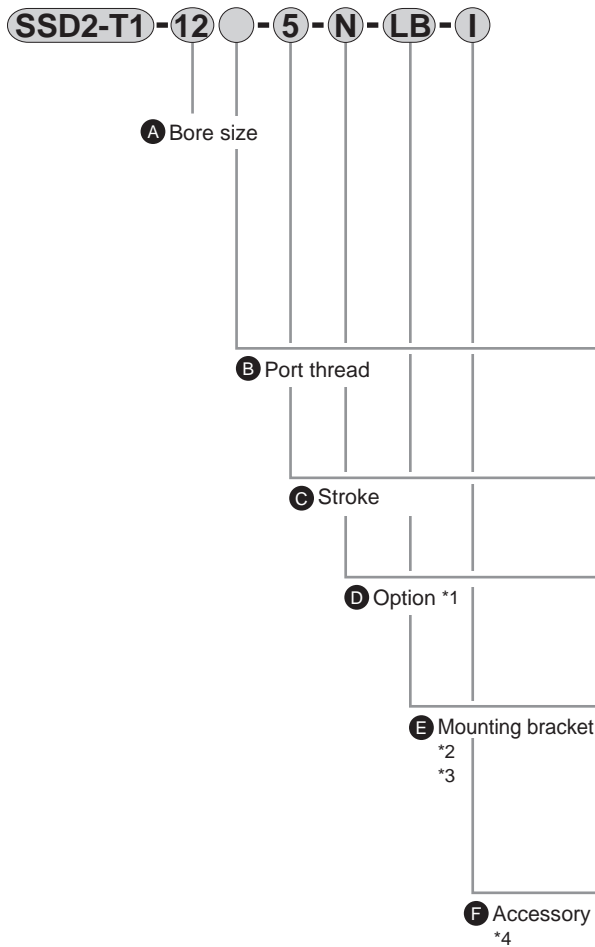


## Cylinder weight table (the weight of the switches is when there are 2 cylinder switches.)

(Unit: g)

Stroke (mm)	5	10	15	20	25	30	35	40	45	50	75	100
<b>Bore size (mm)</b>												
$\phi 12$	36	44	53	61	70	72	-	-	-	-	-	-
$\phi 16$	48	59	69	80	91	102	-	-	-	-	-	-
$\phi 20$	63	75	88	101	113	126	139	152	165	203	-	-
$\phi 25$	87	102	118	134	150	165	181	197	213	228	-	-
$\phi 32$	122	144	166	188	209	231	253	275	297	318	494	604
$\phi 40$	183	210	236	263	290	316	342	369	395	472	646	776
$\phi 50$	-	341	383	425	467	510	552	594	636	678	1025	1235
$\phi 63$	-	507	562	617	672	727	782	838	893	948	1438	1713
$\phi 80$	-	928	1015	1101	1188	1274	1361	1448	1535	1621	2401	2833
$\phi 100$	-	1433	1547	1660	1774	1888	2002	2115	2229	2343	3406	3973

### How to order



Code	Description
<b>A Bore size (mm)</b>	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
<b>B Port thread</b>	
Blank	Rc thread
NN	NPT thread (ø32 and over) (made-to-order product)
GN	G thread (ø32 and over) (made-to-order product)
<b>C Stroke (mm)</b>	
Refer to the stroke table below.	
<b>D Option</b>	
Blank	Rod end female thread
N	Rod end male thread
M	Piston rod material (stainless steel)
<b>E 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>F 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 : Piston rod of ø12 to ø25 is stainless steel as standard. C-snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.
- \*2 : The mounting bracket is included at shipment.
- \*3 : The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 761, 763, 765 and 766. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
- \*4 : "I" and "Y" cannot be selected together.
- \*5 : Refer to pages 750 and 751 for combinations of variations/options.

### [Example of model No.]

#### SSD2-T1-12-5-N

Model: Compact cylinder, heat resistant

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

### [Stroke table]

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

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

### How to order mounting bracket

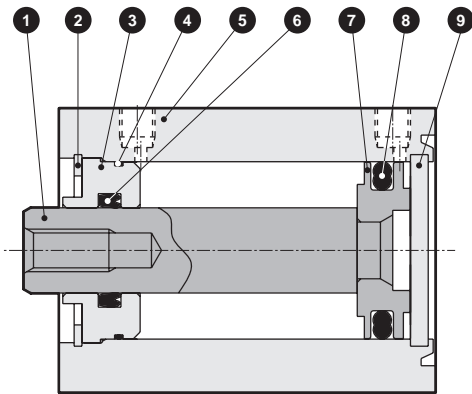
Bore size (mm)	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Mounting bracket										
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63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

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

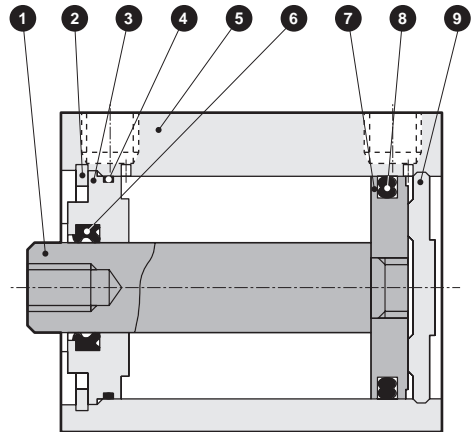
# SSD2-T1 Series

## Internal structure and parts list

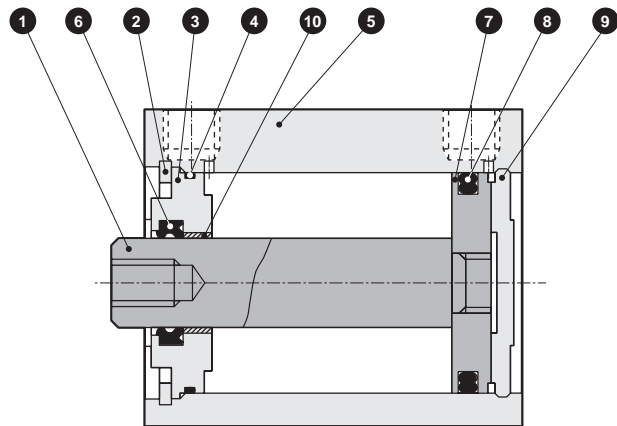
● SSD2-T1-12 to 25



● SSD2-T1-32 to 50



● SSD2-T1-63 to 100



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

## Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
ø12	SSD2-T-12K	4 6 8
ø16	SSD2-T-16K	
ø20	SSD2-T-20K	
ø25	SSD2-T-25K	
ø32	SSD2-T-32K	
ø40	SSD2-T-40K	
ø50	SSD2-T-50K	
ø63	SSD2-T-63K	
ø80	SSD2-T-80K	
ø100	SSD2-T-100K	

## Dimensions

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

---

# MEMO

---

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

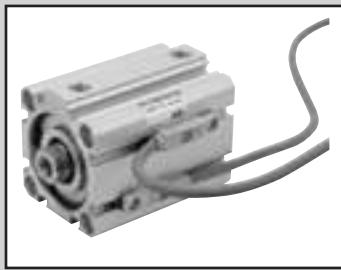
FJ

FK

Spd  
Contr

Ending



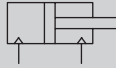


Compact cylinder double acting/with heat resistant cylinder switch

# SSD2-T1L Series

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

JIS symbol



## Specifications

1 MPa  $\approx$  145.0 psi, 1 MPa = 10 bar

Item	SSD2-T1L							
Bore size mm	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 ( $\approx$ 150 psi, 10 bar)							
Min. working pressure MPa	0.1 ( $\approx$ 15 psi, 1 bar)						0.05	
Proof pressure MPa	1.6 ( $\approx$ 230 psi, 16 bar)							
Ambient temperature $^{\circ}\text{C}$	5 (41 $^{\circ}\text{F}$ ) to 150 (302 $^{\circ}\text{F}$ ) (*1)							
Port size	M5			Rc1/8		Rc1/4		
Stroke tolerance mm	$^{+1.0}$ $_0$							
Working piston speed mm/s	50 to 500						50 to 300	
Cushion	None							
Lubrication (*2)	-							

\*1: At an ambient temperature of 150 $^{\circ}\text{C}$ , external leakage will occur gradually after approximately 500,000 uses.

\*2: Periodically apply additional heat-resistant grease.

## Stroke

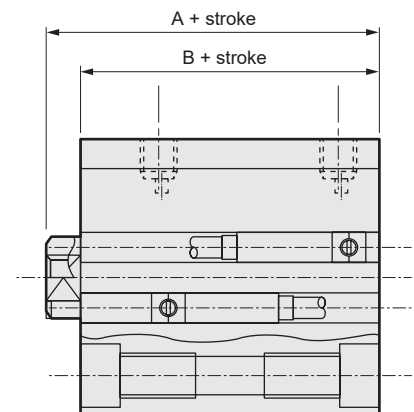
Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)	
			With 1 switch	With 2 switches
$\phi 16$	10/15/20/25/30	30	10	20
$\phi 20$	15/20/25/30/	50	15	25
$\phi 25$	35/40/45/50			
$\phi 32$	15/20/25/30/35/ 40/45/50/70/100	100	15	20
$\phi 40$				
$\phi 50$				
$\phi 63$				

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

## Custom stroke

### ● SSD2-T1L Series

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



### Cylinder switch specifications

Item	2-wire reed	
	E7OH, E7OV	
Applications	For relay, programmable controller	
Load voltage	12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA
Internal voltage drop	3.0 V or less	
Leakage current	0mA	
Indicator	LED (Lit when ON) (Note)	
Lead wire	Heat-resistant fluorine-insulated sheathed wire 1 m (0.5SQ (100/0.08) annealed copper wire x 2C)	
Insulation resistance	100 MΩ and over with 500 VDC megger	
Withstand voltage	No failure after 1 minute of 1,000 VAC application.	
Max. shock resistance	294 m/s <sup>2</sup>	
Ambient temperature	-10 to 150°C	
Degree of protection	IEC standards IP67, JIS C0920 (water-tight)	
Weight	g 40	

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

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

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

### Theoretical thrust table (Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.61x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.01x10 <sup>2</sup>
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06x10 <sup>2</sup>	1.21x10 <sup>2</sup>	1.36x10 <sup>2</sup>	1.51x10 <sup>2</sup>
ø20	Push	-	31.4	47.1	62.8	94.2	1.26x10 <sup>2</sup>	1.57x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.20x10 <sup>2</sup>	2.51x10 <sup>2</sup>	2.83x10 <sup>2</sup>	3.14x10 <sup>2</sup>
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18x10 <sup>2</sup>	1.41x10 <sup>2</sup>	1.65x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.12x10 <sup>2</sup>	2.36x10 <sup>2</sup>
ø25	Push	-	49.1	73.6	98.2	1.47x10 <sup>2</sup>	1.96x10 <sup>2</sup>	2.45x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.44x10 <sup>2</sup>	3.93x10 <sup>2</sup>	4.42x10 <sup>2</sup>	4.91x10 <sup>2</sup>
	Pull	-	37.8	56.7	75.6	1.13x10 <sup>2</sup>	1.51x10 <sup>2</sup>	1.89x10 <sup>2</sup>	2.27x10 <sup>2</sup>	2.64x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.40x10 <sup>2</sup>	3.78x10 <sup>2</sup>
ø32	Push	-	80.4	1.21x10 <sup>2</sup>	1.61x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.22x10 <sup>2</sup>	4.02x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.63x10 <sup>2</sup>	6.43x10 <sup>2</sup>	7.24x10 <sup>2</sup>	8.04x10 <sup>2</sup>
	Pull	-	60.3	90.5	1.21x10 <sup>2</sup>	1.81x10 <sup>2</sup>	2.41x10 <sup>2</sup>	3.02x10 <sup>2</sup>	3.62x10 <sup>2</sup>	4.22x10 <sup>2</sup>	4.83x10 <sup>2</sup>	5.43x10 <sup>2</sup>	6.03x10 <sup>2</sup>
ø40	Push	-	1.26x10 <sup>2</sup>	1.88x10 <sup>2</sup>	2.51x10 <sup>2</sup>	3.77x10 <sup>2</sup>	5.03x10 <sup>2</sup>	6.28x10 <sup>2</sup>	7.54x10 <sup>2</sup>	8.80x10 <sup>2</sup>	1.01x10 <sup>3</sup>	1.13x10 <sup>3</sup>	1.26x10 <sup>3</sup>
	Pull	-	1.06x10 <sup>2</sup>	1.58x10 <sup>2</sup>	2.11x10 <sup>2</sup>	3.17x10 <sup>2</sup>	4.22x10 <sup>2</sup>	5.28x10 <sup>2</sup>	6.33x10 <sup>2</sup>	7.39x10 <sup>2</sup>	8.44x10 <sup>2</sup>	9.50x10 <sup>2</sup>	1.06x10 <sup>3</sup>
ø50	Push	-	1.96x10 <sup>2</sup>	2.95x10 <sup>2</sup>	3.93x10 <sup>2</sup>	5.89x10 <sup>2</sup>	7.85x10 <sup>2</sup>	9.82x10 <sup>2</sup>	1.18x10 <sup>3</sup>	1.37x10 <sup>3</sup>	1.57x10 <sup>3</sup>	1.77x10 <sup>3</sup>	1.96x10 <sup>3</sup>
	Pull	-	1.65x10 <sup>2</sup>	2.47x10 <sup>2</sup>	3.30x10 <sup>2</sup>	4.95x10 <sup>2</sup>	6.60x10 <sup>2</sup>	8.25x10 <sup>2</sup>	9.90x10 <sup>2</sup>	1.15x10 <sup>3</sup>	1.32x10 <sup>3</sup>	1.48x10 <sup>3</sup>	1.65x10 <sup>3</sup>
ø63	Push	1.56x10 <sup>2</sup>	3.12x10 <sup>2</sup>	4.68x10 <sup>2</sup>	6.23x10 <sup>2</sup>	9.35x10 <sup>2</sup>	1.25x10 <sup>3</sup>	1.56x10 <sup>3</sup>	1.87x10 <sup>3</sup>	2.18x10 <sup>3</sup>	2.49x10 <sup>3</sup>	2.81x10 <sup>3</sup>	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>

# SSD2-T1L Series

## How to order

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

Double acting/heat resistant with compact heat resistant switch

**A** Bore size

**B** Port thread

**C** Stroke

**D** Switch model No.

**E** Switch quantity

**F** Option \*1

**G** Mounting bracket \*2 \*3

**H** Accessory \*4

Code	Description			
<b>A Bore size (mm)</b>				
16	ø16			
20	ø20			
25	ø25			
32	ø32			
40	ø40			
50	ø50			
63	ø63			
<b>B Port thread</b>				
Blank	Rc thread			
NN	NPT thread (ø32 and over) (made-to-order product)			
GN	G thread (ø32 and over) (made-to-order product)			
<b>C Stroke (mm)</b>				
Refer to the stroke table on the following page.				
<b>D Switch model No.</b>				
ET0H	Reed	AC/DC	2-wire	Axial lead wire
ET0V				L-shaped lead wire
<b>E Switch quantity</b>				
R	1 on rod side			
H	1 on head side			
D	2			
<b>F Option</b>				
Blank	Rod end female thread			
N	Rod end male thread			
M	Piston rod material (stainless steel)			
<b>G 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>H Accessory (available when rod end male thread "N" is selected)</b>				
I	Rod eye			
Y	Rod clevis (pin and snap ring included)			

### ⚠ Precautions for model No. selection

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

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

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

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

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

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

### [Example of model No.]

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

Model: Compact cylinder with heat resistant cylinder switch

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

### [Stroke table]

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

\*1: The value in ( ) is for types with two switches.

Refer to page 824 for the min. stroke with switch.

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

### How to order switch

SW - ETOH

Switch model No.  
(Item ① on page 826)

### How to order mounting bracket

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

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

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

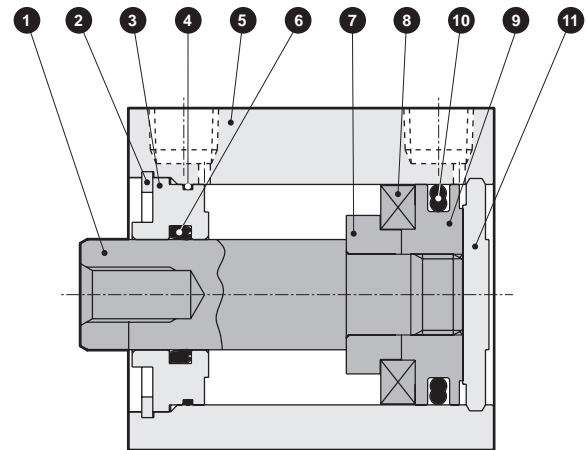
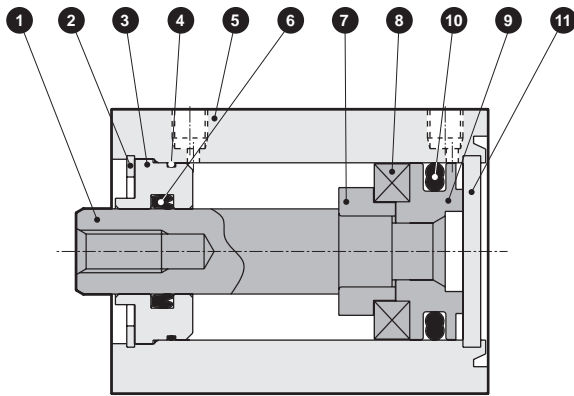
Ending

# SSD2-T1L Series

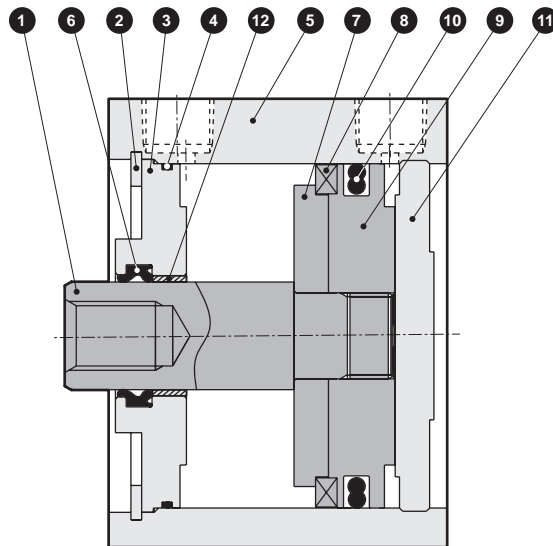
## Internal structure and parts list

● SSD2-T1L-16 to 25

● SSD2-T1L-32 to 50



● SSD2-T1L-63



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

Fluorine grease is used.

## Repair parts list

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

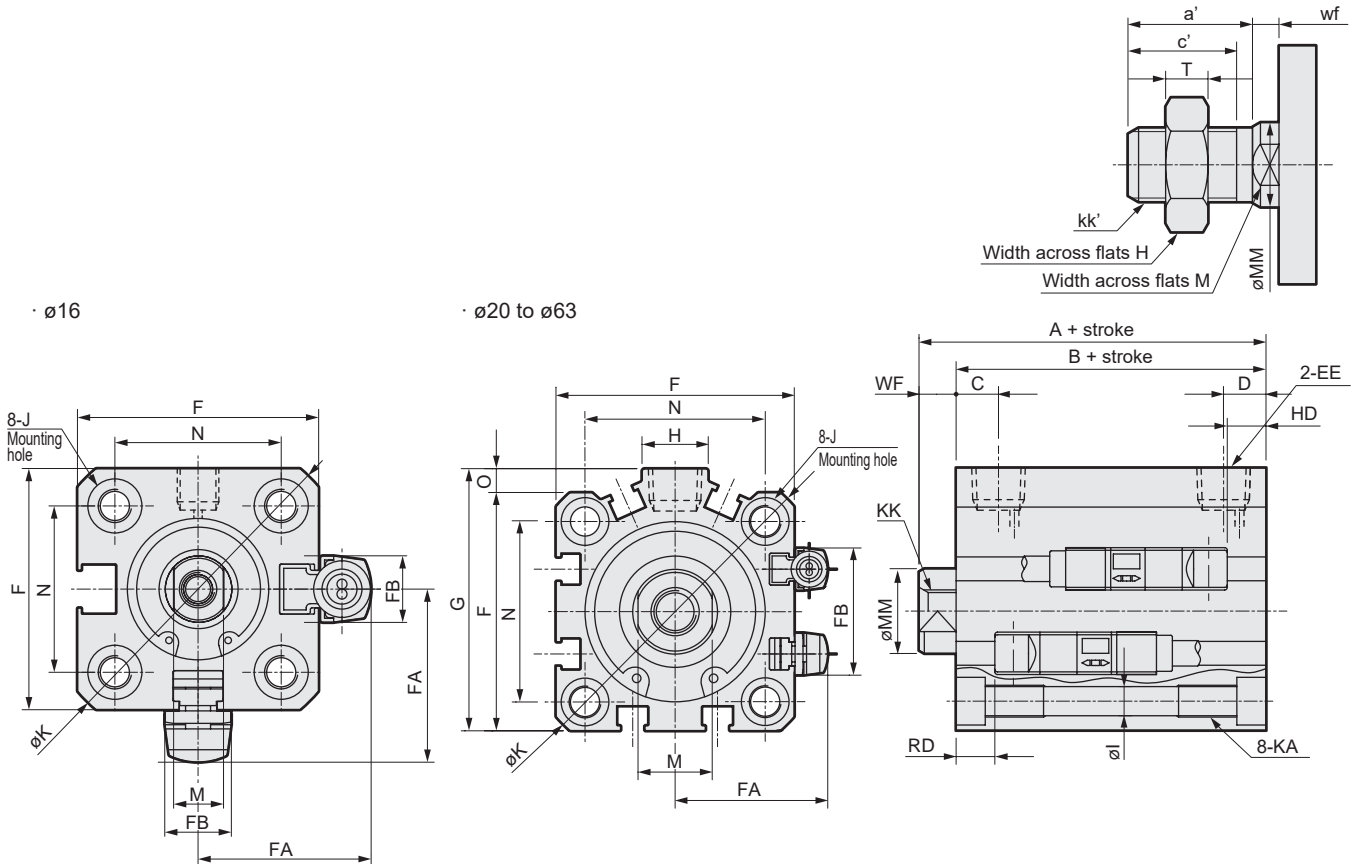
# SSD2-T1L Series

Double acting/with heat resistant cylinder switch

## Dimensions

● SSD2-T1L-16 to 63

● Rod end male thread



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

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

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

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

● Rod end male thread

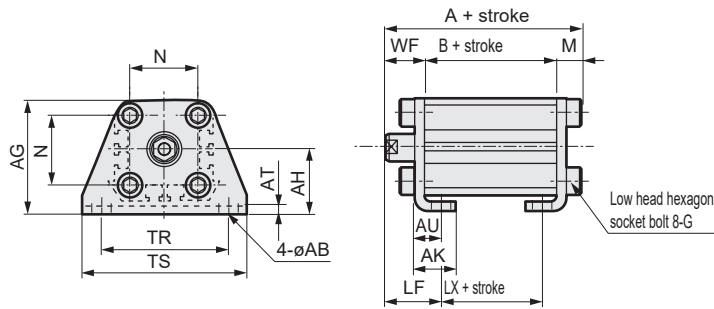
Code	a'	c'	H	kk'	M	MM	T	wf
Bore size (mm)								
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10x1.25	10	12	6	5
ø32	23.5	20.5	22	M14x1.5	14	16	8	5
ø40	23.5	20.5	22	M14x1.5	14	16	8	5
ø50	28.5	26	27	M18x1.5	17	20	11	5
ø63	28.5	26	27	M18x1.5	17	20	11	5

- 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

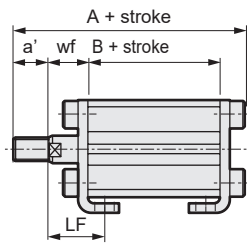
# SSD2-T1L Series

## Dimensions with mounting bracket

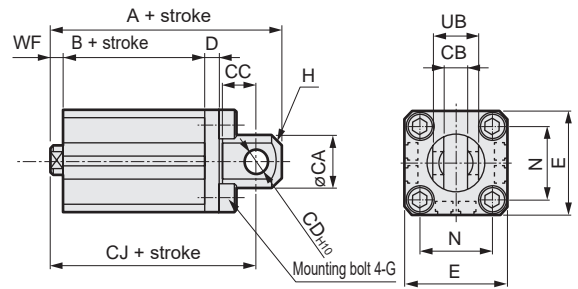
- Axial foot (LB) with switch  
SSD2-T1L-16 to 25 -LB



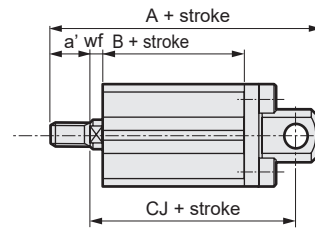
Rod end male thread



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



Rod end male thread



Code	Common dimensions										Female thread		
	AB	AG	AH	AK	AT	AU	G	N	TR	TS	M		
ø16	5	33.5	19	13	2	8	M4x10	20	38	48	4.8		
ø20	7	42	24	15	3.2	9.2	M6x16	25.5	48	62	7.2		
ø25	7	46	26	16.5	3.2	10.7	M6x16	28	52	66	7.2		

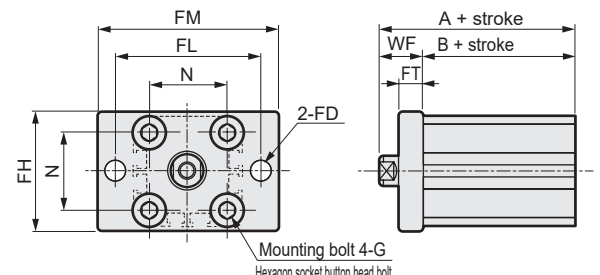
Code	Common dimensions										Male thread		
	WF	LF	A	B	LX	a'	wf	LF	A	B	LX		
ø16	13.5	19.5	50.3	32	20	12	13.5	19.5	62.3	32	20		
ø20	14.5	20.5	51.2	29.5	17.5	14	14.5	20.5	65.2	29.5	17.5		
ø25	15	22.5	54.7	32.5	17.5	17.5	15	22.5	72.2	32.5	17.5		

Code	Common dimensions									
	CA	CB	CC	CD	D	E	G	H	N	UB
ø16	15	6.6 <sup>+0.3</sup>	8	5	5	29	M4x12	C2	20	12 <sup>-0.1</sup>
ø20	20	8.2 <sup>+0.2</sup>	12	8	5	36	M6x16	C4	25.5	16 <sup>-0.1</sup>
ø25	24	10.2 <sup>+0.2</sup>	14	10	5	40	M6x16	C5	28	20 <sup>-0.1</sup>

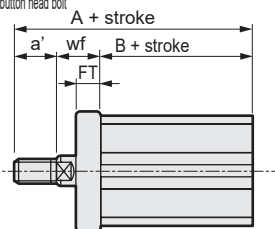
  

Code	Female thread					Male thread				
	WF	A	B	CJ	a'	wf	A	B	CJ	
ø16	3.5	56.5	32	50.5	12	3.5	68.5	32	50.5	
ø20	4.5	61	29.5	52	14	4.5	75	29.5	52	
ø25	5	67.5	32.5	57.5	17.5	5	85	32.5	57.5	

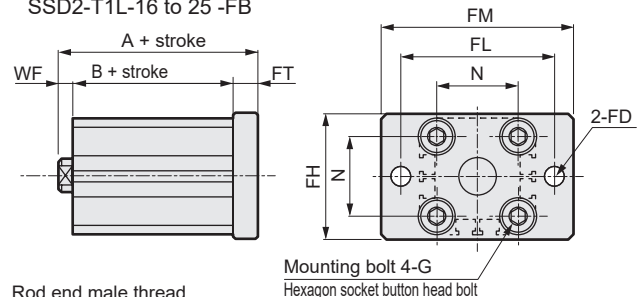
- Rod side flange (FA) with switch  
SSD2-T1L-16 to 25 -FA



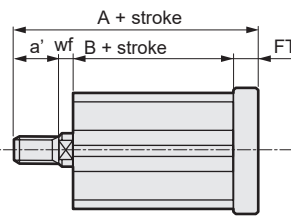
Rod end male thread



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



Rod end male thread



Code	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16

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

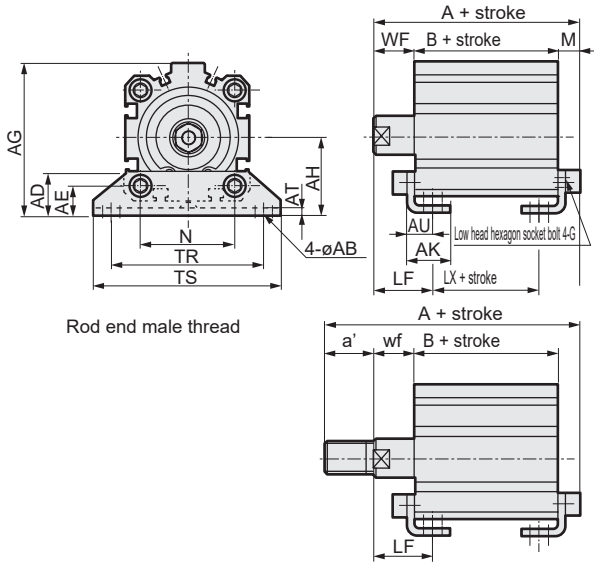
Code	Common dimensions						
	FD	FH	FL	FM	FT	N	G
ø16	4.5	30	45	55	5.5	20	M4x12
ø20	6.6	39	48	60	8	25.5	M6x16
ø25	6.6	42	52	64	8	28	M6x16

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

### Dimensions with mounting bracket

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



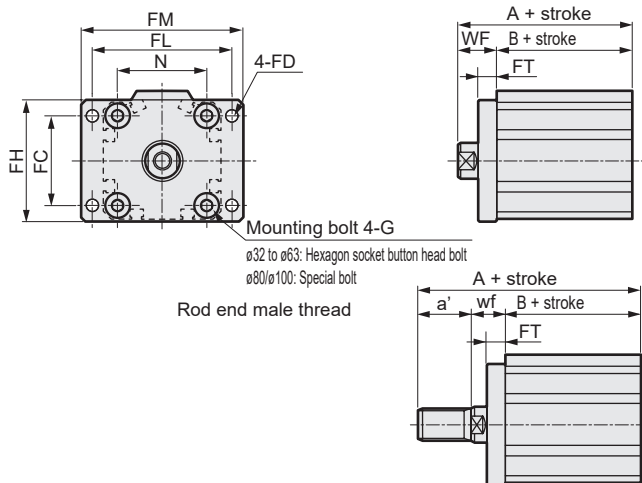
Code	Common dimensions											Female thread			
	Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS		
ø32	7	18.5	13	57	30	17	3.2	11.2	M6x16	34	57	71			
ø40	7	18	13	64	33	18.2	3.2	11.2	M6x16	40	64	78			
ø50	9	22	14	78	39	22.7	3.2	14.7	M8x20	50	79	95			
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10x25	60	95	113			

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

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

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



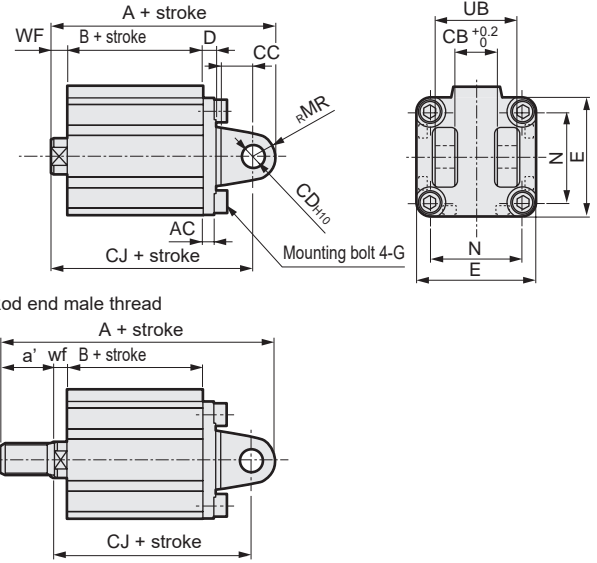
Code	Common dimensions							
	Bore size (mm)	FC	FD	FH	FL	FM	FT	N
ø32	34	5.5	48	56	65	8	34	M6x16
ø40	40	5.5	54	62	72	8	40	M6x16
ø50	50	6.6	67	76	89	9	50	M8x20
ø63	60	9	80	92	108	9	60	M10x25

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

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

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

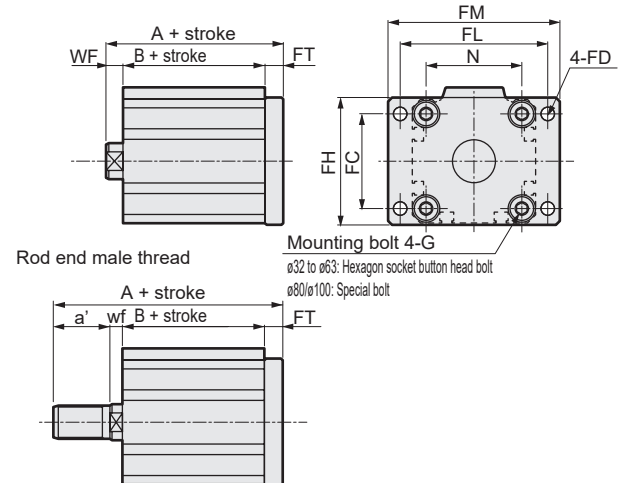


Code	Common dimensions										
	Bore size (mm)	AC	CB	CC	CD	D	E	G	MR	N	UB
ø32	4.5	18.2	14	10	5	45	M6x16	10	34	36	
ø40	5	18.2	14	10	6	52	M6x16	10	40	36	
ø50	6	22.2	20	14	7	64	M8x20	14	50	44	
ø63	7	22.2	20	14	8	77	M10x25	14	60	44	

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

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



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

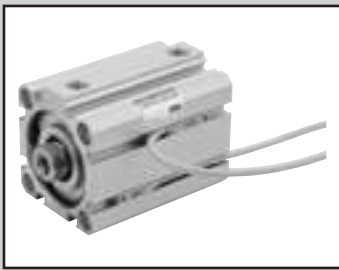
  

Code	Female thread				Male thread			
	Bore size (mm)	WF	A	B	a'	wf	A	B
ø32	7	48	33	23.5	5	69.5	33	
ø40	7	54.5	39.5	23.5	5	76	39.5	
ø50	8	57.5	40.5	28.5	5	83	40.5	
ø63	8	63	46	28.5	5	88.5	46	

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

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





Compact cylinder high load/rubber-air cushioned

# SSD2-K-\*C Series

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

JIS symbol



## Specifications

Item	SSD-K-*C SSD-KL-*C (with switch)							
	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Bore size mm	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 ( $\approx 150$ psi, 10 bar)							
Min. working pressure MPa	0.25 ( $\approx 36$ psi, 2.5 bar)			0.2 ( $\approx 29$ 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	Rc1/8			Rc1/4		Rc3/8		
Stroke tolerance mm	$^{+2.0}_0$							
Working piston speed mm/s	50 to 500				50 to 300			
Cushion	Rubber-air cushion							
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)							
Allowable absorbed energy J	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

## Stroke

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

## Min. stroke with switch (2 switches)

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
$\phi 20$	5	5
$\phi 25$		
$\phi 32$		
$\phi 40$		10
$\phi 50$		
$\phi 63$		
$\phi 80$		
$\phi 100$		

\*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.

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

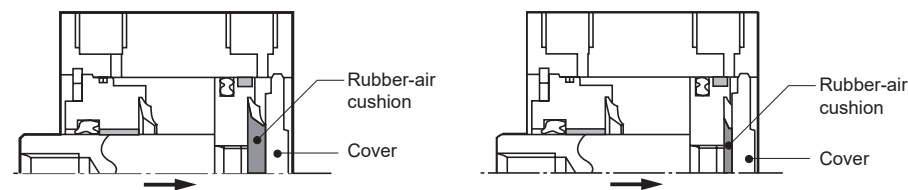
\*1: Less than 10 mm with the 2-color LED, off-delay, AC magnetic field proof, T1\* or T8\* switch is not available.

## Custom stroke

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

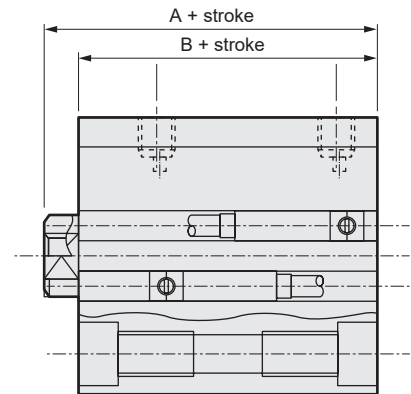
## Rubber-air cushion mechanism



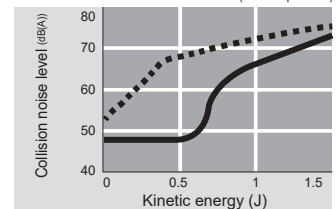
### When pulled

An airtight space is created in the  $\blacksquare$  area when the piston operates and the rubber-air cushion and cover make contact. Air in the airtight area is further compressed, absorbing energy as the piston operates.

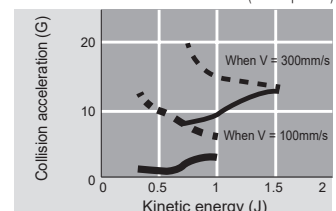
At the end of the stroke, energy generated by compression distortion of the rubber cushion is also added.



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



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



--- Cylinder with rubber cushion  
— Cylinder with rubber-air cushion

### 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/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V	T8H/T8V		T2YD(*4) T2YDT		
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller				For programmable controller, relay				For programmable controller, relay	For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay	For programmable controller	
Output method	-				NPN output	PNP output	NPN output	NPN output	-						
Pwr. supp. V.	-				10 to 28 VDC				-						
Load voltage	85 to 265 VAC	10 to 30 VDC	24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*3)		100 mA or less	50 mA or less			5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator	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								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	-	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	-	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	-	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	-	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	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	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	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	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	1.57x10 <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	1.43x10 <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-K-\*C Series

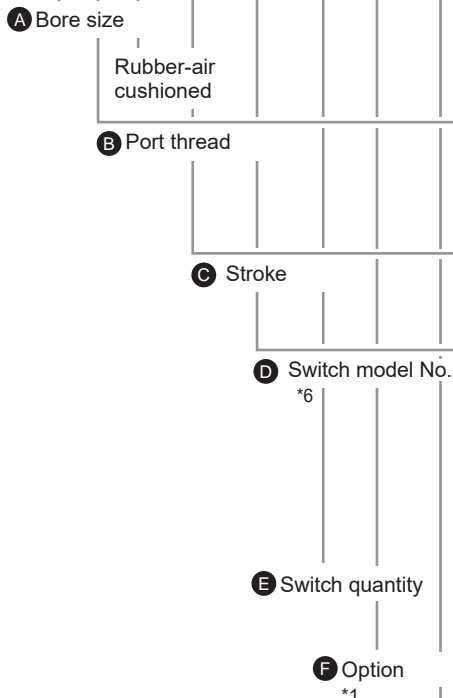
## How to order

No switch (without magnet for switch)

SSD2-K-40-C-10-N-LB-I

With switch (built-in magnet for switch)

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



## Precautions for model No. selection

\*1: Piston rod of  $\phi 20$  and  $\phi 25$  is stainless steel as standard. C-snap ring is stainless steel instead of steel. The rod end male thread nut is stainless steel.

\*2: Mounting The bracket is attached at shipment.

\*3: The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to the dimensions on pages 761, 763, 765 and 766. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.

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

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

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

\*7: F-switch cannot be selected.

[Example of model No.]

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

Model: Compact cylinder, rubber-air cushioned

- A** Bore size :  $\phi 32$  mm
- B** Port thread : Rc thread
- C** Stroke : 10 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** Mounting bracket \*2 \*3

**H** Accessory\*4

## How to order switch

SW-T0H

(Item **D** above)

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

<b>B Port thread</b>	
Blank	Rc thread
N	NPT thread ( $\phi 32$ and over) (made to order)
G	G thread ( $\phi 32$ and over) (made to order)

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

Lead wire		Contact	Voltage	Indicator	Lead wire	Bore size											
Straight type	L-shaped					AC	DC	20	25	32	40	50	63	80	100		
-	F2S*	Proximity	●	1-color LED	2-wire	●	●										
-	F3S*		●		3-wire	●	●										
F2H*	F2V*		●		2-wire	●	●										
F3H*	F3V*		●		3-wire	●	●										
F3PH*	F3PV*		●		3-wire	●	●										
F2YH*	F2YV*		●		2-wire	●	●										
F3YH*	F3YV*	Reed	●	1-color LED	3-wire	●	●										
T0H*	T0V*		●		2-wire	●	●	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		●		2-wire	●	●	●	●	●	●	●	●	●	●	●	●
T8H*	T8V*		●		2-wire	●	●	●	●	●	●	●	●	●	●	●	●
T1H*	T1V*		●		2-wire	●	●	●	●	●	●	●	●	●	●	●	●
T2H*	T2V*		●		3-wire	●	●	●	●	●	●	●	●	●	●	●	●
T3H*	T3V*	Proximity	●	1-color LED (PNP output)	2-wire	●	●	●	●	●	●	●	●	●	●	●	
T3PH*	T3PV*		●		3-wire	●	●	●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*		●		2-wire	●	●	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*		●		3-wire	●	●	●	●	●	●	●	●	●	●	●	●
T3WH*	T3WV*		●		2-wire	●	●	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*		●		3-wire	●	●	●	●	●	●	●	●	●	●	●	●
T2YD*	-	Proximity	●	2-color LED for AC magnetic field	2-wire	●	●	●	●	●	●	●	●	●	●	●	
T2YDT*	-		●		2-wire	●	●	●	●	●	●	●	●	●	●	●	●
T2JH*	T2JV*	●	●	1-color LED off-delay	2-wire	●	●	●	●	●	●	●	●	●	●	●	

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option) *7

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
M	Piston rod material (stainless steel)

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

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

### [Stroke table]

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

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

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

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

### 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**SSD2**

SSG

SSD

CAT

MDC2

MVC

SMG

MSD/  
MSDG

FC\*

STK

SRL3

SRG3

SRM3

SRT3

MRL2

MRG2

SM-25

ShkAbs

FJ

FK

Spd  
Contr

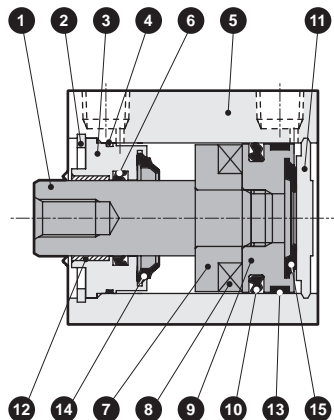
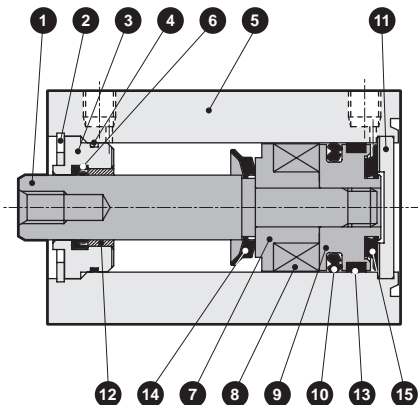
Ending

# SSD2-K-\*C Series

## Internal structure and parts list

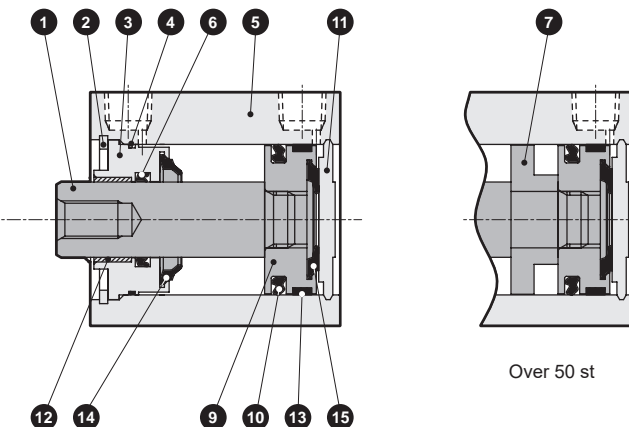
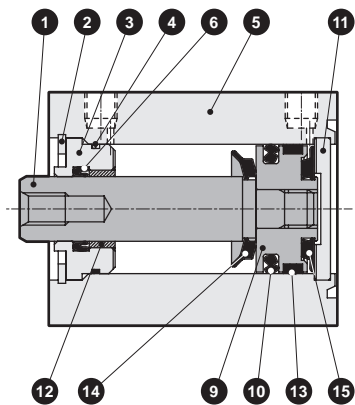
● SSD2-KL-20C, 25C  
(double acting/single rod high load/rubber-air cushioned/with switch)

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



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

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



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

## Repair parts list



Bore size (mm)	Kit No.	Repair parts No.
ø20	SSD2-K-20CK	4 6 10 13 14 15
ø25	SSD2-K-25CK	
ø32	SSD2-K-32CK	
ø40	SSD2-K-40CK	
ø50	SSD2-K-50CK	
ø63	SSD2-K-63CK	
ø80	SSD2-K-80CK	
ø100	SSD2-K-100CK	

## Dimensions

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

## Technical data

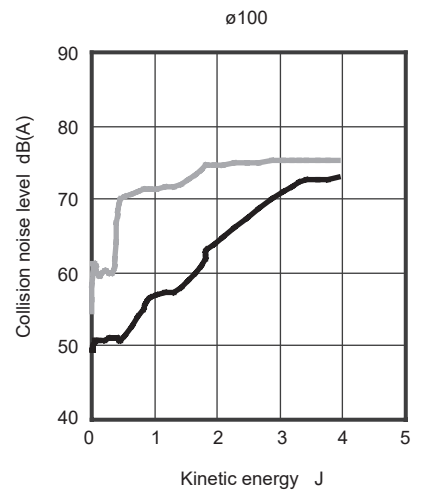
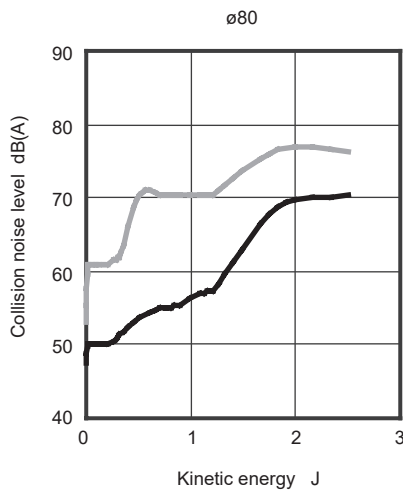
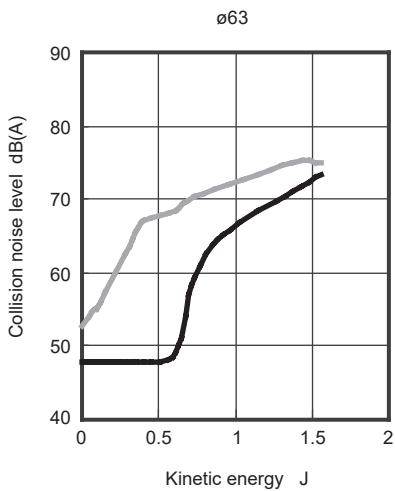
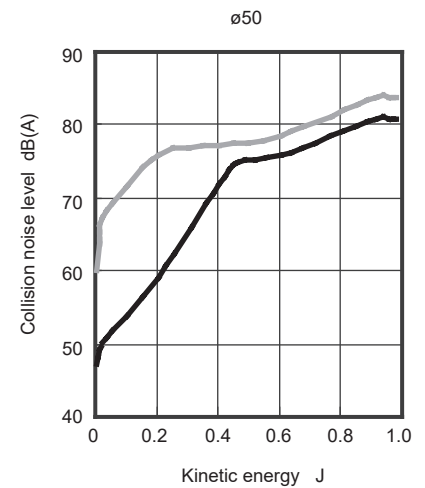
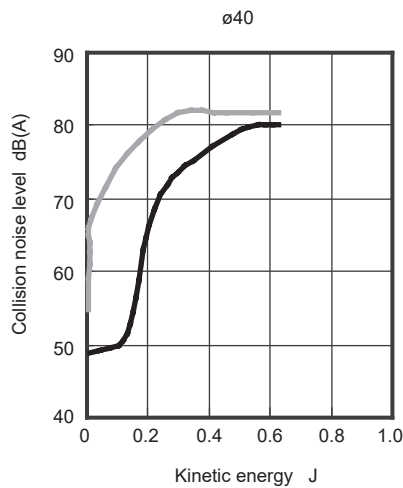
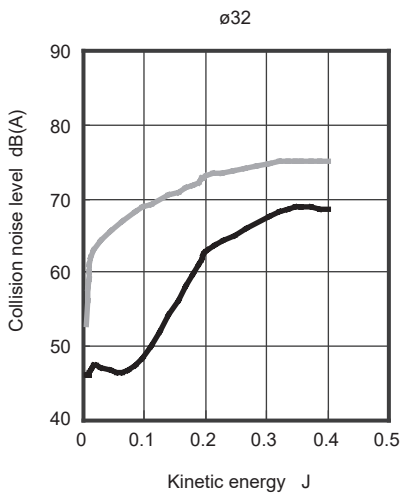
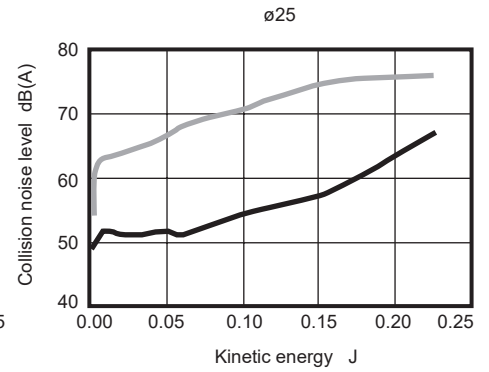
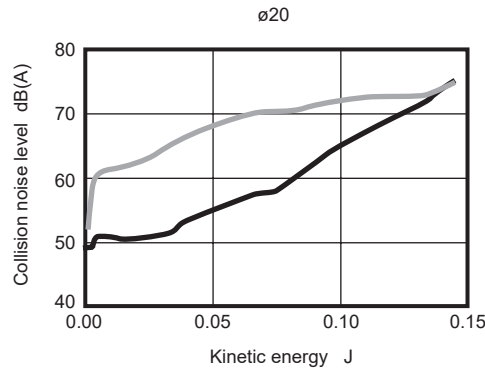
### [Comparison of collision noise level]

Standard rubber cushion :   
 Rubber-air cushion : 

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

(Test conditions)



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

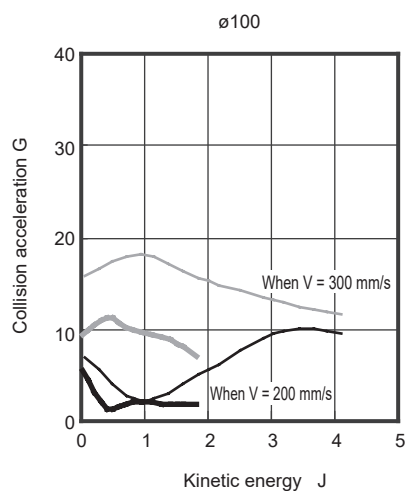
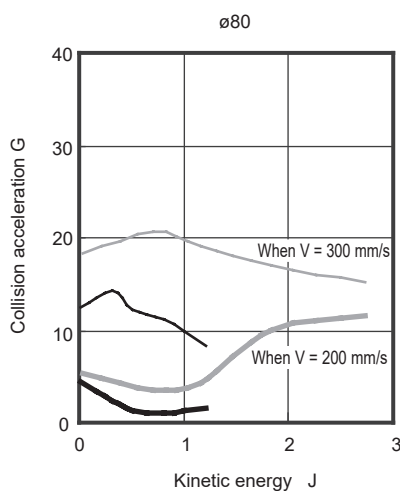
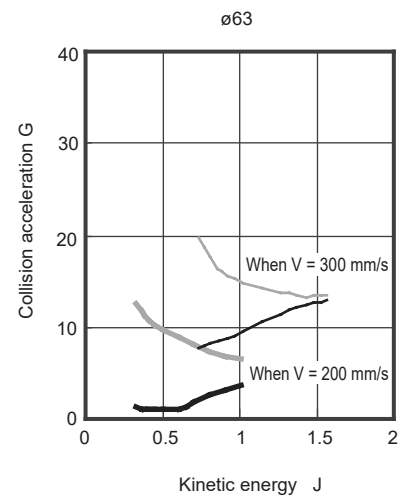
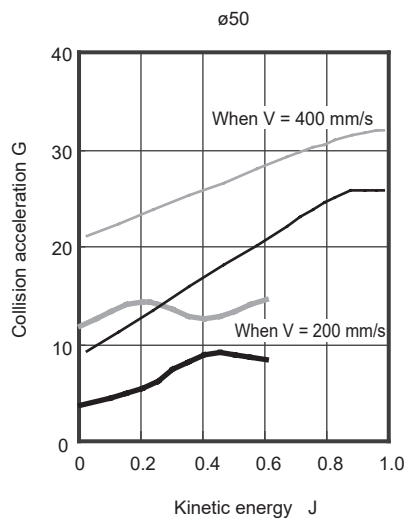
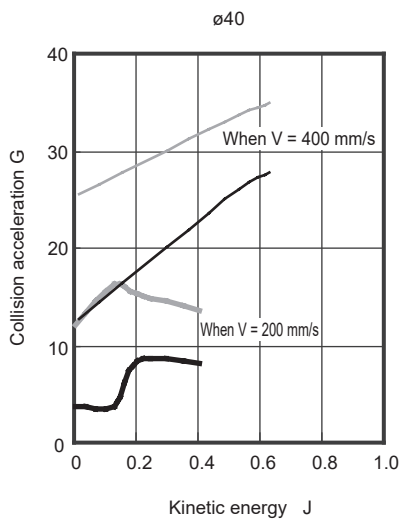
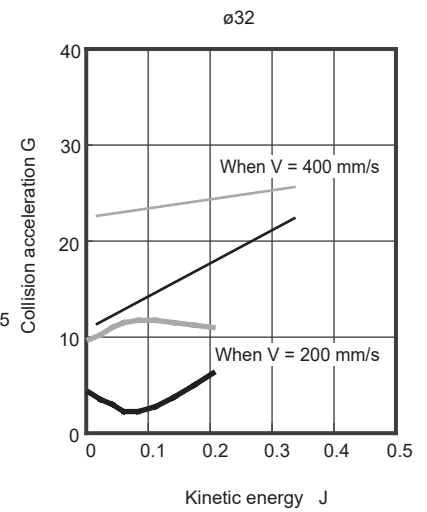
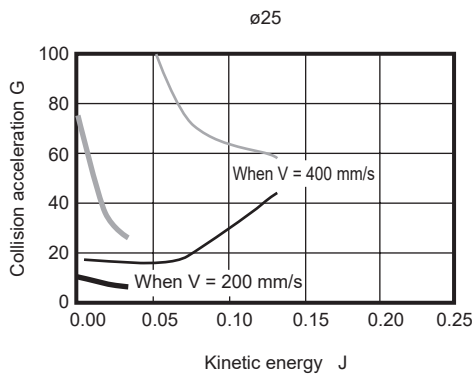
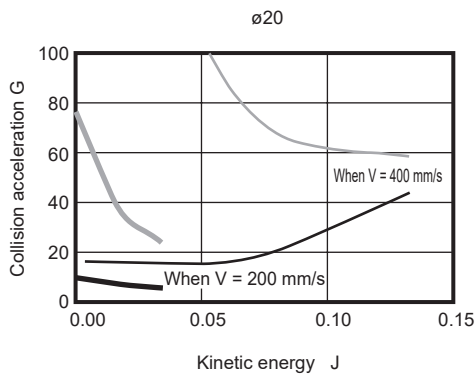


SCP*3
CMK2
CMA2
SCM
SCG
SCA2
SCS2
CKV2
CAV2/COVP/N2
<b>SSD2</b>
SSG
SSD
CAT
MDC2
MVC
SMG
MSD/MSDG
FC*
STK
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
ShkAbs
FJ
FK
Spd Contr
Ending

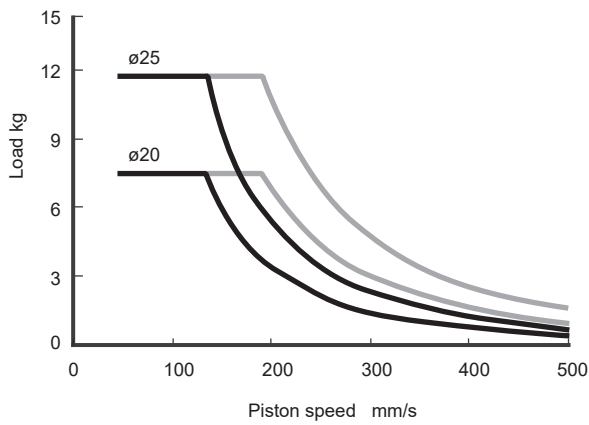
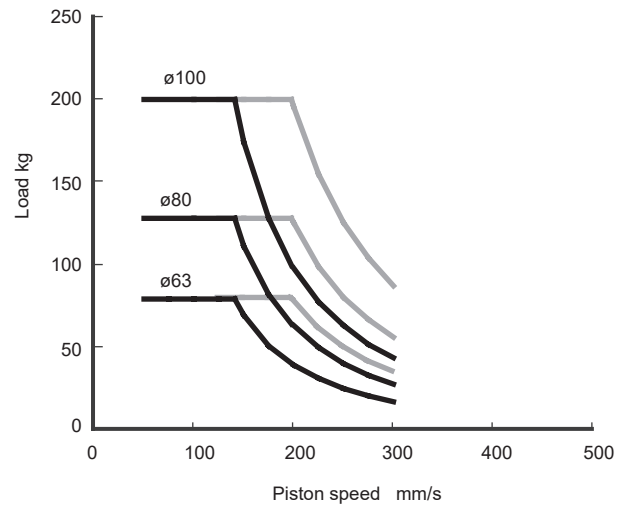
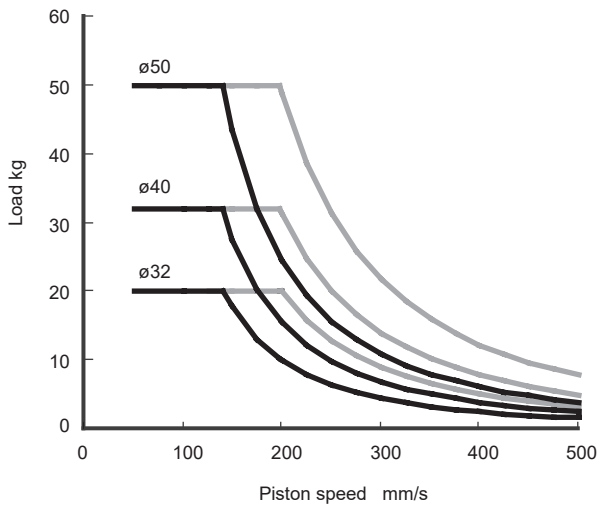
## Technical data

### [Comparison of collision acceleration]

Standard rubber cushion :   
 Rubber-air cushion : 



## [Allowable energy value]



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

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