CKD

Installation on four faces

New Product

Compact cylinder
SSD2 Series

COMPACT CYLINDER SSD2 SERIES

CKD Corporation
CC-937A 3

Reintroducing the easy-to-use Compact Cylinder SSD!

SSD2 Series

Cylinder switch grooves on all four faces

- The cylinder switch can be mounted on the same face as the piping port, improving visibility and serviceability. (Φ20 to Φ200)

Ample stroke settings

- The small increment stroke setting enables the ideal model for the design to be selected.

Selective end threads

- The rod end can be selected from female threads (standard) or male threads (option). The shape can be manufactured to match your application. Contact your CKD representative for details.

Rubber cushion even with the same size (option)

- This type is suitable if metallic noise generated at the cylinder end is annoying. Dimensions are the same when the rubber cushion is used.

T type switch mountable on all tube bore sizes

- The T type switch incorporated with many CKD parts can be mounted on all tube bore sizes. Uniform switches enable stock to be reduced.

Selective mounting

- Holes for either set screws or through bolts are both provided as a standard. Either can be used, depending on the application. A variety of support fittings such as flanges and clevises are available.

RoHS compatible

- All substances that can adversely affect the environment, including lead and hexavalent chrome, have been eliminated.

RoHS

Series variation

Compact cylinder SSD2 Series

●:Standard ○: Available : Not available

Variation	Model no.	Bore size (mm)	Stroke length (mm)																			Min. stroke length	Max. stroke length	Custom stroke length	Option		Mounting bracket				Switch	Page
																									Rod end male thread	Copper and PTFE free	Foot	Clevis	Rod end flange	Head end flange		
			5	10	15	20	25	30	35	40	45	50	75	100	125	150	175	200	250	300	(mm)	(mm)	(mm)	N	P6	LB	CB	FA	FB		
Double acting single rod type with switch	SSD2 SSD2-L SSD2 large bore size	ø12, ø16	●	●	●	●	●	●													1	30	1	○	●	○	○	○	○	Permissible	1
		ø20, ø25	●	●	●	●	●	●	●	●	●	●										50									
		ø32, ø40	●	●	●	●	●	●	●	●	●	●	●	●								100									
		ø50, ø63, ø80, ø100		●	●	●	●	●	●	●	●	●	●	●											○ Note						
	NEW	ø125, ø140, ø160, ø180, ø200		●		●		●		●		●	●	●	●	●	●	●	●	●		300		○							13
Double acting single rod high load type with switch	SSD2-K SSD2-KL	ø12, ø16	●	●	●	●	●	●													1	30	1	○	●	○	○	○	○	Permissible	21
		ø20, ø25	●	●	●	●	●	●	●	●	●	●										50									
		ø32, ø40	●	●	●	●	●	●	●	●	●	●	●	●								100			○						
		ø50, ø63, ø80, ø100		●	●	●	●	●	●	●	●	●	●	●																	
NEW Double acting single rod type long stroke with switch	SSD2 SSD2-L	ø12, ø16							●	●	●	●	●	●							31	100	1	○	●	○	○	○	○	Permissible	31
		ø20											●	●	●	●	●	●			51	200									
		ø25											●	●	●	●	●	●	●	●		300			○						
		ø32, ø40, ø50, ø63, ø80, ø100													●	●	●	●	●	●	101										
NEW Single acting extend type with switch	SSD2-X SSD2-XL	ø12, ø16, ø20, ø25, ø32, ø40	●	●																	5	10	-	○	●	○	○	○	○	Permissible	39
		ø50		●		●																20									
NEW Single acting retract type with switch	SSD2-Y SSD2-YL	ø12, ø16, ø20, ø25, ø32, ø40	●	●																	5	10	-	○	●	○	○	○	○	Permissible	39
		ø50		●		●																20									
NEW Double acting position locking type with switch	SSD2-Q SSD2-QL	ø20, ø25, ø32, ø40, ø50, ø63		●	●	●	●					●	●	●							10	100	-	○		○	○	○	○	Permissible	51
		ø80, ø100					●					●	●	●							25										
NEW Double acting double rod type with switch	SSD2-D SSD2-DL SSD2-D large bore size	ø12, ø16	●	●	●	●	●	●													5	30	5	○	●	○		○		Permissible	61
		ø20, ø25	●	●	●	●	●	●	●	●	●	●										50									
		ø32, ø40	●	●	●	●	●	●	●	●	●	●	●	●								100									
		ø50, ø63, ø80, ø100		●	●	●	●	●	●	●	●	●	●	●							10				○ Note					
		ø125, ø140, ø160, ø180, ø200		●		●		●		●		●	●	●	●	●	●	●	●	●	10	300	1	○							
NEW Double acting non-rotating type with switch	SSD2-M SSD2-ML	ø12, ø16	●	●	●	●	●	●													1	30	1	○	●	○	○	○	○	Permissible	81
		ø20, ø25	●	●	●	●	●	●	●	●	●	●										50									
		ø32, ø40	●	●	●	●	●	●	●	●	●	●	●	●								100									
		ø50, ø63		●	●	●	●	●	●	●	●	●	●	●																	

Note: ø50 is copper and PTFE free as standard.

Safety precautions

Always read this section before starting use.

When designing and manufacturing a device using CKD products, the manufacturer is obligated to check that device safety mechanism, pneumatic control circuit, or water control circuit and the system operated by electric control that controls the devices is secured.
It is important to select, use, handle, and maintain the product appropriately to ensure that the CKD product is used safely.
Observe warnings and precautions to ensure device safety.
Check that device safety is ensured, and manufacture a safe device.

⚠ WARNING

1 This product is designed and manufactured as a general industrial machine part.
It must be handled by an operator having sufficient knowledge and experience in handling.

2 Use this product in accordance with specifications.

This product must be used within its stated specifications. It must not be modified or machined.
This product is intended for use as a general-purpose industrial device or part. It is not intended for use outdoors or under the following conditions or environment.
(Note that this product can be used when CKD is consulted prior to use and the customer consents to CKD product specifications. The customer must provide safety measures to avoid risks in the event of problems.)

❶ Use for special applications including nuclear energy, railway, aircraft, marine vessel, vehicle, medicinal devices, devices or applications coming into contact with beverages or foodstuffs, amusement devices, emergency cutoff circuits, press machines, brake circuits, or safety devices or applications.
❷ Use for applications where life or assets could be adversely affected, and special safety measures are required.

3 Observe corporate standards and regulations, etc., related to the safety of device design and control, etc.

ISO4414, JIS B8370 (pneumatic system rules)
JFPS2008 (principles for pneumatic cylinder selection and use)
Including High Pressure Gas Maintenance Law, Occupational Safety and Sanitation Laws, other safety rules, body standards and regulations, etc.

4 Do not handle, pipe, or remove devices before confirming safety.

❶ Inspect and service the machine and devices after confirming safety of the entire system related to this product.
❷ Note that there may be hot or charged sections even after operation is stopped.
❸ When inspecting or servicing the device, turn off the energy source (air supply or water supply), and turn off power to the facility. Discharge any compressed air from the system, and pay enough attention to possible water leakage and leakage of electricity.
❹ When starting or restarting a machine or device that incorporates pneumatic components, make sure that the system safety, such as pop-out prevention measures, is secured.

5 Observe warnings and cautions on the pages below to prevent accidents.

■ The precautions are ranked as "DANGER", "WARNING" and "CAUTION" in this section.

⚠ DANGER: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries, or when there is a high degree of emergency to a warning.

⚠ WARNING: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries.

⚠ CAUTION: When a dangerous situation may occur if handling is mistaken leading to minor injuries or physical damage.

Note that some items described as “CAUTION” may lead to serious results depending on the situation.
In any case, important information that must be observed is explained.

Disclaimer

1.CKD cannot be held liable for any business interruption, loss of profit, personal injury, delay cost, or any other ancillary or indirect loss, cost, or damage resulting from the use of or faults in the use of CKD products.
2.CKD cannot be held responsible for the following damage.
① Damage resulting from disaster or failure of CKD parts due to fire from reasons not attributable to CKD, or by intentional or negligence of a third party or customer.
② When a CKD product is assembled into customer equipment, damage that could have been avoided if customer equipment were provided with functions and structure, etc., generally accepted in the industry.
③ Damage resulting from use exceeding the scope of specifications provided in CKD catalogs or instruction manuals, etc., or from actions not following precautions for installation, adjustment, or maintenance, etc.
④ Damage resulting from product modifications not approved by CKD, or from faults due to combination with other software or other connected devices.

Pneumatic components

Safety precautions

Always read this section before starting use.
Refer to "Pneumatic Cylinders Ⅰ(No. CB-029SA)" for the general cylinder or cylinder switch.

Compact cylinder SSD2 Series

Design & Selection

1. Position locking type SSD2-Q

⚠WARNING

■ Do not use a 3-position valve.
Do not use this cylinder with a 3-position valve -- especially a closed center metal seal valve. This kind of use closes the pressure at the locking mechanism side, and is unable to lock the position. Even if locked once, air leakage from the valve may enter the cylinder then the lock may be released over time.

⚠CAUTION

■ Cylinder load factor must be 50% or less.
If the load factor is high, the lock may not be released or the lock section could be damaged.

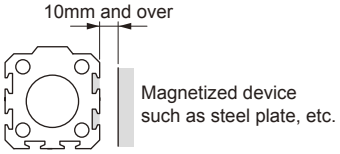
■ If back pressure is applied to the locking mechanism, the lock may be released. Use the solenoid valve as a discrete unit, or use an independently exhausted manifold.

Installation & Adjustment

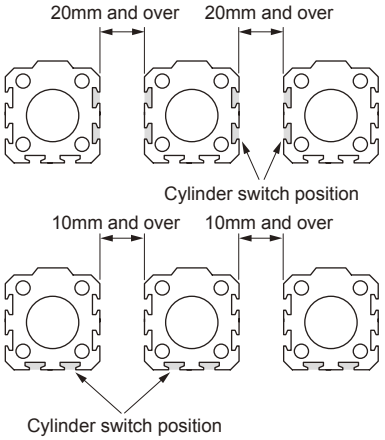
1. Common

⚠CAUTION

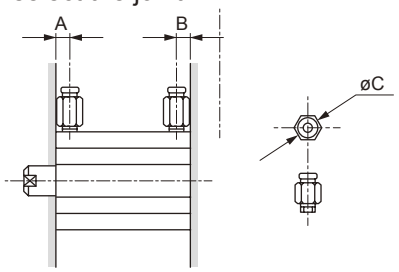
■ The cylinder switch may malfunction if a magnetized device, such as a steel plate, is near the cylinder switch. Separate from the magnetized device by at least 10 mm from the cylinder surface.
(Same for all bore size)



■ The cylinder switch could malfunction if cylinders are installed next to each other. Check that the following distances are provided between cylinder surfaces. (Same for all bore size)



■ Usable pipe joints are limited, so see the following table to select the joint.



Descriptions / Bore size (mm)	Port size	Port dimension A	Port dimension B	Applicable joints	Joint O.D. øC	Inapplicable joints
ø12	M5	5.5	5.5	SC3W-M5-4 SC3W-M5-6 GWS4-M5-S GWS4-M5 GWL4-M5 GWL6-M5	ø11 or less	GWS6-M5
ø16						
ø20		8	5.5			
ø25		11	6			
ø32	Rc1/8 Note 1	8	8	SC3W-6-4, 6, 8 GWS4-6 GWS6-6 GWS8-6 GWL4-6 GWL6-6	ø15 or less	GWS10-6 GWL8-6 GWL10-6
ø40		12	8.5			
ø50	Rc1/4	10.5	10.5	SC3W-8-6, 8, 10 GWS4-8 GWS6-8 GWS10-8 GWL4 to 12-8	ø21 or less	GWS12-8
ø63		13	11			
ø80	Rc3/8	16	13	SC3W-10-6, 8, 10 GWS6-10 GWS8-10 GWS10-10 GWL6 to 12-10	ø21 or less	-
ø100		23	15			

Note 1: The port size is M5 for the 5 stroke length of ø32 without switch.
Refer to dimensions for the port dimension.

Installation & Adjustment

2. Single acting SSD2-X/SSD2-Y

⚠CAUTION

■ Do not leave the single acting cylinder in the pressurized state.
If left in the pressurized state, the piston rod may not return with spring force when pressure is released. Use the double-acting type when the cylinder must be left pressurized.

3. Position locking type SSD2-Q

⚠CAUTION

■ The lock functions at the stroke end. If the stopper is applied with an external stopper in the middle of the stroke, the lock may not function and result in dropping. Check that the locking mechanism works when a load is set.

■ Supply a pressure higher than the minimum working pressure to the port having the locking mechanism.

■ If piping on the side with the lock is thin and long, or if the speed controller is separated from the cylinder port, exhaust may slow, taking time for the lock to function. This may also occur if the silencer on the valve's EXH port is clogged.

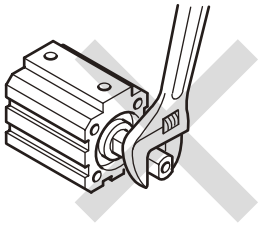
4. Non-rotating type SSD2-M

⚠CAUTION

■ Do not use in applications where rotational torque is applied to the piston rod.
Non-rotating bushing may be deformed and the service life remarkably shortened.

■ Use this cylinder always in the state that the load is applied to an axial direction of piston rod.

■ When fixing a work piece on the end of piston rod, retract the piston rod until the stroke end, use a spanner putting on the section across flat of piston rod which projects from the cylinder tube. When tightening, do not apply a tightening torque to the cylinder body.



During Use & Maintenance

1. Common

⚠WARNING

■ Use suitable pliers (snap ring installation pliers) to install and remove the rod metal.

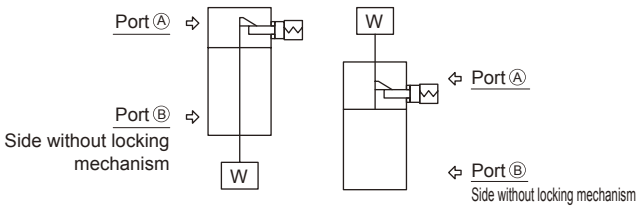
■ Even if suitable pliers (snap ring installation pliers) are used, the snap ring could be dislocated and cause injury to personnel or damage peripheral devices. When installing the snap ring, make sure that it fits securely into the snap ring groove before supplying air.

2. Position locking type SSD2-Q

⚠WARNING

■ For safety purposes, prevent the load from dropping under its own weight during maintenance.

■ If pressure is applied to port Ⓐ in the locked state with both ports unpressurized, the lock may not release or it could be suddenly released and cause the piston rod to pop out.
Before releasing the locking mechanism, supply pressure to port Ⓑ, and check that no load is applied to the locking mechanism.



■ If lowering speed is to be increased with the quick exhaust valve, the cylinder may move out faster than the lock pin and prevent the locking pin from being released correctly. Do not use a quick exhaust valve with the cylinder with position locking.

■ When stopping with an external stopper (shock absorber, etc.), adjust to eliminate bounce. Bouncing could cause the sleeve and stopper to contact on impact, damaging the lock mechanism. Regularly (once/twice a year) check that the holding section is not damaged by this symptom.

⚠CAUTION

■ After manually operating the locking mechanism, return the locking mechanism to the original position. Do not use a manual override except during adjustment, because this may be dangerous.

■ Release the lock when installing or adjusting the cylinder.
The lock could be damaged if the cylinder is installed while the lock is applied.

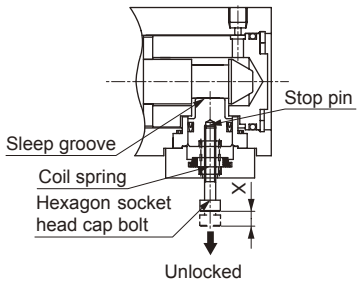
■ Do not use multiple cylinders synchronized.
Do not move one workpiece using more than two cylinders with position locking mechanism simultaneously. One of the cylinder's locks may not be released.

■ Use the speed control valve with meter-out control.
Locks may not be released during meter-in control.

■ Use at the cylinder stroke end for the side with a lock.
If the cylinder's piston does not reach the stroke end, the lock may not be applied or may not be released.

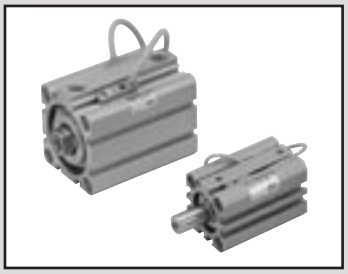
■ How to release manual override non-locking

When a hexagon socket bolt is screwed into the stopper piston and the bolt is pulled up X mm with a force of 20 N or more, the stopper pin moves and the lock is released. (During no-load horizontal installation or when counter side port is pressurized). When the hand is released, if the stopper piston returns by the internal spring and enters the piston rod groove, the piston is locked.



Hexagon socket head cap bolt dimension and movement Unit: mm

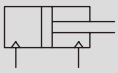
Bore size	dimension	Movement X
ø20	M3 x 20	3
ø25	M3 x 20	3
ø32	M3 x 20	3
ø40	M3 x 20	3
ø50	M4 x 30	3
ø63	M4 x 30	3
ø80	M4 x 30	3.5
ø100	M4 x 30	3.5



Compact cylinder, double acting, single rod type

SSD2 Series

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

JIS symbol 

RoHS

Specifications

Descriptions		SSD2 SSD2-L (with switch)									
Bore size mm		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation		Double acting									
Working fluid		Compressed air									
Max. working pressure MPa		1.0									
Min. working pressure MPa		0.1							0.05		
Withstanding pressure MPa		1.6									
Ambient temperature °C		-10 to 60 (no freezing)									
Port size		M5				Rc1/8 Note 1		Rc1/4		Rc3/8	
Stroke tolerance mm	Rubber cushioned	$^{+2.0}_{0}$									
	No cushion	$^{+1.0}_{0}$									
Working piston speed mm/s		50 to 500							50 to 300		
Cushion		The type with rubber cushion or without rubber cushion can be selected.									
Lubrication		Not required (when lubricating, use turbine oil Class 1 ISOVG 32.)									
Allowable energy absorption	Rubber cushioned	0.03	0.05	0.10	0.16	0.16	0.44	0.75	0.78	2.51	3.92
	No cushion	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

Note 1: The port size is M5 for the 5 stroke length of ø32 with no switch.

Stroke length

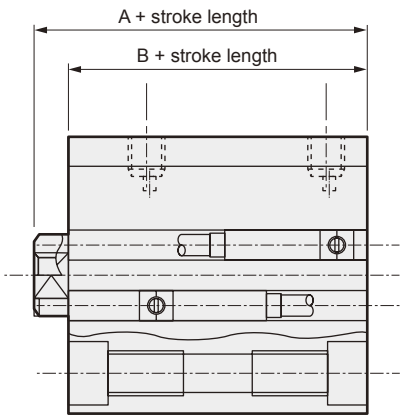
Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5, 10, 15, 20, 25, 30	30	1
ø16			
ø20	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	50	
ø25			
ø32	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	100	
ø40			
ø50	10, 15, 20, 25, 30, 35, 40, 45, 50 75, 100		
ø63			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

Note 1: Refer to the table for min. stroke length with switch on the following page when using a cylinder with a switch.

Custom stroke length

● SSD2 Series

Descriptions	Standard products Standard stroke length spacer type	
Model no.	Refer to How to order.	
Manufacturing descriptions	A spacer is provided on the body with a standard stroke to manufacture in 1 mm unit strokes.	
Stroke range	Bore size	Stroke range
	12, 16	1 to 29
	20 to 25	1 to 49
	32 to 100	1 to 100
Example of model number	Model no.: SSD2-32-38 +2 mm spacer is provided on the standard cylinder SSD2-32-40 to attain a 38 mm stroke. The B dimension is 63 mm.	



Min. stroke length with switch (with 2 switches)

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

Note 1: 2 color indicator type, off-delay type, strong magnetic field proof type, or 10 mm or shorter type with T1* or T8* switch is not available.
Note 2: Values in ( ) apply to the type with one switch on the rod end.

Switch specifications (F type switch)

● 1 color/2 color indicator

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA		100mA or less	50mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

Switch specifications (T type switch)

● 1 color/2 color indicator, strong magnetic field proof

Descriptions	Proximity 2 wire	Proximity 2 wire			Proximity 3 wire				Reed 2 wire							Proximity 2 wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom order)	T3YH/T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD
Applications	Programmable controller, relay and small solenoid valve	Programmable controller			Programmable controller, relay				Programmable controller, relay		Programmable controller, relay, IC circuit (w/o light), serial connection		Programmable controller, relay			Programmable controller dedicated
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Power voltage	-				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 100mA	5 to 20mA (Note 1)			100mA or less		50mA or less		5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	5 to 20mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)			Red/green LED (ON lighting)
Leakage current	1 mA or less at 100 VAC, 2 mA or less at 200 VAC	1mA or less			10μA or less				0mA							1mA or less

Cylinder weight table

(Weight with switch includes weight with two cylinder switches.) (Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch
ø12	36	86	44	86	53	95	61	103	70	112	72	114	-	-	-	-	-	-	-	-	-	-	-	-
ø16	48	104	59	104	69	114	80	125	91	136	102	147	-	-	-	-	-	-	-	-	-	-	-	-
ø20	63	118	75	150	88	163	101	176	113	188	126	201	139	214	152	227	165	240	203	278	-	-	-	-
ø25	87	178	102	193	118	209	134	225	150	241	165	256	181	272	197	288	213	304	228	319	-	-	-	-
ø32	122	236	144	258	166	280	188	302	209	323	231	345	253	367	275	389	297	411	318	432	494	542	604	652
ø40	183	326	210	353	236	379	263	406	290	433	316	459	342	485	369	512	395	538	472	565	646	695	776	825
ø50	-	-	341	535	383	577	425	619	467	661	510	704	552	746	594	788	636	830	678	872	1025	1082	1235	1292
ø63	-	-	507	786	562	841	617	896	672	951	727	1006	782	1061	838	1117	893	1172	948	1227	1438	1502	1713	1777
ø80	-	-	928	1341	1015	1428	1101	1514	1188	1601	1274	1687	1361	1774	1448	1861	1535	1948	1621	2034	2401	2467	2833	2899
ø100	-	-	1433	2000	1547	2114	1660	2227	1774	2341	1888	2455	2002	2569	2115	2682	2229	2796	2343	2910	3406	3478	3973	4045

How to order

Without switch

SSD2 - 12 ○ - 5 ——— N - LB - I

With switch

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

Ⓐ Model no.
Ⓑ Bore size
Ⓒ Cushion
Ⓓ Stroke length
Ⓔ Switch model no.
Note 1
Note 2
Note 3
Ⓕ Switch quantity
Ⓖ Option
Note 4
Note 8
Ⓗ Mounting bracket
Note 5
Ⓘ Accessory
Note 6

Symbol	Descriptions
Ⓐ Model no.	
SSD2	Double acting single rod type
SSD2-L	Double acting single rod type with switch

Ⓑ Bore size (mm)

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

Ⓒ Cushion

Blank	No cushion
D	Rubber cushioned

Ⓓ Stroke length (mm)

Refer to stroke length table on the following page.

Ⓔ Switch model no.

Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire	Bore size 12	16	20	25	32	40	50	63	80	100
F2H*	**F2V***	Proximity	1 color indicator type	2-wire			●	●						
F3H*	**F3V***			3-wire			●	●						
F2YH*	**F2YV***		2 color indicator type	2-wire			●	●						
F3YH*	**F3YV***			3-wire			●	●						
T0H*	**T0V***	Reed	1 color indicator type	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	**T5V***		Without light		●	●	●	●	●	●	●	●	●	●
T8H*	**T8V***		1 color indicator type							●	●	●	●	●
T1H*	**T1V***	Proximity	1 color indicator type	2-wire			●	●	●	●	●	●	●	●
T2H*	**T2V***				●	●	●	●	●	●	●	●	●	●
T3H*	**T3V***			3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	**T3PV***		1 color indicator type (PNP output) (custom order)		●	●	●	●	●	●	●	●	●	●
T2WH*	**T2WV***		2 color indicator type	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	**T2YV***						●	●	●	●	●	●	●	●
T3WH*	**T3WV***			3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	**T3YV***						●	●	●	●	●	●	●	●
T2YD*	**-**		Strong magnetic field proof switch	2-wire			●	●	●	●	●	●	●	●
T2YDT*	**-**						●	●	●	●	●	●	●	●
T2JH*	**T2JV***		Off-delay type	2-wire			●	●	●	●	●	●	●	●

***Lead wire length**

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

Ⓕ Switch quantity

R	One on rod end
H	One on head end
D	Two

Ⓖ Option

	Bore size (mm)	12	16	20	25	32	40	50	63	80	100
Blank	Rod end female thread	●	●	●	●	●	●	●	●	●	●
N	Rod end male thread	●	●	●	●	●	●	●	●	●	●
P6	Copper and PTFE free	As standard							●	●	●
M Note 4	Piston rod material (stainless steel)	●	●	●	●	●	●	●	●	●	●

Ⓗ Mounting bracket

LB	Axial foot
CB	Clevis (pin and snap ring attached)
FA	Rod end flange type
FB	Head end flange type

Ⓘ Accessory (permissible if rod end male thread "N" was selected.)

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

⚠ Note on model no. selection

Note 1: T2YD* switch can not be installed for ø12, ø16.
Note 2: T8* switch can not be installed for ø12 to ø32.
Note 3: F type switch is installable only on the piping port of tube bore size ø20, ø25.
Note 4: ø12 to ø25 piston rod material is stainless steel as standard. The snap-ring is stainless steel instead of steel.
When the rod end male thread type is selected, the nut is made of stainless steel.
Note 5: The mounting bracket is enclosed when shipped.
Note 6: "I" and "Y" can not be selected at the same time.
Note 7: ø20 F-type switch radial lead wire is not available for the 15 or shorter stroke.
Note 8: Switches are shipped with the product. Contact CKD when shipment must be assembled.

<Example of model number>

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

Model: Compact cylinder standard type

Ⓑ Bore size : ø12mm
Ⓒ Cushion : No cushion
Ⓓ Stroke length : 10mm
Ⓔ Switch model no. : Reed switch T0H, lead wire length 1m
Ⓕ Switch quantity : One on rod end
Ⓖ Option : Rod end male thread
Ⓗ Mounting bracket : Axial foot
Ⓘ Accessory : Rod eye

(Stroke length table)

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

Note 1: 5 mm or shorter type with 1 color indicator switch, 2 color indicator, off-delay type, strong magnetic field proof, or 10 mm or shorter type with T1* or T8* switch is not available.
Refer to page 2 for min. stroke length with switch.
Note 2: Total length of the custom stroke length is the same as the next larger standard stroke.

How to order switch

SW - T0H

Switch model no.
(item Ⓔ on previous page)

How to order mounting bracket

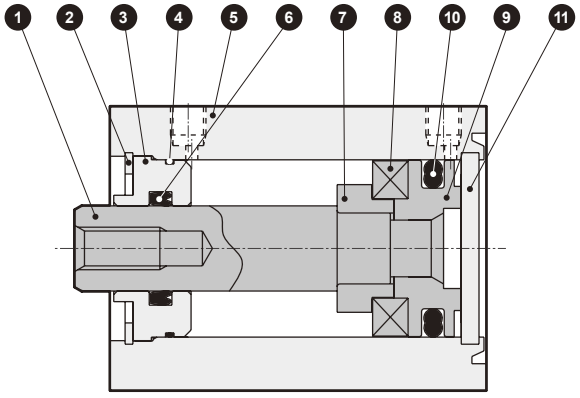
Bore size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50
Clevis (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32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

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

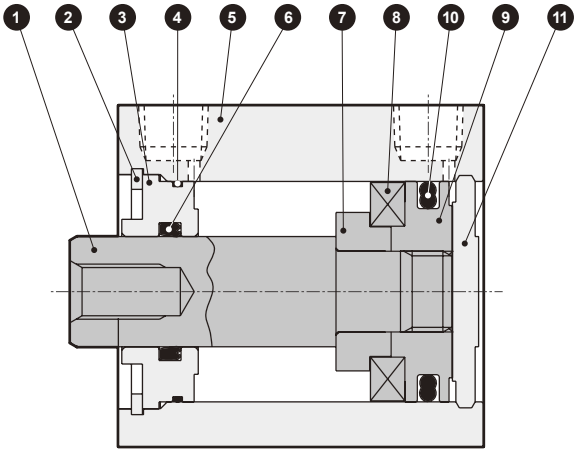
Note 1: The foot type mounting bracket is provided as 2 pcs./set.

Internal structure and parts list (ø12 to ø50) (w/o cushion)

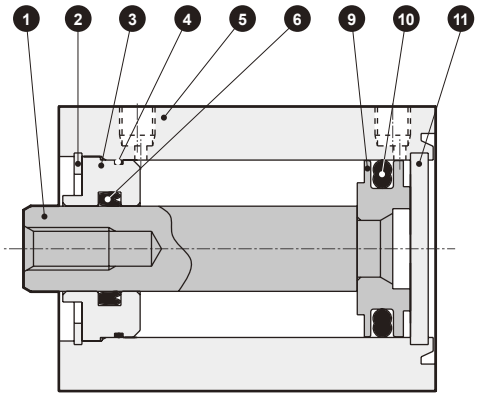
● SSD2-L-12 to 32 (double acting/with switch)



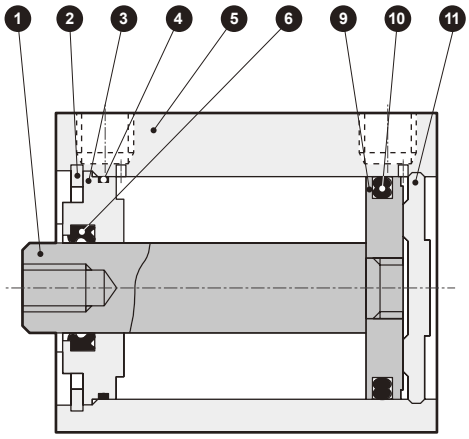
● SSD2-L-40, 50 (double acting/with switch)



● SSD2-12 to 32 (double acting)



● SSD2-40, 50 (double acting)



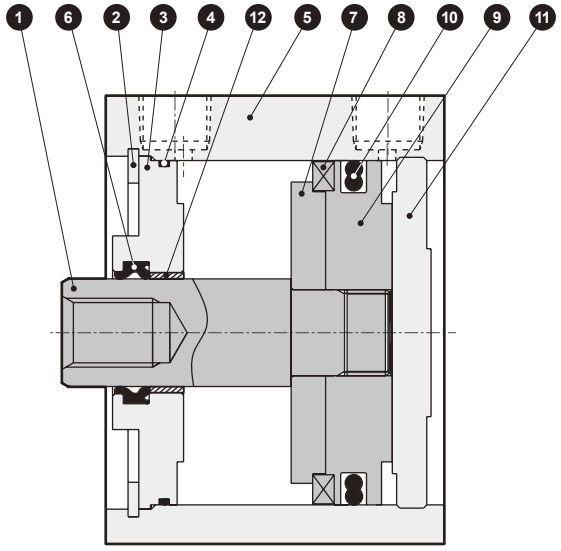
No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating	7	Spacer	Aluminum alloy	ø12 to ø32: Chromate
2	C type snap ring	Steel	Phosphoric acid zinc	8	Magnet	Plastic	
3	Rod bushing	Special aluminum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

Repair parts list

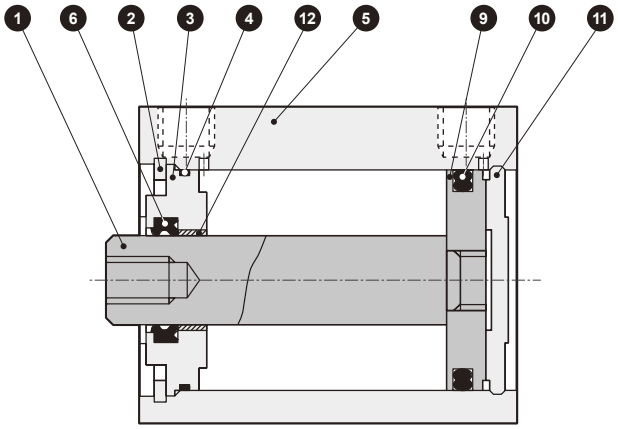
Bore size (mm)	Kit No.	Repair parts number
ø12	SSD2-12K	
ø16	SSD2-16K	
ø20	SSD2-20K	
ø25	SSD2-25K	④ ⑥ ⑩
ø32	SSD2-32K	
ø40	SSD2-40K	
ø50	SSD2-50K	

Internal structure and parts list (ø63 to ø100) (w/o cushion)

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



● SSD2-63 to 100 (double acting)



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

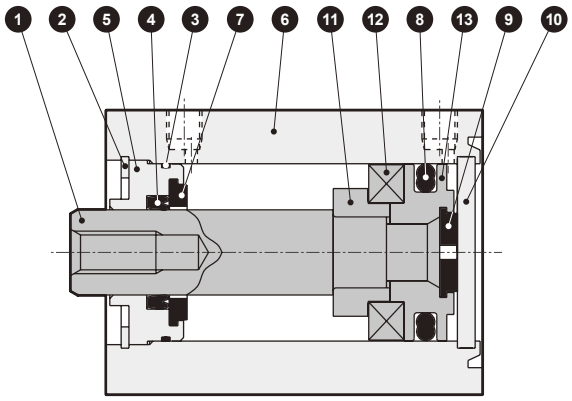
Note 1: Steel is used for copper and PTFE free.

Repair parts list

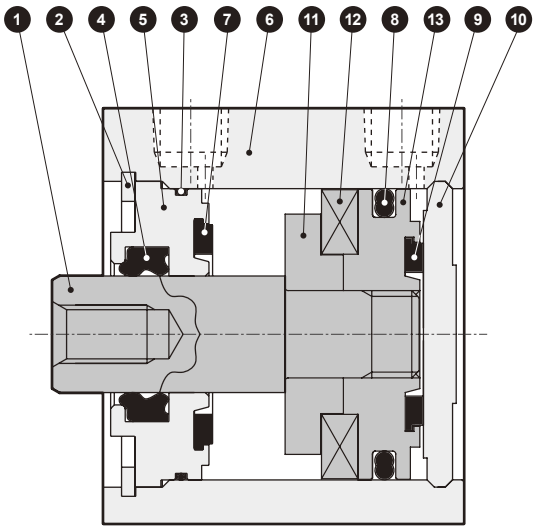
Bore size (mm)	Kit No.	Repair parts number
ø63	SSD2-63K	④ ⑥ ⑩
ø80	SSD2-80K	
ø100	SSD2-100K	

Internal structure and parts list (ø12 to ø50) (Rubber cushioned)

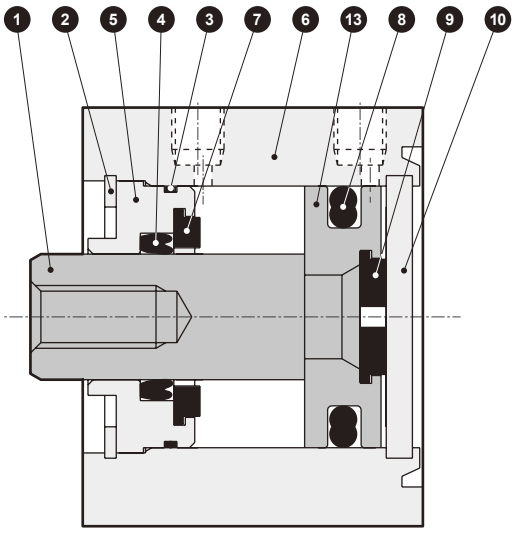
● SSD2-L-12D to 32D (double acting/with switch)



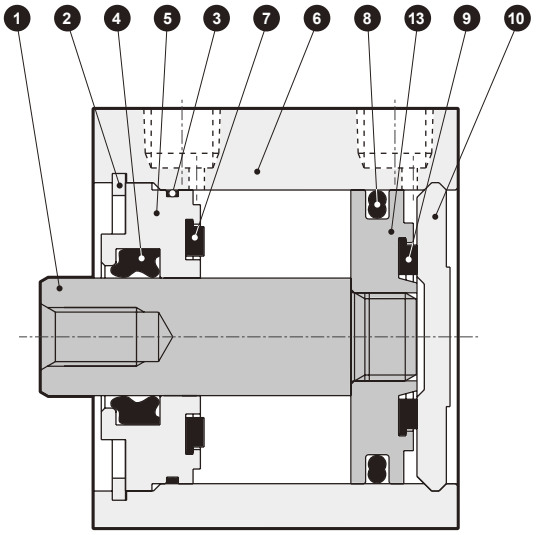
● SSD2-L-40D, 50D (double acting/with switch)



● SSD2-12D to 32D (double acting)



● SSD2-40D, 50D (double acting)



No.	Parts name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
2	C type snap ring	Steel	Phosphoric acid zinc
3	Rod metal gasket	Nitrile rubber	
4	Rod packing seal	Nitrile rubber	
5	Rod bushing	Aluminum alloy	Alumite
6	Body	Aluminum alloy	Hard alumite
7	Cushion rubber (R)	Urethane rubber	

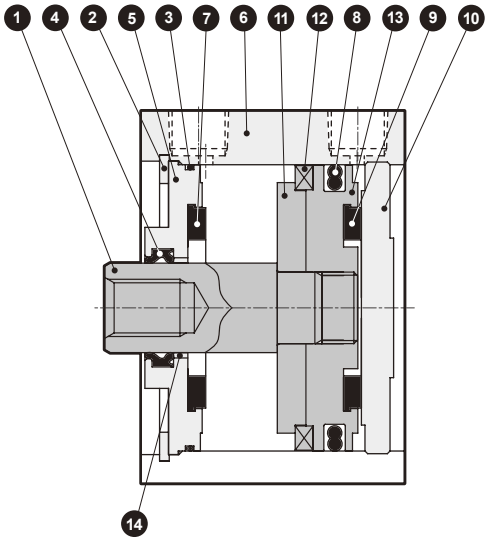
No.	Parts name	Material	Remarks
8	Piston packing seal	Nitrile rubber	
9	Cushion rubber (H)	Urethane rubber	
10	Guard	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
11	Spacer	Aluminum alloy	ø12 to ø32: Chromate
12	Magnet	Plastic	
13	Piston	Aluminum alloy	Chromate

Repair parts list

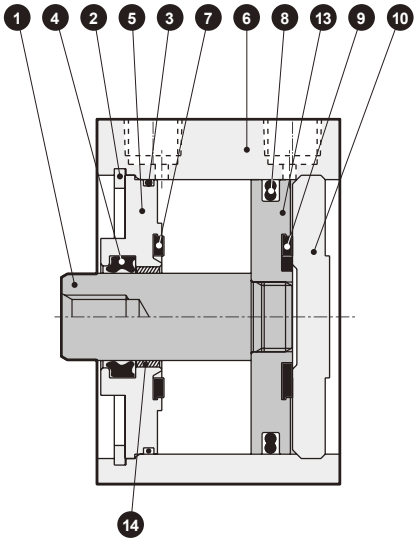
Bore size (mm)	Kit No.	Repair parts number
ø12	SSD2-12DK	③④⑦⑧⑨
ø16	SSD2-16DK	
ø20	SSD2-20DK	
ø25	SSD2-25DK	
ø32	SSD2-32DK	
ø40	SSD2-40DK	
ø50	SSD2-50DK	

Internal structure and parts list (ø63 to ø100) (Rubber cushioned)

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



● SSD2-63D to 100D (double acting)



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	8	Piston packing seal	Nitrile rubber	
2	C type snap ring	Steel	Phosphoric acid zinc	9	Cushion rubber (H)	Urethane rubber	
3	Rod metal gasket	Nitrile rubber		10	Guard	Aluminum alloy	Alumite
4	Rod packing seal	Nitrile rubber		11	Spacer	Aluminum alloy	
5	Rod bushing	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	DU dry bearing	

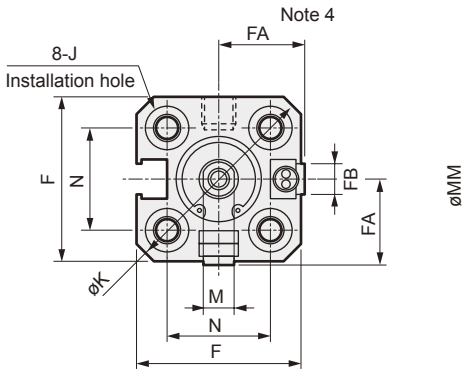
Repair parts list

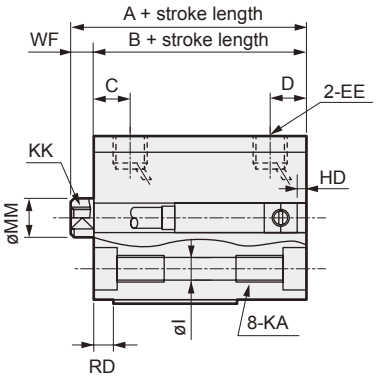
Bore size (mm)	Kit No.	Repair parts number
ø63	SSD2-63DK	3 4 7 8 9
ø80	SSD2-80DK	
ø100	SSD2-100DK	

Dimensions CAD

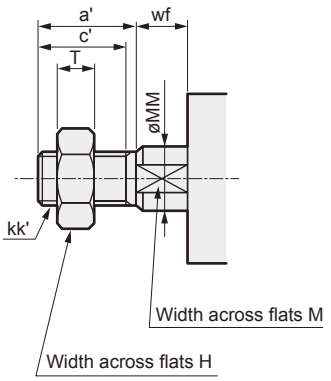
● SSD2-L-12 to 25 (with switch [T0H/V, T5H/V, T2H/V, T3H/V])

ø12, ø16

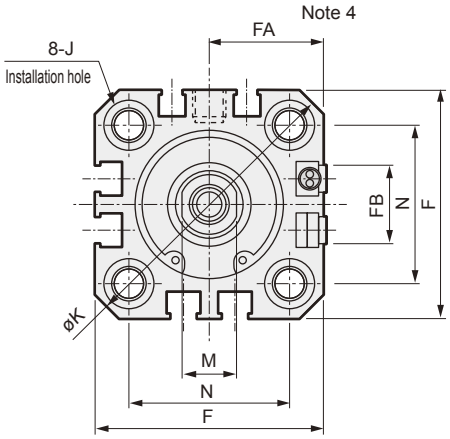


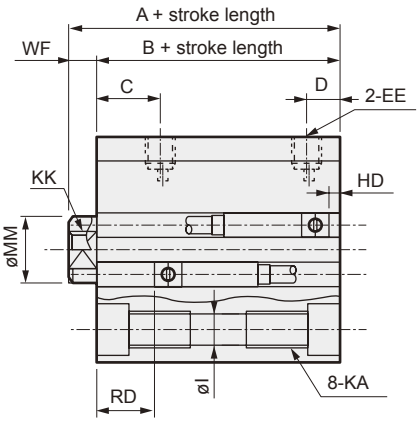


● Rod end male thread



ø20, ø25





● Precautions regarding switch mounting groove

Note 1: Only the F type switch is provided for the tube bore size ø20 and ø25 piping port surface.

Symbol	Common dimension with switch																
Bore size (mm)	A Note 1	B Note 1	C	D	EE	F	FA Note 3	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 11	10	12	28	5

Switch dimension	Reed T0H/T0V, T5H/T5V Note 6		Proximity T2H/T2V, T3H/T3V Note 6		Proximity T2WH/T2WV, T3WH/T3WV Note 6		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV	
Bore size (mm)	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
ø25	4	9.5	4	9.5	6	11.5	8.5	14

Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke.
Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.
Note 2: HD and RD dimensions for the 5 stroke will differ from these due to manufacturing.
Note 3: Refer to page 91 for HD/RD dimensions and projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 4: Dimensions in ( ) are the values for radial lead wire.
Note 5: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.
Note 6: Dimensions in ( ) of HD/RD columns are values when cushion is installed.

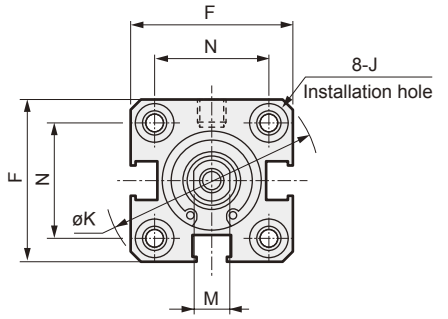
● Rod end male thread

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

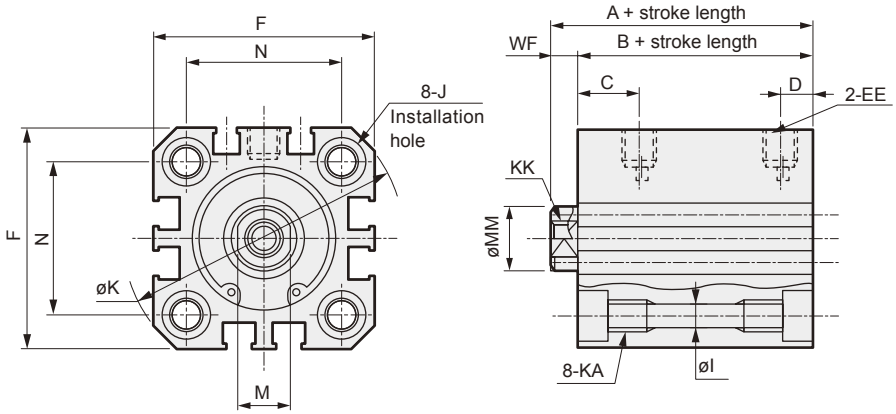
Dimensions

● SSD2-12 to 25 (without switch)

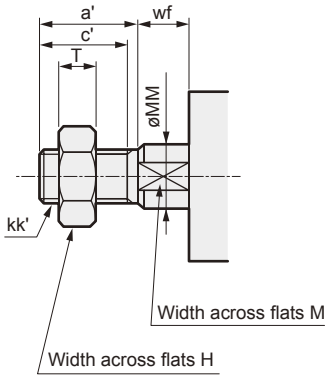
ø12, ø16



ø20, ø25



● Rod end male thread



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

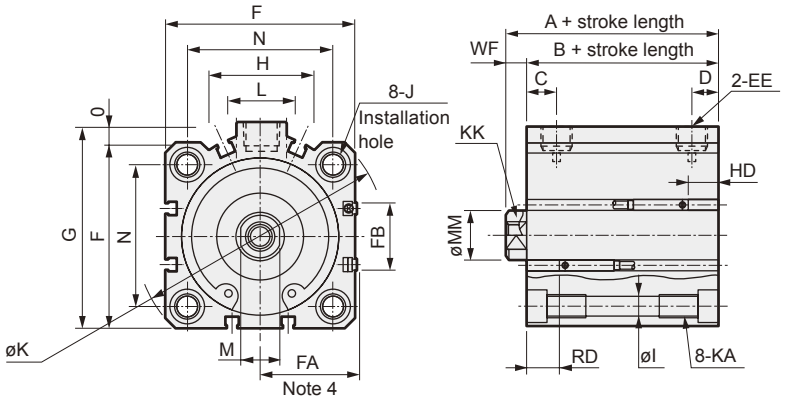
● Rod end male thread

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

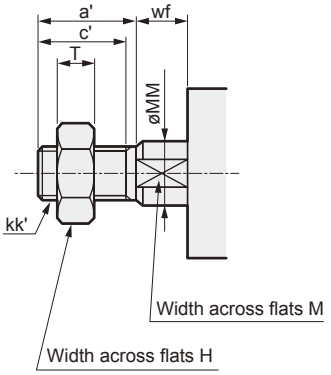
Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke.
Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.
Note 2: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

Dimensions CAD

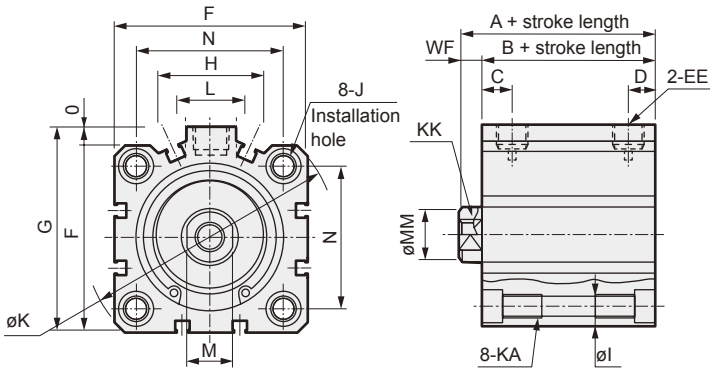
● SSD2-L-32 to 100 (with switch [T0H/V, T5H/V, T2H/V, T3H/V])



● Rod end male thread



● SSD2-32 to 100 (without switch)



Symbol	Without switch		Common dimension with switch																			
Bore size (mm)	A *1, *6	B *1, *6	A *1	B *1	C *8	D *8	EE	F	FA Note 4	FB	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	30 (40)	23 (33)	40	33	8 (10)	8 (5.5)	Rc1/8 *7	45	23 (26.5)	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	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	24	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	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	33	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	44 (54)	36 (46)	54	46	13	11	Rc1/4	77	39 (42.5)	28.5	84	33	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	53.5 (63.5)	43.5 (53.5)	63.5	53.5	16	13	Rc3/8	98	49.5 (53)	28.5	104	38	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10
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	15	27	30	94	6.5	12

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

Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke. Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.
Note 2: HD and RD dimensions for the 5 stroke differ from these due to manufacturing.
Note 3: Refer to page 91 for HD/RD dimensions and projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 4: Dimensions in ( ) of FA are values for radial lead wire.
Note 5: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.
Note 6: Values in ( ) for symbols A and B are for when 50 strokes is exceeded.
Note 7: The port size is M5 for the 5 stroke length of ø32 with no switch.
Note 8: Dimensions in ( ) of C and D columns are values for the 5 stroke with no switch.

● Rod end male thread

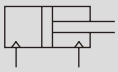
Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 x 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 x 1.5	14	16	8	5
ø50	28.5	26	27	M18 x 1.5	17	20	11	5
ø63	28.5	26	27	M18 x 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 x 1.5	22	25	13	8
ø100	35.5	32.5	41	M26 x 1.5	27	30	16	8

MEMO

Compact cylinder, double acting, single rod type (large bore size)

SSD2 Series

● Bore size: ø125, ø140, ø160, ø180, ø200

JIS symbol 

RoHS

Specifications

Descriptions		SSD2 SSD2-L (with switch)				
Bore size mm		ø125	ø140	ø160	ø180	ø200
Actuation		Double acting				
Working fluid		Compressed air				
Max. working pressure MPa		1.0			0.7	
Min. working pressure MPa		0.05				
Withstanding pressure MPa		1.6			1.05	
Ambient temperature °C		-10 to 60 (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		Rubber cushioned (standard)				
Lubrication		Not required (when lubricating, use turbine oil Class 1 ISOVG 32.)				
Allowable energy absorption J	Rubber cushioned	6.52	6.52	7.78	12.4	
	No cushion	-				

Stroke length

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

Note 1: Refer to the switch quantity and min. stroke length table on the following page when using a cylinder with a switch.

Switch quantity and min. stroke length (mm)

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

Note: 2 color indicator type, off-delay type, strong magnetic field proof type, or 10 mm or shorter type with T1* or T8* switch is not available.

Switch specifications

● 1 color/2 color indicator/strong magnetic field proof

Descriptions	Proximity 2 wire	Proximity 2 wire			Proximity 3 wire				Reed 2 wire							Proximity 2 wire
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom order)	T3YH/T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V		T8H/T8V				T2YD
Applications	Programmable controller, relay, small solenoid valve	Programmable controller			Programmable controller, relay				Programmable controller, relay	Programmable controller, relay IC circuit (w/o light), serial connection		Programmable controller, relay				Programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Power voltage	-				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 100mA	5 to 20mA (Note 1)			100mA or less		50mA or less		5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	5 to 20mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Without indicator light		LED (ON lighting)				Red/green LED (ON lighting)
Leakage current	1 mA or less at 100 VAC, 2 mA or less at 200 VAC	1mA or less			10μA or less				0mA							1mA or less

Note 1: The maximum load current of 20 mA above is at 25°C. When ambient temperature is higher than 25°C, the value is lower than 20mA. (5 to 10 mA at 60°C)

Cylinder weight table (Weight with switch includes weight with two cylinder switches.)

(Unit: kg)

Stroke length (mm)	10		20		30		40		50		75		100	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch
ø125	4.58	4.68	4.85	4.95	5.11	5.21	5.38	5.48	5.64	5.74	6.30	6.40	6.97	7.07
ø140	6.36	6.47	6.66	6.77	6.97	7.08	7.27	7.38	7.58	7.69	8.34	8.45	9.10	9.21
ø160	8.64	8.76	9.02	9.14	9.40	9.52	9.78	9.90	10.16	10.28	11.11	11.23	12.06	12.18
ø180	12.98	13.06	13.38	13.46	13.78	13.86	14.18	14.26	14.58	14.66	15.59	15.67	16.59	16.67
ø200	17.23	17.31	17.69	17.77	18.16	18.24	18.62	18.70	19.08	19.16	20.23	20.31	21.39	21.47

Stroke length (mm)	125		150		175		200		250		300	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o 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

How to order

Without switch

SSD2 - 125 - ○○ - 50 ——— N

With switch

SSD2-L - 200 - ○○ - 100 - T0H - R - N

Ⓐ Model no.

Ⓑ Bore size

Ⓒ Port thread type

Ⓓ Stroke length

Ⓔ Switch model no. Note 1

Ⓕ Switch quantity

Ⓖ Option

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

Ⓔ Switch model no.

Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T0H*	**T0V***	Reed	1 color indicator type	2-wire
T5H*	**T5V***		Without indicator light	
T8H*	**T8V***		1 color indicator type	
T1H*	**T1V***	Proximity	1 color indicator type	2-wire
T2H*	**T2V***			
T3H*	**T3V***			3-wire
T3PH*	**T3PV***		1 color indicator type (custom order)	
T2WH*	**T2WV***		2 color indicator type	2-wire
T2YH*	**T2YV***			
T3WH*	**T3WV***			3-wire
T3YH*	**T3YV***			
T2JH*	**T2JV***		Off-delay type	2-wire
T2YD*	**-**		Strong magnetic field proof switch	2-wire
T2YDT*	**-**			

***Lead wire length**	
Blank	1m (standard)
3	3m (option)
5	5m (option)
Ⓕ Switch quantity	
R	One on rod end
H	One on head end
D	Two
Ⓖ Option	
Blank	Rod end female thread
N	Rod end male thread

⚠ Note on model no. selection

Note 1: Switches are shipped with the product. Contact CKD when shipment must be assembled.

<Example of model number>

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

Model: Compact cylinder standard type

- Ⓑ Bore size : 125mm
- Ⓒ Port thread type : Rc thread
- Ⓓ Stroke length : 50mm
- Ⓔ Switch model no. : reed switch T0H, lead wire length 1m
- Ⓕ Switch quantity : One on rod end
- Ⓖ Option : Rod end male thread

(Stroke length table)

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

Note 1: 5 mm or shorter type with 1 color indicator switch, 2 color indicator, off-delay type, strong magnetic field proof, or 10 mm or shorter type with T1* or T8* switch is not available.
Refer to page 14 for the switch quantity and minimum stroke.
Note 2: The total intermediate stroke length is handled with the length dedicated for the intermediate stroke.

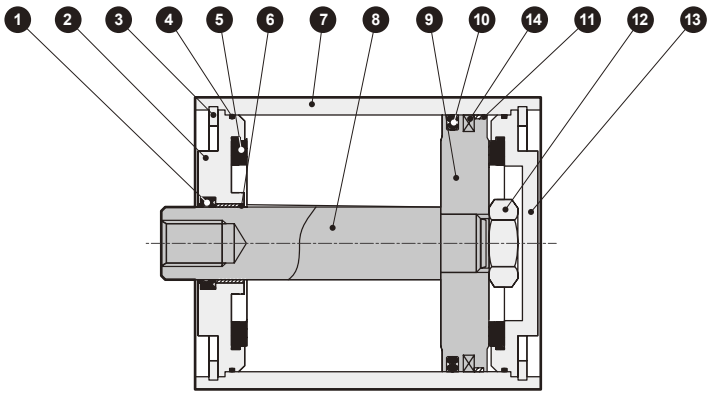
How to order switch

SW - T0H

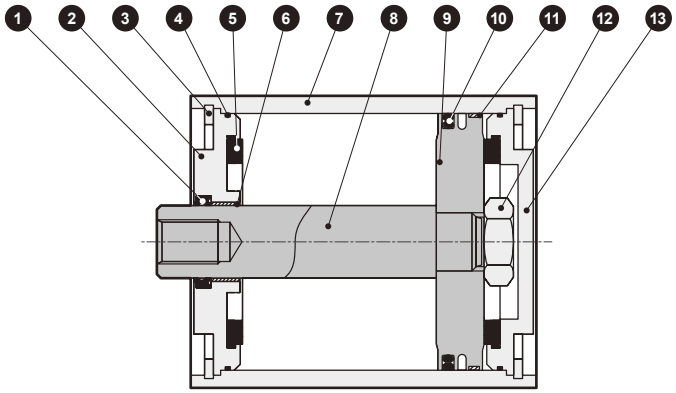
Switch model no.
(item Ⓕ on previous page)

Internal structure and parts list (ø125 to ø160) (cushioned)

● SSD2-L-ø125 to ø160 (double acting single rod type with switch)



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



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

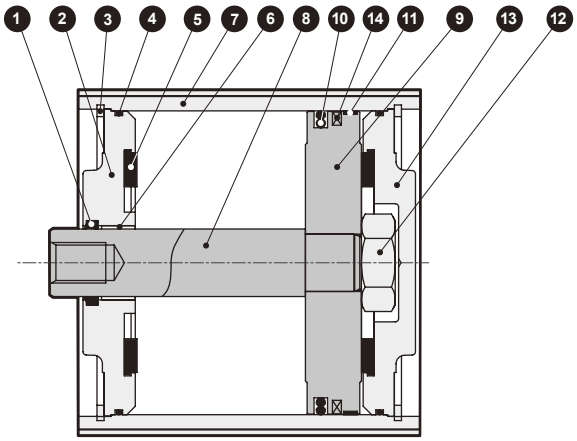
Repair parts list

Bore size (mm)	Kit No.	Repair parts number
ø125	SSD2-125K	❶ ❹ ❺ ❿ ⓫
ø140	SSD2-140K	
ø160	SSD2-160K	

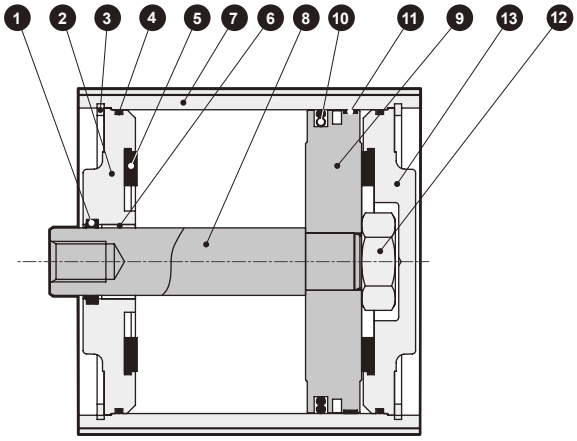
Note 1: Use kit numbers when placing an order.

Internal structure drawing and parts list (ø180, ø200)

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



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



Part list

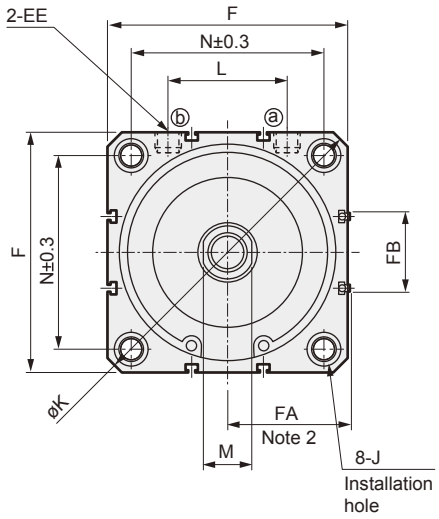
No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Rod packing seal	Nitrile rubber		9	Piston	Aluminum alloy	
2	Rod bushing	Cast iron	Paint	10	Piston packing seal	Nitrile rubber	
3	C type snap ring	Steel	Phosphoric acid zinc	11	Wear ring	Acetar resin	
4	Gasket	Nitrile rubber		12	Hexagon nut	Steel	Zinc chromate
5	Cushion rubber	Urethane rubber		13	Guard	Cast iron	Paint
6	Bush	Oilless dry met		14	Magnet	Rubber	Only with switch
7	Body	Aluminum alloy	Hard alumite				
8	Piston rod	Steel	Industrial chrome plating				

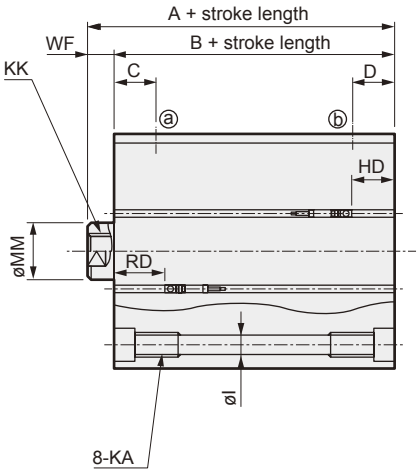
Repair parts list

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

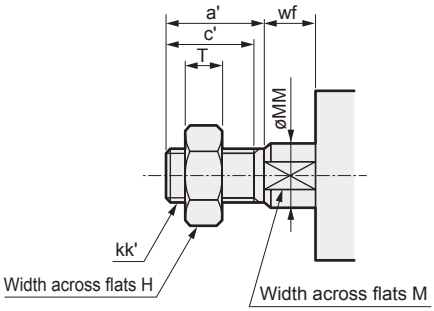
Dimensions (ø125 to ø160)

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





● Rod end male thread



Symbol	Type with switch and common dimensions																
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	14.5	23 spot face depth 15.2	238	M16 depth 28	M24 depth 33	90	36	40	144	17	

Symbol	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	FB	HD	RD	FA	FB	HD	RD	FA	FB	HD	RD	FA	FB	HD	RD	FA	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

Note 1: Dimensions shown in ( ) of FA are for a dimension of radial lead wire.

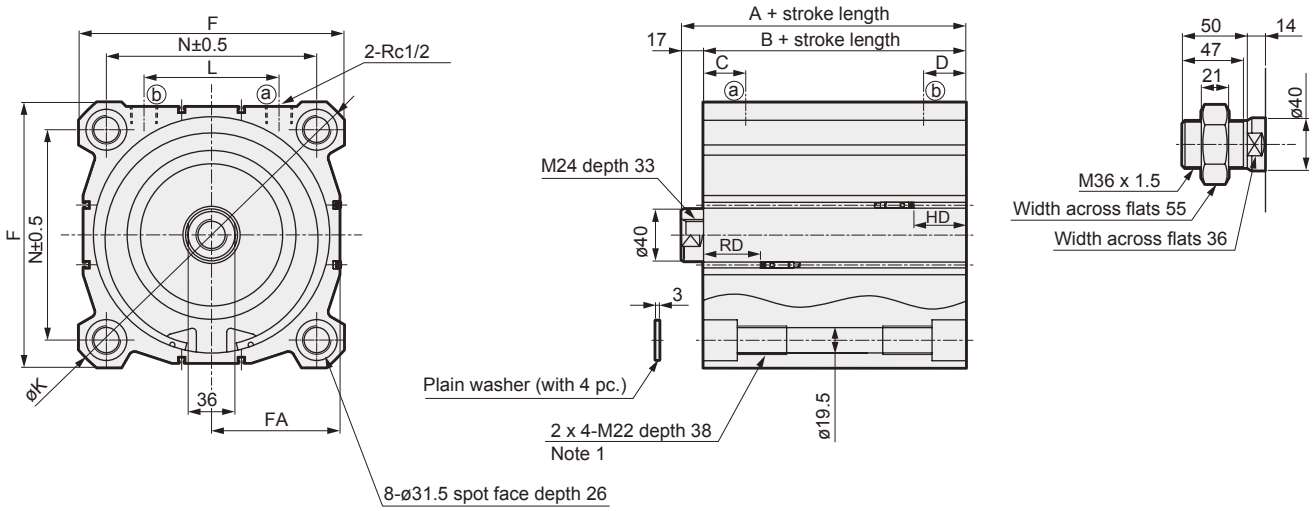
Rod end male thread dimensions table

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

Dimensions (ø180, ø200)

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

● Rod end male thread

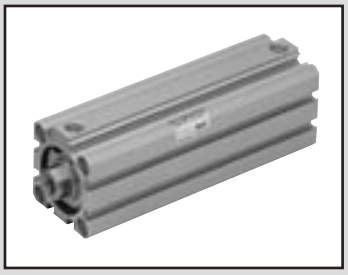


Note 1: 2 x 4-M22 through applies to 20 strokes or less.
Note 2: 2-M24 depth 27 (180 diameter) or 2-M24 depth 29 (200 diameter) is used for 10 strokes.

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

Symbol	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	HD	RD	FA	HD	RD	FA	HD	RD	FA	HD	RD	FA
ø180	39.5	43.5	99 (102.5)	38.5	42.5	104.5 (107.5)	38.5	42.5	110 (113)	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)

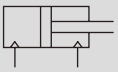
Note 1: Dimensions shown in ( ) of FA are for a dimension of radial lead wire.



Compact cylinder, double acting single rod, high load type

SSD2-K Series

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

JIS symbol 

RoHS

Specifications

Descriptions	SSD2-K SSD2-KL (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	1.0									
Min. working pressure MPa	0.1							0.05		
Withstanding pressure MPa	1.6									
Ambient temperature °C	-10 to 60 (no freezing)									
Port size	M5				Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	+2.0 0									
Working piston speed mm/s	50 to 500							50 to 300		
Cushion	Rubber cushion									
Lubrication	Not required (when lubricating, use turbine oil ISO VG32.)									
Allowable energy absorption J	0.04	0.09	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke length

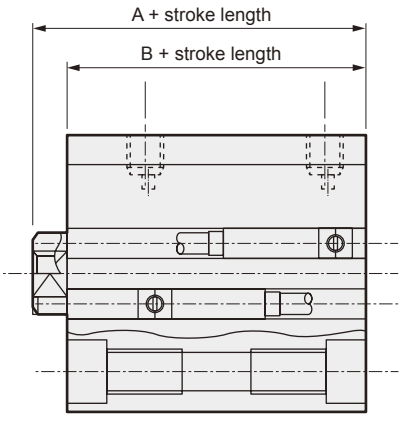
Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5, 10, 15, 20, 25, 30	30	1
ø16			
ø20	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	50	
ø25			
ø32	5, 10, 15, 20, 25, 30, 35, 40, 50, 75, 100	100	
ø40			
ø50	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100		
ø63			
ø80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

Note 1: Refer to the table for min. stroke length with switch on the following page when using a cylinder with a switch.

Custom stroke length

● SSD2-K Series

Descriptions	Standard products Standard stroke length spacer type	
Model no.	Refer to How to order.	
Manufacturing descriptions	A spacer is provided on the body with a standard stroke to manufacture in 1 mm unit strokes.	
Stroke range	Bore size	Stroke range
	12, 16	1 to 29
	20 to 25	1 to 49
	32 to 100	1 to 100
Example of model number	Model no.: SSD2-K-32-41 +4 mm spacer is provided on the standard cylinder SSD2-K-32-45 to attain a 41 mm stroke. The B dimension is 88 mm.	



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

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

Note 1: 2 color indicator type, off-delay type, strong magnetic field proof type, or 10 mm or shorter type with T1* or T8* switch is not available.
Note 2: Values in ( ) apply to the type with one switch on the rod end.

Switch specifications (F type switch)

● 1 color/2 color indicator

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA		100mA or less	50mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

Switch specifications (T type switch)

● 1 color/2 color indicator/strong magnetic field proof

Descriptions	Proximity 2 wire	Proximity 2 wire			Proximity 3 wire				Reed 2 wire							Proximity 2 wire
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom order)	T3YH/T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V		T8H/T8V				T2YD
Applications	Programmable controller, relay, small solenoid valve	Programmable controller			Programmable controller, relay				Programmable controller, relay	Programmable controller, relay, IC circuit (w/o light), serial connection		Programmable controller, relay				Programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Power voltage	-				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 100mA	5 to 20mA (Note 1)			100mA or less		50mA or less		5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	5 to 20mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Without indicator light		LED (ON lighting)				Red/green LED (ON lighting)
Leakage current	1 mA or less at 100 VAC, 2 mA or less at 200 VAC	1mA or less			10μA or less				0mA							1mA or less

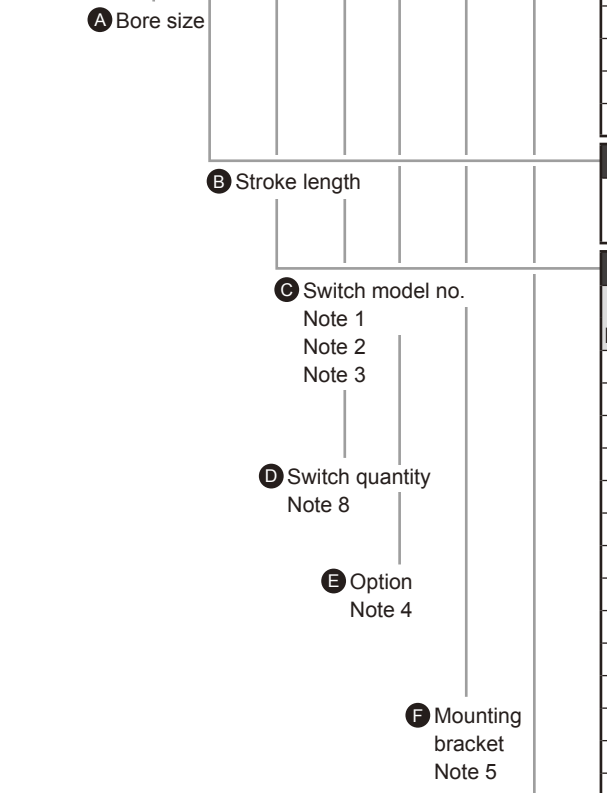
How to order

Without switch

SSD2-K - 12 - 10 ——— N - LB - I

With switch

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



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

B Stroke length (mm)

Refer to stroke length table on the following page.

C Switch model no.

Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire	Bore size 12	16	20	25	32	40	50	63	80	100
F2H*	**F2V***	Proximity	1 color indicator type	2-wire			●	●						
F3H*	**F3V***			3-wire			●	●						
F2YH*	**F2YV***		2 color indicator type	2-wire			●	●						
F3YH*	**F3YV***			3-wire			●	●						
T0H*	**T0V***	Reed	1 color indicator type	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	**T5V***		Without light		●	●	●	●	●	●	●	●	●	●
T8H*	**T8V***		1 color indicator type				●	●	●	●	●	●	●	●
T1H*	**T1V***	Proximity	1 color indicator type	2-wire			●	●	●	●	●	●	●	●
T2H*	**T2V***				●	●	●	●	●	●	●	●	●	●
T3H*	**T3V***			3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	**T3PV***		1 color indicator type (PNP output) (custom order)		●	●	●	●	●	●	●	●	●	●
T2WH*	**T2WV***		2 color indicator type	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	**T2YV***						●	●	●	●	●	●	●	●
T3WH*	**T3WV***			3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	**T3YV***						●	●	●	●	●	●	●	●
T2YD*	**-**		Strong magnetic field proof switch	2-wire			●	●	●	●	●	●	●	●
T2YDT*	**-**						●	●	●	●	●	●	●	●
T2JH*	**T2JV***		Off-delay type	2-wire			●	●	●	●	●	●	●	●

***Lead wire length**

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

D Switch quantity

R	One on rod end
H	One on head end
D	Two

E Option

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

F Mounting bracket

LB	Axial foot
CB	Clevis (pin and snap ring attached)
FA	Rod end flange type
FB	Head end flange type

G Accessory (permissible if rod end male thread "N" was selected.)

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

⚠ Note on model no. selection

Note 1: T2YD* switch can not be installed for ø12, ø16.
Note 2: T8* switch can not be installed for ø12, ø16.
Note 3: F type switch is installable only on the piping port of tube bore size ø20, ø25.
Note 4: ø12 to ø25 piston rod material is stainless steel as standard. The snap-ring is stainless steel instead of steel. When the rod end male thread type is selected, the nut is made of stainless steel.
Note 5: The mounting bracket is enclosed when shipped.
Note 6: "I" and "Y" can not be selected at the same time.
Note 7: ø20 F-type switch radial lead wire is not available for the 10 or shorter stroke.
Note 8: Switches are shipped with the product. Contact CKD when shipment must be assembled.

<Example of model number>

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

Model: Compact cylinder high load type

A Bore size : ø12mm
B Stroke length : 10mm
C Switch model no. : reed switch T0H, lead wire 1m
D Switch quantity : One on rod end
E Option : Rod end male thread

(Stroke length table)

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

Note 1: 5 mm or shorter type with 1 color indicator switch, 2 color indicator, off-delay type, strong magnetic field proof, or 10 mm or shorter type with T1* or T8* switch is not available. Refer to page 22 for min. stroke length with switch.
Note 2: The same dimension as next longer standard stroke length applies to the total length.

How to order switch

SW - T0H

Switch model no.
(item Ⓒ on previous page)

Cylinder weight table (Weight with switch includes weight with two cylinder switches.)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch
ø12	44	86	53	95	61	103	70	112	78	121	87	129	-	-	-	-	-	-	-	-	-	-	-	-
ø16	59	104	69	114	80	125	91	136	102	147	113	158	-	-	-	-	-	-	-	-	-	-	-	-
ø20	75	150	88	163	101	176	113	188	126	201	138	213	151	226	163	238	176	251	188	263	-	-	-	-
ø25	102	193	118	209	134	225	150	241	165	256	182	273	198	289	214	305	230	321	246	337	-	-	-	-
ø32	167	281	188	302	209	323	231	345	253	367	275	389	297	411	318	432	340	454	361	475	534	583	642	690
ø40	236	379	263	406	290	433	316	459	342	485	369	512	396	539	422	565	449	592	475	618	702	751	834	883
ø50	-	-	425	619	467	661	510	704	553	747	594	788	636	830	678	872	720	914	762	956	1109	1166	1319	1376
ø63	-	-	617	896	672	951	727	1006	782	1061	838	1117	893	1172	948	1227	1003	1282	1058	1337	1548	1612	1823	1887
ø80	-	-	1101	1514	1188	1601	1274	1687	1361	1774	1448	1861	1535	1948	1621	2034	1708	2121	1794	2207	2574	2640	3006	3072
ø100	-	-	1660	2227	1774	2341	1888	2455	2002	2569	2115	2682	2229	2796	2343	2910	2457	3024	2571	3138	3636	3708	4206	4278

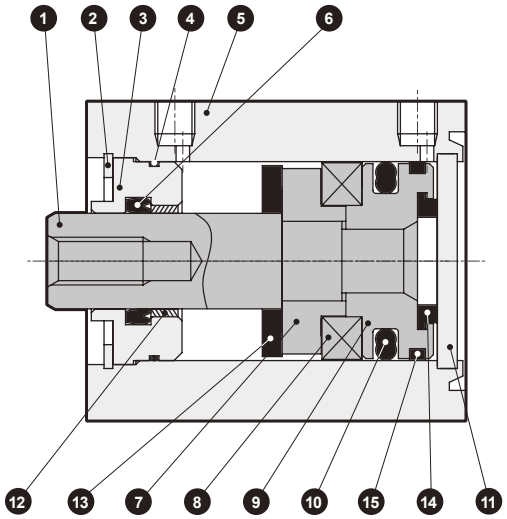
How to order mounting bracket

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

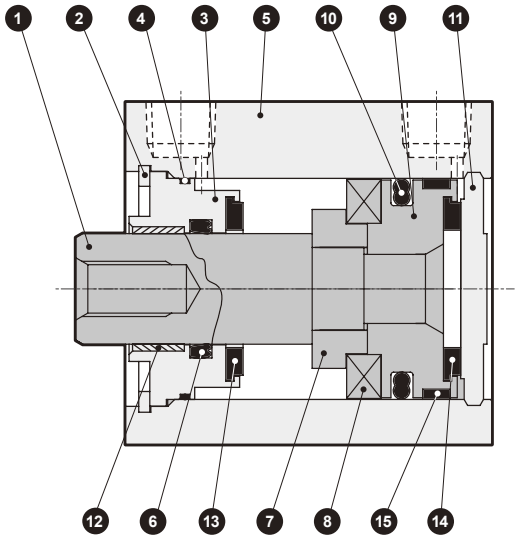
Note 1: The foot type mounting bracket is provided as 2 pcs./set.

Internal structure and parts list

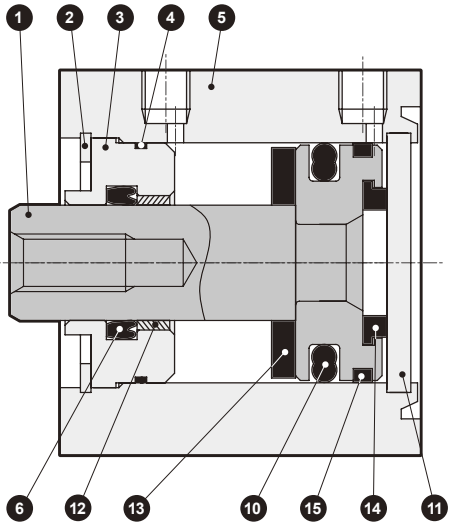
● SSD2-KL-12 to 25 (double acting single rod high load type with switch)



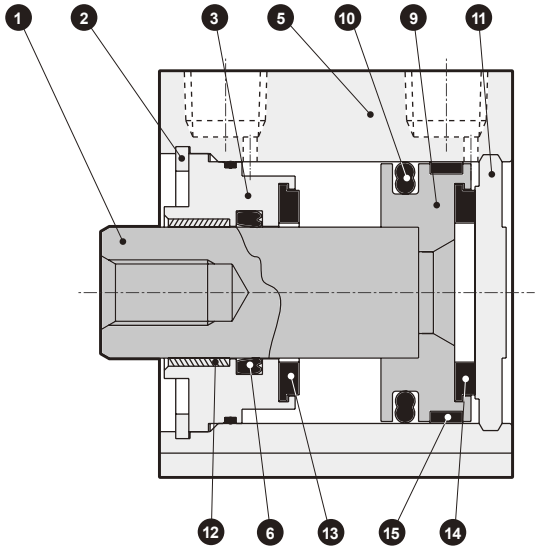
● SSD2-KL-32 (double acting single rod high load type with switch)



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



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



No.	Parts name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32: Steel	ø16 to ø32: Industrial chrome plating
2	C type snap ring	Steel	Phosphoric acid zinc
3	Rod bushing	Special aluminum	Alumite
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing seal	Nitrile rubber	
7	Spacer	Aluminum alloy	Chromate
8	Magnet	Plastic	

No.	Parts name	Material	Remarks
9	Piston	Aluminum alloy	Chromate
10	Piston packing seal	Nitrile rubber	
11	Guard	ø12 to ø25: Stainless steel ø32: Aluminum alloy	ø32: Alumite
12	Bush	Oilless dry met	ø20 to ø32 (Note 1)
13	Cushion rubber (R)	Urethane rubber	
14	Cushion rubber (H)	Urethane rubber	
15	Wear ring	Polyacetal resin	

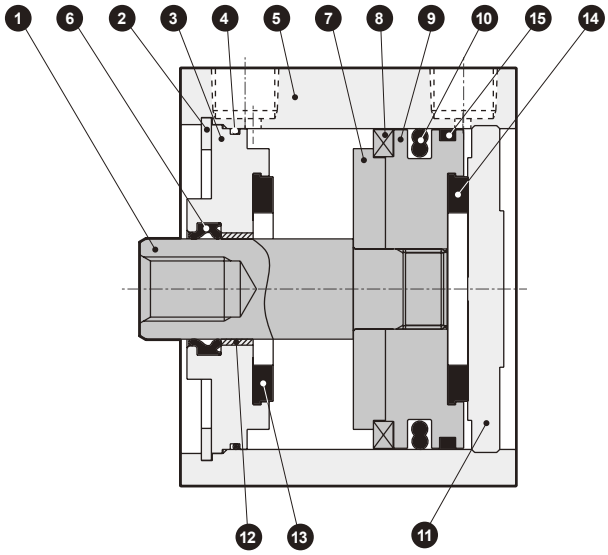
Note 1: Steel is used for copper and PTFE free.

Repair parts list

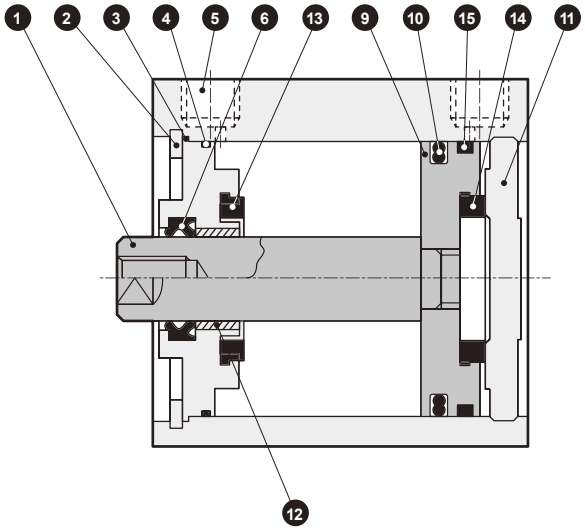
Bore size (mm)	Kit No.	Repair parts number
ø12	SSD2-K-12K	4 6 10 13 14 15
ø16	SSD2-K-16K	
ø20	SSD2-K-20K	
ø25	SSD2-K-25K	
ø32	SSD2-K-32K	

Internal structure and parts list

● SSD2-KL-40 to 100 (double acting single rod high load type with switch)



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



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	9	Piston	Aluminum alloy	Chromate
2	C type snap ring	Steel	Phosphoric acid zinc	10	Piston packing seal	Nitrile rubber	
3	Rod bushing	Aluminum alloy	Alumite	11	Guard	Aluminum alloy	Alumite
4	Rod metal gasket	Nitrile rubber		12	Bush	Oilless dry met	Note 1
5	Body	Aluminum alloy	Hard alumite	13	Cushion rubber (R)	Urethane rubber	
6	Rod packing seal	Nitrile rubber		14	Cushion rubber (H)	Urethane rubber	
7	Spacer	Aluminum alloy		15	Wear ring	Polyacetal resin	
8	Magnet	Plastic					

Note 1: Steel is used for copper and PTFE free.

Repair parts list

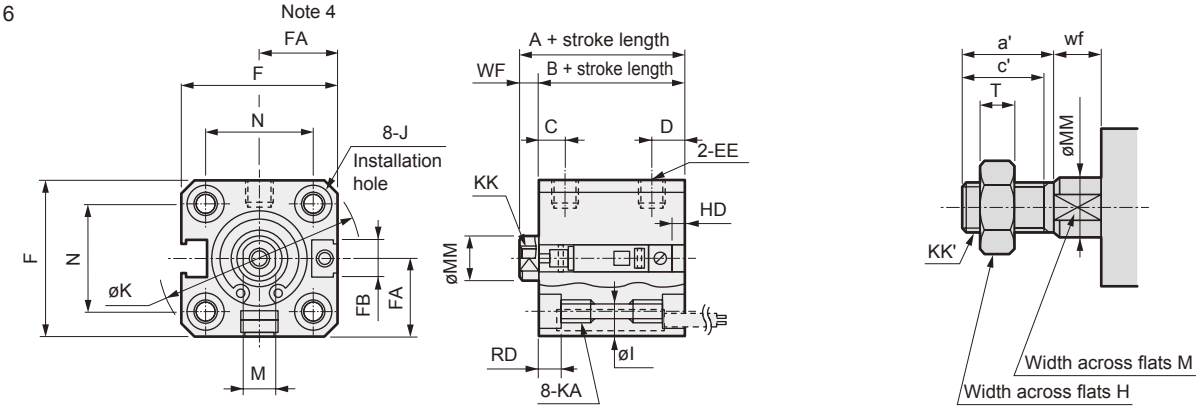
Bore size (mm)	Kit No.	Repair parts number
ø40	SSD2-K-40K	4 6 10 13 14 15
ø50	SSD2-K-50K	
ø63	SSD2-K-63K	
ø80	SSD2-K-80K	
ø100	SSD2-K-100K	

Dimensions

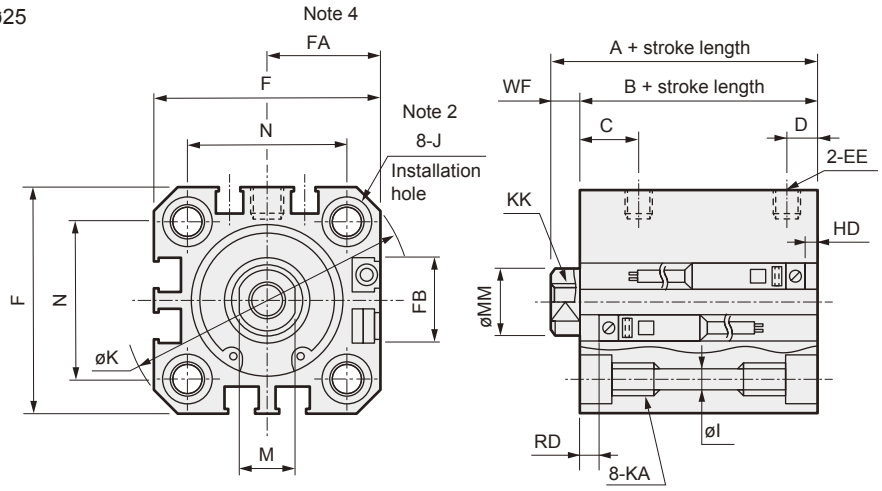
● SSD2-KL-12 to 25 (with switch)

● Rod end male thread

ø12, ø16



ø20, ø25



・Cautions on switch installation groove

Note 1: Only the F type switch is provided for the tube bore size ø20 and ø25 piping port surface.

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

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

Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke.
Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.

Note 2: Refer to page 92 for HD and RD dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.

Note 3: Refer to page 92 for projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.

Note 4: Dimensions in ( ) of FA are values for radial lead wire.

Note 5: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

● Rod end male thread dimensions table

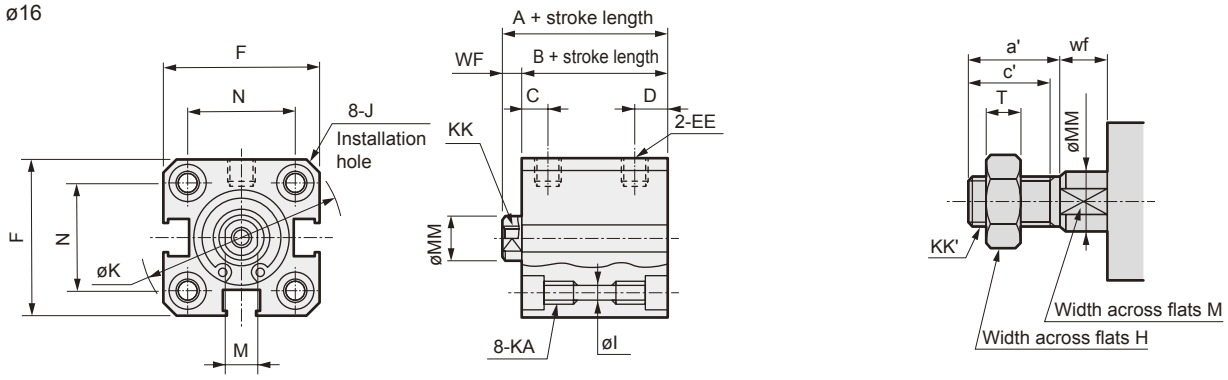
Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	8	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10 x 1.25	10	12	6	5

Dimensions

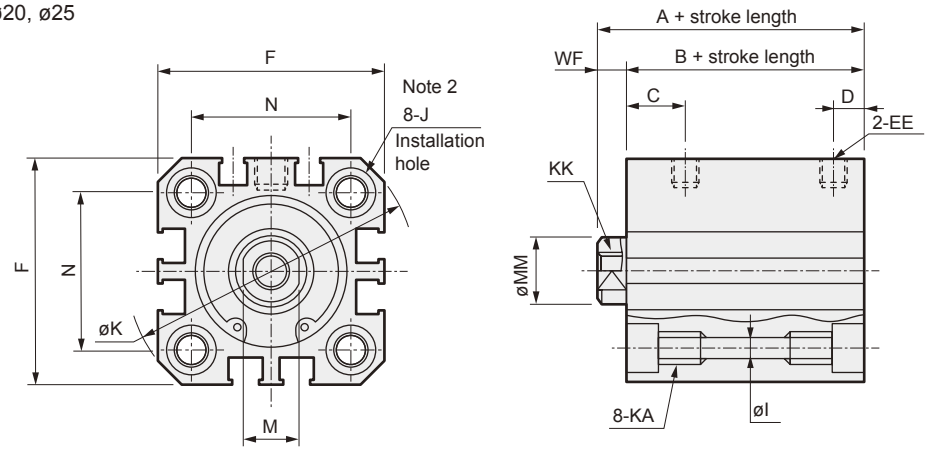
● SSD2-K-12 to 25 (without switch)

● Rod end male thread

ø12, ø16



ø20, ø25



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

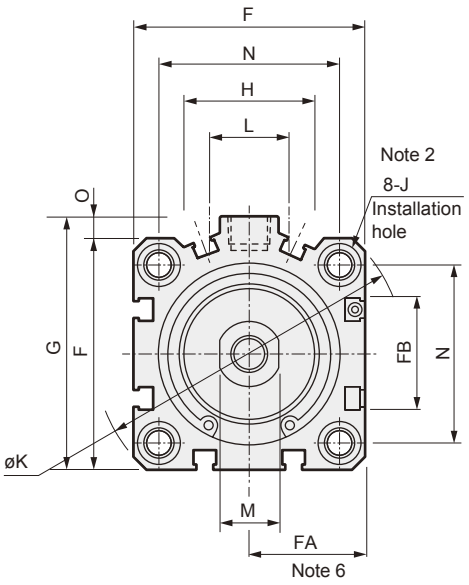
Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke.
Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.
Note 2: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

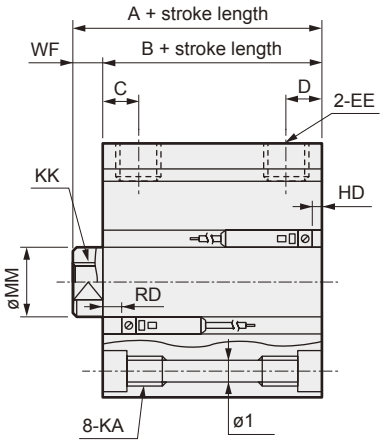
● Rod end male thread dimensions table

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

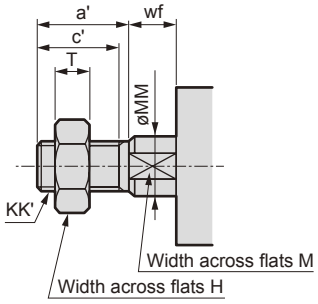
Dimensions

● SSD2-KL-32 to 100 (with switch)





● Rod end male thread



Symbol	Type with switch and common dimensions																			
Bore size (mm)	A Note 1	B Note 1	C	D	EE	F	FA Note 5	FB	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	50	43	8	8	Rc1/8	45	23 (26.5)	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	56.5	49.5	12	8.5	Rc1/8	52	26.5 (30)	27.5	57	24	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	58.5	50.5	10.5	10.5	Rc1/4	64	32.5 (36)	28.5	71	33	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	64	56	13	11	Rc1/4	77	39 (42.5)	28.5	84	33	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	73.5	63.5	16	13	Rc3/8	98	49.5 (53)	28.5	104	38	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10
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	15	27	30	94	6.5	12

Switch dimension	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size (mm)	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

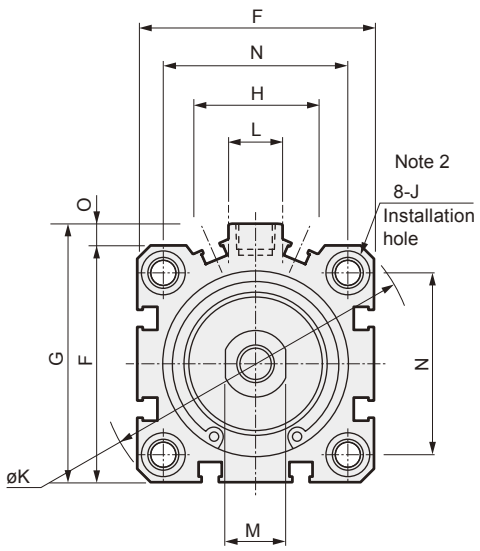
Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke. Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.
Note 2: HD and RD dimensions for 5 stroke differ from these due to manufacturing.
Note 3: Refer to page 92 for HD and RD dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 4: Refer to page 92 for projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 5: Dimensions in ( ) of FA are values for radial lead wire.
Note 6: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

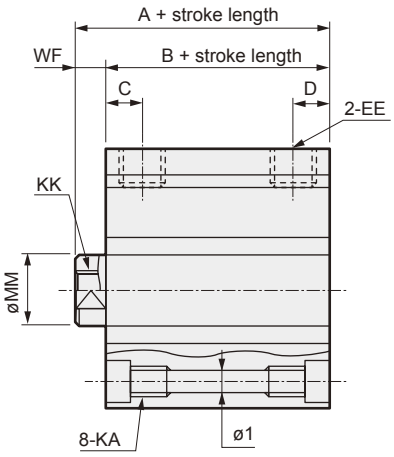
● Rod end male thread dimensions table

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

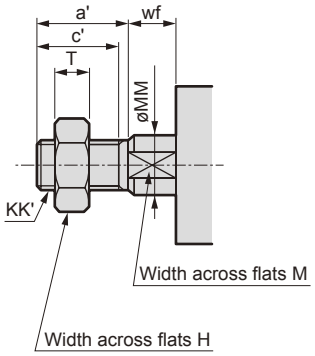
Dimensions

● SSD2-K-32 to 100 (without switch)





● Rod end male thread

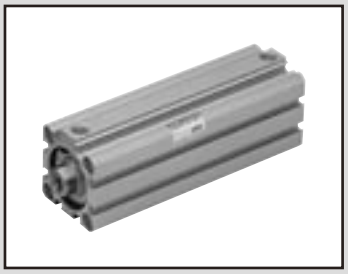


Symbol / Bore size (mm)	A Note 1, Note 3	B Note 1, Note 3	C	D	EE	F	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	40 (50)	33 (43)	8	8	Rc1/8	45	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	46.5 (56.5)	39.5 (49.5)	12	8.5	Rc1/8	52	57	24	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	48.5 (58.5)	40.5 (50.5)	10.5	10.5	Rc1/4	64	71	33	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	54 (64)	46 (56)	13	11	Rc1/4	77	84	33	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	63.5 (73.5)	53.5 (63.5)	16	13	Rc3/8	98	104	38	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10
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	15	27	30	94	6.5	12

Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke. Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.
Note 2: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.
Note 3: Values in ( ) for symbols A and B are for when 50 strokes is exceeded.

● Rod end male thread dimensions table

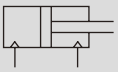
Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 x 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 x 1.5	14	16	8	5
ø50	28.5	26	27	M18 x 1.5	17	20	11	5
ø63	28.5	26	27	M18 x 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 x 1.5	22	25	13	8
ø100	35.5	32.5	41	M26 x 1.5	27	30	16	8



Compact cylinder, double acting single rod long stroke

SSD2 Series (long stroke)

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

JIS symbol 

RoHS

Specifications

Descriptions	SSD2 SSD2-L (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	1.0									
Min. working pressure MPa	0.1							0.05		
Withstanding pressure MPa	1.6									
Ambient temperature °C	-10 to 60 (no freezing)									
Port size	M5				Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	+2.0 0									
Working piston speed mm/s	50 to 500							50 to 300		
Cushion	Rubber cushion									
Lubrication	Not required (when lubricating, use turbine oil ISO VG32.)									
Allowable energy absorption J	0.04	0.09	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

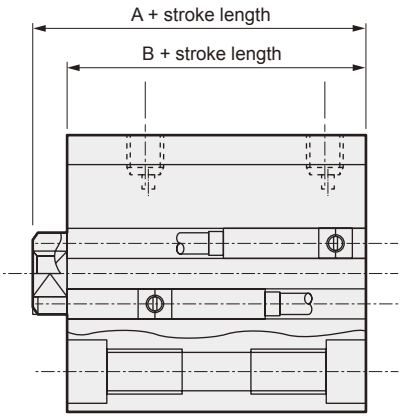
Stroke length

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

Custom stroke length

● SSD2 Series

Descriptions	Standard products Standard stroke length spacer type	
Model no.	Refer to How to order.	
Manufacturing descriptions	A spacer is provided on the body with a standard stroke to manufacture in 1 mm unit strokes.	
Stroke range	Bore size	Stroke range
	12, 16	31 to 99
	20	51 to 199
	25	51 to 299
	32 to 100	101 to 299
Example of model number	Model no.: SSD2-32-121 +4 mm spacer is provided on the standard cylinder SSD2-32-125 to attain a 121 mm stroke. The B dimension is 170.5 mm.	



Switch specifications (F type switch)

● 1 color/2 color indicator

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA		100mA or less	50mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

Switch specifications (T type switch)

● 1 color/2 color indicator/strong magnetic field proof

Descriptions	Proximity 2 wire	Proximity 2 wire			Proximity 3 wire				Reed 2 wire							Proximity 2 wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom order)	T3YH/T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD
Applications	Programmable controller, relay, small solenoid valve	Programmable controller			Programmable controller, relay				Programmable controller, relay		Programmable controller, relay, IC circuit (w/o light), serial connection		Programmable controller, relay			Programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Power voltage	-				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 100mA	5 to 20mA (Note 1)			100mA or less		50mA or less		5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	5 to 20mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)			Red/green LED (ON lighting)
Leakage current	1 mA or less at 100 VAC, 2 mA or less at 200 VAC	1mA or less			10μA or less				0mA							1mA or less

How to order

Without switch

SSD2 - 12 - 100 ——— N - LB - I

With switch

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

- Ⓐ Bore size
- Ⓑ Stroke length
- Ⓒ Switch model no. Note 1
- Ⓓ Switch quantity Note 7
- Ⓔ Option Note 4
- Ⓕ Mounting bracket Note 5
- Ⓖ Accessory Note 6

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

Ⓑ Stroke length (mm)

Refer to stroke length table on the following page.

Ⓒ Switch model no.

Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire	Bore size 12	16	20	25	32	40	50	63	80	100
F2H*	F2V*	Proximity	1 color indicator type	2-wire			●	●						
F3H*	F3V*			3-wire			●	●						
F2YH*	F2YV*		2 color indicator type	2-wire			●	●						
F3YH*	F3YV*			3-wire			●	●						
T0H*	T0V*	Reed	1 color indicator type	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		Without light		●	●	●	●	●	●	●	●	●	●
T8H*	T8V*		1 color indicator type				●	●	●	●	●	●	●	●
T1H*	T1V*	Proximity	1 color indicator type	2-wire	●	●	●	●	●	●	●	●	●	●
T2H*	T2V*				●	●	●	●	●	●	●	●	●	●
T3H*	T3V*			3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	T3PV*		1 color indicator type (PNP output) (custom order)		●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*		2 color indicator type	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*				●	●	●	●	●	●	●	●	●	●
T3WH*	T3WV*			3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*				●	●	●	●	●	●	●	●	●	●
T2YD*	-		Strong magnetic field proof switch	2-wire			●	●	●	●	●	●	●	●
T2YDT*	-						●	●	●	●	●	●	●	●
T2JH*	T2JV*		Off-delay type	2-wire	●	●	●	●	●	●	●	●	●	●

***Lead wire length**

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

Ⓓ Switch quantity

R	One on rod end
H	One on head end
D	Two

Ⓔ Option

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

Ⓕ Mounting bracket

LB	Axial foot
CB	Clevis (pin and snap ring attached)
FA	Rod end flange type
FB	Head end flange type

Ⓖ Accessory (permissible if rod end male thread "N" was selected.)

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

⚠ Note on model no. selection

Note 1: T2YD* switch can not be installed for ø12, ø16.
Note 2: T8* switch can not be installed for ø12, ø16.
Note 3: F type switch is installable only on the piping port of tube bore size ø20, ø25.
Note 4: ø12 to ø25 piston rod material is stainless steel as standard. The snap-ring is stainless steel instead of steel. When the rod end male thread type is selected, the nut is made of stainless steel.
Note 5: The mounting bracket is enclosed when shipped.
Note 6: "I" and "Y" can not be selected at the same time.
Note 7: Switches are shipped with the product. Contact CKD when shipment must be assembled.

<Example of model number>

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

Model: Compact cylinder long stroke

- Ⓐ Bore size : ø12mm
- Ⓑ Stroke length : 100mm
- Ⓒ Switch model no. : Reed switch T0H, lead wire 1m
- Ⓓ Switch quantity : One on rod end
- Ⓔ Option : Rod end male thread

(Stroke length table)

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

Note 1: The same dimension as next longer standard stroke length applies to the total length.

How to order switch

SW - T0H

Switch model no.
(item Ⓒ on previous page)

Cylinder weight table (Weight with switch includes weight with two cylinder switches.)

(Unit: g)

Stroke length (mm)	35		40		45		50		75		100		125		150		175		200		250		300	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch
ø12	144	146	153	155	161	163	170	172	212	214	255	257	-	-	-	-	-	-	-	-	-	-	-	-
ø16	179	180	190	191	201	202	212	213	267	268	322	323	-	-	-	-	-	-	-	-	-	-	-	-
ø20	-	-	-	-	-	-	-	-	321	326	383	388	446	451	508	513	571	576	633	638	-	-	-	-
ø25	-	-	-	-	-	-	-	-	412	417	492	497	572	577	652	657	732	737	812	817	972	977	1132	1137
ø32	-	-	-	-	-	-	-	-	-	-	-	-	790	799	897	905	1003	1012	1111	1119	1326	1334	1541	1549
ø40	-	-	-	-	-	-	-	-	-	-	-	-	1000	1016	1133	1148	1265	1281	1398	1413	1663	1678	1928	1943
ø50	-	-	-	-	-	-	-	-	-	-	-	-	1553	1571	1779	1796	2004	2022	2217	2234	2642	2659	3067	3084
ø63	-	-	-	-	-	-	-	-	-	-	-	-	2138	2162	2413	2437	2688	2712	2963	2987	3512	3536	4062	4086
ø80	-	-	-	-	-	-	-	-	-	-	-	-	3478	3505	3911	3937	4343	4370	4776	4802	5640	5666	6505	6531
ø100	-	-	-	-	-	-	-	-	-	-	-	-	4816	4848	5386	5418	5956	5988	6526	6558	7667	7699	8807	8839

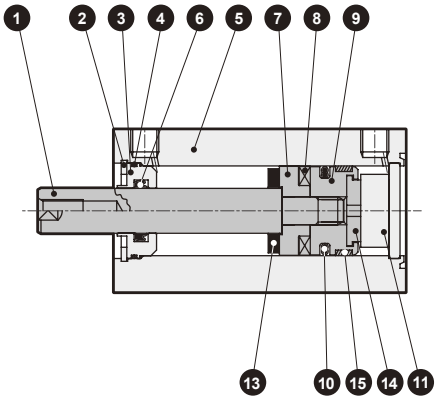
How to order mounting bracket

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

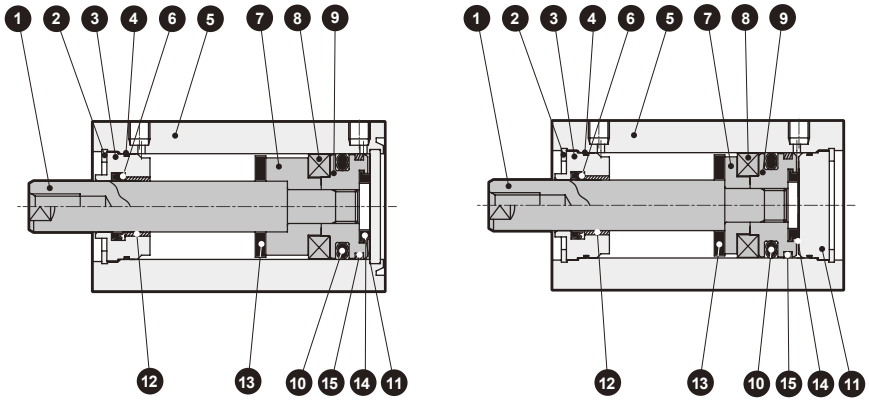
Note 1: The foot type mounting bracket is provided as 2 pcs./set.

Internal structure and parts list

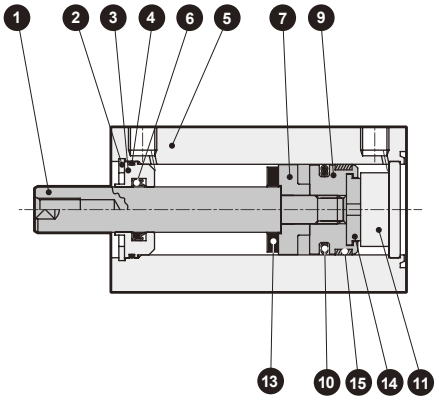
● SSD2 (long stroke)-L-12, 16
(Double acting single rod type with switch)



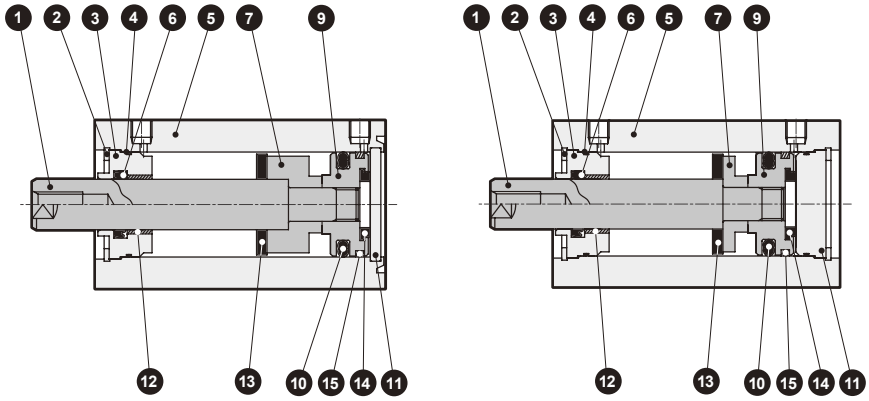
● SSD2 (long stroke)-L-20 to 100
(Double acting single rod type with switch)
ø20: 100 to 200 mm stroke
ø25: 150 to 300 mm stroke
ø32 to ø50: 150 to 300 mm stroke
ø63 to ø100: 200 to 300 mm stroke



● SSD2 (long stroke)-12, 16
(Double acting single rod type)



● SSD2 (long stroke)-20 to 100
(Double acting single rod type)
ø20: 100 to 200 mm stroke
ø25: 150 to 300 mm stroke
ø32 to ø50: 150 to 300 mm stroke
ø63 to ø100: 200 to 300 mm stroke



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	ø12 to 25: Stainless steel ø32 to 100: Steel	ø16 to 100 Industrial chrome plating	9	Piston	Aluminum alloy	Chromate
2	C type snap ring	Steel	Phosphoric acid zinc	10	Piston packing seal	Nitrile rubber	
3	Rod bushing	Special aluminum	Alumite	11	Guard	ø12 to 25: Stainless steel ø32 to 100: Aluminum alloy	ø32 to 100: Alumite (Note 1)
4	Rod metal gasket	Nitrile rubber		12	Bush	Oilless dry met	ø20 to 100 (Note 2)
5	Body	Aluminum alloy	Hard alumite	13	Cushion rubber (R)	Urethane rubber	
6	Rod packing seal	Nitrile rubber		14	Cushion rubber (H)	Urethane rubber	
7	Spacer	Aluminum alloy	ø12 to 32: Chromate	15	Wear ring	Polyacetal resin	
8	Magnet	Plastic					

Note 1: The cover when ø20: 100 stroke or ø25: 150 stroke is exceeded is made of aluminum alloy (reference: alumite treated).
Note 2: Steel is used for copper and PTFE free specifications.

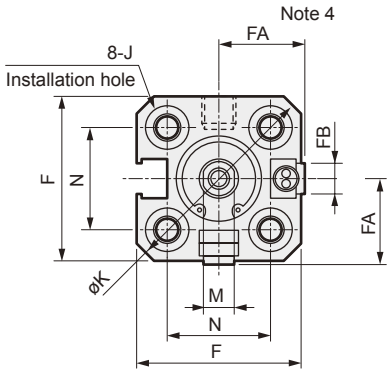
Repair parts list

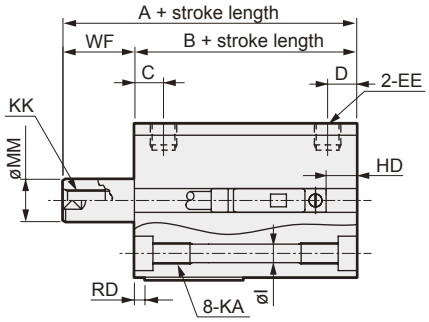
It is the same as the double acting, high load type SSD2-K series. Refer to Page 25, 26.

Dimensions

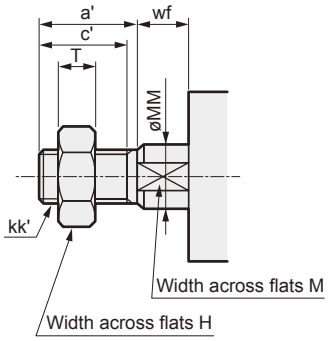
● SSD2(long stroke)-(L)-12 to 25
Dimensions are the same for cylinders with and without switches.

ø12, ø16

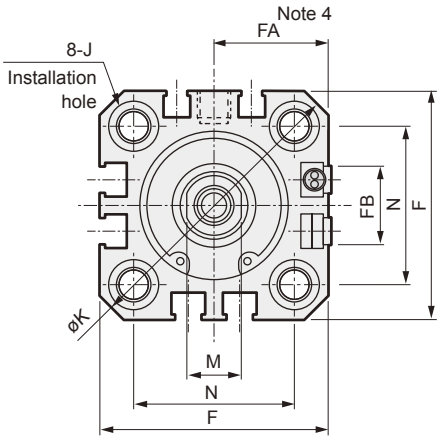


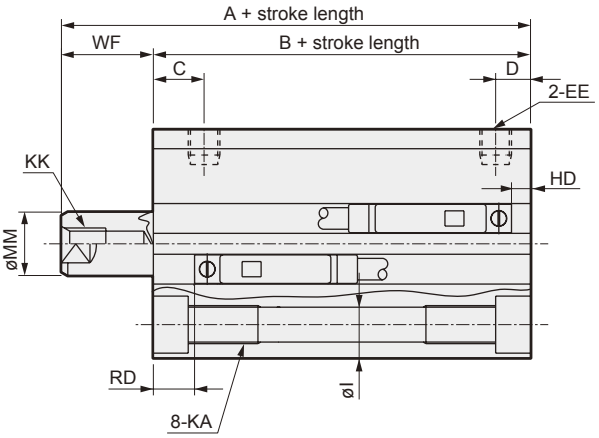


● Rod end male thread



ø20, ø25





· Cautions on switch installation groove
Note 1: Only F type switch is provided for the tube bore size ø20 and ø25 piping port surface.

Symbol	Type with switch and common dimensions																
Bore size (mm)	A Note 1	B Note 1	C	D Note 3	EE	F	FA Note 6	FB	I	J	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 (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 dimension	Reed T0H/T0V, T5H/T5V Note 3		Proximity T2H/T2V, T3H/T3V Note 3		Proximity T2WH/T2WV, T3WH/T3WV Note 3		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV Note 3	
Bore size (mm)	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)
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)

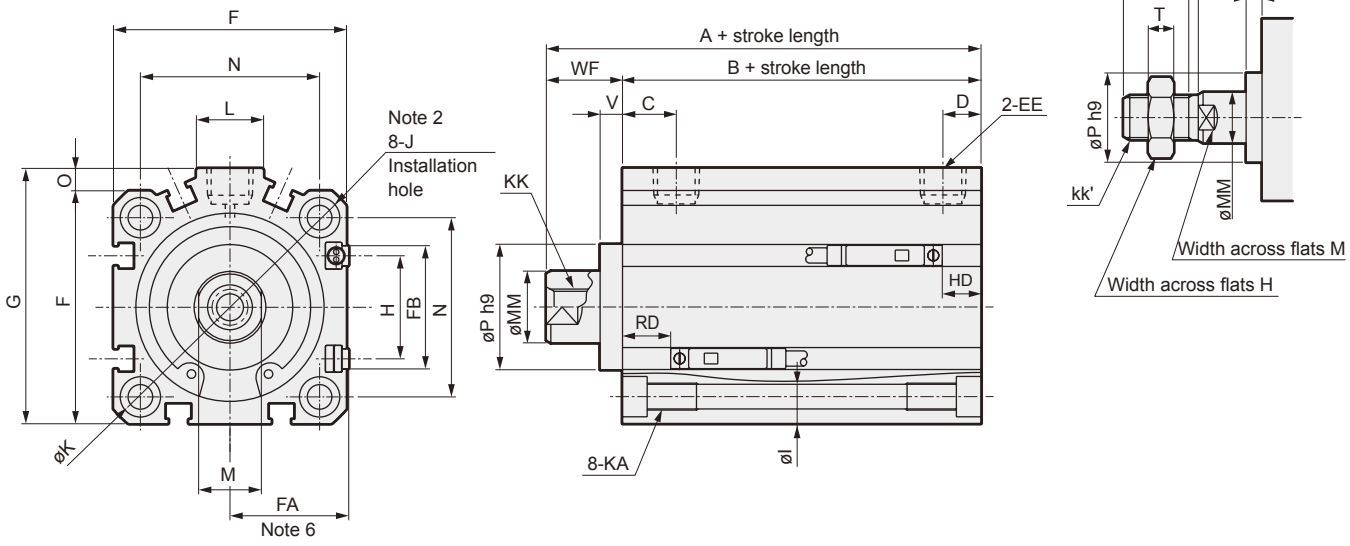
Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke.
Example: If the custom stroke is 70 mm, calculate including standard stroke 75 mm.
Note 2: Spot face J is not provided when ø20: 100 strokes or ø25: 150 strokes is exceeded.
Note 3: Values in ( ) apply when ø20: 100 strokes or ø25: 150 strokes is exceeded.
Note 4: Refer to page 91 for HD and RD dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 5: Refer to page 91 for projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 6: Dimensions in ( ) of FA are values for radial lead wire.
Note 7: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

● Rod end male thread dimensions table

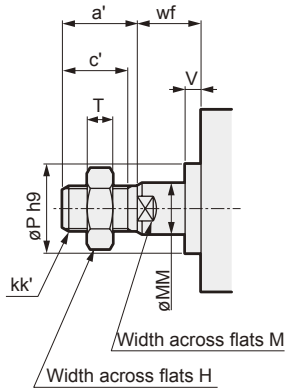
Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	13.5
ø16	12	10	8	M6	6	8	3.6	13.5
ø20	14	12	13	M8	8	10	5	14.5
ø25	17.5	15	17	M10 x 1.25	10	12	6	15

Dimensions

● SSD2(long stroke)-(L)-32 to 100
*Dimensions are the same for cylinders with and without switches.



● Rod end male thread



Symbol	Type with switch and common dimensions																						
Bore size (mm)	A Note 1	B Note 1	C	D Note 3	EE	F	FA Note 6	FB	G	H	I	J	K	KA	KK	L	M	MM	N	O	P	V	WF
ø32	62.5	45.5	8	8	Rc1/8	45	23 (26.5)	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	22	5	17
ø40	72	55	12	8.5 (12)	Rc1/8	52	26.5 (30)	27.5	57	24	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	28	5	17
ø50	73.5	55.5	10.5	10.5	Rc1/4	64	32.5 (36)	28.5	71	33	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	35	5	18
ø63	75	57	13	11 (13)	Rc1/4	77	39 (42.5)	28.5	84	33	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	35	5	18
ø80	86	66	16	13 (16)	Rc3/8	98	49.5 (53)	28.5	104	38	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	43	5	20
ø100	97.5	75.5	23	15 (23)	Rc3/8	117	59 (62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27	15	27	30	94	6.5	59	5	22

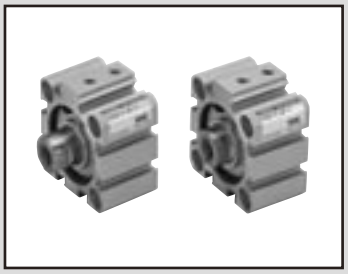
Switch dimension	Reed T0H/T0V, T5H/T5V Note 3		Proximity T2H/T2V, T3H/T3V Note 3		Proximity T2WH/T2WV, T3WH/T3WV Note 3	
Bore size (mm)	HD	RD	HD	RD	HD	RD
ø32	8.5 (16)	18 (10)	8.5 (16)	18 (10)	10 (17.5)	19.5 (12)
ø40	9.5 (19)	26.5 (16.5)	9.5 (19)	26.5 (16.5)	11 (20.5)	28 (18.5)
ø50	10 (19)	26 (17)	10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

Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke. Example: If the custom stroke is 121 mm, calculate including standard stroke 125 mm.
Note 2: Spot face J is not provided when ø32 to ø50: 150 strokes or ø63 to ø100: 200 strokes is exceeded.
Note 3: Values in ( ) apply when ø32 to ø50: 150 strokes or ø63 to ø100: 200 strokes is exceeded.
Note 4: Refer to page 91 for HD and RD dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 5: Refer to page 91 for projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 6: Dimensions in ( ) of FA are values for radial lead wire.
Note 7: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

● Rod end male thread dimensions table

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

MEMO



Compact cylinder, single acting, extend type

SSD2-X Series

Single acting, retract type, with switch

SSD2-Y Series

- Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50

JIS symbol SSD2-X  SSD2-Y 

RoHS

Specifications

Descriptions	SSD2-X SSD2-XL (with switch)				SSD2-Y SSD2-YL (with switch)		
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Actuation	SSD2-X and XL: single acting/extend, SSD2-Y and YL: single acting/retract						
Working fluid	Compressed air						
Max. working pressure MPa	1.0						
Min. working pressure MPa	0.2		0.17		0.12		
Withstanding pressure MPa	1.6						
Ambient temperature °C	-10 to 60 (no freezing)						
Port size	M5				Rc1/8 Note 2		Rc1/4
Stroke tolerance mm	+1.0 0						
Working piston speed mm/s	50 to 500						
Cushion	None						
Lubrication	Not required (when lubricating, use turbine oil ISOVG32.)						
Allowable energy absorption J	0.004	0.01	0.016	0.021	0.025	0.092	0.1

Note 1: Do not leave the single acting cylinder in the pressurized state. If left in the pressurized state, the piston rod may not return with spring force when pressure is released. Use the double-acting type when the cylinder must be left pressurized.
Note 2: The port size is M5 for the 5 stroke length of ø32 with no switch.

Stroke length

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

Note: Refer to the following table when a switch is used.

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

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

Note 1: 2 color indicator type, off-delay type, strong magnetic field proof type, or 10 mm or shorter type with T1* or T8* switch is not available.
Note 2: Five strokes is used only when one switch is installed on the rod side.

Switch specifications (F type switch)

● 1 color/2 color indicator

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA		100mA or less	50mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

Switch specifications (T type switch)

● 1 color/2 color indicator/strong magnetic field proof

Descriptions	Proximity 2 wire	Proximity 2 wire			Proximity 3 wire				Reed 2 wire							Proximity 2 wire
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom order)	T3YH/T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD
Applications	Programmable controlle, relay, small solenoid valve	Programmable controller			Programmable controller, relay				Programmable controller, relay		Programmable controller, relay, IC circuit (w/o light), serial connection		Programmable controller, relay			Programmable controller dedicated
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Power voltage	-				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 100mA	5 to 20mA (Note 1)			100mA or less		50mA or less		5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	5 to 20mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)			Red/green LED (ON lighting)
Leakage current	1 mA or less at 100 VAC, 2 mA or less at 200 VAC	1mA or less			10μA or less				0mA							1mA or less

Cylinder weight table (weight with switch is with a cylinder switch 2 pieces.)

(Unit: g)

Stroke length (mm)	5		10		20	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o 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

SSD2-X/SSD2-Y spring load

(Unit: N)

Bore size (mm)	Stroke length (mm)	SSD2-X		SSD2-Y	
		Stroke length 0	Full stroke length during operation	Stroke length 0	Full stroke length during 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

How to order

Without switch

SSD2-X - 12 - 5 ——— N - LB - I

With switch

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

Ⓐ Model no.
Ⓑ Bore size
Ⓒ Stroke length
Ⓓ Switch model no.
Note 1
Note 2
Note 3
Ⓔ Switch quantity
Note 8
Ⓕ Option
Note 4
Ⓖ Mounting bracket
Note 5
Ⓗ Accessory
Note 6

Symbol	Descriptions
Ⓐ Model no.	
SSD2-X	Single acting, extend type
SSD2-XL	Single acting, extend type, with switch
SSD2-Y	Single acting retract type
SSD2-YL	Single acting, retract type, with switch

Ⓑ Bore size (mm)

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

Ⓒ Stroke length (mm)

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

Ⓓ Switch model no.

Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire	Bore size 12	16	20	25	32	40	50
F2H*	**F2V***	Proximity	1 color indicator type	2-wire			●	●			
F3H*	**F3V***			3-wire			●	●			
F2YH*	**F2YV***		2 color indicator type	2-wire			●	●			
F3YH*	**F3YV***			3-wire			●	●			
T0H*	**T0V***	Reed	1 color indicator type	2-wire	●	●	●	●	●	●	●
T5H*	**T5V***		Without light		●	●	●	●	●	●	●
T8H*	**T8V***		1 color indicator type							●	●
T1H*	**T1V***	Proximity	1 color indicator type	2-wire			●	●	●	●	●
T2H*	**T2V***				●	●	●	●	●	●	●
T3H*	**T3V***			3-wire	●	●	●	●	●	●	●
T3PH*	**T3PV***		1 color indicator type (PNP output) (custom order)		●	●	●	●	●	●	●
T2WH*	**T2WV***		2 color indicator type	2-wire	●	●	●	●	●	●	●
T2YH*	**T2YV***						●	●	●	●	●
T3WH*	**T3WV***			3-wire	●	●	●	●	●	●	●
T3YH*	**T3YV***						●	●	●	●	●
T2YD*	**-**		Strong magnetic field proof switch	2-wire			●	●	●	●	●
T2YDT*	**-**						●	●	●	●	●
T2JH*	**T2JV***		Off-delay type	2-wire			●	●	●	●	●

***Lead wire length**

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

Ⓔ Switch quantity

R	One on rod end
H	One on head end
D	Two

Ⓕ 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	As standard						
M Note 4	Piston rod material (stainless steel)	●	●	●	●	●	●	●

Ⓖ Mounting bracket

LB	Axial foot
CB	Clevis (pin and snap ring attached)
FA	Rod end flange type
FB	Head end flange type

Ⓗ Accessory (permissible if rod end male thread "N" was selected.)

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

⚠ Note on model no. selection

Note 1: T2YD* switch can not be installed for ø12, ø16.
Note 2: T8* switch can not be installed for ø12 to ø32.
Note 3: F type switch is installable only on the piping port of tube bore size ø20, ø25.
Note 4: ø12 to ø25 piston rod material is stainless steel as standard. The snap-ring is stainless steel instead of steel.
When the rod end male thread type is selected, the nut is made of stainless steel.
Note 5: The mounting bracket is enclosed when shipped.
Note 6: "I" and "Y" can not be selected at the same time.
Note 7: ø20 F-type switch radial lead wire is not available.
Note 8: Switches are shipped with the product. Contact CKD when shipment must be assembled.

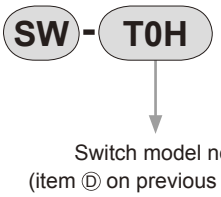
<Example of model number>

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

Model: Compact cylinder

Ⓐ Model no. : Single acting spring return type
Ⓑ Bore size : ø12mm
Ⓒ Stroke length : 5mm
Ⓓ Switch model no.: Reed switch T0H, lead wire length 1m
Ⓔ Switch quantity : 1 on rod end
Ⓕ Option : Rod end male thread

How to order switch



Switch model no.
(item Ⓓ on previous page)

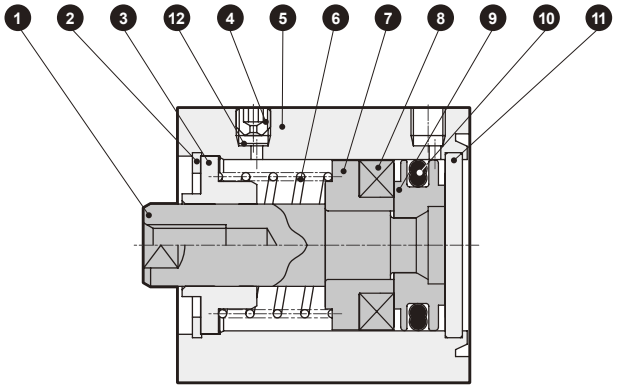
How to order mounting bracket

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

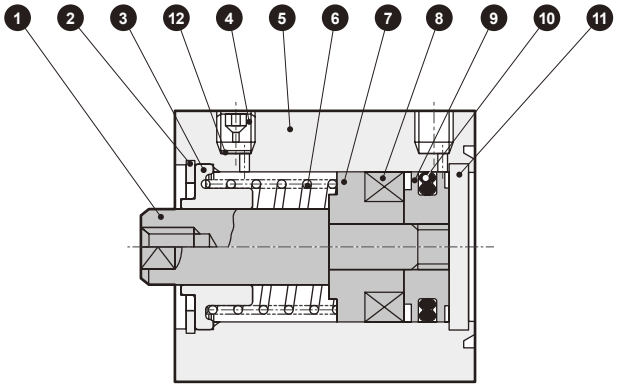
Note 1: The foot type mounting bracket is provided as 2 pcs./set.

Internal structure and parts list

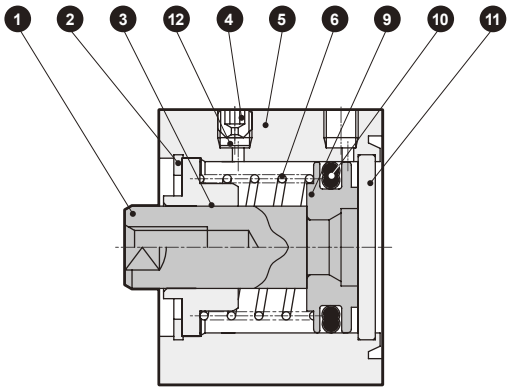
● SSD2-XL-12 to 32 (single acting extend type with switch)



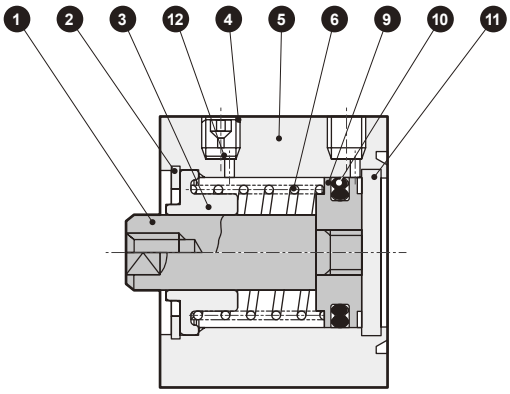
● SSD2-XL-40, 50 (single acting extend type with switch)



● SSD2-X-12 to 32 (single acting extend type)



● SSD2-X-40, 50 (single acting extend type)



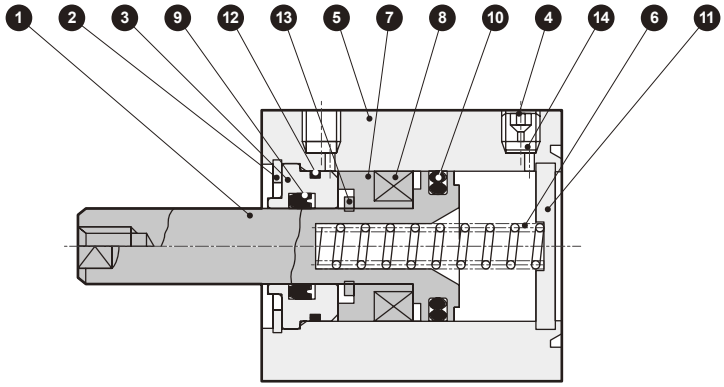
No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating	7	Spacer	Aluminum alloy	Chromate
				8	Magnet	Plastic	
2	C type snap ring	Steel	Phosphoric acid zinc	9	Piston	Aluminum alloy	Chromate
3	Rod bushing	Special aluminum	Alumite	10	Piston packing seal	Nitrile rubber	
4	Plug	Stainless steel		11	Guard	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
5	Body	Aluminum alloy	Hard alumite				
6	Spring	Piano wire	Electrode position coating	12	Stainless steel wire net	Stainless steel	

Repair parts list

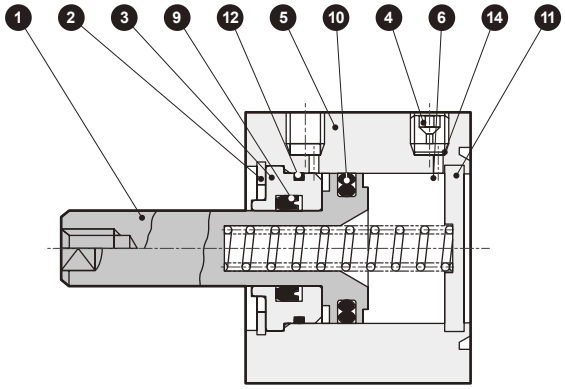
Bore size (mm)	Kit No.	Repair parts number
ø12	SSD2-X-12K	⑩
ø16	SSD2-X-16K	
ø20	SSD2-X-20K	
ø25	SSD2-X-25K	
ø32	SSD2-X-32K	
ø40	SSD2-X-40K	
ø50	SSD2-X-50K	

Internal structure and parts list

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



● SSD2-Y (single acting pull type)



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston	Stainless steel		8	Magnet	Plastic	
				9	Rod packing seal	Nitrile rubber	
2	C type snap ring	Steel	Phosphoric acid zinc	10	Piston packing seal	Nitrile rubber	
3	Rod bushing	Special aluminum alloy	Alumite	11	Guard	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
4	Plug	Stainless steel					
5	Body	Aluminum alloy	Hard alumite	12	Metal gasket	Nitrile rubber	
6	Spring	Piano wire	Electrode position coating	13	Round S type snap ring	Steel	Phosphoric acid zinc
7	Spacer	Aluminum alloy	Chromate	14	Stainless steel wire net	Stainless steel	

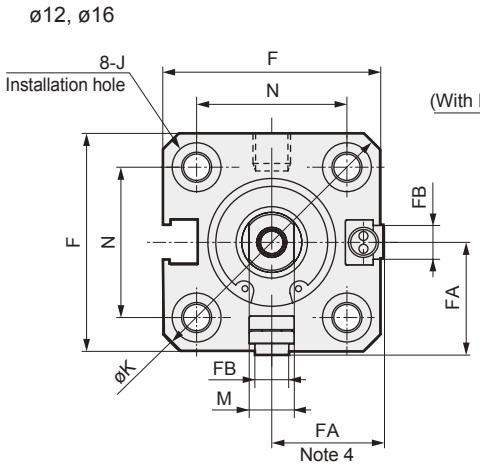
Repair parts list

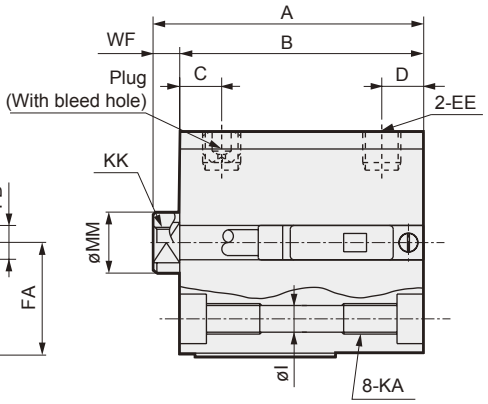
Bore size (mm)	Kit No.	Repair parts number
ø12	SSD2-Y-12K	
ø16	SSD2-Y-16K	
ø20	SSD2-Y-20K	
ø25	SSD2-Y-25K	9 10 12
ø32	SSD2-Y-32K	
ø40	SSD2-Y-40K	
ø50	SSD2-Y-50K	

Dimensions

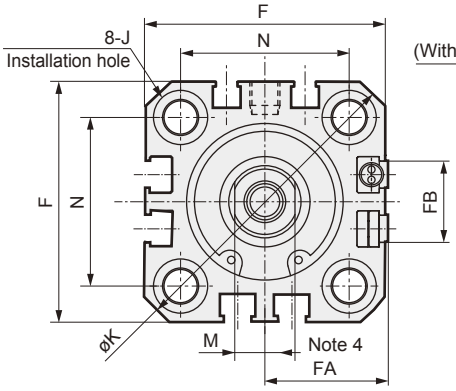
● SSD2-XL-12 to 25 (with switch)

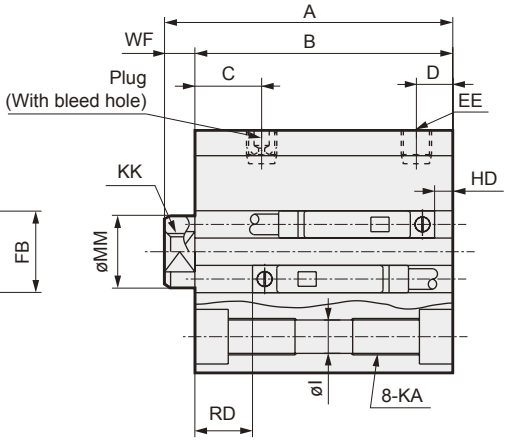
ø12, ø16



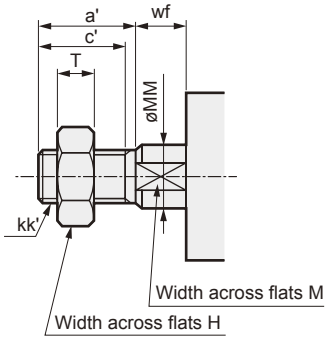


ø20, ø25





● Rod end male thread



● Cautions on switch installation groove

Note 1: Only the F type switch is provided for the tube bore size ø20 and ø25 piping port surface.

Symbol			Type with switch and common dimensions																
Bore size (mm)			A	B	C	D	EE	F	FA Note4	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	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															
ø16	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															
ø20	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															
ø25	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 dimension	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV	
Bore size (mm)	HD	RD	HD	RD	HD	RD	HD	RD
ø12	1.5	1.5	1.5	1.5	3.5	3.5		
ø16	0	4	0	4.5	1	6		
ø20	3	7.5	3	7.5	5	9.5	7.5	12
ø25	4	9.5	4	9.5	6	11.5	8.5	14

Note 2: HD and RD dimensions for the 5 stroke will differ from these due to manufacturing.
Note 3: Refer to page 91 for HD/RD dimensions and projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 4: Dimensions in ( ) are the values for radial lead wire.
Note 5: Refer to pages 93 to 102 for dimensions drawings with accessories and dimension drawings for discrete accessories.

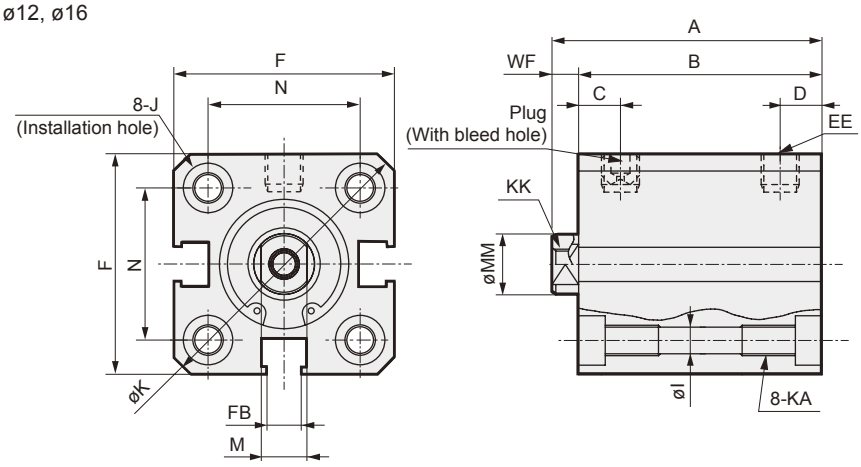
● Rod end male thread

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

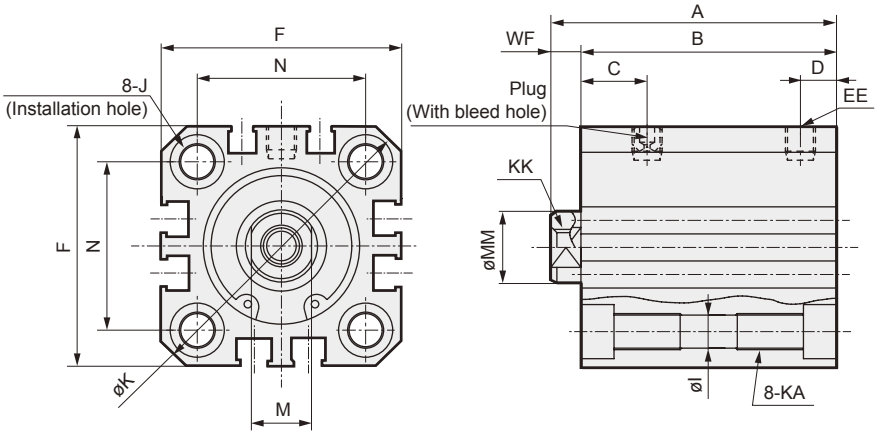
Dimensions

● SSD2-X-12 to 25 (without switch)

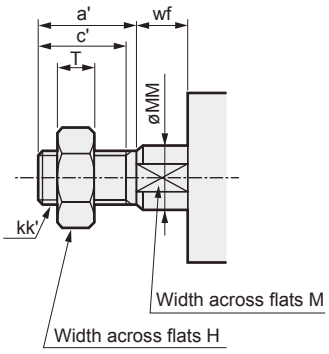
ø12, ø16



ø20, ø25



● Rod end male thread



Symbol / Bore size (mm)			A	B	C	D	EE	F	FA	FB	I	J	K	KA	KK	M	MM	N	WF
			Type without switch and common dimensions																
ø12	Stroke	5	25.5	22	5.5	5.5	M5	25	13	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	27															
ø16	Stroke	5	25.5	22	5.5	5.5	M5	29	15	4.5	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	18.5	12.5	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	20.5	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5
		10	37.5	32.5															

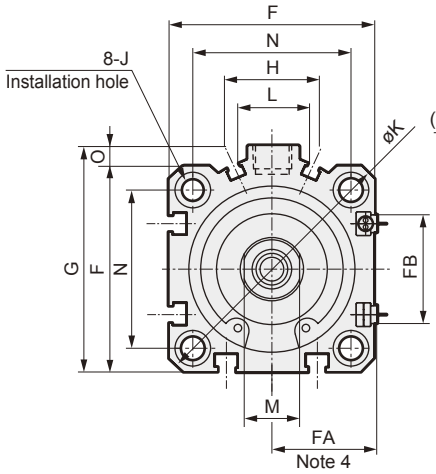
● Rod end male thread dimensions table

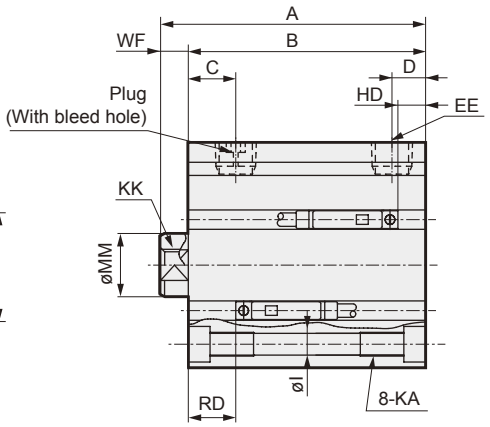
Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	8	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10 x 1.25	10	12	6	5

Note 1: Refer to pages 93 to 102 for dimension drawings for discrete accessories.

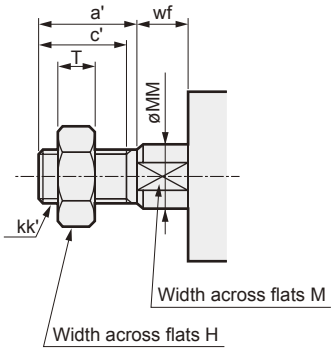
Dimensions

● SSD2-XL-32 to 50 (with switch)

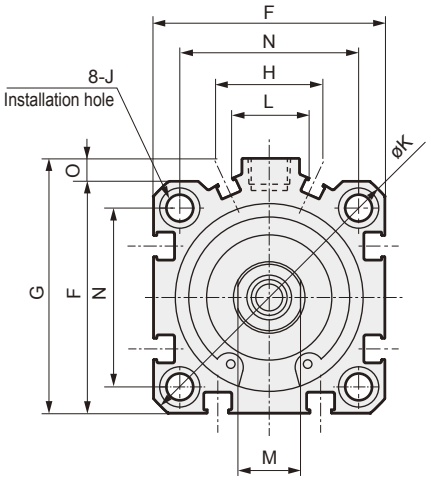


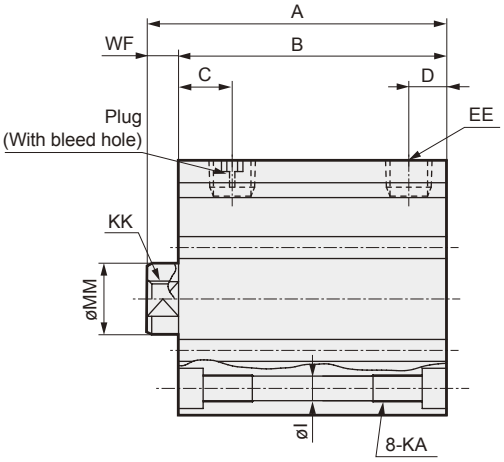


● Rod end male thread



● SSD2-X-32 to 50 (without switch)





Symbol		Without switch		Type with switch and common dimensions																				
Bore size (mm)		A	B	A	B	C	D	EE Note 6	F	FA Note 4	FB	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	Stroke 5	35	28	45	38	8	8	Rc1/8	45	23 (26.5)	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
	Stroke 10	40	33	50	43																			
ø40	Stroke 5	41.5	34.5	51.5	44.5	12	8.5	Rc1/8	52	26.5 (30)	27.5	57	24	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
	Stroke 10	46.5	39.5	56.5	49.5																			
ø50	Stroke 10	48.5	40.5	58.5	50.5	10.5	10.5	Rc1/4	64	32.5 (36)	28.5	71	33	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
	Stroke 20	58.5	50.5	68.5	60.5																			

Switch dimension	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size (mm)	HD Note2	RD Note2	HD Note2	RD Note2	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

Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke. Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.
Note 2: HD and RD dimensions for the 5 stroke differ from these due to manufacturing.
Note 3: Refer to page 91 for HD/RD dimensions and projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 4: Dimensions in ( ) of FA are values for radial lead wire.
Note 5: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.
Note 6: The port size is M5 for the 5 stroke length of ø32 with no switch.

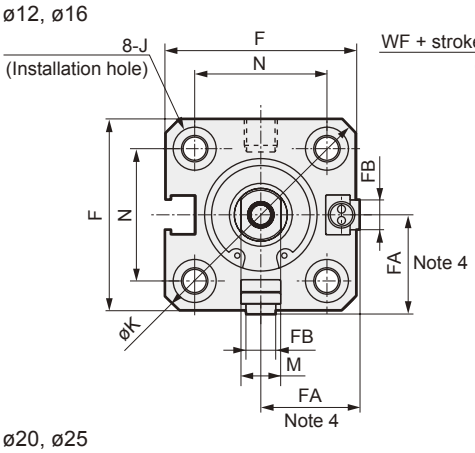
● Rod end male thread

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

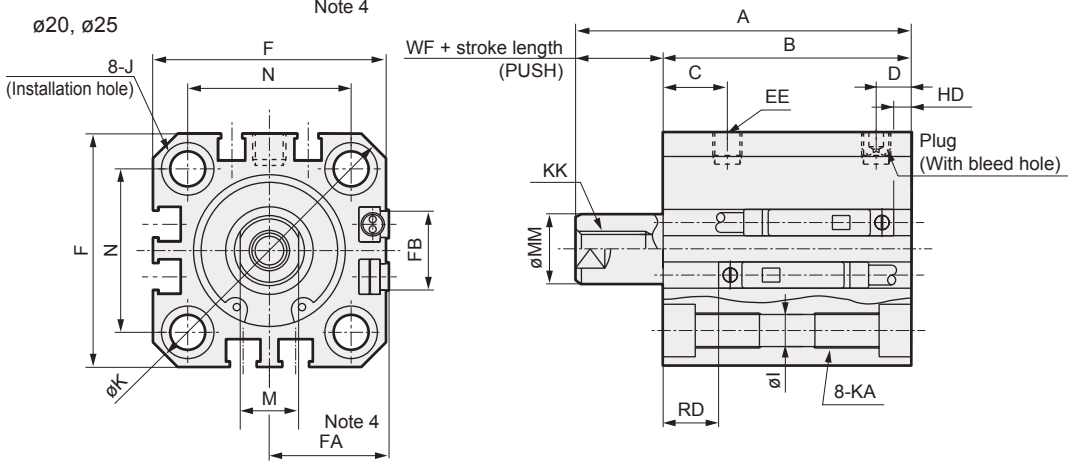
Dimensions

● SSD2-YL-12 to 25 (with switch)

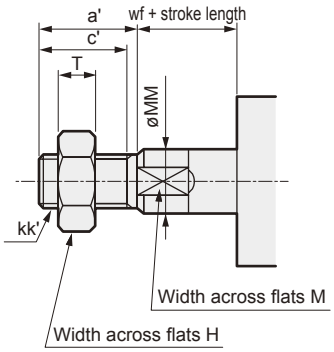
ø12, ø16



ø20, ø25



● Rod end male thread



● Cautions on switch installation groove

Note 1: Only the F type switch is provided for the tube bore size ø20 and ø25 piping port surface.

Symbol			Without switch		Type with switch and common dimensions																
Bore size (mm)			A	B	A	B	C	D	EE	F		FB	I	J	K	KA	KK	M	MM	N	WF
ø12	Stroke	5	30.5	22	40.5	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	40.5	27	45.5	32															3.5
ø16	Stroke	5	30.5	22	40.5	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	40.5	27	45.5	32															3.5
ø20	Stroke	5	34	24.5	44	34.5	8	5.5	M5	36	18.5 (22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
		10	44	29.5	54	39.5															4.5
ø25	Stroke	5	37.5	27.5	47.5	37.5	11	6	M5	40	20.5 (24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5
		10	47.5	32.5	57.5	42.5															5

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

Note 2: HD and RD dimensions for the 5 stroke will differ from these due to manufacturing.
Note 3: Refer to page 91 for HD/RD dimensions and projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 4: Dimensions in ( ) are the values for radial lead wire.
Note 5: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

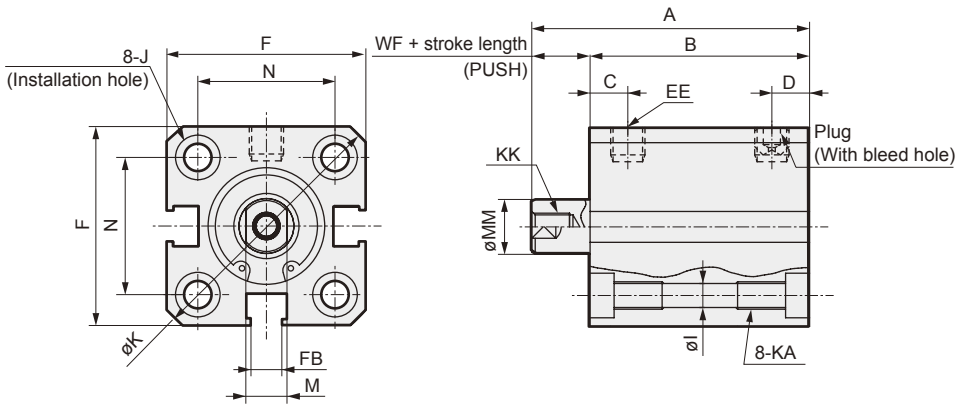
● Rod end male thread

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

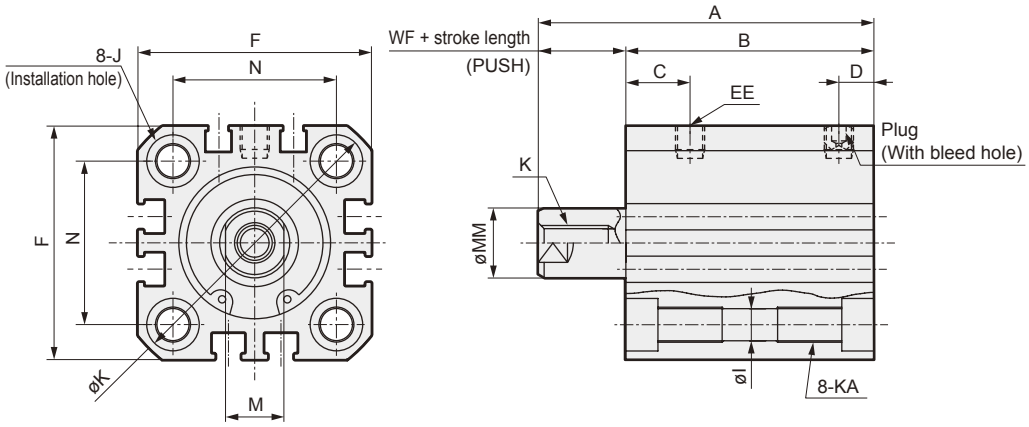
Dimensions

● SSD2-Y-12 to 25 (without switch)

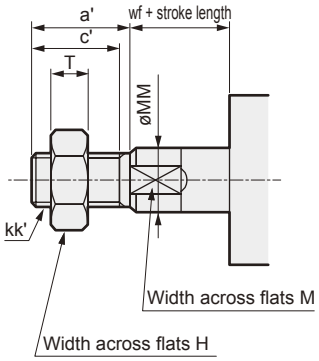
ø12, ø16



ø20, ø25



● Rod end male thread



Symbol / Bore size (mm)			Without switch															
			A	B	C	D	EE	F	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	Stroke	5	30.5	22	5.5	5.5	M5	25	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	40.5	27														3.5
ø16	Stroke	5	30.5	22	5.5	5.5	M5	29	4.5	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	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	29.5														4.5
ø25	Stroke	5	37.5	27.5	11	6	M5	40	13.5	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

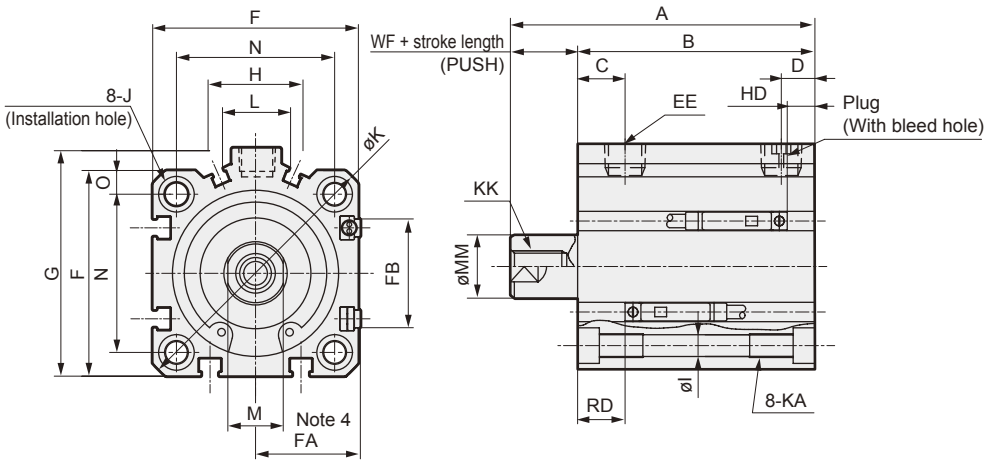
● Rod end male thread dimensions table

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

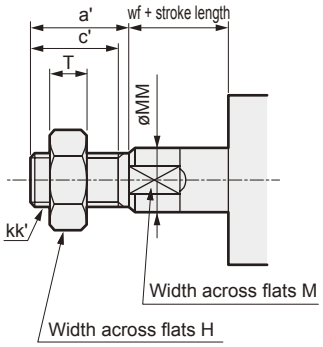
Note 1: Refer to pages 93 to 102 for dimension drawings for discrete accessories.

Dimensions

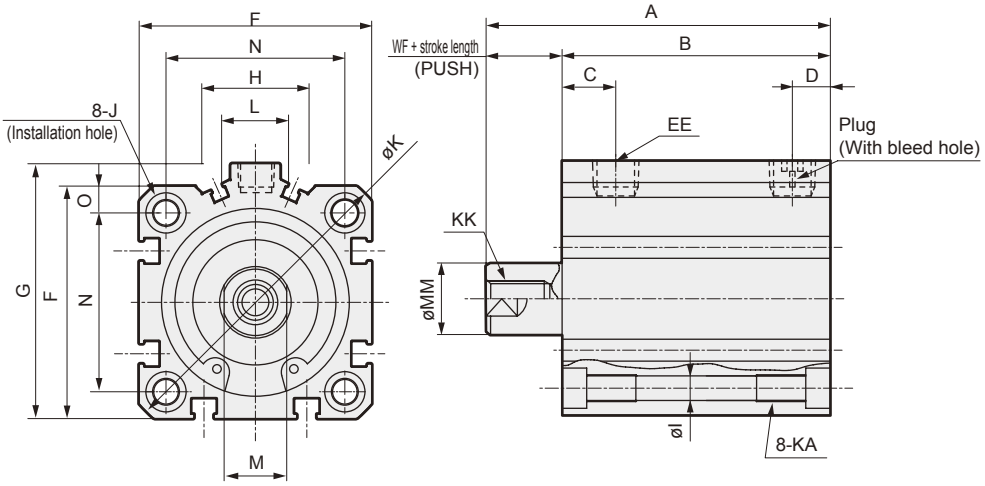
● SSD2-YL-32 to 50 (with switch)



● Rod end male thread



● SSD2-Y-32 to 50 (without switch)



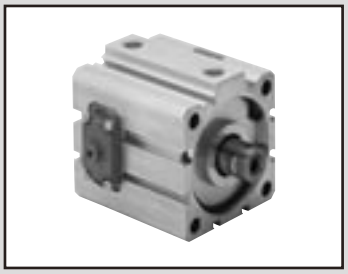
Symbol			Without switch		Type with switch and common dimensions																			
Bore size (mm)			A	B	A	B	C	D	EE Note 5	F	FA Note 3	FB	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	Stroke	5	40	28	50	38	8	8	Rc1/8	45	23 (26.5)	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
		10	50	33	60	43																			7
ø40	Stroke	5	51.5	34.5	61.5	44.5	12	8.5	Rc1/8	52	26.5 (30)	27.5	57	24	5.5	11 spot face depth 6.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
		10	56.5	39.5	66.5	49.5																			7
ø50	Stroke	10	58.5	40.5	68.5	50.5	10.5	10.5	Rc1/4	64	32.5 (36)	28.5	71	33	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
		20	78.5	50.5	88.5	60.5																			8

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

Note 1: HD and RD dimensions for 5 stroke will differ from these due to manufacturing.
Note 2: Refer to page 91 for HD/RD dimensions and projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 3: Dimensions in ( ) are the values for radial lead wire.
Note 4: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.
Note 5: The port size is M5 for the 5 stroke ø32 with no switch.

● Rod end male thread

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



Compact cylinder, double acting position locking

SSD2-Q Series

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

JIS symbol

RoHS

Specifications

Descriptions	SSD2-Q SSD2-QL (with switch)							
Bore size mm	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting position locking type							
Working fluid	Compressed air							
Max. working pressure MPa	1.0							
Min. working pressure MPa	0.15							
Withstanding pressure MPa	1.6							
Ambient temperature °C	-10 to 60 (no freezing)							
Port size	M5		Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.5}_{0}$							
Working piston speed mm/s	50 to 500					50 to 300		
Cushion	Rubber cushion							
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISOVG 32.)							
Position locking mechanism	Rod end or head end							
Holding force N	Max. thrust x 0.7							
Allowable energy absorption J	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke length

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

⚠ Before starting use, read Safety Precautions for (Position Locking Mechanism) on Intro 4 to 6.

Switch specifications (F type switch)

● 1 color/2 color indicator

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA		100mA or less	50mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

Switch specifications (T type switch)

● 1 color/2 color indicator/strong magnetic field proof

Descriptions	Proximity 2 wire	Proximity 2 wire			Proximity 3 wire				Reed 2 wire							Proximity 2 wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom order)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD
Applications	Programmable controller, relay, small solenoid valve	Programmable controller			Programmable controller, relay				Programmable controller, relay		Programmable controller, relay, IC circuit (w/o light), serial connection		Programmable controller, relay			Programmable controller dedicated
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Power voltage	-				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 100mA	5 to 20mA (Note 1)			100mA or less		50mA or less		5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	5 to 20mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)			Red/green LED (ON lighting)
Leakage current	1 mA or less at 100 VAC, 2 mA or less at 200 VAC	1mA or less			10μA or less				0mA							1mA or less

Cylinder weight table (weight with switch is with a cylinder switch 2 pieces.)

● Rod end position locking (Unit: g)

Stroke length (mm)	10		15		20		25		50		75		100	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch
ø20	201	242	213	254	226	267	238	279	330	370	392	433	455	495
ø25	274	315	290	331	306	347	322	363	439	480	519	560	599	640
ø32	430	474	451	495	473	517	494	538	602	646	709	753	817	861
ø40	632	681	658	708	685	734	711	761	844	893	976	1026	1109	1158
ø50	1096	1147	1138	1189	1180	1231	1222	1273	1432	1483	1642	1693	1852	1903
ø63	1609	1663	1664	1718	1719	1773	1774	1828	2049	2103	2324	2378	2599	2653
ø80	-	-	-	-	-	-	3822	3882	4255	4315	4904	4964	5336	5396
ø100	-	-	-	-	-	-	5769	5835	6339	6405	7194	7260	7764	7830

● With head end position locking (Unit: g)

Stroke length (mm)	10		15		20		25		50		75		100	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch
ø20	217	258	230	270	242	283	255	295	330	370	392	433	455	495
ø25	295	336	311	352	327	368	343	384	439	480	519	560	599	640
ø32	462	506	484	528	505	549	527	571	634	678	742	786	849	893
ø40	688	737	714	763	741	790	767	816	900	949	1032	1081	1165	1214
ø50	1180	1231	1222	1273	1264	1315	1306	1357	1516	1567	1726	1777	1936	1987
ø63	1675	1729	1730	1784	1785	1839	1840	1894	2115	2169	2390	2444	2665	2719
ø80	-	-	-	-	-	-	3952	4012	4385	4445	4904	4964	5336	5396
ø100	-	-	-	-	-	-	5940	6006	6510	6576	7194	7260	7764	7830

How to order

● Without switch

SSD2-Q - 20 - 10 - R ——— NMO - LB - I

● With switch

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

Ⓐ Bore size

Ⓑ Stroke length

Ⓒ Position locking mechanism

Ⓓ Switch model no. Note 1 Note 5

Ⓔ Switch quantity

Ⓕ Option Note 2

Ⓖ Mounting bracket Note 3

Ⓗ Accessory Note 4

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

Ⓑ Stroke length (mm)

Refer to stroke length table on the following page.

Ⓒ Position locking mechanism	
R	Rod end position locking
H	head end position locking

Ⓓ Switch model no.

Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire	Bore size 20	25	32	40	50	63	80	100
F2H*	F2V*	Proximity	1 color indicator type	2-wire	●	●						
F3H*	F3V*			3-wire	●	●						
F2YH*	F2YV*		2 color indicator type	2-wire	●	●						
F3YH*	F3YV*			3-wire	●	●						
T0H*	T0V*	Reed	1 color indicator type	2-wire	●	●	●	●	●	●	●	●
T5H*	T5V*		Without light		●	●	●	●	●	●	●	●
T8H*	T8V*		1 color indicator type		●	●	●	●	●	●	●	●
T1H*	T1V*	Proximity	1 color indicator type	2-wire	●	●	●	●	●	●	●	●
T2H*	T2V*				●	●	●	●	●	●	●	●
T3H*	T3V*			3-wire	●	●	●	●	●	●	●	●
T3PH*	T3PV*		1 color indicator type (PNP output) (custom order)		●	●	●	●	●	●	●	●
T2WH*	T2WV*		2 color indicator type	2-wire	●	●	●	●	●	●	●	●
T2YH*	T2YV*				●	●	●	●	●	●	●	●
T3WH*	T3WV*			3-wire	●	●	●	●	●	●	●	●
T3YH*	T3YV*				●	●	●	●	●	●	●	●
T2YD*	-		Strong magnetic field proof switch	2-wire	●	●	●	●	●	●	●	●
T2YDT*	-				●	●	●	●	●	●	●	●
T2JH*	T2JV*		Off-delay type	2-wire	●	●	●	●	●	●	●	●

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

Ⓔ Switch quantity	
R	One on rod end
H	One on head end
D	Two

Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread
M0	Non-locking manual override (release bolt attached)
M1	Locking manual override

Ⓖ Mounting bracket	
LB	Axial foot
CB	Clevis (pin and snap ring attached)
FA	Rod end flange type
FB	Head end flange type

Ⓗ Accessory (permissible if rod end male thread "N" was selected.)	
I	Rod eye
Y	Rod clevis (pin and snap ring attached)

⚠ Note on model no. selection

Note 1: F type switch is installable only on the piping port of tube bore size ø20, ø25.

Note 2: Only the nonlocking manual override is used if M0 or M1 is not selected for the Ⓕ option. Release bolt is not attached.

Note 3: The mounting bracket is enclosed when shipped.

Note 4: "I" and "Y" can not be selected at the same time.

Note 5: Switches are shipped with the product. Contact CKD when shipment must be assembled.

<Example of model number>

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

Model: Compact cylinder position locking type

Ⓐ Bore size : ø20mm
Ⓑ Stroke length : 10mm
Ⓒ Position locking mechanism : Rod end position locking
Ⓓ Switch model no. : Reed switch T0H, lead wire 1m
Ⓔ Switch quantity : One on rod end
Ⓕ Option : Rod end male thread
Ⓖ Mounting bracket : Axial foot
Ⓗ Accessory : Rod eye

How to order switch

SW - T0H

Switch model no. (item Ⓓ above)

(Stroke length table)

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

How to order mounting bracket

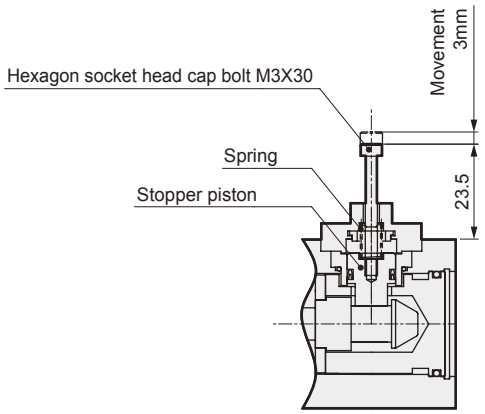
Bore size (mm) / Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80
Foot (LB)	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50	SSD2-LB-63	SSD2-LB-80
Flange (FA/FB)	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50	SSD2-FA-63	SSD2-FA-80
Clevis (CB)	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50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

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

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

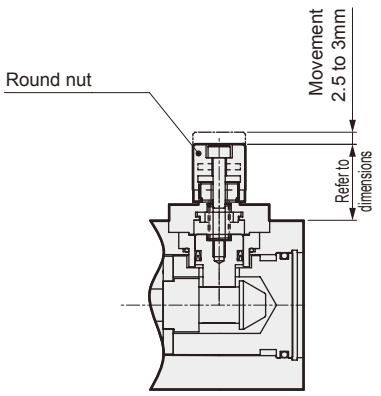
<Explanation of manual override>

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



Screw a hexagon socket bolt (M3x30) into the stopper piston and pull the bolt up with a force of 20 N or more. The stopper piston moved and the lock is released. (Operate loadless horizontal installation or opposition side port with pressurized.)
When the hand is released from the bolt, and the stopper piston returns by the internal spring and enters the piston rod groove, the piston is locked.

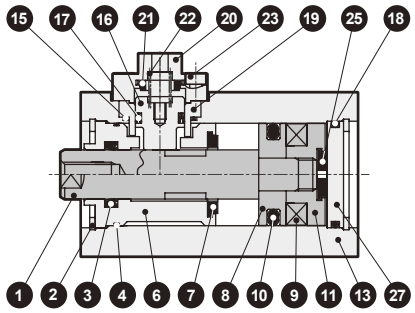
● Locking manual override (option symbol: M1)



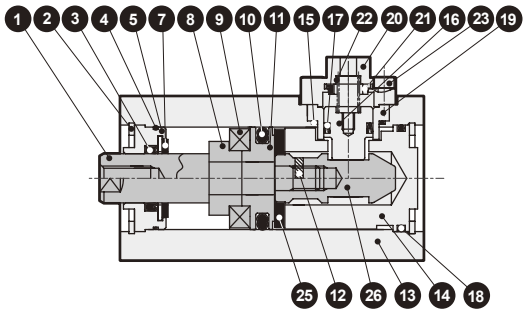
When the round nut is turned counterclockwise, the stopper piston moved and the lock is released. When the nut is turned clockwise to the lock position, the stopper piston is returned. When it fits into the piston rod slot again, the piston is locked. If the stopper piston is not deeply fit into the slot when locked, damage could occur. Check the round nut fits into the back.

Internal structure drawing and parts list (ø20 to ø50)

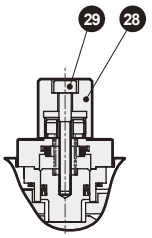
● SSD2-QL-20 to 50-R
(Double acting single rod type with switch rod end position locking)



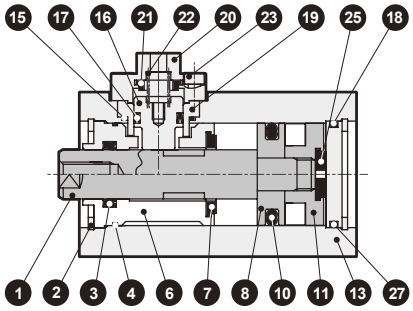
● SSD2-QL-20 to 50-H
(Double acting single rod type with switch head end position locking)



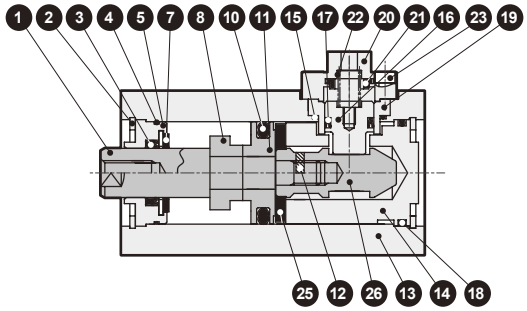
● Locking manual override



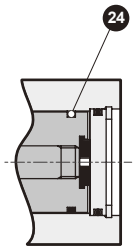
● SSD2-Q-20 to 50-R
(Double acting single rod type rod end position locking)



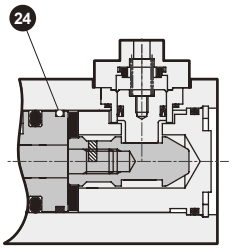
● SSD2-Q-20 to 50-H
(Double acting single rod type head end position locking)



● ø20, ø25: 50 mm stroke and over



● ø20, ø25: 50 mm stroke and over



Part list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	ø20 to ø25: Stainless steel ø32 to ø50: Steel	Industrial chrome plating	16	Stopper piston	Steel	Nitriding
2	C type snap ring	Steel	Phosphoric acid zinc	17	Stopper packing seal	Nitrile rubber	
3	Rod packing seal	Nitrile rubber		18	O ring	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		19	Stopper housing	ø20 to ø30, ø50: Aluminum alloy	Alumite
5	Rod bushing	Special aluminum	Alumite			ø40: Alloy steel	Chromate
6	Rod cover	Aluminum alloy	Alumite	20	Stopper guard	Aluminum alloy	Chromate
7	Cushion rubber (R)	Urethane rubber		21	Cushion rubber	Urethane rubber	
8	Spacer	Aluminum alloy	ø20 to ø32: Chromate	22	Coil spring	Piano wire	Electrode position coating
9	Magnet	Plastic		23	Hexagon socket head cap bolt	Steel	
10	Piston packing seal	Nitrile rubber		24	Wear ring	Polyacetal resin (Only 50 mm stroke and over ø20, ø25)	
11	Piston	Aluminum alloy	Chromate	25	Cushion rubber (H)	Urethane rubber	
12	Spring pin	Steel	Blackening	26	Sleeve	Steel	Nitriding
13	Body	Aluminum alloy	Hard alumite	27	Guard	Aluminum alloy	Chromate
14	Head cover	Aluminum alloy	Chromate	28	Round nut	Aluminum alloy	
15	O ring	Nitrile rubber		29	Hexagon socket head cap bolt	Steel	

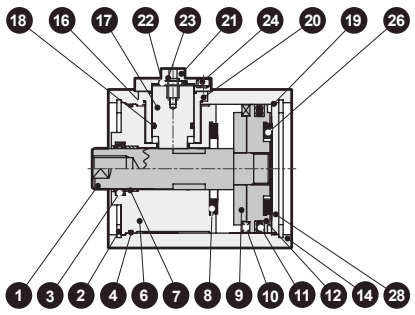
Repair parts list

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

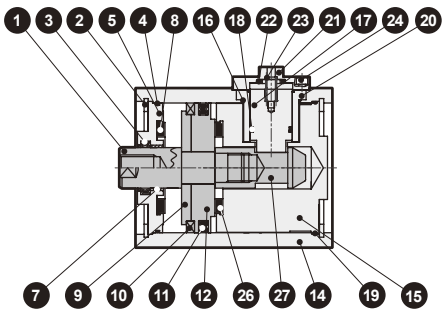
Note 1: 24 can be used only on ø20 and ø25.

Internal structure drawing and parts list (ø63 to ø100)

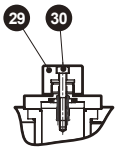
● SSD2-QL-63 to 100-R
(Double acting single rod type with switch rod end position locking)



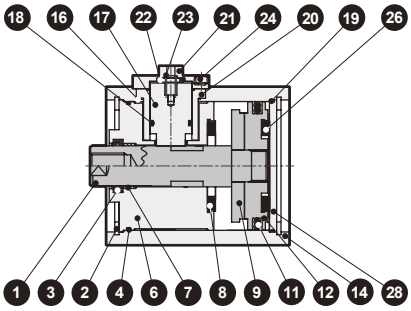
● SSD2-QL-63 to 100-H
(Double acting single rod type with switch head end position locking)



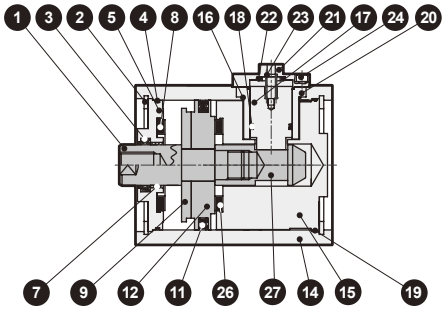
● Locking manual override



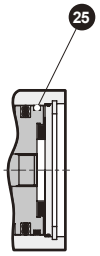
● SSD2-Q-63 to 100-R
(Double acting single rod type rod end position locking)



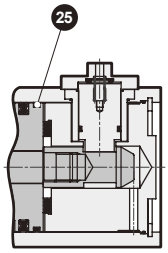
● SSD2-Q-63 to 100-H
(Double acting single rod type head end position locking)



● ø80, ø100: 75 mm stroke and over



● ø80, ø100: 75 mm stroke and over



Part list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating	17	Stopper piston	Steel	Nitriding
2	C type snap ring	Steel	Phosphoric acid zinc	18	Stopper packing seal	Nitrile rubber	
3	Rod packing seal	Nitrile rubber		19	O ring	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		20	Stopper housing	ø80: Aluminum alloy	Alumite
5	Rod bushing	Special aluminum	Alumite			ø63, ø100: Alloy steel	Chromate
6	Rod cover	Aluminum alloy	Alumite	21	Stopper guard	Aluminum alloy	Chromate
7	Bush	Oilless dry met		22	Cushion rubber	Urethane rubber	
8	Cushion rubber (R)	Urethane rubber		23	Coil spring	Piano wire	Electrode position coating
9	Spacer	Aluminum alloy		24	Hexagon socket head cap bolt	Steel	
10	Magnet	Plastic		25	Wear ring	Polyacetal resin (Only 75 mm stroke and over ø80, ø100)	
11	Piston packing seal	Nitrile rubber		26	Cushion rubber (H)	Urethane rubber	
12	Piston	Aluminum alloy	Chromate	27	Sleeve	Steel	Nitriding
13	Spring pin	Steel	Blackening	28	Guard	Aluminum alloy	Chromate
14	Body	Aluminum alloy	Hard alumite	29	Round nut	Aluminum alloy	
15	Head cover	Aluminum alloy	Chromate	30	Hexagon socket head cap bolt	Steel	
16	O ring	Nitrile rubber					

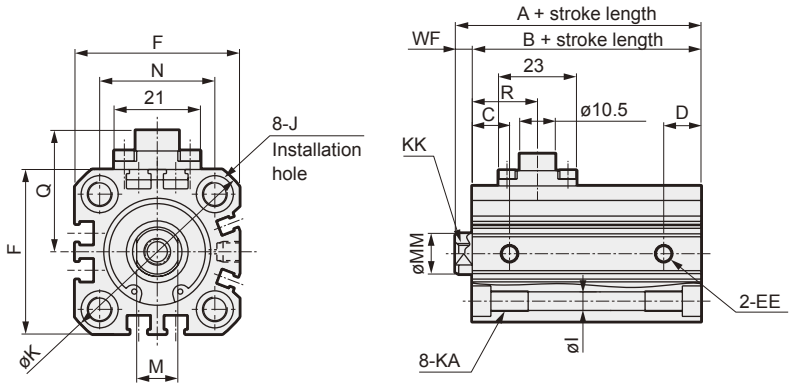
Repair parts list

Bore size (mm)	Kit No.	Repair parts number
ø63	SSD2-Q-63K	3 4 8 11 16 18 19 22 25 26
ø80	SSD2-Q-80K	
ø100	SSD2-Q-100K	

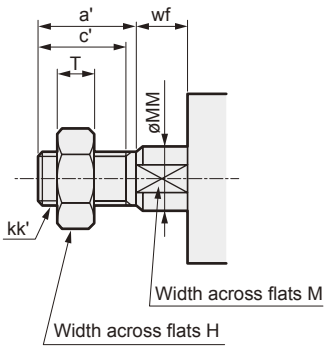
Note 1: 25 can be used only on ø80 and ø100.

Dimensions (ø20, ø25)

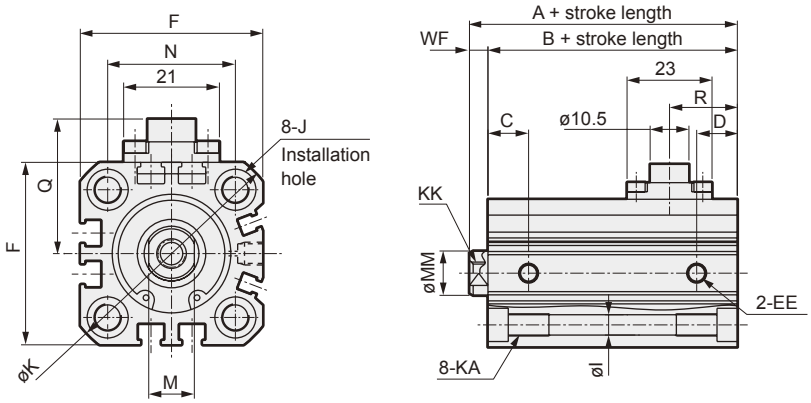
● SSD2-Q (L)-20 to 25-R
*Dimensions are the same for cylinders with and without switches.

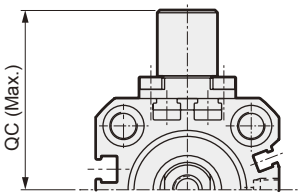


● Rod end male thread



● SSD2-Q (L)-20 to 25-H
*Dimensions are the same for cylinders with and without switches.





● Cautions on switch installation groove
Note 1: Only the F type switch is provided for the tube bore size ø20 and ø25 piping port surface.

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

Symbol / Bore size (mm)	Rod end position locking mechanism					With head end position locking mechanism				
	A Note1	B Note1	C	D	R	A Note1	B Note1	C	D	R
ø20	59 (80.5)	54.5 (66)	9.5	8	18.6	65.5 (80.5)	61 (66)	9.5	8	17.3
ø25	62.5 (84)	57.5 (69)	12	8.5	19.3	69 (84)	64 (69)	12	8.5	18.4

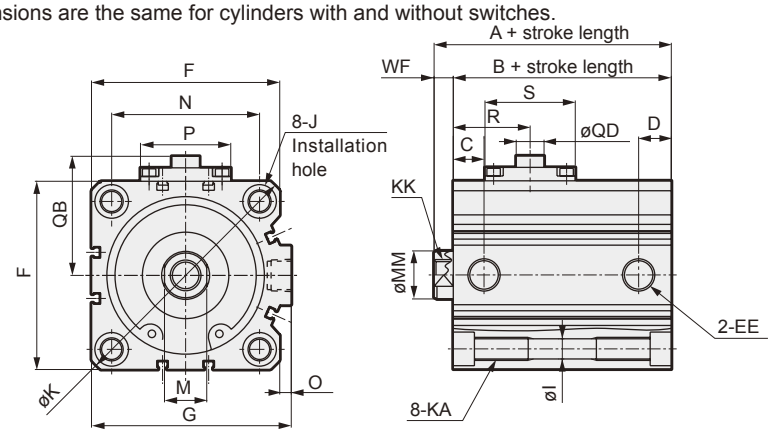
● Rod end male thread

Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf Note1
ø20	14	12	13	M8	8	10	5	4.5 (14.5)
ø25	17.5	15	17	M10 x 1.25	10	12	6	5 (15)

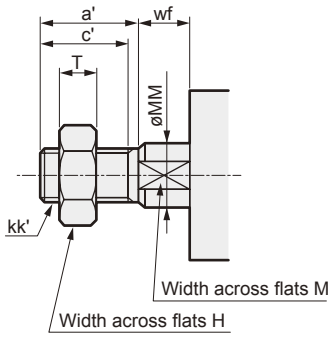
Note 1: Values in ( ) apply when 25 strokes is exceeded.
Note 2: Refer to page 59, 60 for a switch installation position.
Note 3: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

Dimensions (ø32 to ø100)

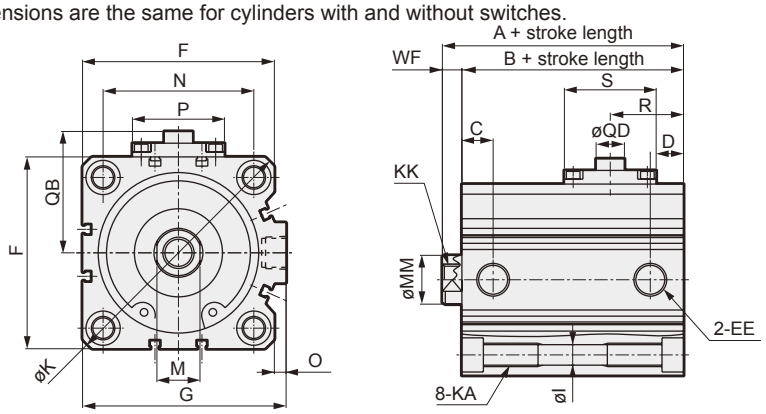
● SSD2-Q (L)-32 to 100-R
*Dimensions are the same for cylinders with and without switches.



● Rod end male thread



● SSD2-Q (L)-32 to 100-H
*Dimensions are the same for cylinders with and without switches.



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

Symbol / Bore size (mm)	Common dimension							
	O	P	S	QB	QC	QD	QE	WF Note1
ø32	4.5	22	30.5	33.5	46.3	10.5	13	7
ø40	5	22	30.5	37	49.8	10.5	13	7
ø50	7	40.5	23	44	56.3	10.5	13	8
ø63	7	40.5	23	50.5	62.8	10.5	13	8
ø80	6	47	47	62	77.5	14.5	24	10 (20)
ø100	6.5	47	47	71.5	87	14.5	24	12 (22)

Symbol / Bore size (mm)	Rod end position locking mechanism					With head end position locking mechanism				
	A Note1	B Note1	C	D	R	A Note1	B Note1	C	D	R
ø32	65	58	11	9	19.2	72.5	65.5	11	9	20.9
ø40	71.5	64.5	14	11	21.7	82	75	14	14	23.9
ø50	73.5	65.5	15	12.5	24.7	83.5	75.5	15	12.5	29.8
ø63	79	71	19	16	26.2	85	77	15	16	25.5
ø80	113.5 (136)	103.5 (116)	18	17	40	121 (136)	111 (116)	18	17	37.5
ø100	125 (147.5)	113 (125.5)	23	21	44.5	132.5 (147.5)	120.5 (125.5)	23	21	40

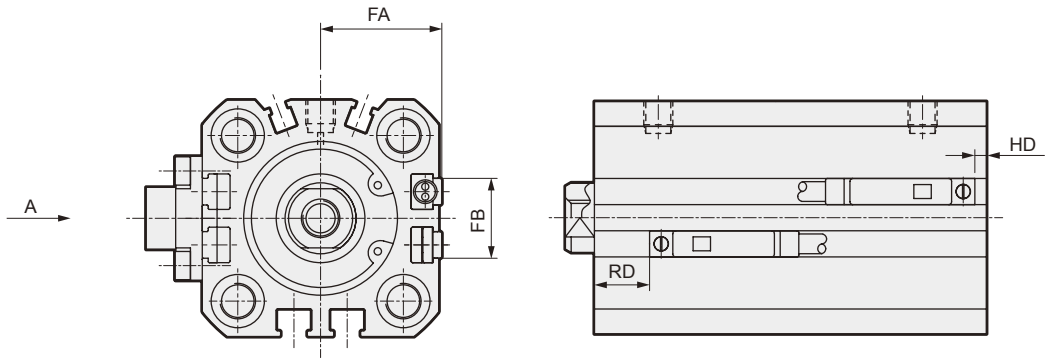
● Rod end male thread

Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf Note1
ø32	23.5	20.5	22	M14 x 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 x 1.5	14	16	8	5
ø50	28.5	26	27	M18 x 1.5	17	20	11	5
ø63	28.5	26	27	M18 x 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 x 1.5	22	25	13	8 (18)
ø100	35.5	32.5	41	M26 x 1.5	27	30	16	8 (18)

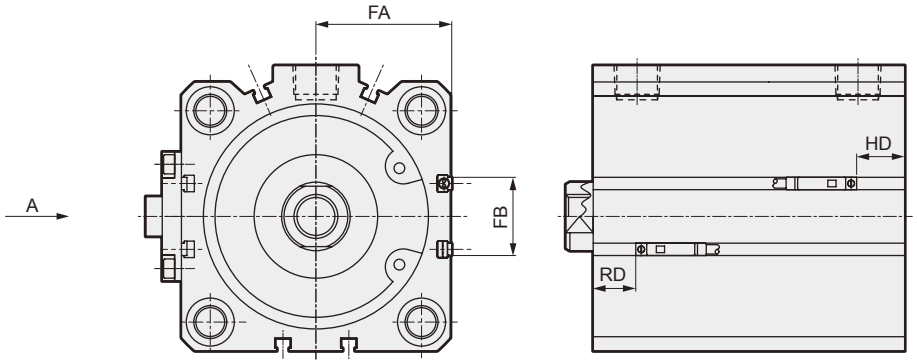
Note 1: Values in ( ) apply when 50 strokes is exceeded.
Note 2: Refer to page 59, 60 for a switch installation position.
Note 3: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

Dimensions (1 color indicator type, 2 color indicator type, off-delay type, strong magnetic field, T1*, T8*with switch)

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



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



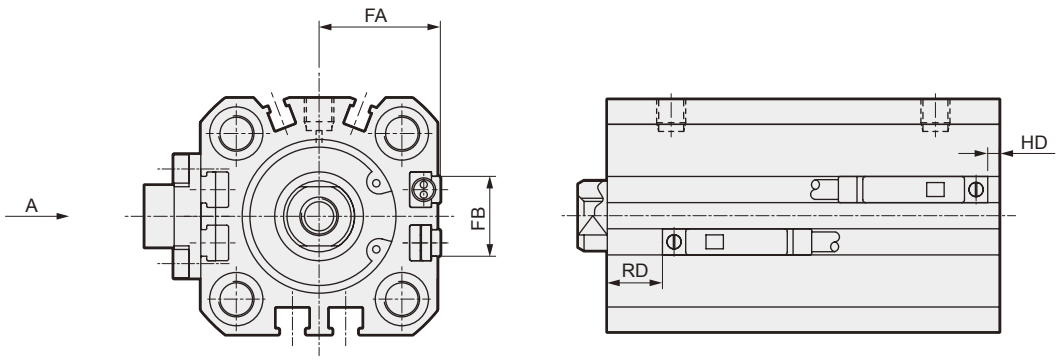
Symbol	Common dimension		T0H/T0V, T5H/T5V		T2H/T2V, T3H/T3V		T2WH/T2WV, T3WH/T3WV		F2H/F2V, F3H/F3V F2YH/F2YV, F3YH/F3YV	
Bore size (mm)	FA	FB	HD	RD	HD	RD	HD	RD	HD	RD
ø20	18.5	12.5	4	32	4	32	6	33.5	8.5	36
ø25	20.5	13.5	6.5	33.5	6.5	33.5	8.5	35	11	37.5
ø32	23	20.5	5.5	34	5.5	34	7.5	36		
ø40	26.5	27.5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

Symbol	T2YH/T2YV, T3YH, T3YV,T2JH/T2JV				T2YD, T2YDT or T1H/T1 V				T8H/T8V Note 1			
Bore size (mm)	FA	FB	HD	RD	FA	FB	HD	RD	FA	FB	HD	RD
ø20	24.3	16	3	30	29.3	16	3	30	24.3	16	0	25.5
ø25	26.3	17	5.5	32	31.3	17	5.5	32	26.3	17	0.5	27
ø32	28.8	24	4	32.5	33.8	24	4	32.5	28.8	24	0	28
ø40	32.3	31	7	36.5	37.3	31	7	36.5	32.3	31	2	31.5
ø50	38.3	32	5.5	39.5	43.3	32	5.5	39.5	38.3	32	0.5	34.5
ø63	44.8	32	9	40.5	49.8	32	9	40.5	44.8	32	4	35.5
ø80	55.3	32	17.5	64.5	60.3	32	17.5	64.5	55.3	32	12.5	60
ø100	64.8	32	23	68.5	69.8	32	23	68.5	64.8	32	18	64

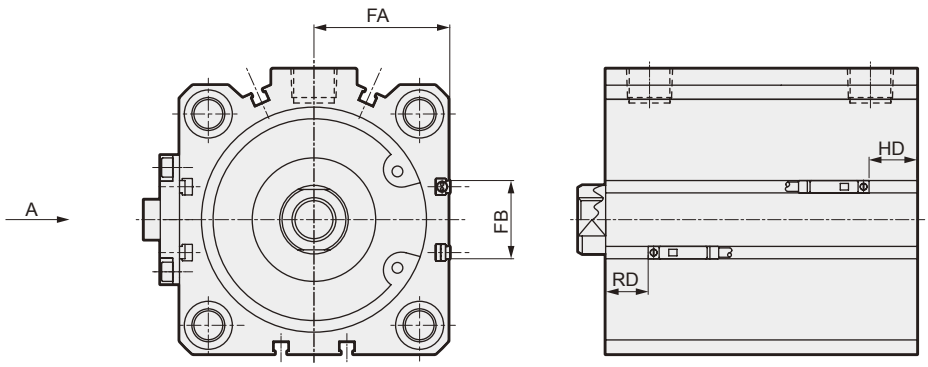
Note 1: The T8 switch cannot be used on the A side (position locking mechanism side).
Note 2: Only the F type switch is provided for the tube bore size ø20 and ø25 piping port surface.

Dimensions (1 color indicator type, 2 color indicator type, off-delay type, strong magnetic field, T1*, T8*with switch)

● SSD2-QL-20 to 25-H (head end position locking with switch)



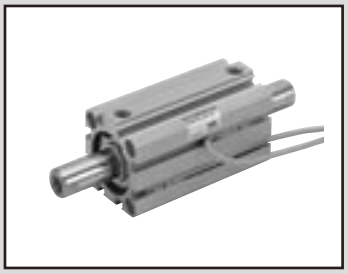
● SSD2-QL-32 to 100-H (head end position locking with switch)



Symbol	Common dimension		T0H/T0V, T5H/T5V		T2H/T2V, T3H/T3V		T2WH/T2WV, T3WH/T3WV		F2H/F2V, F3H/F3V F2YH/F2YV, F3YH/F3YV	
Bore size (mm)	FA	FB	HD	RD	HD	RD	HD	RD	HD	RD
ø20	18.5	12.5	33.5	9	33.5	9	35.5	10.5	38	13
ø25	20.5	13.5	35.5	10	35.5	10	37.5	12	40	14
ø32	23	20.5	38	9	38	9	40	11		
ø40	26.5	27.5	46	10.5	46	10.5	48	12		
ø50	32.5	28.5	46	11	46	11	48	12.5		
ø63	39	28.5	46.5	12	46.5	12	48.5	14		
ø80	49.5	28.5	78	14.5	78	14.5	80	16		
ø100	59	28.5	84.5	28	84.5	28	86.5	29.5		

Symbol	T2YH/T2YV, T3YH, T3YV,T2JH/T2JV				T2YD, T2YDT or T1H/T1 V							
Bore size (mm)	FA	FB	HD	RD	FA	FB	HD	RD	FA	FB	HD	RD
ø20	24.3	16	32.5	7.5	29.3	16	32.5	7.5	24.3	16	27.5	2.5
ø25	26.3	17	34	8.5	31.3	17	34	8.5	26.3	17	29.5	3.5
ø32	28.8	24	36.5	7.5	33.8	24	36.5	7.5	28.8	24	32	2.5
ø40	32.3	31	44.5	9	37.3	31	44.5	9	32.3	31	40	4
ø50	38.3	32	45	9	43.3	32	45	9	38.3	32	40	4.5
ø63	44.8	32	45	10.5	49.8	32	45	10.5	44.8	32	40	5.5
ø80	55.3	32	76.5	13	60.3	32	76.5	13	55.3	32	72	8
ø100	64.8	32	83	26	69.8	32	83	26	64.8	32	78	21

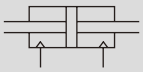
Note 1: The T8 switch cannot be used on the A side (position locking mechanism side).
Note 2: Only the F type switch is provided for the tube bore size ø20 and ø25 piping port surface.



Compact cylinder, double acting, double rod type

SSD2-D Series

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

JIS symbol 

RoHS

Specifications

Descriptions		SSD2-D SSD2-DL (with switch)									
Bore size mm		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation		Double acting									
Working fluid		Compressed air									
Max. working pressure MPa		1.0									
Min. working pressure MPa		0.15							0.1		
Withstanding pressure MPa		1.6									
Ambient temperature °C		-10 to 60 (no freezing)									
Port size		M5				Rc1/8 Note 1		Rc1/4		Rc3/8	
Stroke tolerance mm	Rubber cushioned	$^{+2.0}_{0}$									
	No cushion	$^{+1.0}_{0}$									
Working piston speed mm/s		50 to 500							50 to 300		
Cushion		The type with rubber cushion or without rubber cushion can be selected.									
Lubrication		Not required (when lubricating, use turbine oil Class 1 ISOVG 32.)									
Allowable energy absorption J	Rubber cushioned	0.03	0.05	0.10	0.16	0.16	0.44	0.75	0.78	2.51	3.92
	No cushion	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

Note 1: The port size is M5 for the 5 stroke length of ø32 with no switch.

Stroke length

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

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

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

Note: 2 color indicator type, off-delay type, strong magnetic field proof type, or 10 mm or shorter type with T1* or T8* switch is not available.

Switch specifications (F type switch)

● 1 color/2 color indicator

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA		100mA or less	50mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

Switch specifications (T type switch)

● 1 color/2 color indicator/strong magnetic field proof

Descriptions	Proximity 2 wire	Proximity 2 wire			Proximity 3 wire				Reed 2 wire							Proximity 2 wire
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom order)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD
Applications	Programmable controller, relay, small solenoid valve	Programmable controller			Programmable controller, relay				Programmable controlle, relay		Programmable controller, relay, IC circuit (w/o light), serial connection		Programmable controller, relay			Programmable controller dedicated
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Power voltage	-				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 100mA	5 to 20mA (Note 1)			100mA or less		50mA or less		5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	5 to 20mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)			Red/green LED (ON lighting)
Leakage current	1 mA or less at 100 VAC, 2 mA or less at 200 VAC	1mA or less			10μA or less				0mA							1mA or less

Cylinder weight table

(Weight with switch includes weight with two cylinder switches.) (Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch
ø12	52	105	60	105	69	115	77	124	86	134	95	147	-	-	-	-	-	-	-	-	-	-	-	-
ø16	74	133	85	133	95	144	106	156	117	168	128	177	-	-	-	-	-	-	-	-	-	-	-	-
ø20	131	187	143	222	161	238	179	254	196	269	214	285	232	301	249	316	267	332	284	347	-	-	-	-
ø25	147	238	162	253	178	269	194	285	210	301	226	316	242	332	257	348	275	364	288	379	-	-	-	-
ø32	184	299	230	344	275	390	322	436	366	481	413	527	459	573	469	612	485	628	522	665	776	785	1004	1012
ø40	283	426	310	453	336	479	363	506	390	533	416	569	443	601	507	617	553	663	601	707	1317	1333	1475	1490
ø50	-	-	508	702	558	751	608	803	658	851	708	901	758	950	808	1001	835	1033	911	1105	2007	2025	2252	2270
ø63	-	-	902	1266	977	1341	1052	1416	1127	1491	1202	1566	1278	1642	1353	1717	1428	1792	1503	1867	2218	2242	2593	2617
ø80	-	-	1608	1538	1725	1916	1841	2294	1958	2411	2074	2527	2191	2649	2308	2771	2425	2888	2541	3004	3560	3587	4143	4169
ø100	-	-	2483	3105	2652	3254	2820	3402	2989	3586	3158	3770	3327	3934	3495	4097	3664	4261	3833	4425	5213	5245	6033	6065

How to order

Without switch

SSD2-D - 12 ○ - 5 ——— N - LB - I

With switch

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

Ⓐ Model no.

Ⓑ Bore size

Ⓒ Cushion

Ⓓ Stroke length

Ⓔ Switch model no.
Note 1 Note 2
Note 3 Note 8

Ⓕ Switch quantity

Ⓖ Option
Note 4

Ⓗ Mounting bracket
Note 5

Ⓘ Accessory
Note 6

⚠ Note on model no. selection

Note 1: T2YD* switch can not be installed for ø12, ø16.
Note 2: T8* switch can not be installed for ø12, ø16.
Note 3: F type switch is installable only on the piping port of tube bore size ø20, ø25.
Note 4: ø12 to ø25 piston rod material is stainless steel as standard. The snap-ring is stainless steel instead of steel.
When the rod end male thread type is selected, the nut is made of stainless steel.
Note 5: The mounting bracket is enclosed when shipped.
Note 6: "I" and "Y" can not be selected at the same time.
Note 7: ø20 F-type switch radial lead wire is not available for the 15 or shorter stroke.
Note 8: Switches are shipped with the product. Contact CKD when shipment must be assembled.

<Example of model number>

SSD2-DL-12-5-T0H-R-N-LB-I

Model: Compact cylinder double acting double rod type

Ⓑ Bore size : ø12mm
Ⓒ Cushion : No cushion
Ⓓ Stroke length : 5mm
Ⓔ Switch model no. : Reed switch T0H, lead wire length 1m
Ⓕ Switch quantity : One on rod end
Ⓖ Option : Rod end male thread
Ⓗ Mounting bracket : Axial foot
Ⓘ Accessory : Rod eye

How to order switch

SW - T0H

Switch model no.
(item Ⓔ above)

Symbol	Descriptions
Ⓐ Model no.	
SSD2-D	Double acting double rod type
SSD2-DL	Double acting double rod type/with switch

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

Ⓒ Cushion	
Blank	No cushion
D	Rubber cushioned

Ⓓ Stroke length (mm)

Refer to stroke length table on the following page.

Ⓔ Switch model no.

Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire	Bore size 12	16	20	25	32	40	50	63	80	100
F2H*	F2V*	Proximity	1 color indicator type	2-wire			●	●						
F3H*	F3V*			3-wire			●	●						
F2YH*	F2YV*		2 color indicator type	2-wire			●	●						
F3YH*	F3YV*			3-wire			●	●						
T0H*	T0V*	Reed	1 color indicator type	2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*		Without light		●	●	●	●	●	●	●	●	●	●
T8H*	T8V*		1 color indicator type				●	●	●	●	●	●	●	●
T1H*	T1V*	Proximity	1 color indicator type	2-wire	●	●	●	●	●	●	●	●	●	●
T2H*	T2V*				●	●	●	●	●	●	●	●	●	●
T3H*	T3V*			3-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	T3PV*		1 color indicator type (PNP output) (custom order)		●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*		2 color indicator type	2-wire	●	●	●	●	●	●	●	●	●	●
T2YH*	T2YV*				●	●	●	●	●	●	●	●	●	●
T3WH*	T3WV*			3-wire	●	●	●	●	●	●	●	●	●	●
T3YH*	T3YV*				●	●	●	●	●	●	●	●	●	●
T2YD*	-		Strong magnetic field proof switch	2-wire			●	●	●	●	●	●	●	●
T2YDT*	-						●	●	●	●	●	●	●	●
T2JH*	T2JV*		Off-delay type	2-wire	●	●	●	●	●	●	●	●	●	●

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

Ⓕ Switch quantity	
R	One on rod end
H	One on head end
D	Two

Ⓖ Option

	Bore size (mm)	12	16	20	25	32	40	50	63	80	100
Blank	Rod end female thread	●	●	●	●	●	●	●	●	●	●
N	Rod end male thread	●	●	●	●	●	●	●	●	●	●
P6	Copper and PTFE free	As standard							●	●	●
M Note 4	Piston rod material (stainless steel)	●	●	●	●	●	●	●	●	●	●

Ⓗ Mounting bracket	
LB	Axial foot
FA	Rod end flange type

Ⓘ Accessory (permissible if rod end male thread "N" was selected.)	
I	Rod eye
Y	Rod clevis (pin and snap ring attached)

(Stroke length table)

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

Note 1: 5 mm or shorter type with 1 color indicator switch, 2 color indicator, off-delay type, strong magnetic field proof, or 10 mm or shorter type with T1* or T8* switch is not available.
Refer to page 61 for min. stroke length with switch.
Note 2: It is only possible when over 50 stroke length.

How to order mounting bracket

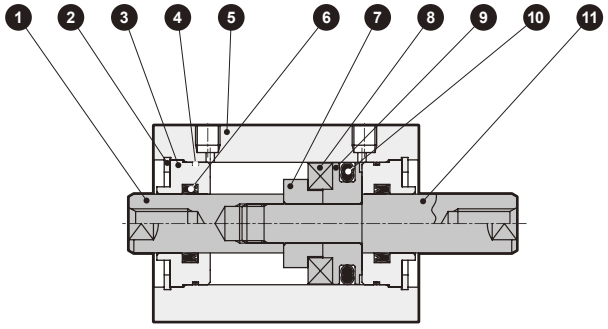
Bore size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50
Flange (FA)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50

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

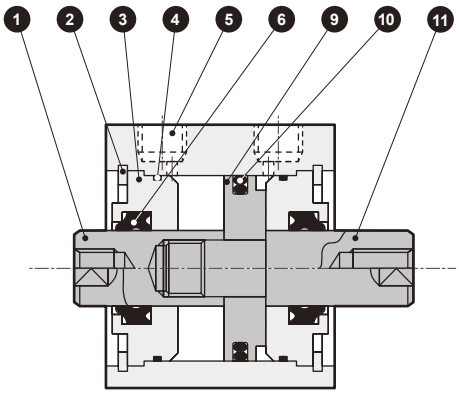
Note 1: The foot type mounting bracket is provided as 2 pcs./set.

Internal structure and parts list (ø12 to ø50) (w/o cushion)

● SSD2-DL-12 to 50 (double acting double rod type with switch)



● SSD2-D-12 to 50 (double acting double rod type)



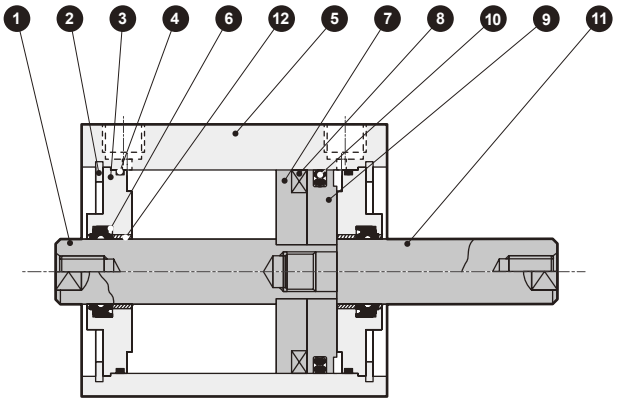
No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod Ⓐ	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating	7	Spacer	ø12, ø20, ø32, ø40: Aluminum alloy ø16, ø25, ø50: Special resin	ø12, ø20, ø32, ø40: Chromate
2	C type snap ring	Steel	Phosphoric acid zinc	8	Magnet	Plastic	
3	Rod bushing	Special aluminum	Alumite	9	Piston	Aluminum alloy	Chromate
4	Rod metal gasket	Nitrile rubber		10	Piston packing seal	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite	11	Piston rod Ⓑ	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
6	Rod packing seal	Nitrile rubber					

Repair parts list

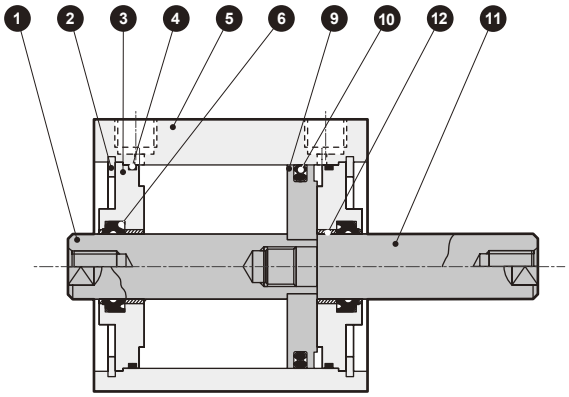
Bore size (mm)	Kit No.	Repair parts number
ø12	SSD2-D-12K	4 6 10
ø16	SSD2-D-16K	
ø20	SSD2-D-20K	
ø25	SSD2-D-25K	
ø32	SSD2-D-32K	
ø40	SSD2-D-40K	
ø50	SSD2-D-50K	

Internal structure and parts list (ø63 to ø100) (w/o cushion)

● SSD2-DL-63 to 100 (double acting double rod type with switch)



● SSD2-D-63 to 100 (double acting double rod type)



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

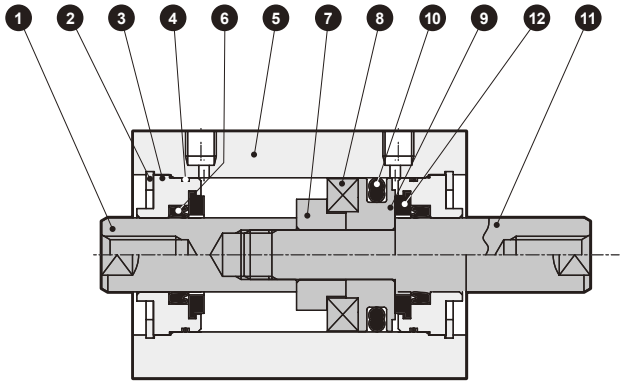
Note 1: Steel is used for copper and PTFE free.

Repair parts list

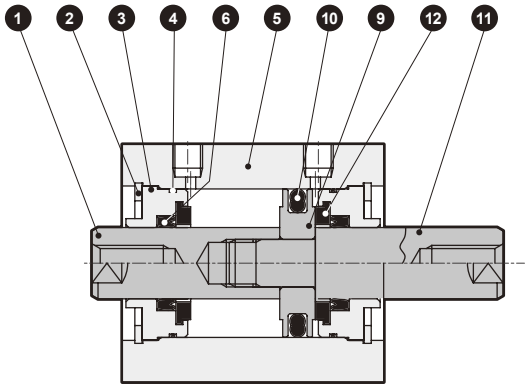
Bore size (mm)	Kit No.	Repair parts number
ø63	SSD2-D-63K	4 6 10
ø80	SSD2-D-80K	
ø100	SSD2-D-100K	

Internal structure and parts list (ø12 to ø50) (Rubber cushioned)

● SSD2-DL-12D to 50D (double acting double rod type with switch)



● SSD2-D-12D to 50D (double acting double rod type)



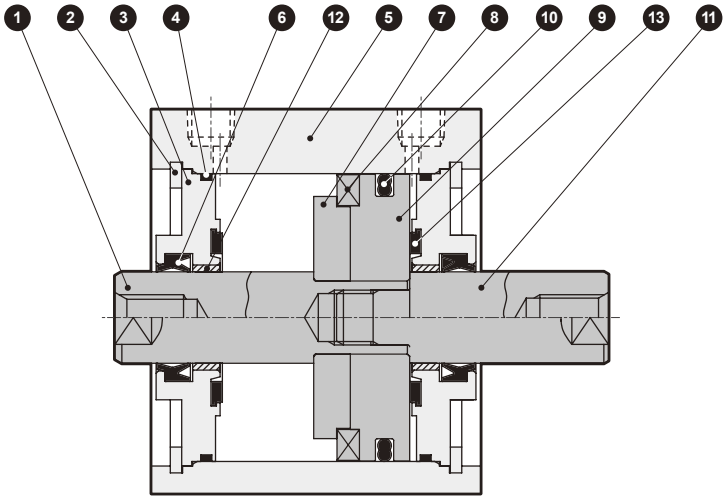
No.	Parts name	Material	Remarks
1	Piston rod Ⓐ	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
2	C type snap ring	Steel	Phosphoric acid zinc
3	Rod bushing	Special aluminum	Alumite
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing seal	Nitrile rubber	
7	Spacer	ø12, ø20, ø32, ø40: Aluminum alloy ø16, ø25, ø50: Special resin	ø12, ø20, ø32, ø40: Chromate
8	Magnet	Plastic	
9	Piston	Aluminum alloy	Chromate
10	Piston packing seal	Nitrile rubber	
11	Piston rod Ⓑ	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
12	Cushion rubber	Urethane rubber	

Repair parts list

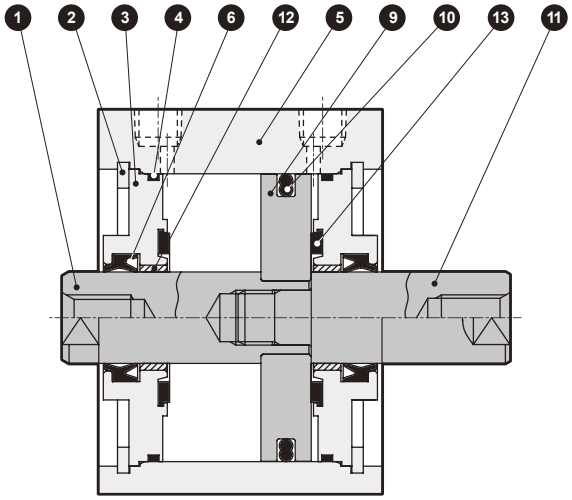
Bore size (mm)	Kit No.	Repair parts number
ø12	SSD2-D-12DK	4 6 10 12
ø16	SSD2-D-16DK	
ø20	SSD2-D-20DK	
ø25	SSD2-D-25DK	
ø32	SSD2-D-32DK	
ø40	SSD2-D-40DK	
ø50	SSD2-D-50DK	

Internal structure and parts list (ø63 to ø100) (Rubber cushioned)

● SSD2-DL-63D to 100D (double acting double rod type with switch)



● SSD2-D-63D to 100D (double acting double rod type)



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod Ⓐ	Steel	Industrial chrome plating	8	Magnet	Plastic	
2	C type snap ring	Steel	Phosphoric acid zinc	9	Piston	Aluminum alloy	Chromate
3	Rod bushing	Aluminum alloy	Alumite	10	Piston packing seal	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		11	Piston rod Ⓑ	Steel	Industrial chrome plating
5	Body	Aluminum alloy	Hard alumite	12	Bush	Oilless dry met	Note 1
6	Rod packing seal	Nitrile rubber		13	Cushion rubber	Urethane rubber	
7	Spacer	Aluminum alloy	Chromate				

Note 1: Steel is used for copper and PTFE free.

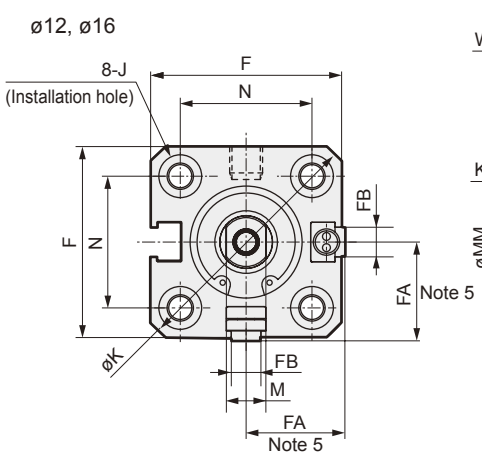
Repair parts list

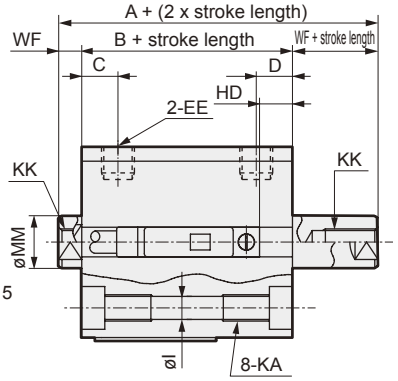
Bore size (mm)	Kit No.	Repair parts number
ø63	SSD2-D-63DK	④ ⑥ ⑩ ⑬
ø80	SSD2-D-80DK	
ø100	SSD2-D-100DK	

Dimensions

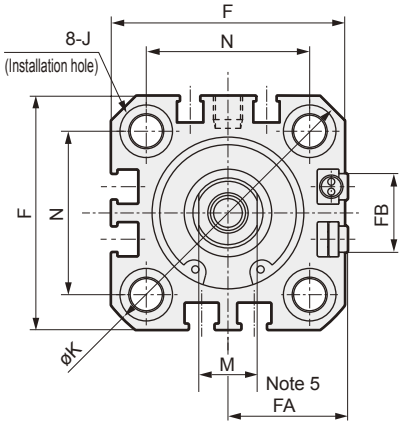
● SSD2-DL-12 to 25 (with switch)

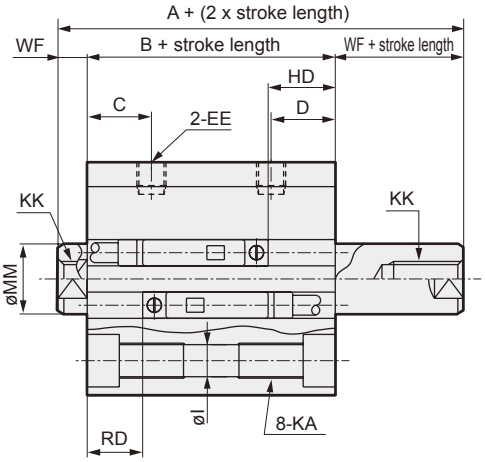
ø12, ø16



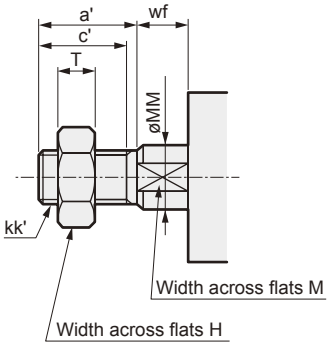


ø20, ø25





● Rod end male thread



● Cautions on switch installation groove

Note 1: Only the F type switch is provided for the tube bore size ø20 and ø25 piping port surface. Note: The cross-width position for the left/right wrench is not specified.

Symbol	Type with switch and common dimensions																	
Bore size (mm)	A	B	C	D	EE	F	FA Note 5	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	34	27	5.5	5.5	M5	25	13 (16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	34	27	5.5	5.5	M5	29	15 (18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	45	36	8	8	M5	36	18.5 (22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	49	39	11	11	M5	40	20.5 (24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimension	Reed T0H/T0V, T5H/T5V Note 6		Proximity T2H/T2V, T3H/T3V Note 6		Proximity T2WH/T2WV, T3WH/T3WV Note 6		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV	
Bore size (mm)	HD	RD	HD	RD	HD	RD	HD	RD
ø12	5	2.5	5	2.5	6.5	4		
ø16	5	2	5	2	6.5	3.5		
ø20	9.5	6.5	9.5	6.5	11	8	14	12
ø25	11.5	9.5	11.5	9.5	13	11	15	13

Note 2: HD and RD dimensions for the 5 stroke will differ from these due to manufacturing.
Note 3: Refer to page 91 for HD/RD dimensions and projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 4: Dimensions in ( ) are the values for radial lead wire.
Note 5: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.
Note 6: Dimensions in ( ) of HD/RD column are values when cushion is installed.
Note 7: The side with a mark on the main port is the RD side.

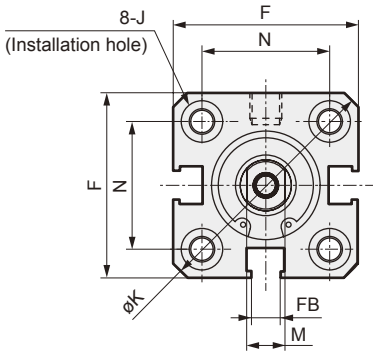
● Rod end male thread dimensions table

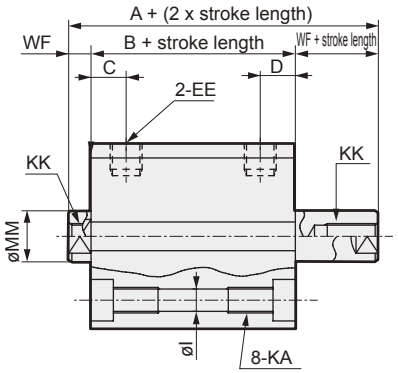
Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	8	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10 x 1.25	10	12	6	5

Dimensions

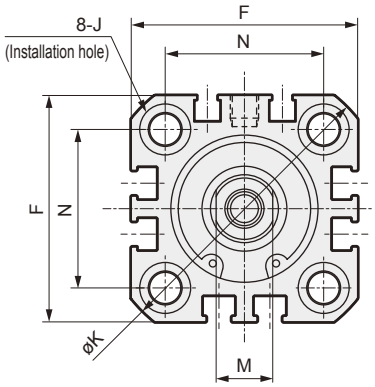
● SSD2-D-12 to 25 (without switch)

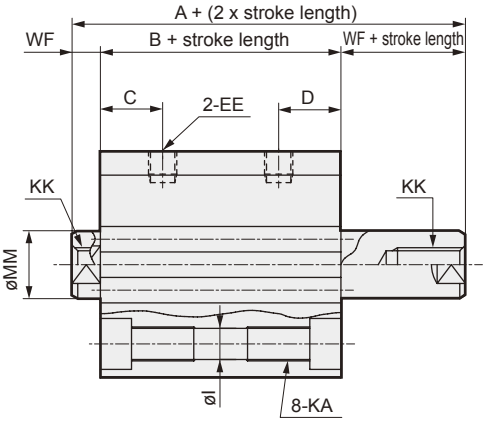
ø12, ø16



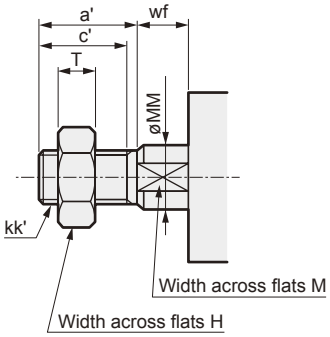


ø20, ø25





● Rod end male thread



Note: The cross-width position for the left/right wrench is not specified.

Symbol / Bore size (mm)	Type without out switch and common dimensions															
	A	B	C	D	EE	F	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	29	22	5.5	5.5	M5	25	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	29	22	5.5	5.5	M5	29	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	35	26	8	8	M5	36	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	39	29	11	11	M5	40	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

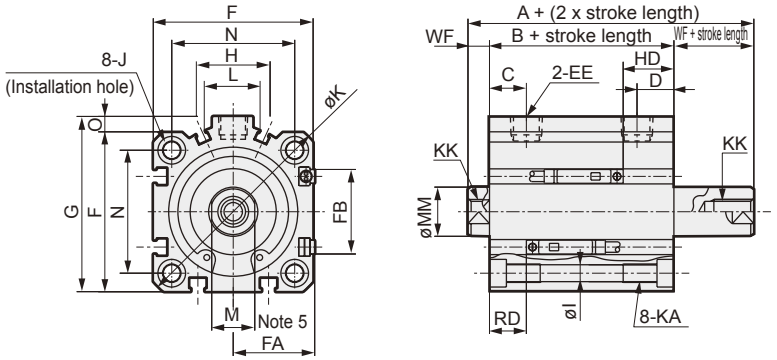
● Rod end male thread dimensions table

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

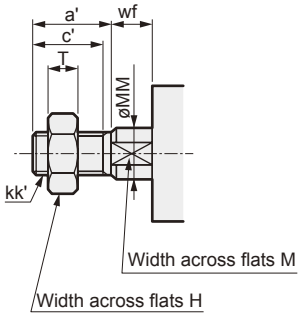
Note 1: Refer to pages 93 to 102 for dimension drawings for discrete accessories.

Dimensions CAD

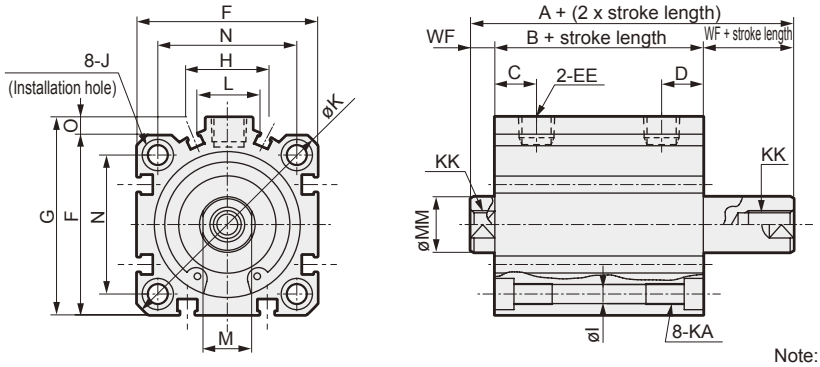
● SSD2-DL-32 to 100 (with switch)



● Rod end male thread



● SSD2-D-32 to 100 (without switch)



Note: The cross-width position for the left/right wrench is not specified.

Symbol	Without switch		Common dimension with switch														
Bore size (mm)	A Note 2, Note 8	B Note 3, Note 8	A *2	B *3	C *10	D *10	EE *9	F	FA Note 6	FB	G	H	I	J	K	KA	KK
ø32	44.5 (54.5)	30.5 (40.5)	54.5	40.5	8	8	Rc1/8	45	23 (26.5)	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13
ø40	54 (64)	40 (50)	64	50	12	12	Rc1/8	52	26.5 (30)	27.5	57	24	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13
ø50	56.5 (66.5)	40.5 (50.5)	66.5	50.5	10.5	10.5	Rc1/4	64	32.5 (36)	28.5	71	33	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15
ø63	58 (68)	42 (52)	68	52	13	13	Rc1/4	77	39 (42.5)	28.5	84	33	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15
ø80	71 (81)	51 (61)	81	61	16	16	Rc3/8	98	49.5 (53)	28.5	104	38	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21
ø100	84.5 (94.5)	60.5 (70.5)	94.5	70.5	23	23	Rc3/8	117	59 (62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27

Symbol	Common dimension with switch						Switch dimension					
							Reed T0H/TOV, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size (mm)	L	M	MM	N	O	WF	HD Note 4	RD Note 4	HD Note 4	RD Note 4	HD	RD
ø32	10	14	16	34	4.5	7	11	9	11	9	12.5	10.5
ø40	10	14	16	40	5	7	16.5	12	16.5	12	18	13.5
ø50	15	17	20	50	7	8	16.5	12.5	16.5	12.5	18	14
ø63	15	17	20	60	7	8	18	13	18	13	19.5	14.5
ø80	15	22	25	77	6	10	23	15.5	23	15.5	24.5	17
ø100	15	27	30	94	6.5	12	28.5	19.5	28.5	19.5	30	21

Note 1: The intermediate stroke is used only when the stroke exceeds 50.
Note 2: When calculating A + (2 x stroke) for the custom stroke, calculate as “A + the above standard stroke + custom stroke” instead of using the custom stroke.
Example: If the custom stroke is 70 mm, calculate as “A + standard stroke 75 mm + custom stroke 70 mm”.
Note 3: When calculating B + str□
Example: If the custom stroke is 70 mm, calculate including standard stroke 75 mm.
Note 4: HD and RD dimensions for the 5 stroke differ from these due to manufacturing.
Note 5: Refer to page 91 for HD/RD dimensions and projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 6: Dimensions in ( ) of FA are values for radial lead wire.
Note 7: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.
Note 8: Values in ( ) for symbols A and B are for when 50 strokes is exceeded.
Note 9: The port size is M5 for the 5 stroke ø32 with no switch.
Note 10: Dimensions in ( ) of C and D column are values for the 5 stroke with no switch.
Note 11: The side with a mark on the main port is the RD side.

● Rod end male thread dimensions table

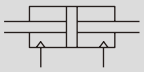
Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 x 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 x 1.5	14	16	8	5
ø50	28.5	26	27	M18 x 1.5	17	20	11	5
ø63	28.5	26	27	M18 x 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 x 1.5	22	25	13	8
ø100	35.5	32.5	41	M26 x 1.5	27	30	16	8

MEMO

Compact cylinder, double acting, double rod type (large bore size)

SSD2-D Series

● Bore size: ø125, ø140, ø160, ø180, ø200

JIS symbol 

RoHS

Specifications

Descriptions	SSD2-D SSD2-DL (with switch)				
Bore size mm	ø125	ø140	ø160	ø180	ø200
Actuation	Double-acting, double-rod type				
Working fluid	Compressed air				
Max. working pressure MPa	1.0			0.7	
Min. working pressure MPa	0.05				
Withstanding pressure MPa	1.6			1.05	
Ambient temperature °C	-10 to 60 (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	Rubber cushioned (standard)				
Lubrication	Not required (when lubricating, use turbine oil ISOVG32.)				
Allowable energy absorption J	6.52	6.52	7.78	12.4	

Stroke length

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

Note 1: The total custom stroke length is handled with the length dedicated for the custom stroke.
Note 2: Refer to the table below for the cylinder with switch.

Switch quantity and min. stroke length (mm)

Switch quantity	1	2	3	4	5
Switch model no. / Bore size (mm)	T*	T*	T*	T*	T*
ø125	10	10	40	55	70
ø140	10	10	40	55	70
ø160	10	10	40	55	70
ø180	10	10	40	55	70
ø200	10	10	40	55	70

Switch specifications

● 1 color/2 color indicator/strong magnetic field proof

Descriptions	Proximity 2 wire	Proximity 2 wire			Proximity 3 wire				Reed 2 wire				Proximity 2 wire
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom order)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V	T8H/T8V		T2YD
Applications	Programmable controller, relay, small solenoid valve	Programmable controller			Programmable controller, relay				Programmable controller, relay	Programmable controller, relay, IC circuit (w/o light), serial connection	Programmable controller, relay		Programmable controller dedicated
Output method	-				NPN output	PNP output	NPN output	NPN output	-				
Power voltage	-				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 100mA	5 to 20mA (Note 1)			100mA or less		50mA or less		5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	5 to 20mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Without indicator light	LED (ON lighting)					Red/green LED (ON lighting)
Leakage current	1 mA or less at 100 VAC, 2 mA or less at 200 VAC	1mA or less			10μA or less				0mA							1mA or less

Note 1: The maximum load current of 20 mA above is at 25°C. When ambient temperature is higher than 25°C, the value is lower than 20mA. (5 to 10 mA at 60°C)

Cylinder weight table

(Weight with switch includes weight with two cylinder switches.) (Unit: kg)

Stroke length (mm)	10		20		30		40		50		75		100	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch
ø125	4.64	4.74	4.98	5.08	5.32	5.42	5.66	5.76	6.00	6.10	6.85	6.95	7.70	7.80
ø140	6.62	6.73	7.00	7.11	7.38	7.49	7.77	7.88	8.15	8.26	9.00	9.11	10.07	10.18
ø160	9.10	9.22	9.58	9.70	10.06	10.18	10.54	10.66	11.02	11.14	12.22	12.34	13.41	13.53
ø180	13.12	13.27	13.62	13.77	14.12	14.27	14.62	14.77	15.12	15.27	16.36	16.51	17.61	17.76
ø200	16.09	16.27	16.65	16.83	17.21	17.39	17.77	17.95	18.33	18.51	19.73	19.91	21.13	21.31

Stroke length (mm)	125		150		175		200		250		300	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch
ø125	8.55	8.65	9.40	9.50	10.25	10.35	11.10	11.20	12.80	12.90	14.50	14.60
ø140	11.02	11.13	11.87	11.98	12.72	12.83	13.57	13.68	15.27	15.38	16.97	17.08
ø160	14.61	14.73	15.81	15.93	17.01	17.13	18.21	18.33	20.61	20.73	23.01	23.13
ø180	18.85	19.00	20.10	20.25	21.35	21.50	22.59	22.74	25.09	25.24	27.58	27.73
ø200	22.53	22.71	23.93	24.11	25.32	25.50	26.72	26.90	29.52	29.70	32.32	32.50

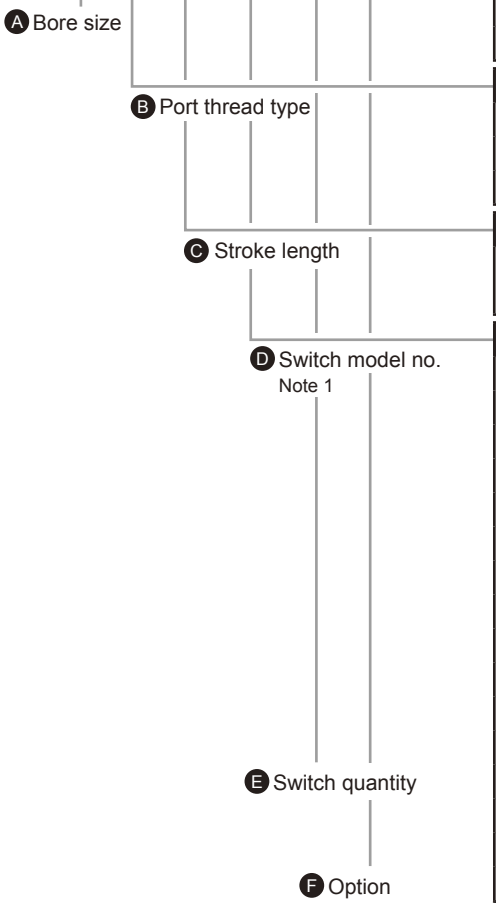
How to order

Without switch

SSD2-D - 125 ○ - 50 ——— N

With switch

SSD2-DL - 125 ○ - 50 - T0H - R - N



Symbol	Descriptions
Ⓐ Bore size (mm)	
125	ø125
140	ø140
160	ø160
180	ø180
200	ø200

Ⓑ Port thread type	
Blank	Rc thread
NN	NPT thread (ø125 to ø160) (custom order)
GN	G thread (ø125 to ø160) (custom order)

Ⓒ Stroke length (mm)

Refer to stroke length table on the following page.

Ⓓ Switch model no.

Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T0H*	**T0V***	Reed	1 color indicator type	2-wire
T5H*	**T5V***		Without indicator light	
T8H*	**T8V***		1 color indicator type	
T1H*	**T1V***	Proximity	1 color indicator type	2-wire
T2H*	**T2V***			
T3H*	**T3V***			3-wire
T3PH*	**T3PV***		1 color indicator type (custom order)	
T2WH*	**T2WV***		2 color indicator type	2-wire
T2YH*	**T2YV***			
T3WH*	**T3WV***			3-wire
T3YH*	**T3YV***			
T2JH*	**T2JV***		Off-delay type	2-wire
T2YD*	**-**		Strong magnetic field proof switch	2-wire
T2YDT*	**-**			

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

Ⓔ Switch quantity	
R	One on rod end
H	One on head end
D	Two

Ⓕ Option	
Blank	Rod end female thread
N	Rod end male thread

⚠ Note on model no. selection

Note 1: Switches are shipped with the product. Contact CKD when switches must be installed at the shipment.

<Example of model number>

SSD2-DL-125-50-T0H-R-N

Model: Compact cylinder double acting double rod type

Ⓐ Bore size : 125mm
Ⓑ Port thread type : Rc thread
Ⓒ Stroke length : 50mm
Ⓓ Switch model no. : Reed switch T0H, lead wire length 1m
Ⓔ Switch quantity : One on rod end
Ⓕ Option : Rod end male thread

How to order switch

SW - T0H

Switch model no. (item Ⓓ above)

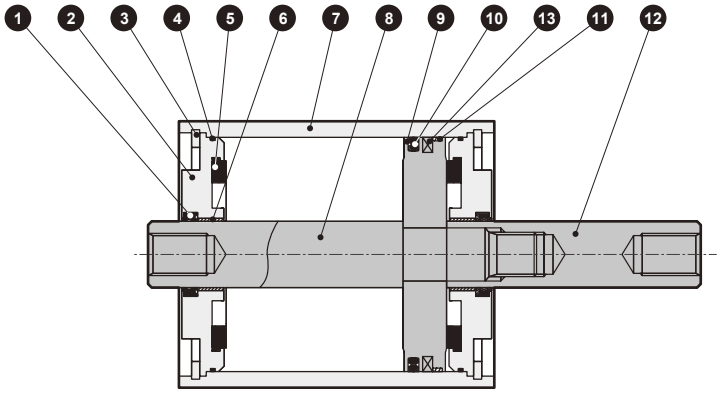
(Stroke length table)

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

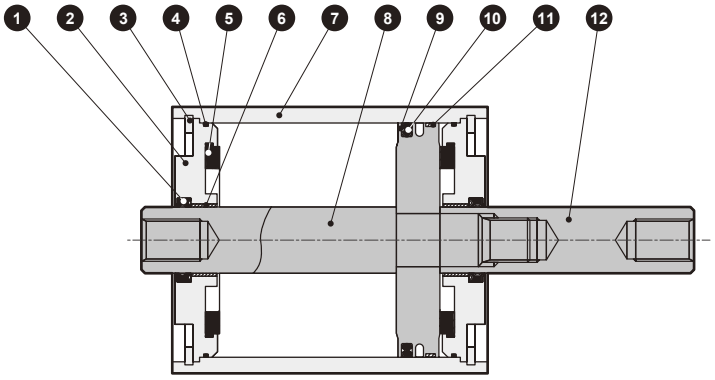
Note 1: Refer to page 73 for the switch installation number and minimum stroke.
Note 2: The total custom stroke length is handled with the length dedicated for the custom stroke.

Internal structure drawing and parts list (ø125 to ø160)

● SSD2-DL-125 to 160 (double acting double rod type with switch)



● SSD2-D-125 to 160 (double acting double rod type without switch)



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Rod packing seal	Nitrile rubber		8	Piston rod Ⓐ	Steel	Industrial chrome plating
2	Rod bushing	Aluminum alloy die-casting	Chromate	9	Piston	Aluminum alloy die-casting	
3	C type snap ring	Steel	Phosphoric acid zinc	10	Piston packing seal	Nitrile rubber	
4	Metal gasket	Nitrile rubber		11	Wear ring	Polyacetal	
5	Cushion rubber	Urethane rubber		12	Piston rod Ⓑ	Steel	Industrial chrome plating
6	Bush	Oilless dry met		13	Magnet	Rubber	Only with switch
7	Body	Aluminum alloy	Hard alumite				

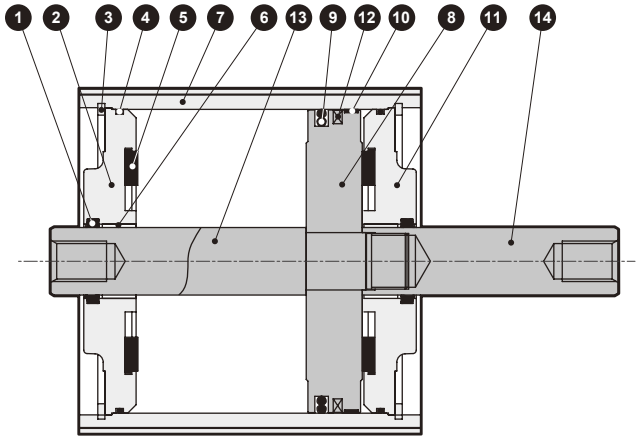
Repair parts list

Bore size (mm)	Kit No.	Repair parts number
ø125	SSD2-D-125K	❶ ❹ ❺ ❿ ⓫
ø140	SSD2-D-140K	
ø160	SSD2-D-160K	

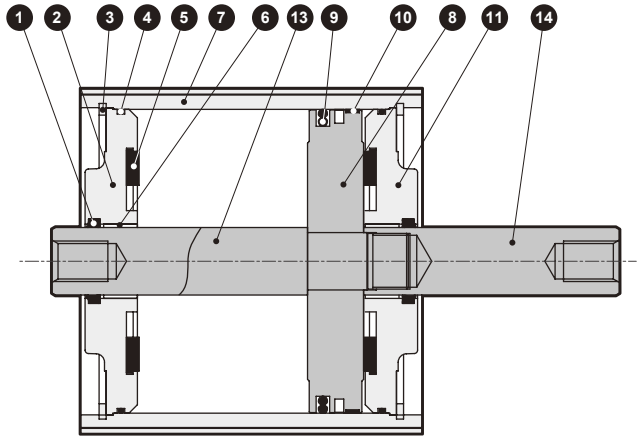
Note 1: Use kit numbers when placing an order.

Internal structure drawing and parts list (ø180, ø200)

● SSD2-DL-180,200 (double acting double rod type with switch)



● SSD2-D-180,200 (double acting double rod type without switch)



Part list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Rod packing seal	Nitrile rubber		8	Piston	Aluminum alloy	
2	Rod bushing	Cast iron	Paint	9	Piston packing seal	Nitrile rubber	
3	C type snap ring	Steel	Phosphoric acid zinc	10	Wear ring	Acetar resin	
4	Gasket	Nitrile rubber		11	Guard	Cast iron	Paint
5	Cushion rubber	Urethane rubber		12	Magnet	Rubber	Only with switch
6	Bush	Oilless dry met		13	Piston rod A	Steel	Industrial chrome plating
7	Body	Aluminum alloy	Hard alumite	14	Piston rod B	Steel	Industrial chrome plating

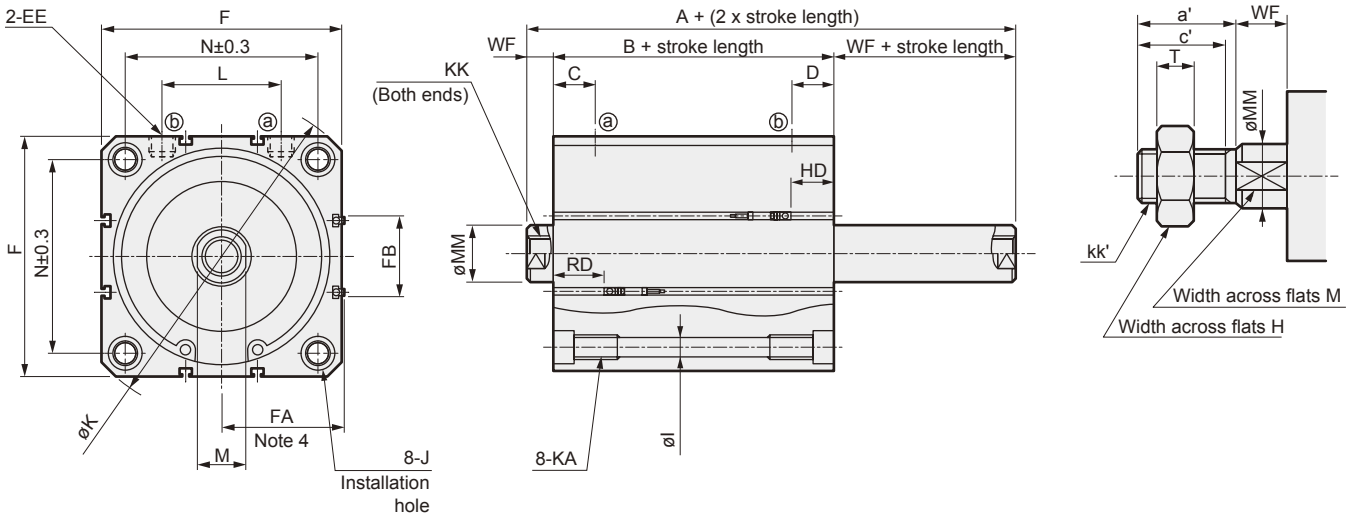
Repair parts list

Bore size (mm)	Kit No.	Repair parts number
ø180	SSD2-180K	1 4 5 9 10
ø200	SSD2-200K	

Dimensions (ø125 to ø160)

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

● Rod end male thread



Note: The cross-width position for the left/right wrench is not specified.

Symbol	Type with switch and common dimensions																
Bore size (mm)	A	B	C	D	EE	F	I	J	K	KA	KK (Note 1)	L	M	MM	N	WF	
ø125	115	83	29	29	Rc3/8	142	12.5	20 spot face depth 13	190	M14 depth 25	M22 x 2.5 depth 30 (22.5)	72	30	35	114	16	
ø140	115	83	27.5	27.5	Rc3/8	158	12.5	20 spot face depth 13	210	M14 depth 25	M22 x 2.5 depth 30 (22.5)	80	30	35	128	16	
ø160	125	91	30	30	Rc3/8	178	14.5	23 spot face depth 15.2	238	M16 depth 28	M24 x 3 depth 33 (24)	90	36	40	144	17	

Symbol	T0H/V, T2H/V, T3H/V or T5/V				T2YH/V, T3YH/V or T2JH/V				T1H/V and T2YD				T2WH/V and T3WH/V				T8H/V			
Bore size (mm)	HD	RD	FA	FB	HD	RD	FA	FB	HD	RD	FA	FB	HD	RD	FA	FB	HD	RD	FA	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

Note 1: Values in ( ) for KK dimensions indicate the effective thread length on one side for a stroke of 10.
Note 2: Dimensions in ( ) of FA are values for radial lead wire.
Note 3: The side with a mark on the main port is the RD side.

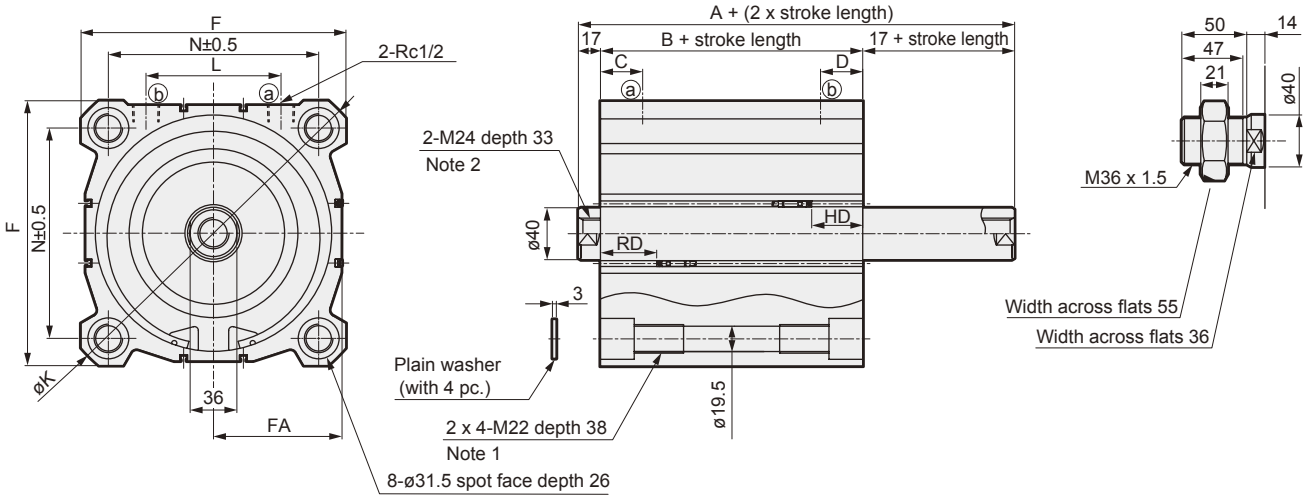
Rod end male thread dimensions table

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

Dimensions (ø180, ø200)

● SSD2-D(L)-180, 200(Double acting double rod type)

● Rod end male thread

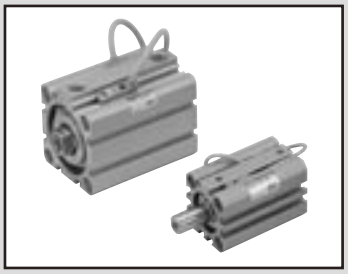


Note 1: 2 x 4-M22 through applies to 20 stroke or less.
Note 2: 2-M24 depth 27 (ø180) or 2-M24 depth 29 (ø200) is used for 10 strokes.
Note 3: The cross-width position for the left/right wrench is not specified.

Symbol / Bore size (mm)	A	B	C	D	F	K	L	N
ø180	136	102	32.5	32.5	204	270	104	162
ø200	143	109	33.5	33.5	226	300	110	182

Symbol	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	HD	RD	FA	HD	RD	FA	HD	RD	FA	HD	RD	FA
ø180	39.5	43.5	99 (102.5)	38.5	42.5	104.5 (107.5)	38.5	42.5	110 (113)	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)

Note 1: Dimensions shown in ( ) of FA are for a dimension of radial lead wire.
Note 2: The side with a mark on the main port is the RD side.

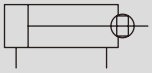


Compact cylinder, double acting, non-rotating type

SSD2-M Series

● Bore size: ø12, ø16, ø20, ø25
ø32, ø40, ø50, ø63

JIS symbol



RoHS

Specifications

Descriptions	SSD2-M SSD2-ML (with switch)							
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0							
Min. working pressure MPa	0.1							0.05
Withstanding pressure MPa	1.6							
Ambient temperature °C	-10 to 60 (no freezing)							
Port size	M5				Rc1/8 Note 1		Rc1/4	
Stroke tolerance mm	+1.0 0							
Working piston speed mm/s	50 to 500							50 to 300
Cushion	None							
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISO VG32.)							
Revolvable angle tolerance (Note 2)	±1°		±0.7°		±0.8°			
Allowable energy absorption J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12

Note 1: The port size is M5 for the 5 stroke length of ø32 with no switch.
Note 2: This is default at a pull end.

Stroke length

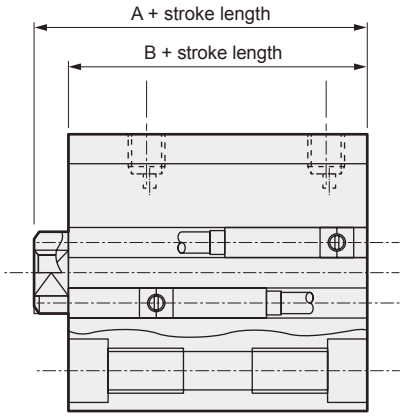
Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø12	5, 10, 15, 20, 25, 30	30	1
ø16			
ø20	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	50	
ø25			
ø32	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	100	
ø40			
ø50	10, 15, 20, 25, 30, 35, 40, 50, 75, 100		
ø63			

Note 1: Refer to the table for min. stroke length with switch on the following page when using a cylinder with switch.

Custom stroke length

● SSD2-M Series

Descriptions	Standard products Standard stroke length spacer type	
Model no.	Refer to How to order.	
Manufacturing descriptions	A spacer is provided on the body with a standard stroke to manufacture in 1 mm unit strokes.	
Stroke range	Bore size	Stroke range
	12, 16	1 to 29
	20 to 25	1 to 49
	32 to 63	1 to 100
Example of model no.	Model no.: SSD2-M-32-38 +2 mm spacer is provided on the standard cylinder SSD2-32-40 to attain a 38 mm stroke. The B dimension is 63 mm.	



Min. stroke length with switch (with 2 switches)

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

Note 1: 2 color indicator type, off-delay type, strong magnetic field proof type, or 10 mm or shorter type with T1* or T8* switch is not available.
Note 2: Values in ( ) apply to the type with one switch on the rod side.

Switch specifications (F type switch)

● 1 color/2 color indicator

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA		100mA or less	50mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

Switch specifications (T type switch)

● 1 color/2 color indicator/strong magnetic field proof

Descriptions	Proximity 2 wire	Proximity 2 wire			Proximity 3 wire				Reed 2 wire							Proximity 2 wire
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom order)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD
Applications	Programmable controller, relay, small solenoid valve	Programmable controller			Programmable controller, relay				Programmable controller, relay		Programmable controller, relay, IC circuit (w/o light), serial connection		Programmable controller, relay			Programmable controller dedicated
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Power voltage	-				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 100mA	5 to 20mA (Note 1)			100mA or less		50mA or less		5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	5 to 20mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)			Red/green LED (ON lighting)
Leakage current	1 mA or less at 100 VAC, 2 mA or less at 200 VAC	1mA or less			10μA or less				0mA							1mA or less

Cylinder weight table

(Weight with switch includes weight with two cylinder switches.) (Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
Bore size (mm)	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch	W/o switch	With switch
ø12	44	94	52	94	61	103	69	11	78	120	80	122	-	-	-	-	-	-	-	-	-	-	-	-
ø16	58	114	69	114	79	124	90	135	101	146	112	157	-	-	-	-	-	-	-	-	-	-	-	-
ø20	76	131	88	163	101	176	114	189	126	201	139	214	152	227	165	240	178	253	191	266	-	-	-	-
ø25	102	193	117	208	133	224	149	240	165	256	180	271	196	287	212	303	228	319	243	334	-	-	-	-
ø32	166	280	188	302	210	324	232	346	253	367	275	389	297	411	319	433	341	455	362	476	575	583	682	691
ø40	-	-	210	353	237	380	263	406	290	433	317	460	343	486	370	513	396	539	423	566	683	698	815	831
ø50	-	-	341	535	383	577	425	619	467	661	509	703	552	746	594	788	636	830	678	872	1065	1082	1275	1292
ø63	-	-	507	786	562	841	617	896	672	951	727	1006	782	1061	837	1116	893	1172	948	1227	1478	1502	1753	1777

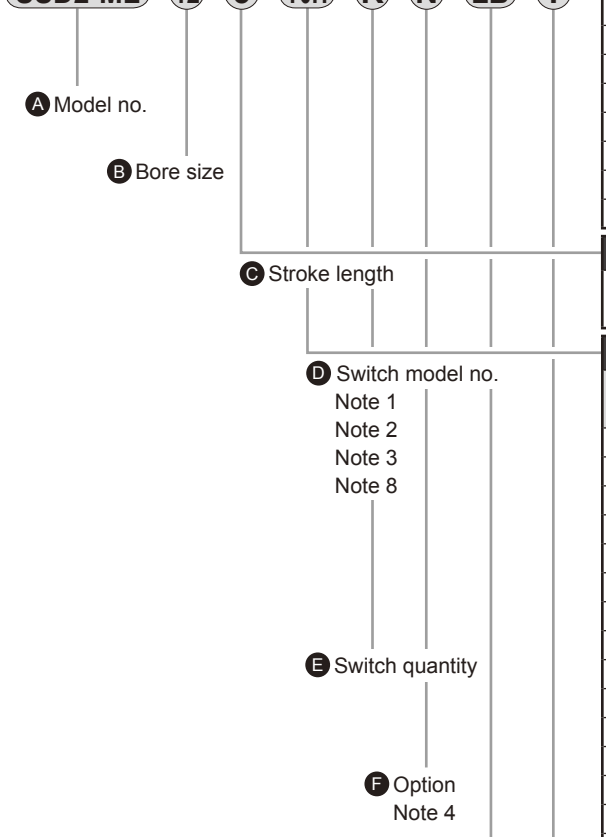
How to order

Without switch

SSD2-M - 12 - 5 ——— N - LB - I

With switch

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



Symbol	Descriptions
A Model no.	
SSD2-M	Double acting non-rotating type
SSD2-ML	Double acting non-rotating type/with switch

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

C Stroke length (mm)

Refer to stroke length table on the following page.

D Switch model no.

Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire	Bore size 12	16	20	25	32	40	50	63
F2H*	F2V*	Proximity	1 color indicator type	2-wire			●	●				
F3H*	F3V*			3-wire			●	●				
F2YH*	F2YV*		2 color indicator type	2-wire			●	●				
F3YH*	F3YV*			3-wire			●	●				
T0H*	T0V*	Reed	1 color indicator type	2-wire	●	●	●	●	●	●	●	●
T5H*	T5V*		Without light		●	●	●	●	●	●	●	●
T8H*	T8V*		1 color indicator type							●	●	●
T1H*	T1V*	Proximity	1 color indicator type	2-wire			●	●	●	●	●	●
T2H*	T2V*				●	●	●	●	●	●	●	●
T3H*	T3V*			3-wire	●	●	●	●	●	●	●	●
T3PH*	T3PV*		1 color indicator type (PNP output) (custom order)		●	●	●	●	●	●	●	●
T2WH*	T2WV*		2 color indicator type	2-wire	●	●	●	●	●	●	●	●
T2YH*	T2YV*						●	●	●	●	●	●
T3WH*	T3WV*			3-wire	●	●	●	●	●	●	●	●
T3YH*	T3YV*						●	●	●	●	●	●
T2YD*	-		Strong magnetic field proof switch	2-wire			●	●	●	●	●	●
T2YDT*	-						●	●	●	●	●	●
T2JH*	T2JV*		Off-delay type	2-wire			●	●	●	●	●	●

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

E Switch quantity	
R	One on rod end
H	One on head end
D	Two

F Option	
Blank	Rod end female thread
N	Rod end male thread
M Note 5	Piston rod material (stainless steel)

G Mounting bracket	
LB	Axial foot
CB	Clevis (pin and snap ring attached)
FA	Rod end flange type
FB	Head end flange type

H Accessory (permissible if rod end male thread "N" was selected.)	
I	Rod eye
Y	Rod clevis (pin and snap ring attached)

⚠ Note on model no. selection

Note 1: T2YD* switch can not be installed for ø12, ø16.
Note 2: T8* switch can not be installed for ø12 to ø32.
Note 3: F type switch is installable only on the piping port of tube bore size ø20, ø25.
Note 4: ø12 to ø25 piston rod material is stainless steel as standard. The snap-ring is stainless steel instead of steel.
When the rod end male thread type is selected, the nut is made of stainless steel.
Note 5: The mounting bracket is enclosed when shipped.
Note 6: "I" and "Y" can not be selected at the same time.
Note 7: ø20 F-type switch radial lead wire is not available for the 10 or shorter stroke.
Note 8: Switches are shipped with the product. Contact CKD when switches must be installed at the shipment.

<Example of model number>

SSD2-ML-12-5-T0H-R-N

Model: Compact cylinder non-rotating type

- B Bore size : ø12mm
- C Stroke length : 5mm
- D Switch model no. : Reed switch T0H
- E Switch quantity : One on rod end
- F Option : Rod end male thread
- G Mounting bracket : Axial foot
- H Accessory : Rod eye

(Stroke length table)

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

Note 1: 5 mm or shorter type with 1 color indicator switch, 2 color indicator, off-delay type, strong magnetic field proof, or 10 mm or shorter type with T1* or T8* switch is not available.
Refer to page 82 for min. stroke length with switch.
Note 2: Total length of the custom stroke length is the same as the next longer standard stroke.

How to order switch

SW - T0H

Switch model no.
(item Ⓓ above)

How to order mounting bracket

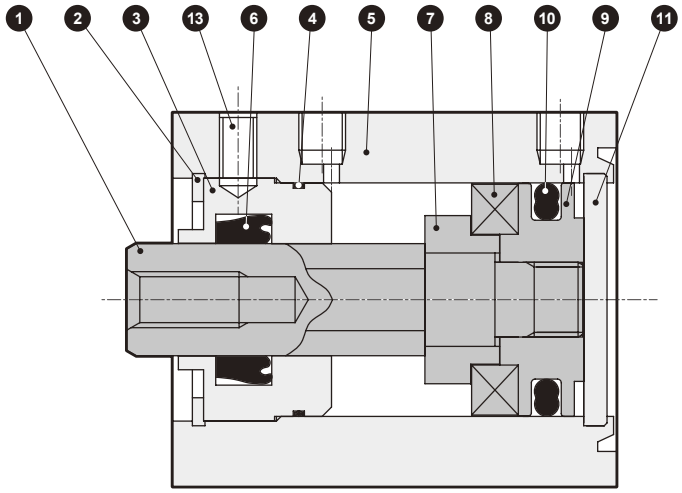
Bore size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD2-LB-12	SSD2-LB-16	SSD2-LB-20	SSD2-LB-25	SSD2-LB-32	SSD2-LB-40	SSD2-LB-50
Flange (FA/FB)	SSD2-FA-12	SSD2-FA-16	SSD2-FA-20	SSD2-FA-25	SSD2-FA-32	SSD2-FA-40	SSD2-FA-50
Clevis (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32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

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

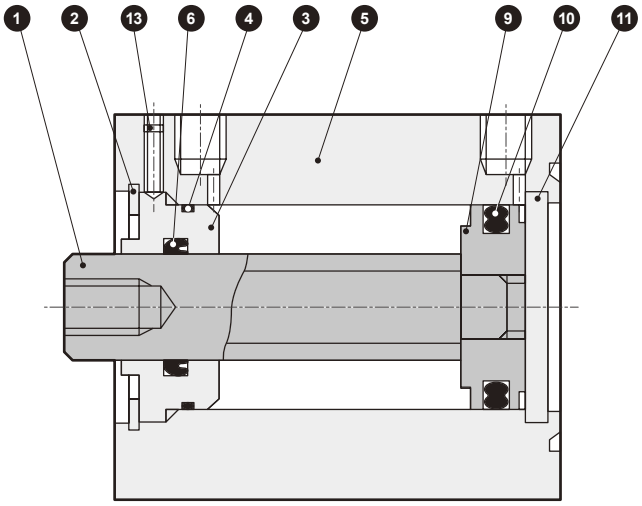
Note 1: The foot type mounting bracket is provided as 2 pcs./set.

Internal structure drawing and parts list (ø12 to ø25)

● SSD2-ML-12 to 25 (double acting non-rotating type with switch)



● SSD2-M-12 to 25 (double acting non-rotating type)



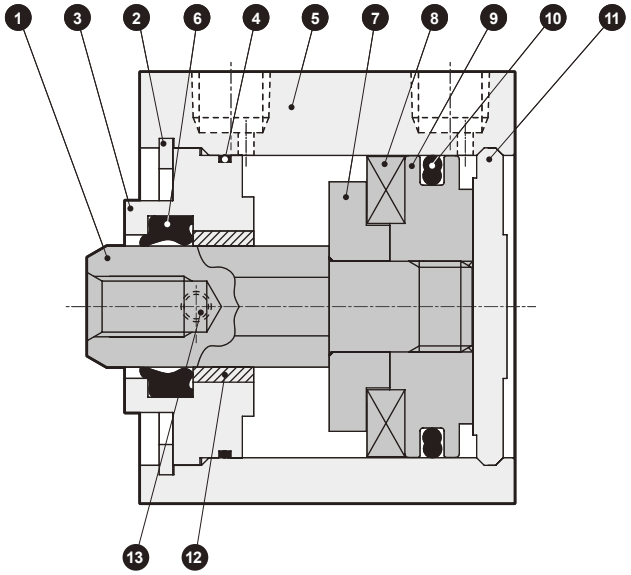
No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston rod	Stainless steel		8	Magnet	Plastic	
2	C type snap ring	Steel	Phosphoric acid zinc	9	Piston	Aluminum alloy	Chromate
3	Rod bushing	Special aluminum	Alumite	10	Piston packing seal	Nitrile rubber	
4	Rod metal gasket	Nitrile rubber		11	Guard	Stainless steel	
5	Body	Aluminum alloy	Hard alumite	13	Hexagon socket head set screw	Steel	
6	Rod packing seal	Nitrile rubber					
7	Spacer	Aluminum alloy	Chromate				

Repair parts list

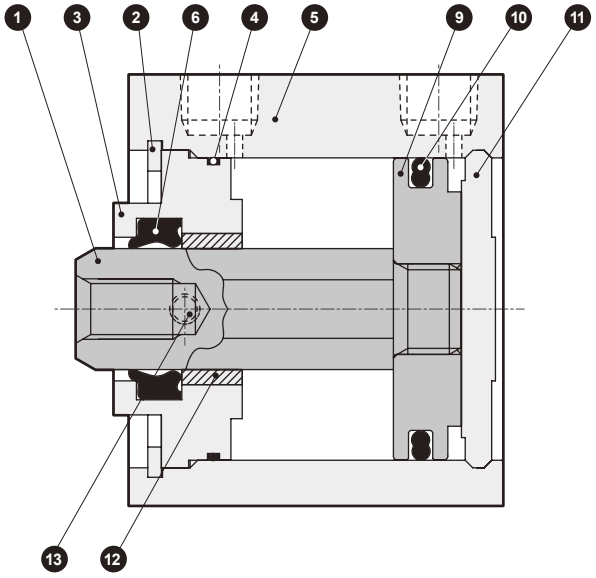
Bore size (mm)	Kit No.	Repair parts number
ø12	SSD2-M-12K	4 6 10
ø16	SSD2-M-16K	
ø20	SSD2-M-20K	
ø25	SSD2-M-25K	

Internal structure drawing and parts list (ø32 to ø63)

● SSD2-ML-32 to 63 (double acting non-rotating type with switch)



● SSD2-M-32 to 63 (double acting non-rotating type)



No.	Parts name	Material	Remarks
1	Piston rod	Steel	Industrial chrome plating
2	C type snap ring	Steel	Phosphoric acid zinc
3	Rod bushing	ø32 to ø50: Special aluminum ø63: Aluminum alloy	Alumite
4	Rod metal gasket	Nitrile rubber	
5	Body	Aluminum alloy	Hard alumite
6	Rod packing seal	Nitrile rubber	
7	Spacer	Aluminum alloy	Chromate

No.	Parts name	Material	Remarks
8	Magnet	Plastic	
9	Piston	Aluminum alloy	Chromate
10	Piston packing seal	Nitrile rubber	
11	Guard	Aluminum alloy	Alumite
12	Bush	Oil impregnated bearing alloy	
13	Hexagon socket head set screw	Steel	

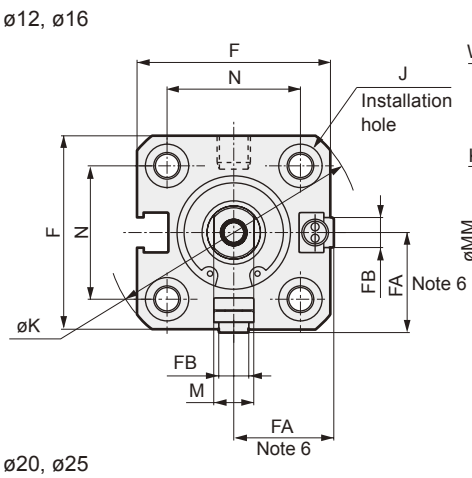
Repair parts list

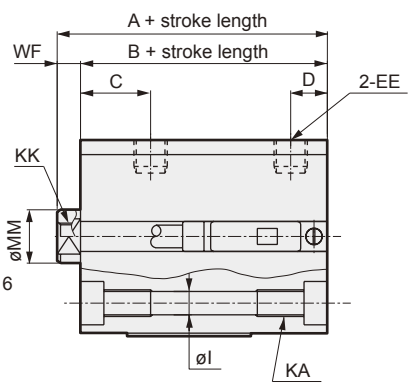
Bore size (mm)	Kit No.	Repair parts number
ø32	SSD2-M-32K	4 6 10
ø40	SSD2-M-40K	
ø50	SSD2-M-50K	
ø63	SSD2-M-63K	

Dimensions

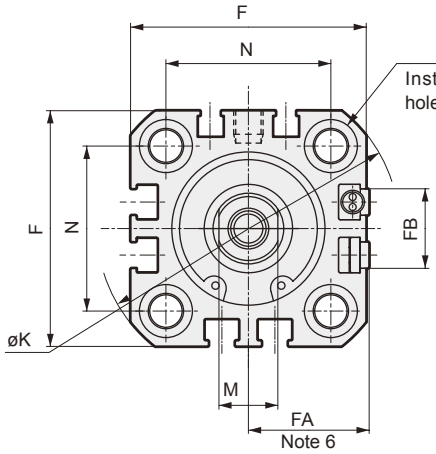
● SSD2-ML-12 to 25 (with switch)

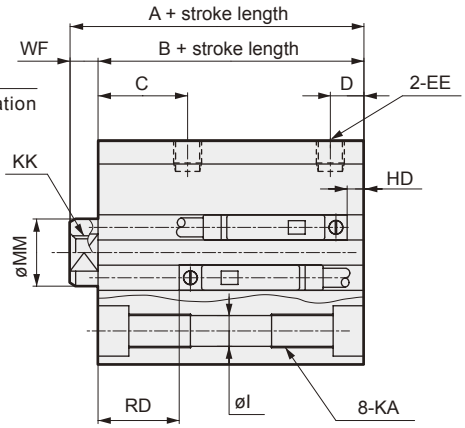
ø12, ø16



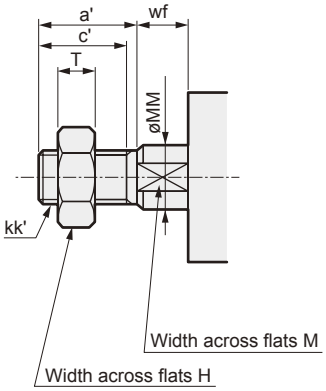


ø20, ø25





● Rod end male thread



● Cautions on switch installation groove

Note 1: Only the F type switch is provided for the tube bore size ø20 and ø25 piping port surface.

Symbol	Common dimension with switch																
Bore size (mm)	A Note 1	B Note 1	C	D	EE	F	FA Note 4	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	30.5	27	10.5	5.5	M5	25	13 (16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	30.5	27	10.5	5.5	M5	29	15 (18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	39	34.5	13	5.5	M5	36	18.5 (22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	42.5	37.5	16	6	M5	40	20.5 (24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

Switch dimension	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV	
Bore size (mm)	HD	RD	HD	RD	HD	RD	HD	RD
ø12	0	7.5	0	7.5	2	9.5		
ø16	0	7	0	7	2.5	9.5		
ø20	3	11.5	3	11.5	5	13	7.5	15.5
ø25	3	14.5	3	14.5	6	16	8.5	18.5

Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke.
Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.
Note 2: HD and RD dimensions for the 5 stroke will differ from these due to manufacturing.
Note 3: Refer to page 91 for HD/RD dimensions and projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 4: Dimensions in ( ) are the values for radial lead wire.
Note 5: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

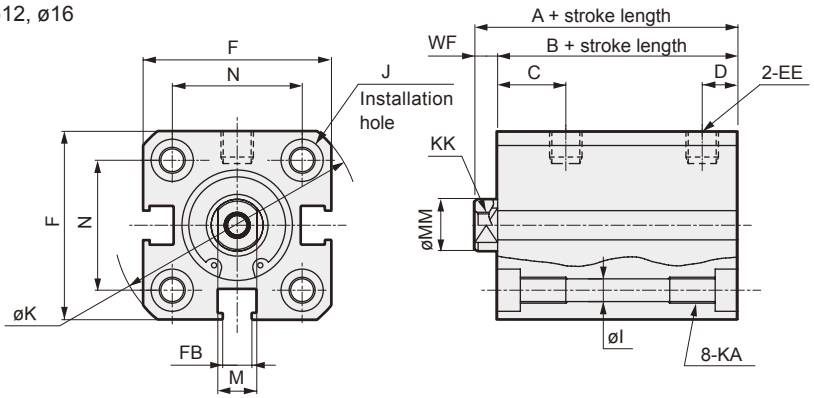
● Rod end male thread dimensions table

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

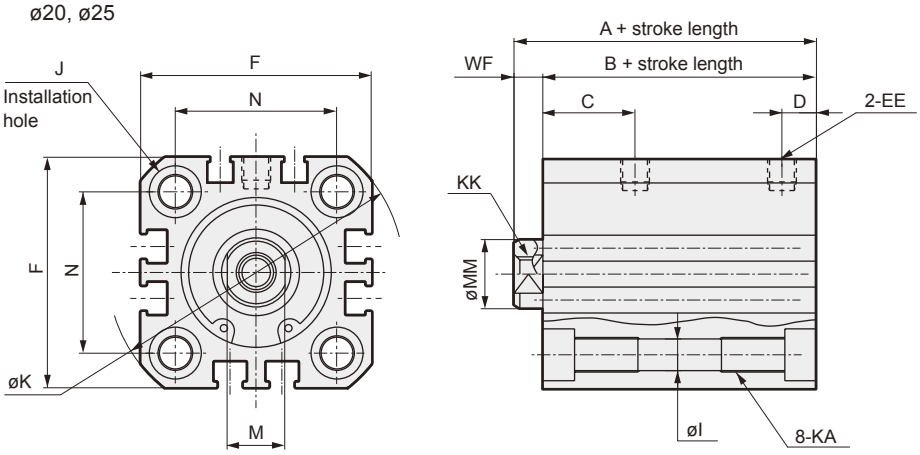
Dimensions

● SSD2-M-12 to 25 (without switch)

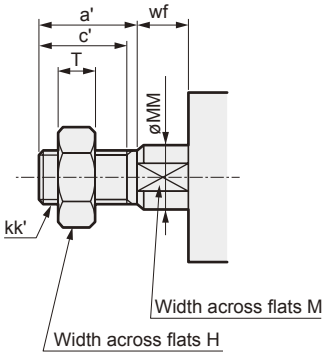
ø12, ø16



ø20, ø25



● Rod end male thread



Symbol / Bore size (mm)	Without switch																
	A Note 1	B Note 1	C	D	EE	F	FB	I	J	K	KA	KK	M	MM	N	WF
ø12	25.5	22	10.5	5.5	M5	25	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	10.5	5.5	M5	29	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	29	24.5	13	5.5	M5	36	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	32.5	27.5	16	6	M5	40	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5

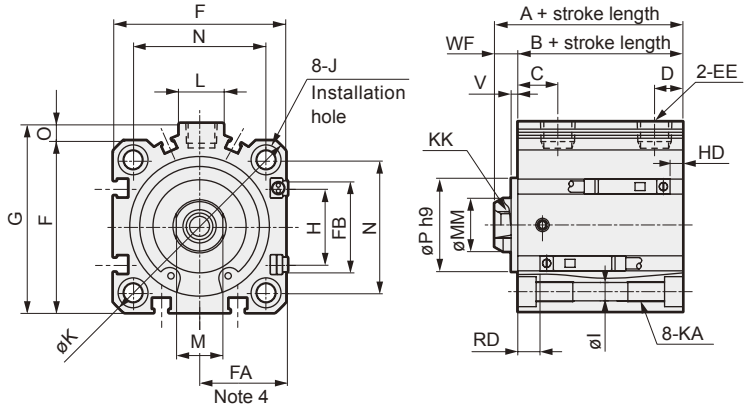
Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke.
Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.
Note 2: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.

● Rod end male thread dimensions table

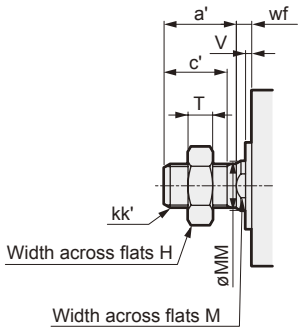
Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	8	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10 x 1.25	10	12	6	5

Dimensions

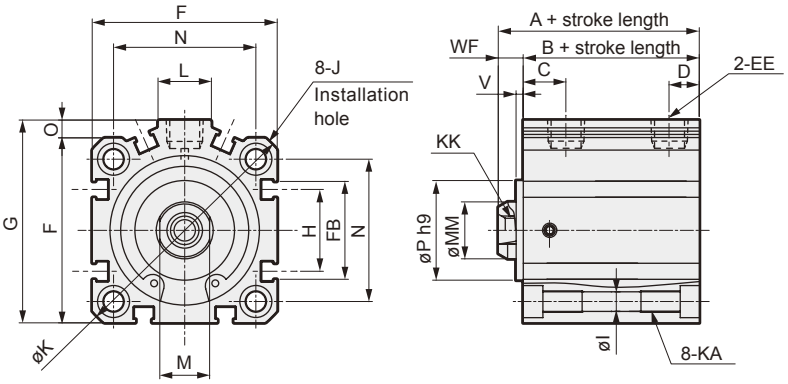
● SSD2-ML-32 to 63 (with switch)



● Rod end male thread



● SSD2-M-32 to 63 (without switch)



Symbol	Without switch		Common dimension with switch																						
Bore size (mm)	A Note 1 Note 6	B Note 1 Note 6	A *1	B *1	C *1	D *1	EE	F	FA Note 4	FB	G	H	I	J	K	KA	KK	L	M	MM	N	O	P	V	WF
ø32	39 (49)	32 (42)	49	42	8 (10)	8 (5.5)	Rc1/8	45	23 (26.5)	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	21	2	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	24	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	28	2	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	33	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	18	20	50	7	35	2	8
ø63	44 (54)	36 (46)	54	46	13	11	Rc1/4	77	39 (42.5)	28.5	84	33	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15	15	18	20	60	7	35	2	8

Switch dimension	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
Bore size (mm)	HD Note2	RD Note2	HD Note2	RD Note2	HD	RD
ø32	4.5	19	4.5	19	5	20.5
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

Note 1: When calculating A + and B + stroke dimensions for the custom stroke, do not set the custom stroke in the stroke. Instead, set the next longer standard stroke. Example: If the custom stroke is 7 mm, calculate including standard stroke 10 mm.
Note 2: HD and RD dimensions for the 5 stroke differ from these due to manufacturing.
Note 3: Refer to page 91 for HD/RD dimensions and projection dimensions of the 2 color indicator type, off-delay type, strong magnetic field proof type, and T1* or T8* switch.
Note 4: Dimensions in ( ) of FA are values for radial lead wire.
Note 5: Refer to pages 93 to 102 for dimension drawings with accessories and dimension drawings for discrete accessories.
Note 6: Values in ( ) for symbols A and B are for when 50 strokes is exceeded.
Note 7: The port size is M5 for the 5 stroke ø32 with no switch.
Note 8: Dimensions in ( ) of C and D column are values for the 5 stroke with no switch.

● Rod end male thread

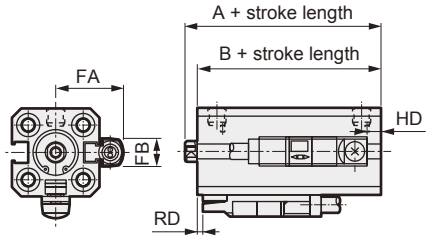
Symbol / Bore size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 x 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 x 1.5	14	16	8	5
ø50	28.5	26	27	M18 x 1.5	17	20	11	5
ø63	28.5	26	27	M18 x 1.5	17	20	11	5

MEMO

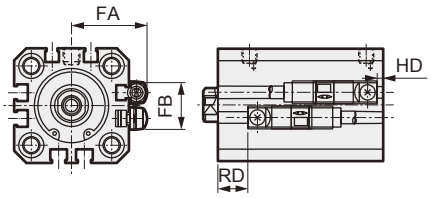
SSD2 Series common (2 color indicator type, off-delay type, strong magnetic field, T1*, T8* with switch) dimensions

● SSD2-L-12 to 100 (2 color indicator type, off-delay type, T8* with switch, T2YH/V, T3YH/V, T2JH/V, T8H/V)

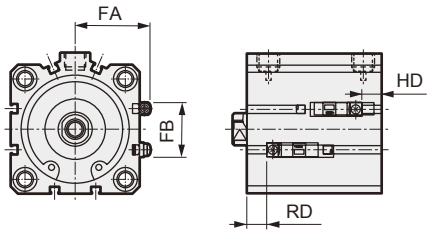
・ø12, ø16



・ø20, ø25



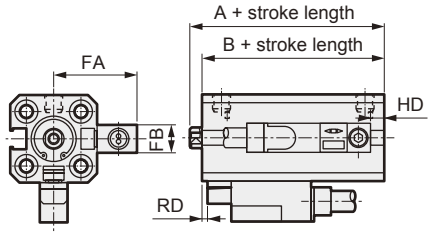
・ø32 to ø100



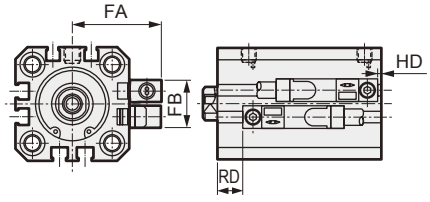
Symbol / Bore size (mm)	FA	FB	T2YH/V, T3YH/V or T2JH/V								T8H/V							
			SSD2-L, XL or YL		SSD2-DL Note 1		SSD2 (long stroke)-L Note 2		SSD2-ML		SSD2-L, XL or YL		SSD2-DL Note 2		SSD2-ML		SSD2 (long)-L Note 2	
			RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD
ø12	18.8	8	-	-	1	3.5	3	1	-	-	-	-	-	-	-	-	-	-
ø16	20.8	8	-	-	0.5	3.5	2.5	1.5	-	-	-	-	-	-	-	-	-	-
ø20	24.3	16	6.5	2	5	8	14 (8.5)	5.5 (11)	10	1.5	-	-	0.5	3.5	-	-	9.5 (4)	0 (6.5)
ø25	26.3	17	8.5	3	8	10	17.5 (10.5)	5 (12.5)	13	1.5	-	-	1.5	5.5	-	-	13 (6)	0 (8)
ø32	28.8	24	8.5	3.5	7.5	9.5	16 (8)	8 (14.5)	17.5	2	-	-	3	5	-	-	11.5 (4)	2.5 (10)
ø40	32.3	31	10.5	5.5	10.5	15	24.5 (15)	8 (17.5)	10.5	5.5	6	1	6	10.5	6	1	20 (10.5)	3.5 (13)
ø50	38.3	32	11	6	11	15	24.5 (16)	8.5 (17.5)	11	6	6.5	1.5	6.5	10.5	6.5	1.5	19.5 (11)	4 (13)
ø63	44.8	32	11.5	11	11.5	16.5	18.5 (13.5)	16 (21.5)	11.5	11	7	6.5	7	12	7	6.5	13.5 (8.5)	11.5 (17)
ø80	55.3	32	14	16	14	21.5	22.5 (17.5)	20.5 (26.5)	-	-	9.5	11.5	9.5	17	-	-	17.5 (12.5)	16 (22)
ø100	64.8	32	18	21.5	18	27	26.5 (21.5)	26.5 (32)	-	-	13.5	17	13.5	22.5	-	-	21.5 (16.5)	22 (27.5)

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

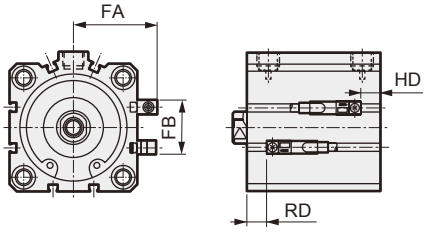
・ø12, ø16



・ø20, ø25



・ø32 to ø100



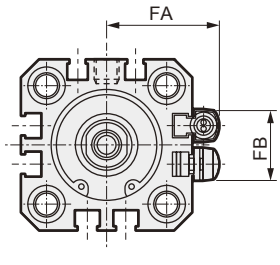
Symbol / Bore size (mm)	FA	FB	SSD2-L, XL, YL		SSD2-DL Note 1		SSD2(long stroke)-L Note 2		SSD2-ML	
			RD	HD	RD	HD	RD	HD	RD	HD
ø12	23.8	8	-	-	1	3.5	3	1	-	-
ø16	25.8	8	-	-	0.5	3.5	2.5	1.5	-	-
ø20	29.3	16	6.5	2	5	8	14 (8.5)	5.5 (11)	10	1.5
ø25	31.3	17	8.5	3	8	10	17.5 (10.5)	5 (12.5)	13	1.5
ø32	33.8	24	8.5	3.5	7.5	9.5	16 (8)	8 (14.5)	17.5	2
ø40	37.3	31	10.5	5.5	10.5	15	24.5 (15)	8 (17.5)	10.5	5.5
ø50	43.3	32	11	6	11	15	24.5 (16)	8.5 (17.5)	11	6
ø63	49.8	32	11.5	11	11.5	16.5	18.5 (13.5)	16 (21.5)	11.5	11
ø80	60.3	32	14	16	14	21.5	22.5 (17.5)	20.5 (26.5)	-	-
ø100	60.8	32	18	21.5	18	27	26.5 (21.5)	26.5 (32)	-	-

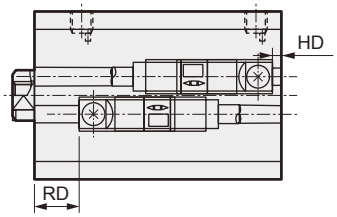
Note 1: The side with a mark on the main port is the RD side.
Note 2□

SSD2-K Series common (2 color indicator type, off-delay type, strong magnetic field, T1*, T8* with switch) dimensions

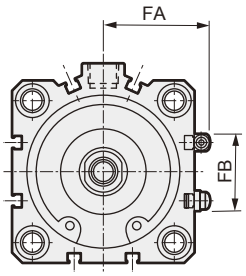
● SSD2-KL-20 to 100 (2 color indicator type, off-delay type, T8* with switch, T2YH/V, T3YH/V, T2JH/V, T8H/V)

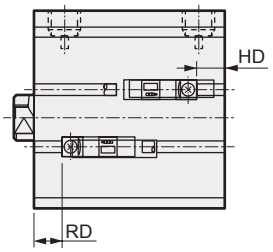
・ø20, ø25





・ø32 to ø100

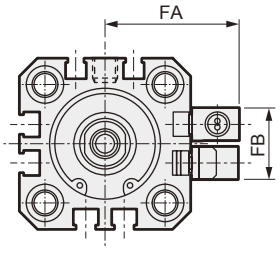


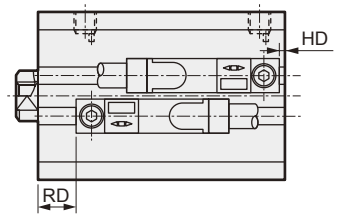


Symbol / Bore size (mm)	FA	FB	T2YH/V, T3YH/V, T2JH/V		T8H/V	
			RD	HD	RD	HD
ø20	24.3	16	8	5.5	-	-
ø25	26.3	17	11.5	5	-	-
ø32	28.8	24	14	8	-	-
ø40	32.3	31	18	8	13.5	3.5
ø50	38.3	32	18.5	8.5	14	4
ø63	44.8	32	16.5	16	12	11.5
ø80	55.3	32	19	20.5	14.5	16
ø100	64.8	32	23	26.5	18.5	22

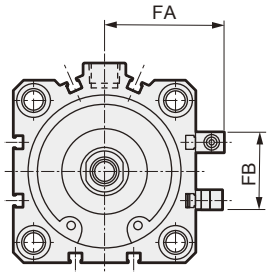
● SSD2-KL-20 to 100 (strong magnetic field, T1* with switch, T2YD, T2YDT, T1H/V)

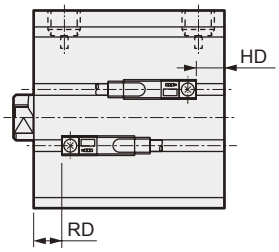
・ø20, ø25





・ø32 to ø100



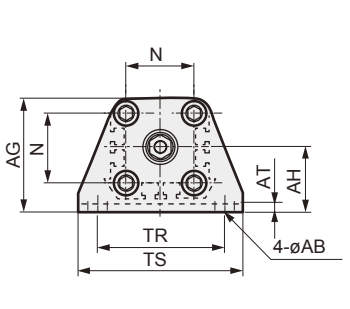


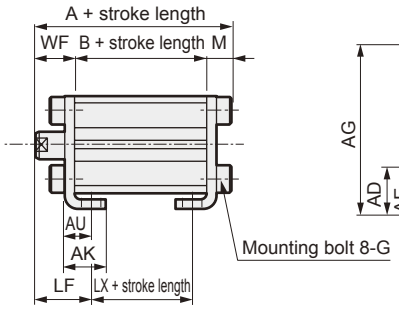
Symbol / Bore size (mm)	FA	FB	RD	HD
ø20	29.3	16	8	5.5
ø25	31.3	17	11.5	5
ø32	33.8	24	14	8
ø40	37.3	31	18	8
ø50	43.3	32	18.5	8.5
ø63	49.8	32	16.5	16
ø80	60.3	32	19	20.5
ø100	60.8	32	23	26.5

Dimensions with accessory (mounting bracket: LB)

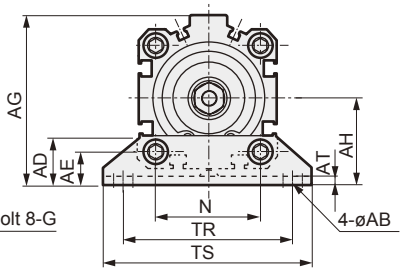
● SSD2, SSD2-K, SSD2(long stroke), SSD2-X, Y, SSD2-Q, SSD2-M

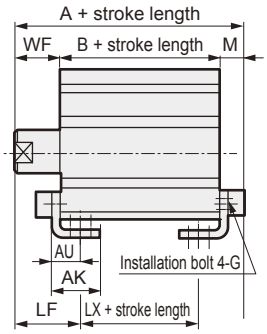
・ø12 to ø25



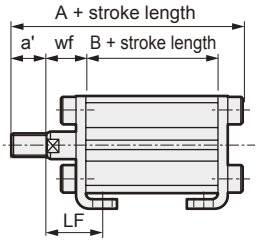


・ø32 to ø100

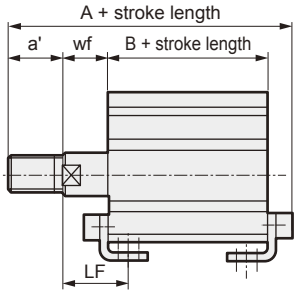




For rod end male thread



For rod end male thread



SSD2 (double-acting, single rod type), SSD2-X (single-acting, extending type), SSD2-Y(single-acting, retracting type)

Symbol	Common dimension						SSD2, SSD2-X, SSD2-Y (female thread)									Without switch			With switch			SSD2, SSD2-X, SSD2-Y (male thread)								
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M	WF	LF	A	B	LX	A	B	LX	a'	WF	LF	A	B	LX	A	B	LX
ø12	5	-	-	29.5	17	12.5	2	8	M4 x 10	15.5	34	44	6	13.5	19.5	36.5	17	5	41.5	22	10	10.5	13.5	19.5	47	17	5	52	22	10
ø16	5	-	-	33.5	19	13	2	8	M4 x 10	20	38	48	6	13.5	19.5	36.5	17	5	41.5	22	10	12	13.5	19.5	48.5	17	5	53.5	22	10
ø20	7	-	-	42	24	15	3.2	9.2	M6 x 16	25.5	48	62	9.2	14.5	20.5	43.2	19.5	7.5	53.2	29.5	17.5	14	14.5	20.5	57.2	19.5	7.5	67.2	29.5	17.5
ø25	7	-	-	46	26	16.5	3.2	10.7	M6 x 16	28	52	66	9.2	15	22.5	46.7	22.5	7.5	56.7	32.5	17.5	17.5	15	22.5	64.2	22.5	7.5	74.2	32.5	17.5
ø32	7	18.5	13	57	30	17	3.2	11.2	M6 x 16	34	57	71	9.2	17	25	49.2 (59.2)	23 (33)	7 (17)	59.2	33	17	23.5	15	23	70.7 (80.7)	23 (33)	7 (17)	80.7	33	17
ø40	7	18	13	64	33	18.2	3.2	11.2	M6 x 16	40	64	78	9.2	17	25	55.7 (65.7)	29.5 (39.5)	13.5 (23.5)	65.7	39.5	23.5	23.5	15	23	77.2 (87.2)	29.5 (39.5)	13.5 (23.5)	87.2	39.5	23.5
ø50	9	22	14	78	39	22.7	3.2	14.7	M8 x 20	50	79	95	11.2	18	29.5	59.7 (69.7)	30.5 (40.5)	7.5 (17.5)	69.7	40.5	17.5	28.5	15	26.5	85.2 (95.2)	30.5 (40.5)	7.5 (17.5)	95.2	40.5	17.5
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10 x 25	60	95	113	13.2	18	31	67.2 (77.2)	36 (46)	10 (20)	77.2	46	20	28.5	15	28	92.7 (102.7)	36 (46)	10 (20)	102.7	46	20
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12 x 40	77	118	140	16.5	20	35	80 (90)	43.5 (53.5)	13.5 (23.5)	90	53.5	23.5	35.5	18	33	113.5 (123.5)	43.5 (53.5)	13.5 (23.5)	123.5	53.5	23.5
ø100	13	35	24	136	71	35.5	6	23	M12 x 40	94	137	162	18	22	39	93 (103)	53 (63)	19 (29)	103	63	29	35.5	18	35	124.5 (134.5)	53 (63)	19 (29)	134.5	63	29

*Values in ( ) apply when 50 strokes is exceeded.

SSD2(long stroke), SSD2-K (double acting high load type)

Symbol	SSD2 (long stroke) (female thread)					SSD2 (long stroke) (male thread)						SSD2-K (female thread)							SSD2-K (male thread)								
Bore size (mm)	WF	LF	With/without switch			a'	wf	LF	With/without switch			WF	LF	Without switch			With switch			a'	WF	LF	Without switch			With switch		
			A	B	LX				A	B	LX			A	B	LX	A	B	LX				A	B	LX	A	B	LX
ø12	13.5	19.5	51.5	32	20	10.5	13.5	19.5	62	32	20	13.5	19.5	41.5	22	10	46.5	27	15	10.5	13.5	19.5	52	22	10	57	27	15
ø16	13.5	19.5	51.5	32	20	12	13.5	19.5	63.5	32	20	13.5	19.5	41.5	22	10	46.5	27	15	12	13.5	19.5	53.5	22	10	58.5	27	15
ø20	14.5	20.5	64.7	41	29	14	14.5	20.5	78.7	41	29	14.5	20.5	48.2	24.5	12.5	58.2	34.5	22.5	14	14.5	20.5	62.2	24.5	12.5	72.2	34.5	22.5
ø25	15	22.5	68.2	44	29	17.5	15	22.5	85.7	44	29	15	22.5	51.7	27.5	12.5	61.7	37.5	22.5	17.5	15	22.5	69.2	27.5	12.5	79.2	37.5	22.5
ø32	17	25	71.7	45.5	29.5	23.5	15	23	93.2	45.5	29.5	17	25	59.2 (69.2)	33 (43)	17 (27)	69.2	43	27	23.5	15	23	80.7 (90.7)	33 (43)	17 (27)	90.7	43	27
ø40	17	25	81.2	55	39	23.5	15	23	102.7	55	39	17	25	65.7 (75.7)	39.5 (49.5)	23.5 (33.5)	75.5	49.5	33.5	23.5	15	23	87.2 (97.2)	39.5 (49.5)	23.5 (33.5)	97.2	49.5	33.5
ø50	18	29.5	84.7	55.5	32.5	28.5	15	26.5	110.2	55.5	32.5	18	29.5	69.7 (79.7)	40.5 (50.5)	17.5 (27.5)	79.7	50.5	27.5	28.5	15	26.5	95.2 (105.2)	40.5 (50.5)	17.5 (27.5)	105.2	50.5	27.5
ø63	18	31	88.2	57	31	28.5	15	28	113.7	57	31	18	31	77.2 (87.2)	46 (56)	20 (30)	87.2	56	30	28.5	15	28	102.7 (112.7)	46 (56)	20 (30)	112.7	56	30
ø80	20	35	102.5	66	36	35.5	18	33	136	66	36	20	35	90 (100)	53.5 (63.5)	23.5 (33.5)	100	63.5	33.5	35.5	18	33	123.5 (133.5)	53.5 (63.5)	23.5 (33.5)	133.5	63.5	33.5
ø100	22	39	115.5	75.5	41.5	35.5	18	35	147	75.5	41.5	22	39	103 (113)	63 (73)	29 (39)	113	73	39	35.5	18	35	134.5 (144.5)	63 (73)	29 (39)	144.5	73	39

*Values in ( ) apply when 50 strokes is exceeded.

SSD2-M (double acting, non-rotating type)

Symbol	SSD2-M (female thread)								SSD2-M (male thread)							
Bore size (mm)	WF	LF	Without switch			With switch			a'	WF	LF	Without switch			With switch		
			A	B	LX	A	B	LX				A	B	LX	A	B	LX
ø12	13.5	19.5	41.5	22	10	46.5	27	15	10.5	13.5	19.5	52	22	10	57	27	15
ø16	13.5	19.5	41.5	22	10	46.5	27	15	12	13.5	19.5	53.5	22	10	58.5	27	15
ø20	14.5	20.5	48.2	24.5	12.5	58.2	34.5	22.5	14	14.5	20.5	62.2	24.5	12.5	72.2	34.5	22.5
ø25	15	22.5	51.7	27.5	12.5	61.7	37.5	22.5	17.5	15	22.5	69.2	27.5	12.5	79.2	37.5	22.5
ø32	17	25	58.2 (68.2)	32 (42)	16 (26)	68.2	42	26	23.5	15	23	79.7 (89.7)	32 (42)	16 (26)	89.7	42	26
ø40	17	25	55.7 (65.7)	29.5 (39.5)	13.5 (23.5)	65.7	39.5	23.5	23.5	15	23	77.2 (87.2)	29.5 (39.5)	13.5 (23.5)	87.2	39.5	23.5
ø50	18	29.5	59.7 (69.7)	30.5 (40.5)	7.5 (17.5)	69.7	40.5	17.5	28.5	15	26.5	85.2 (95.2)	30.5 (40.5)	7.5 (17.5)	95.2	40.5	17.5
ø63	18	31	67.2 (77.2)	36 (46)	10 (20)	77.2	46	20	28.5	15	28	92.7 (102.7)	36 (46)	10 (20)	102.7	46	20

*Values in ( ) apply when 50 strokes is exceeded.

SSD2-Q (double acting, position locking type)

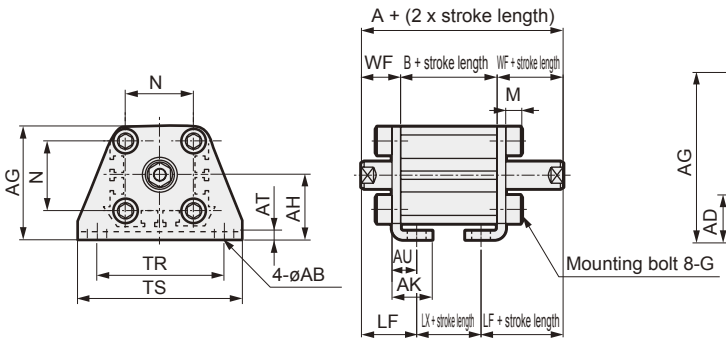
Symbol	SSD2-Q-R (female thread)					SSD2-Q-R (male thread)						SSD2-Q-H (female thread)					SSD2-Q-H (male thread)					
Bore size (mm)	WF	LF	With/without switch			a'	wf	LF	With/without switch			WF	LF	With/without switch			a'	wf	LF	With/without switch		
			A	B	LX				A	B	LX			A	B	LX				A	B	LX
ø20	14.5	20.5	78.2 (89.7)	54.5 (66)	42.5 (54)	14	14.5	20.5	92.2 (103.7)	54.5 (66)	42.5 (54)	14.5	20.5	84.7 (89.7)	61 (66)	49 (54)	14	14.5	20.5	98.7 (103.7)	61 (66)	49 (54)
ø25	15	22.5	81.7 (93.2)	57.5 (69)	42.5 (54)	17.5	15	22.5	99.2 (110.7)	57.5 (69)	42.5 (54)	15	22.5	88.2 (93.2)	64 (69)	49 (54)	17.5	15	22.5	105.7 (110.7)	64 (69)	49 (54)
ø32	17	25	84.2	58	42	23.5	15	23	105.7	58	42	17	25	91.7	65.5	49.5	23.5	15	23	113.2	65.5	49.5
ø40	17	25	90.7	64.5	48.5	23.5	15	23	112.2	64.5	48.5	17	25	101.2	75	59	23.5	15	23	122.7	75	59
ø50	18	29.5	94.7	65.5	42.5	28.5	15	26.5	120.2	65.5	42.5	18	29.5	104.7	75.5	52.5	28.5	15	26.5	130.2	75.5	52.5
ø63	18	31	102.2	71	45	28.5	15	28	127.7	71	45	18	31	108.2	77	51	28.5	15	28	133.7	77	51
ø80	20	35	140 (152.5)	103.5 (116)	73.5 (86)	35.5	18	33	173.5 (186)	103.5 (116)	73.5 (86)	20	35	147.5 (152.5)	111 (116)	81 (86)	35.5	18	33	181 (186)	111 (116)	81 (86)
ø100	22	39	153 (165.5)	113 (125.5)	79 (91.5)	35.5	18	35	184.5 (197)	113 (125.5)	79 (91.5)	22	39	160.5 (165.5)	120.5 (125.5)	86.5 (91.5)	35.5	18	35	192 (197)	120.5 (125.5)	86.5 (91.5)

*Dimensions in ( ) apply to ø20: 100 strokes or more, ø25 to ø50: 150 strokes or more, and ø63 to ø100: 200 strokes or more.

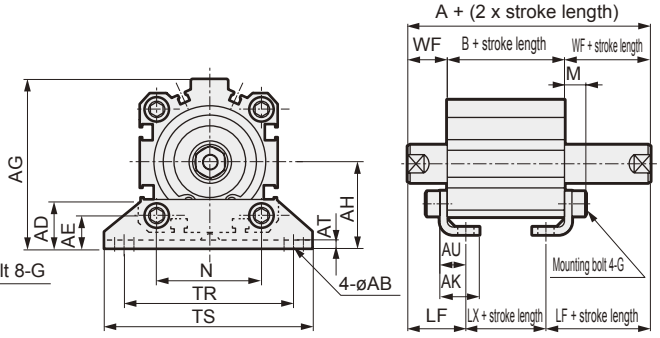
Dimensions with accessory (mounting bracket: LB)

● SSD2-D

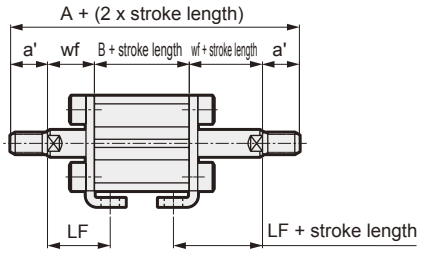
・ø12 to ø25



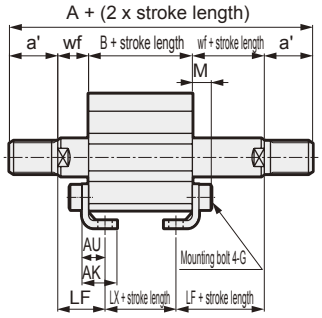
・ø32 to ø100



For rod end male thread



For rod end male thread



SSD2-D (double acting, double rod type) dimensions table

Symbol	Common dimension												
Bore size (mm)	AB	AD	AE	AG	AH	AK	AT	AU	G	N	TR	TS	M
ø12	5	-	-	29.5	17	12.5	2	8	M4 x 10	15.5	34	44	6
ø16	5	-	-	33.5	19	13	2	8	M4 x 10	20	38	48	6
ø20	7	-	-	42	24	15	3.2	9.2	M6 x 16	25.5	48	62	9.2
ø25	7	-	-	46	26	16.5	3.2	10.7	M6 x 16	28	52	66	9.2
ø32	7	18.5	13	57	30	17	3.2	11.2	M6 x 16	34	57	71	9.2
ø40	7	18	13	64	33	18.2	3.2	11.2	M6 x 16	40	64	78	9.2
ø50	9	22	14	78	39	22.7	3.2	14.7	M8 x 20	50	79	95	11.2
ø63	11	26	16	91.5	46	25.2	3.2	16.2	M10 x 25	60	95	113	13.2
ø80	13	31.5	20.5	114	59	30.5	4.5	19.5	M12 x 40	77	118	140	16.5
ø100	13	35	24	136	71	35.5	6	23	M12 x 40	94	137	162	18

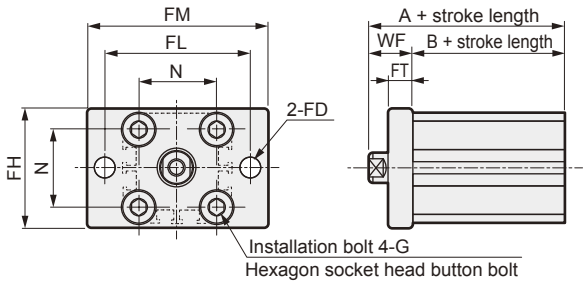
Symbol	SSD2-D (female thread)								SSD2-D (male thread)							
Bore size (mm)	WF	LF	Without switch			With switch			a'	wf	LF	Without switch			With switch	
			A	B	LX	A	B	LX				A	B	LX	A	B	LX
ø12	13.5	19.5	49	22	10	54	27	15	10.5	13.5	19.5	70	22	10	75	27	15
ø16	13.5	19.5	49	22	10	54	27	15	12	13.5	19.5	73	22	10	78	27	15
ø20	14.5	20.5	55	26	14	65	36	24	14	14.5	20.5	83	26	14	93	36	24
ø25	15	22.5	59	29	14	69	39	24	17.5	15	22.5	94	29	14	104	39	24
ø32	17	25	64.5 (74.5)	30.5 (40.5)	14.5 (24.5)	74.5	40.5	24.5	23.5	15	23	107.5 (117.5)	30.5 (40.5)	14.5 (24.5)	117.5	40.5	24.5
ø40	17	25	74 (84)	40 (50)	24 (34)	84	50	34	23.5	15	23	117 (127)	40 (50)	24 (34)	127	50	34
ø50	18	29.5	76.5 (86.5)	40.5 (50.5)	17.5 (27.5)	86.5	50.5	27.5	28.5	15	26.5	127.5 (137.59)	40.5 (50.5)	17.5 (27.5)	137.5	50.5	27.5
ø63	18	31	78 (88)	42 (52)	16 (26)	88	52	26	28.5	15	28	129 (139)	42 (52)	16 (26)	139	52	26
ø80	20	35	91 (101)	51 (61)	21 (31)	101	61	31	35.5	18	33	158 (168)	51 (61)	21 (31)	168	61	31
ø100	22	39	104.5 (114.5)	60.5 (70.5)	26.5 (36.5)	115	70.5	36.5	35.5	18	35	167.5 (177.5)	60.5 (70.5)	26.5 (36.5)	177.5	70.5	36.5

*Values in ( ) apply when 50 strokes is exceeded.

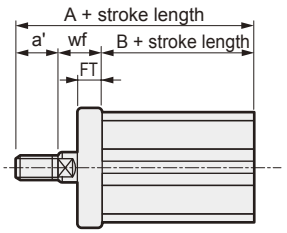
Dimensions with accessory (mounting bracket: FA)

● SSD2, SSD2-K, SSD2(long stroke), SSD2-X·Y, SSD2-Q, SSD2-M

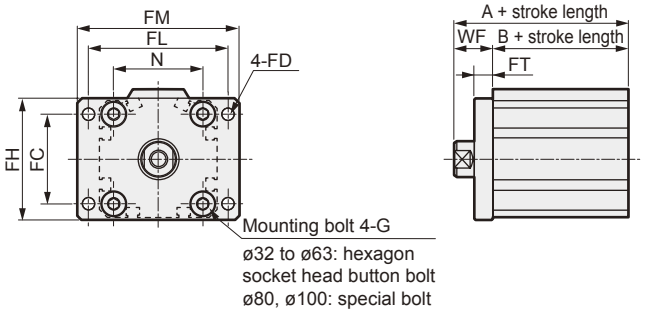
· ø12 to ø25



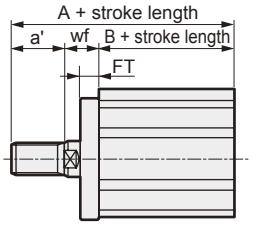
For rod end male thread



· ø32 to ø100



For rod end male thread



SSD2 (double-acting, single rod type), SSD2-X (single-acting, extending type), SSD2-Y (single-acting, retracting type)

Symbol	Common dimension								SSD2, SSD2-X, SSD2-Y (female thread)					SSD2, SSD2-X, SSD2-Y (male thread)					
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø12	-	4.5	25	45	55	5.5	15.5	M4 x 12	13.5	30.5	17	35.5	22	10.5	13.5	41	17	46	22
ø16	-	4.5	30	45	55	5.5	20	M4 x 12	13.5	30.5	17	35.5	22	12	13.5	42.5	17	47.5	22
ø20	-	6.6	39	48	60	8	25.5	M6 x 16	14.5	34	19.5	44	29.5	14	14.5	48	19.5	58	29.5
ø25	-	6.6	42	52	64	8	28	M6 x 16	15	37.5	22.5	47.5	32.5	17.5	15	55	22.5	65	32.5
ø32	34	5.5	48	56	65	8	34	M6 x 16	17	40 (50)	23 (33)	50	33	23.5	15	61.5 (71.5)	23 (33)	71.5	33
ø40	40	5.5	54	62	72	8	40	M6 x 16	17	46.5 (56.5)	29.5 (39.5)	56.5	39.5	23.5	15	68 (78)	29.5 (39.5)	78	39.5
ø50	50	6.6	67	76	89	9	50	M8 x 20	18	48.5 (58.5)	30.5 (40.5)	58.5	40.5	28.5	15	74 (84)	30.5 (40.5)	84	40.5
ø63	60	9	80	92	108	9	60	M10 x 25	18	54 (64)	36 (46)	64	46	28.5	15	79.5 (89.5)	36 (46)	89.5	46
ø80	77	11	99	116	134	11	77	M12 x 40	20	63.5 (73.5)	43.5 (53.5)	73.5	53.5	35.5	18	97 (107)	43.5 (53.5)	107	53.5
ø100	94	11	117	136	154	11	94	M12 x 40	22	75 (85)	53 (63)	85	63	35.5	18	106.5 (116.5)	53 (63)	116.5	63

*Values in ( ) apply when 50 strokes is exceeded.

SSD2(long stroke), SSD2-K (double acting high load type)

Symbol	SSD2 (long stroke) (female thread)			SSD2 (long stroke) (male thread)				SSD2-K (female thread)					SSD2-K (male thread)					
Bore size (mm)	WF	With/without switch		a'	wf	With/without switch		WF	Without switch		With switch		a'	wf	Without switch		With switch	
		A	B			A	B		A	B	A	B			A	B	A	B
ø12	13.5	45.5	32	10.5	13.5	56	32	13.5	35.5	22	40.5	27	10.5	13.5	46	22	51	27
ø16	13.5	45.5	32	12	13.5	57.5	32	13.5	35.5	22	40.5	27	12	13.5	47.5	22	52.5	27
ø20	14.5	55.5	41	14	14.5	69.5	41	14.5	39	24.5	49	34.5	14	14.5	53	24.5	63	34.5
ø25	15	59	44	17.5	15	76.5	44	15	42.5	27.5	52.5	37.5	17.5	15	60	27.5	70	37.5
ø32	17	62.5	45.5	23.5	15	84	45.5	17	50 (60)	33 (43)	60	43	23.5	15	71.5 (81.59)	33 (43)	81.5	43
ø40	17	72	55	23.5	15	93.5	55	17	56.5 (66.5)	39.5 (49.5)	66.5	49.5	23.5	15	78 (88)	39.5 (49.5)	88	49.5
ø50	18	73.5	55.5	28.5	15	99	55.5	18	58.5 (68.5)	40.5 (50.5)	68.5	50.5	28.5	15	84 (94)	40.5 (50.5)	94	50.5
ø63	18	75	57	28.5	15	100.5	57	18	64 (74)	46 (56)	74	56	28.5	15	89.5 (99.5)	46 (56)	99.5	56
ø80	20	86	66	35.5	18	119.5	66	20	73.5 (83.5)	53.5 (63.5)	83.5	63.5	35.5	18	107 (117)	53.5 (63.5)	117	63.5
ø100	22	97.5	75.5	35.5	18	129	75.5	22	85 (95)	63 (73)	95	73	35.5	18	116.5 (126.5)	63 (73)	126.5	73

*Values in ( ) apply when 50 strokes is exceeded.

SSD2-M (double acting, non-rotating type)

Symbol	SSD2-M (female thread)					SSD2-M (male thread)				
Bore size (mm)	WF	Without switch		With switch		a'	WF	Without switch		With switch	
		A	B	A	B			A	B	A	B
ø12	13.5	35.5	22	40.5	27	10.5	13.5	46	22	51	27
ø16	13.5	35.5	22	40.5	27	12	13.5	47.5	22	52.5	27
ø20	14.5	39	24.5	49	34.5	14	14.5	53	24.5	63	34.5
ø25	15	42.5	27.5	52.5	37.5	17.5	15	60	27.5	70	37.5
ø32	17	49 (59)	32 (42)	59	42	23.5	15	70.5 (80.5)	32 (42)	80.5	42
ø40	17	46.5 (56.5)	29.5 (39.5)	56.5	39.5	23.5	15	68 (78)	29.5 (39.5)	78	39.5
ø50	18	48.5 (58.5)	30.5 (40.5)	58.5	40.5	28.5	15	74 (84)	30.5 (40.5)	84	40.5
ø63	18	54 (64)	36 (46)	64	46	28.5	15	79.5 (89.5)	36 (46)	89.5	46

*Values in ( ) apply when 50 strokes is exceeded.

SSD2-Q (double acting, position locking type)

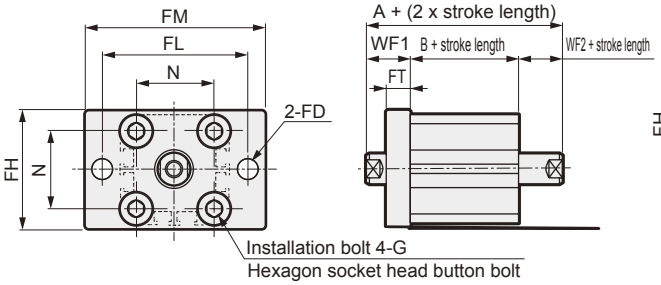
Symbol	SSD2-Q-R (female thread)			SSD2-Q-R (male thread)				SSD2-Q-H (female thread)			SSD2-Q-H (male thread)			
Bore size (mm)	WF	With/without switch		a'	wf	With/without switch		WF	With/without switch		a'	wf	With/without switch	
		A	B			A	B		A	B			A	B
ø20	14.5	69 (80.5)	54.5 (66)	14	14.5	83 (94.5)	54.5 (66)	14.5	75.5 (80.5)	61 (66)	14	14.5	89.5 (94.5)	61 (66)
ø25	15	72.5 (84)	57.5 (69)	17.5	15	90 (101.5)	57.5 (69)	15	79 (84)	64 (69)	17.5	15	96.5 (101.5)	64 (69)
ø32	17	75	58	23.5	15	96.5	58	17	82.5	65.5	23.5	15	104	65.5
ø40	17	81.5	64.5	23.5	15	103	64.5	17	92	75	23.5	15	113.5	75
ø50	18	83.5	65.5	28.5	15	109	65.5	18	93.5	75.5	28.5	15	119	75.5
ø63	18	89	71	28.5	15	114.5	71	18	95	77	28.5	15	120.5	77
ø80	20	123.5 (136)	103.5 (116)	35.5	18	157 (169.5)	103.5 (116)	20	131 (136)	111 (116)	35.5	18	164.5 (169.5)	111 (116)
ø100	22	135 (147.5)	113 (125.5)	35.5	18	166.5 (179)	113 (125.5)	22	142.5 (147.5)	120.5 (125.5)	35.5	18	174 (179)	120.5 (125.5)

*Dimensions in ( ) apply to ø20: 100 strokes or more, ø25 to ø50: 150 strokes or more, and ø63 to ø100: 200 strokes or more.

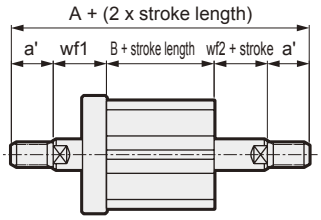
Dimensions with accessory (mounting bracket: FA)

● SSD2-D

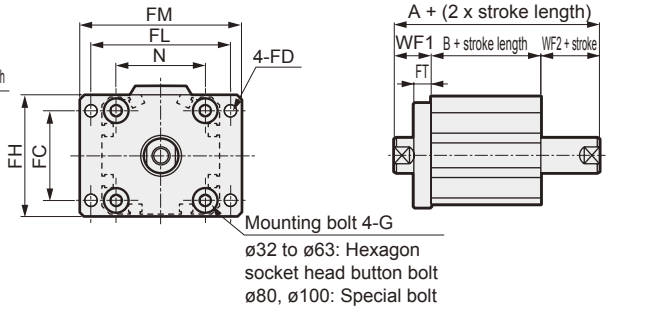
・ø12 to ø25



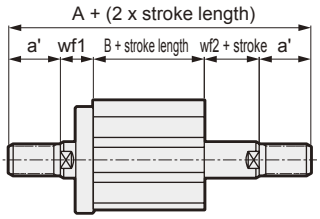
For rod end male thread



・ø32 to ø100



For rod end male thread



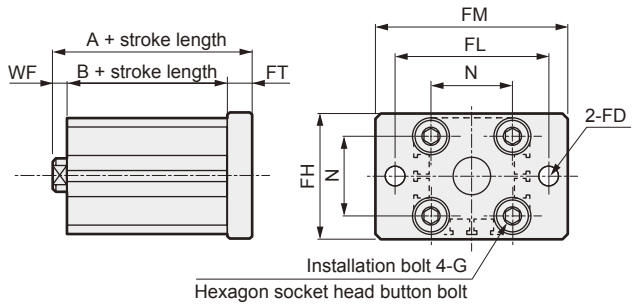
SSD2-D (double acting, double rod type) dimensions table

Symbol	Common dimension								SSD2-D (female thread)						SSD2-D (male thread)						
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF1	WF2	Without switch		With switch		a'	wf1	wf2	Without switch		With switch	
											A	B	A	B				A	B	A	B
ø12	-	4.5	25	45	55	5.5	15.5	M4 x 12	13.5	3.5	39	22	44	27	11	13.5	3.5	60	22	65	27
ø16	-	4.5	30	45	55	5.5	20	M4 x 12	13.5	3.5	39	22	44	27	12	13.5	3.5	63	22	68	27
ø20	-	6.6	39	48	60	8	25.5	M6 x 16	14.5	4.5	45	26	55	36	14	14.5	4.5	73	26	83	36
ø25	-	6.6	42	52	64	8	28	M6 x 16	15	5	49	29	59	39	18	15	5	84	29	94	39
ø32	34	5.5	48	56	65	8	34	M6 x 16	17	7	54.5 (64.5)	30.5 (40.5)	64.5	40.5	24	15	5	97.5 (107.5)	30.5 (40.5)	107.5	40.5
ø40	40	5.5	54	62	72	8	40	M6 x 16	17	7	64 (74)	40 (50)	74	50	24	15	5	107 (117)	40 (50)	117	50
ø50	50	6.6	67	76	89	9	50	M8 x 20	18	8	66.5 (76.5)	40.5 (50.5)	76.5	50.5	29	15	5	117.5 (127.5)	40.5 (50.5)	127.5	50.5
ø63	60	9	80	92	108	9	60	M10 x 25	18	8	68 (78)	42 (52)	78	52	29	15	5	119 (129)	42 (52)	129	52
ø80	77	11	99	116	134	11	77	M12 x 40	20	10	81 (91)	51 (61)	91	61	36	18	8	148 (158)	51 (61)	158	61
ø100	94	11	117	136	154	11	94	M12 x 40	22	12	94.5 (104.5)	60.5 (70.5)	104.5	70.5	36	18	8	157.5 (167.5)	60.5 (70.5)	167.5	70.5

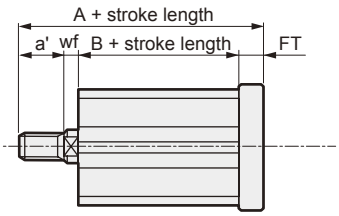
*Values in ( ) apply when 50 strokes is exceeded.

Dimensions with accessory (mounting bracket: FB)

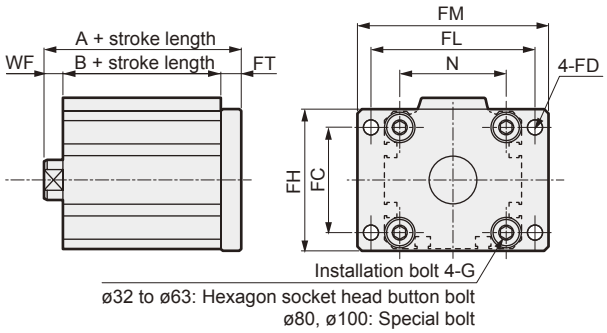
● ø12 to ø25



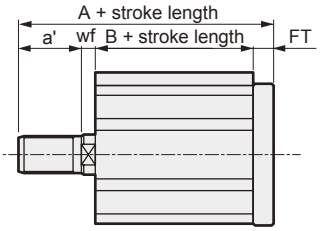
For rod end male thread



● ø32 to ø100



For rod end male thread



SSD2 (double acting, single rod type) dimensions table

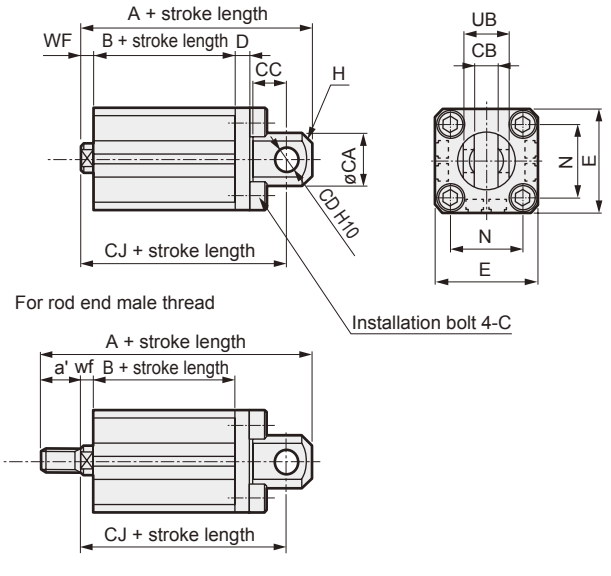
Symbol	Common dimension								Female thread					Male thread					
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø12	-	4.5	25	45	55	5.5	15.5	M4 x 12	3.5	26	17	31	22	10.5	3.5	36.5	17	41.5	22
ø16	-	4.5	30	45	55	5.5	20	M4 x 12	3.5	26	17	31	22	12	3.5	38	17	43	22
ø20	-	6.6	39	48	60	8	25.5	M6 x 16	4.5	32	19.5	42	29.5	14	4.5	46	19.5	56	29.5
ø25	-	6.6	42	52	64	8	28	M6 x 16	5	35.5	22.5	45.5	32.5	17.5	5	53	22.5	63	32.5
ø32	34	5.5	48	56	65	8	34	M6 x 16	7	38	23	48	33	23.5	5	59.5	23	69.5	33
ø40	40	5.5	54	62	72	8	40	M6 x 16	7	44.5	29.5	54.5	39.5	23.5	5	66	29.5	76	39.5
ø50	50	6.6	67	76	89	9	50	M8 x 20	8	47.5	30.5	57.5	40.5	28.5	5	73	30.5	83	40.5
ø63	60	9	80	92	108	9	60	M10 x 25	8	53	36	63	46	28.5	5	78.5	36	88.5	46
ø80	77	11	99	116	134	11	77	M12 x 40	10	64.5	43.5	74.5	53.5	35.5	8	98	43.5	108	53.5
ø100	94	11	117	136	154	11	94	M12 x 40	12	76	53	86	63	35.5	8	107.5	53	117.5	63

SSD2-K (double acting, high load type) dimensions table

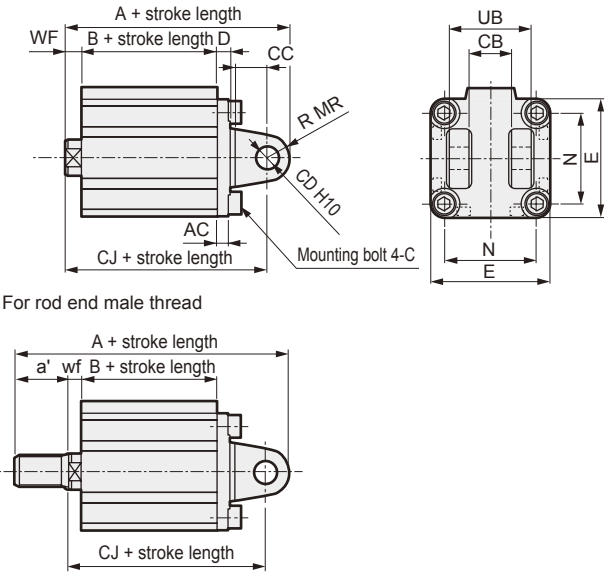
Symbol	Common dimension								Female thread					Male thread					
Bore size (mm)	FC	FD	FH	FL	FM	FT	N	G	WF	Without switch		With switch		a'	wf	Without switch		With switch	
										A	B	A	B			A	B	A	B
ø12	-	4.5	25	45	55	5.5	15.5	M4 x 12	3.5	31	22	36	27	10.5	3.5	41.5	22	46.5	27
ø16	-	4.5	30	45	55	5.5	20	M4 x 12	3.5	31	22	36	27	12	3.5	43	22	48	27
ø20	-	6.6	39	48	60	8	25.5	M6 x 16	4.5	37	24.5	47	34.5	14	4.5	51	24.5	61	34.5
ø25	-	6.6	42	52	64	8	28	M6 x 16	5	40.5	27.5	50.5	37.5	17.5	5	58	27.5	68	37.5
ø32	34	5.5	48	56	65	8	34	M6 x 16	7	48	33	58	43	23.5	5	69.5	33	79.5	43
ø40	40	5.5	54	62	72	8	40	M6 x 16	7	54.5	39.5	64.5	49.5	23.5	5	76	39.5	86	49.5
ø50	50	6.6	67	76	89	9	50	M8 x 20	8	57.5	40.5	67.5	50.5	28.5	5	83	40.5	93	50.5
ø63	60	9	80	92	108	9	60	M10 x 25	8	63	46	73	56	28.5	5	88.5	46	98.5	56
ø80	77	11	99	116	134	11	77	M12 x 40	10	74.5	53.5	84.5	63.5	35.5	8	108	53.5	118	63.5
ø100	94	11	117	136	154	11	94	M12 x 40	12	86	63	96	73	35.5	8	117.5	63	127.5	73

Dimensions with accessory (mounting bracket: CB)

● ø12 to ø25



● ø32 to ø100



SSD2 (double acting, single rod type) dimensions table

Symbol	Common dimension												Female thread							Male thread						
Bore size (mm)	AC	CA	CB	CC	CD	D	E	G	H	MR	N	UB	WF	Without switch			With switch			a'	wf	Without switch			With switch		
														A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø12	-	12	5 $^{+0.4}_{+0.2}$	7	5	4	25	M4 x 12	C1.5	-	15.5	10 $^{-0.1}_{-0.3}$	3.5	40.5	17	34.5	45.5	22	39.5	10.5	3.5	51	17	34.5	56	22	39.5
ø16	-	15	6.5 $^{+0.4}_{+0.1}$	8	5	5	29	M4 x 12	C2	-	20	12 $^{-0.1}_{-0.4}$	3.5	41.5	17	35.5	46.5	22	40.5	12	3.5	53.5	17	35.5	58.5	22	40.5
ø20	-	20	8 $^{+0.4}_{+0.2}$	12	8	5	36	M6 x 16	C4	-	25.5	16 $^{-0.1}_{-0.3}$	4.5	51	19.5	42	61	29.5	52	14	4.5	65	19.5	42	75	29.5	52
ø25	-	24	10 $^{+0.4}_{+0.2}$	14	10	5	40	M6 x 16	C5	-	28	20 $^{-0.1}_{-0.3}$	5	57.5	22.5	47.5	67.5	32.5	57.5	17.5	5	75	22.5	47.5	85	32.5	57.5
ø32	4.5	-	18 $^{+0.4}_{+0.2}$	14	10	5	45	M6 x 16	-	10	34	36 $^{-0.1}_{-0.3}$	7	60	23	50	70	33	60	23.5	5	81.5	23	48	91.5	33	58
ø40	5	-	18 $^{+0.4}_{+0.2}$	14	10	6	52	M6 x 16	-	10	40	36 $^{-0.1}_{-0.3}$	7	68.5	29.5	58.5	78.5	39.5	68.5	23.5	5	90	29.5	56.5	100	39.5	66.5
ø50	6	-	22 $^{+0.4}_{+0.2}$	20	14	7	64	M8 x 20	-	14	50	44 $^{-0.1}_{-0.3}$	8	80.5	30.5	66.5	90.5	40.5	76.5	28.5	5	106	30.5	63.5	116	40.5	73.5
ø63	7	-	22 $^{+0.4}_{+0.2}$	20	14	8	77	M10 x 25	-	14	60	44 $^{-0.1}_{-0.3}$	8	88	36	74	98	46	84	28.5	5	113.5	36	71	123.5	46	81
ø80	9	-	28 $^{+0.4}_{+0.2}$	27	18	10	98	M12 x 40	-	18	77	56 $^{-0.1}_{-0.3}$	10	109.5	43.5	91.5	119.5	53.5	101.5	35.5	8	143	43.5	89.5	153	53.5	99.5
ø100	12	-	32 $^{+0.4}_{+0.2}$	31	22	13	117	M12 x 40	-	22	94	64 $^{-0.1}_{-0.3}$	12	132	53	110	142	63	120	35.5	8	163.5	53	106	173.5	63	116

SSD2-K (double acting, high load type) dimensions table

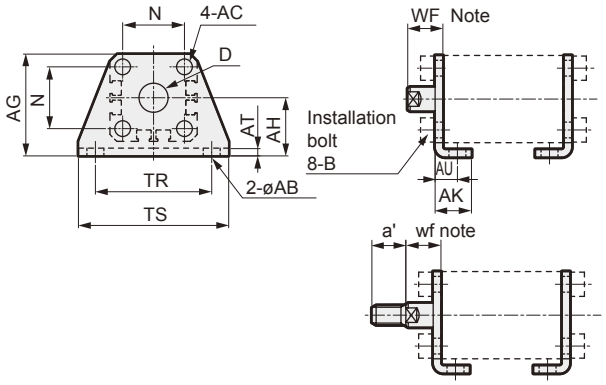
Symbol	Common dimension												Female thread							Male thread						
Bore size (mm)	AC	CA	CB	CC	CD	D	E	G	H	MR	N	UB	WF	Without switch			With switch			a'	wf	Without switch			With switch		
														A	B	CJ	A	B	CJ			A	B	CJ	A	B	CJ
ø12	-	12	5 $^{+0.4}_{+0.2}$	7	5	4	25	M4 x 12	C1.5	-	15.5	10 $^{-0.1}_{-0.3}$	3.5	45.5	22	39.5	50.5	27	44.5	10.5	3.5	56	22	39.5	61	27	44.5
ø16	-	15	6.5 $^{+0.4}_{+0.1}$	8	5	5	29	M4 x 12	C2	-	20	12 $^{-0.1}_{-0.4}$	3.5	46.5	22	40.5	51.5	27	45.5	12	3.5	58.5	22	40.5	63.5	27	45.5
ø20	-	20	8 $^{+0.4}_{+0.2}$	12	8	5	36	M6 x 16	C4	-	25.5	16 $^{-0.1}_{-0.3}$	4.5	56	24.5	47	66	34.5	57	14	4.5	70	24.5	47	80	34.5	57
ø25	-	24	10 $^{+0.4}_{+0.2}$	14	10	5	40	M6 x 16	C5	-	28	20 $^{-0.1}_{-0.3}$	5	62.5	27.5	52.5	72.5	37.5	62.5	17.5	5	80	27.5	52.5	90	37.5	62.5
ø32	4.5	-	18 $^{+0.4}_{+0.2}$	14	10	5	45	M6 x 16	-	10	34	36 $^{-0.1}_{-0.3}$	7	70	33	60	80	43	70	23.5	5	91.5	33	58	101.5	43	68
ø40	5	-	18 $^{+0.4}_{+0.2}$	14	10	6	52	M6 x 16	-	10	40	36 $^{-0.1}_{-0.3}$	7	78.5	39.5	68.5	88.5	49.5	78.5	23.5	5	100	39.5	66.5	110	49.5	76.5
ø50	6	-	22 $^{+0.4}_{+0.2}$	20	14	7	64	M8 x 20	-	14	50	44 $^{-0.1}_{-0.3}$	8	90.5	40.5	76.5	100.5	50.5	86.5	28.5	5	116	40.5	73.5	126	50.5	83.5
ø63	7	-	22 $^{+0.4}_{+0.2}$	20	14	8	77	M10 x 25	-	14	60	44 $^{-0.1}_{-0.3}$	8	98	46	84	108	56	94	28.5	5	123.5	46	81	133.5	56	91
ø80	9	-	28 $^{+0.4}_{+0.2}$	27	18	10	98	M12 x 40	-	18	77	56 $^{-0.1}_{-0.3}$	10	119.5	53.5	101.5	129.5	63.5	111.5	35.5	8	153	53.5	99.5	163	63.5	109.5
ø100	12	-	32 $^{+0.4}_{+0.2}$	31	22	13	117	M12 x 40	-	22	94	64 $^{-0.1}_{-0.3}$	12	142	63	120	152	73	130	35.5	8	173.5	63	116	183.5	73	126

*Pin and snap ring are attached.

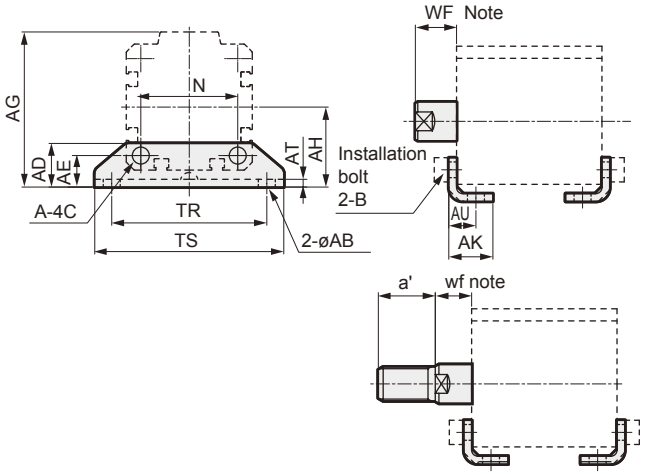
Dimensions (mounting bracket: LB) CAD

● Axial foot type (LB)

・ø12 to ø25



・ø32 to ø100



*1: Hexagon socket head cap bolt for mounting is attached.

Model no.	Applicable bore size	AB	AC	AD	AE	AG	AH	AK	AT	AU	B	D	N	TR	TS	WF	wf	a'	Weight (g)
SSD2-LB-12	ø12	5	4.5	-	-	29.5	17	12.5	2	8	M4 x 10	8	15.5	34	44	13.5	13.5	10.5	51
SSD2-LB-16	ø16	5	4.5	-	-	33.5	19	13	2	8	M4 x 10	10	20	38	48	13.5	13.5	12	61
SSD2-LB-20	ø20	7	6.5	-	-	42	24	15	3.2	9.2	M6 x 16	12	25.5	48	62	14.5	14.5	14	161
SSD2-LB-25	ø25	7	6.5	-	-	46	26	16.5	3.2	10.7	M6 x 16	14	28	52	66	15	15	17.5	176
SSD2-LB-32	ø32	7	7	18.5	13	57	30	17	3.2	11.2	M6 x 16	-	34	57	71	17	15	23.5	107
SSD2-LB-40	ø40	7	7	18	13	64	33	18.2	3.2	11.2	M6 x 16	-	40	64	78	17	15	23.5	121
SSD2-LB-50	ø50	9	9	22	14	78	39	22.7	3.2	14.7	M8 x 20	-	50	79	95	18	15	28.5	201
SSD2-LB-63	ø63	11	11	26	16	91.5	46	25.2	3.2	16.2	M10 x 25	-	60	95	113	18	15	28.5	314
SSD2-LB-80	ø80	13	13	31.5	20.5	114	59	30.5	4.5	19.5	M12 x 40	-	77	118	140	20	18	35.5	678
SSD2-LB-100	ø100	13	13	35	24	136	71	35.5	6	23	M12 x 40	-	94	137	162	22	18	35.5	1198

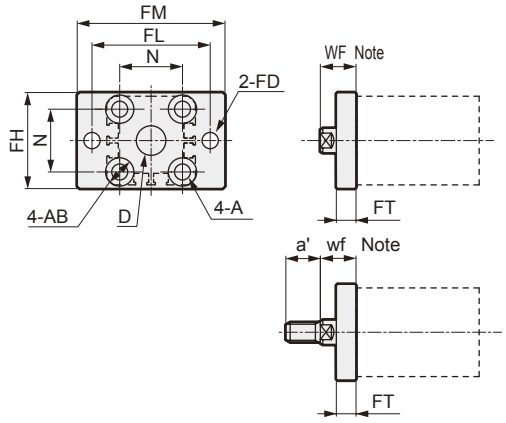
Note 1: WF and wf dimensions for LB cylinder are 10 mm longer than the standard part. Contact CKD for information on the cylinder model when preparing the cylinder and LB fitting individually.

Note 2: Dimensions of SSD2 mounting bracket are the same as the SSD compact mounting bracket.
Note when checking with Pneumatic Cylinders I (CB-029SA).
(Example: Dimensions of SSD2-LB-32 are the same as SSD-LB2-32.)

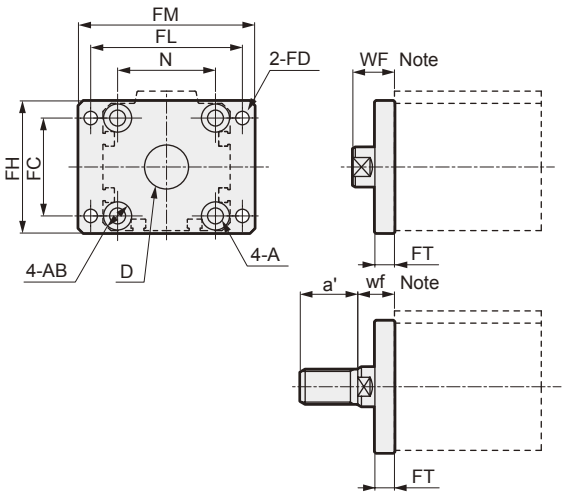
Dimensions (mounting bracket: FA, FB)

● Rod end flange type (FA)

・ø12 to ø25



・ø32 to ø100



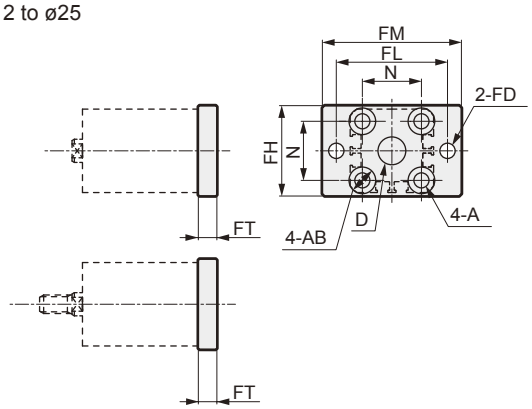
*1: Mounting bolt is attached.

Model no.	Applicable bore size	FC	FD	FH	FL	FM	FT	A	AB	D	N	WF	wf	a'	Weight (g)
SSD2-FA-12	ø12	-	4.5	25	45	55	5.5	4.5	8.5 spot face depth 2.7	8	15.5	13.5	13.5	10.5	54
SSD2-FA-16	ø16	-	4.5	30	45	55	5.5	4.5	8.5 spot face depth 2.7	10	20	13.5	13.5	12	64
SSD2-FA-20	ø20	-	6.6	39	48	60	8	6.5	11.5 spot face depth 3.8	12	25.5	14.5	14.5	14	129
SSD2-FA-25	ø25	-	6.6	42	52	64	8	6.5	11.5 spot face depth 3.8	14	28	15	15	17.5	148
SSD2-FA-32	ø32	34	5.5	48	56	65	8	6.5	11.5 spot face depth 3.8	22	34	17	15	23.5	167
SSD2-FA-40	ø40	40	5.5	54	62	72	8	6.5	11.5 spot face depth 3.8	28	40	17	15	23.5	215
SSD2-FA-50	ø50	50	6.6	67	76	89	9	9	15 spot face depth 5	35	50	18	15	28.5	387
SSD2-FA-63	ø63	60	9	80	92	108	9	11	18 spot face depth 6	35	60	18	15	28.5	573
SSD2-FA-80	ø80	77	11	99	116	134	11	13	19 spot face depth 7.5	43	77	20	18	35.5	1132
SSD2-FA-100	ø100	94	11	117	136	154	11	13	19 spot face depth 7.5	59	94	22	18	35.5	1522

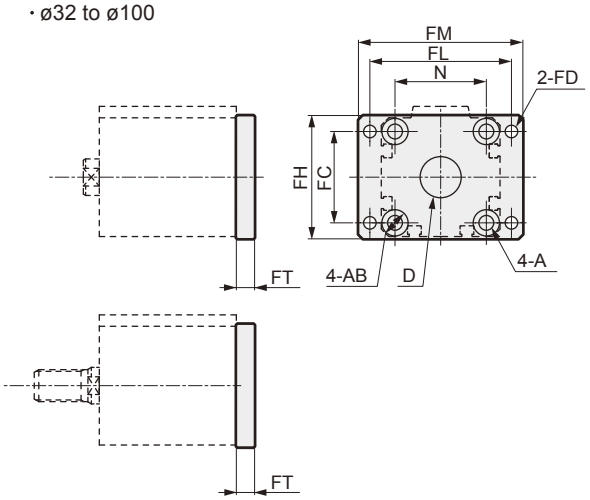
Note: WF and wf dimensions for FA cylinder are 10 mm longer than the standard part. Contact CKD for information on the cylinder model when preparing the cylinder and FA fitting individually.

● Head end flange type (FB)

・ø12 to ø25



・ø32 to ø100



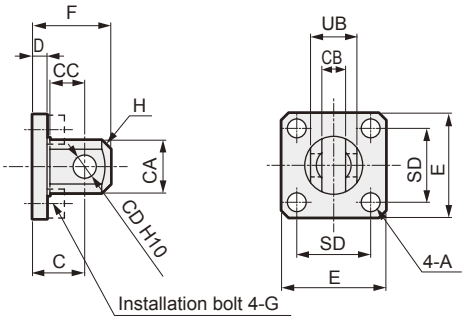
*1: Mounting bolt is attached.

Model no.	Applicable bore size	FC	FD	FH	FL	FM	FT	A	AB	D	N	Weight (g)
SSD2-FB-12	ø12	-	4.5	25	45	55	5.5	4.5	8.5 spot face depth 2.7	8	15.5	54
SSD2-FB-16	ø16	-	4.5	30	45	55	5.5	4.5	8.5 spot face depth 2.7	10	20	64
SSD2-FB-20	ø20	-	6.6	39	48	60	8	6.5	11.5 spot face depth 3.8	12	25.5	129
SSD2-FB-25	ø25	-	6.6	42	52	64	8	6.5	11.5 spot face depth 3.8	14	28	148
SSD2-FB-32	ø32	34	5.5	48	56	65	8	6.5	11.5 spot face depth 3.8	22	34	167
SSD2-FB-40	ø40	40	5.5	54	62	72	8	6.5	11.5 spot face depth 3.8	28	40	215
SSD2-FB-50	ø50	50	6.6	67	76	89	9	9	15 spot face depth 5	35	50	387
SSD2-FB-63	ø63	60	9	80	92	108	9	11	18 spot face depth 6	35	60	573
SSD2-FB-80	ø80	77	11	99	116	134	11	13	19 spot face depth 7.5	43	77	1132
SSD2-FB-100	ø100	94	11	117	136	154	11	13	19 spot face depth 7.5	59	94	1522

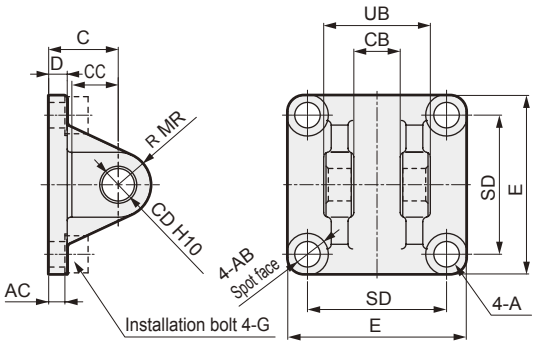
Dimensions (mounting bracket: CB)

● Clevis bracket type (CB)

・ø12 to ø25



・ø32 to ø100

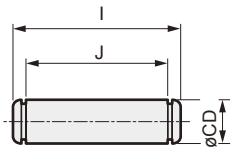


*1: Hexagon socket head cap bolt for mounting, pin (including C ring), snap ring are attached.

Model no.	Applicable bore size	A	AB	AC	C	CA	CB	CC	CD	D	E	F	G	H	MR	SD	UB	Weight (g)
SSD2-CB-12	ø12	4.5	-	-	14	12	5.2 $^{+0.2}_{0}$	7	5 $^{+0.048}_{0}$	4	25	20	M4 x 12	C1.5	-	15.5	10 $^{-0.1}_{-0.3}$	28
SSD2-CB-16	ø16	4.5	-	-	15	15	6.6 $^{+0.3}_{0}$	8	5 $^{+0.048}_{0}$	5	29	21	M4 x 12	C2	-	20	12 $^{-0.1}_{-0.4}$	43
SSD2-CB-20	ø20	6.5	-	-	18	20	8.2 $^{+0.2}_{0}$	12	8 $^{+0.058}_{0}$	5	36	27	M6 x 16	C4	-	25.5	16 $^{-0.1}_{-0.3}$	84
SSD2-CB-25	ø25	6.5	-	-	20	24	10.2 $^{+0.2}_{0}$	14	10 $^{+0.058}_{0}$	5	40	30	M6 x 16	C5	-	28	20 $^{-0.1}_{-0.3}$	110
SSD2-CB-32	ø32	6.6	13	4.5	20	-	18.2 $^{+0.2}_{0}$	14	10 $^{+0.058}_{0}$	5	45	30	M6 x 16	-	10	34	36 $^{-0.1}_{-0.3}$	159
SSD2-CB-40	ø40	6.6	14	5	22	-	18.2 $^{+0.2}_{0}$	14	10 $^{+0.058}_{0}$	6	52	32	M6 x 16	-	10	40	36 $^{-0.1}_{-0.3}$	207
SSD2-CB-50	ø50	9	16	6	28	-	22.2 $^{+0.2}_{0}$	20	14 $^{+0.070}_{0}$	7	64	42	M8 x 20	-	14	50	44 $^{-0.1}_{-0.3}$	420
SSD2-CB-63	ø63	11	18	7	30	-	22.2 $^{+0.2}_{0}$	20	14 $^{+0.070}_{0}$	8	77	44	M10 x 25	-	14	60	44 $^{-0.1}_{-0.3}$	605
SSD2-CB-80	ø80	13.5	23	9	38	-	28.2 $^{+0.2}_{0}$	27	18 $^{+0.070}_{0}$	10	98	56	M12 x 40	-	18	77	56 $^{-0.1}_{-0.3}$	1222
SSD2-CB-100	ø100	13.5	20	12	45	-	32.2 $^{+0.2}_{0}$	31	22 $^{+0.084}_{0}$	13	117	67	M12 x 40	-	22	94	64 $^{-0.1}_{-0.3}$	2031

Note 1: Dimensions of SSD2 mounting bracket are the same as the SSD compact mounting bracket.
Note when checking with Pneumatic Cylinders I (CB-029SA).
(Example: Dimensions of SSD2-CB-32 are the same as SSD-CB2-32.)

● Clevis bracket (CB), attached pin dimensions table (P)

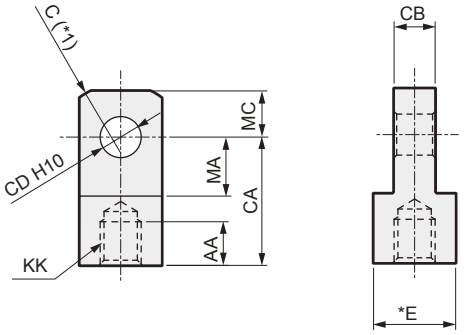


Model no.	Applicable bore size	I	J	CD	Snap ring	Weight (g)
SSD2-P-12	ø12	15.2	10.2	5 $^{-0.01}_{-0.028}$	E type 4	2.4
SSD2-P-16	ø16	18	13	5 $^{-0.01}_{-0.028}$	E type 4	2.8
SSD2-P-20	ø20	21	16.2	8 $^{-0.025}_{-0.047}$	Axis C type 8	8.2
SSD2-P-25	ø25	25.6	20.2	10 $^{-0.025}_{-0.047}$	Axis C type 10	16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

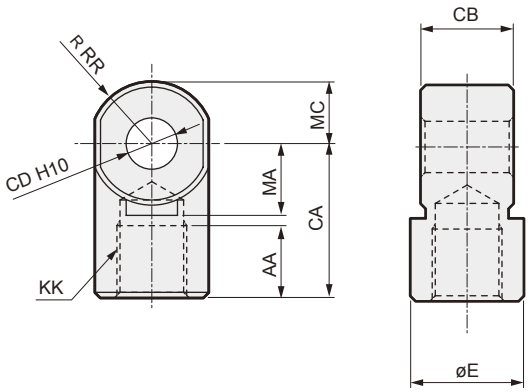
Dimensions (accessory: I, Y)

● Rod eye (I)

・ø12 to ø25



・ø32 to ø100



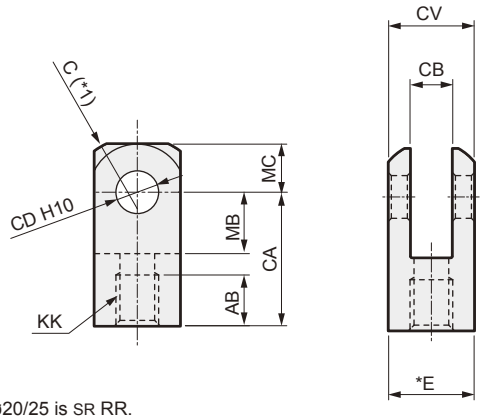
*1: ø20/25 is SR RR.

Model no.	Applicable bore size	AA	CA	CB	CD	E	KK	MA	C	RR	MC	Weight (g)
SSD2-I-12	ø12	6	16	$5^{-0.2}_{-0.4}$	$5^{+0.048}_{0}$	*10	M5 x 0.8	7	2	-	5.5	9
SSD2-I-16	ø16	8	25	$6.5^{-0.2}_{-0.4}$	$5^{+0.048}_{0}$	*12	M6 x 1	14	2	-	7	21
SSD2-I-20	ø20	8.5	25	$8^{-0.2}_{-0.4}$	$8^{+0.058}_{0}$	*16	M8 x 1.25	11.5	-	13.4	9	38
SSD2-I-25	ø25	10.5	30	$10^{-0.2}_{-0.4}$	$10^{+0.058}_{0}$	*20	M10 x 1.25	14	-	17.1	11	71
SSD2-I-32	ø32, ø40	14	30	$18^{-0.3}_{-0.5}$	$10^{+0.058}_{0}$	ø22	M14 x 1.5	14	-	12	12	74
SSD2-I-50	ø50, ø63	18	40	$22^{-0.3}_{-0.5}$	$14^{+0.070}_{0}$	ø28	M18 x 1.5	20	-	16	16	155
SSD2-I-80	ø80	21	50	$28^{-0.3}_{-0.5}$	$18^{+0.070}_{0}$	ø38	M22 x 1.5	27	-	21	21	380
SSD2-I-100	ø100	21	55	$32^{-0.3}_{-0.5}$	$22^{+0.084}_{0}$	ø44	M26 x 1.5	31	-	24	24	550

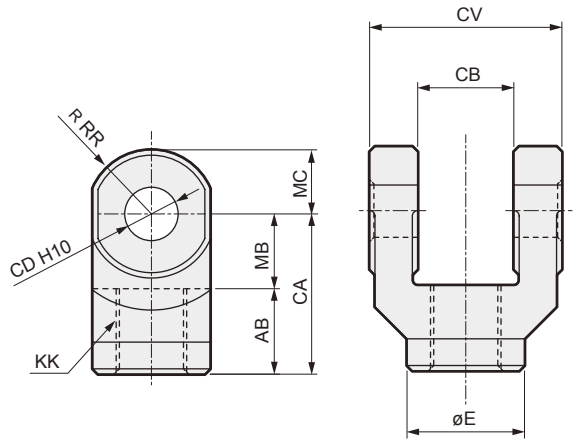
Note 1: Dimensions of SSD2 accessory are the same as the SSD compact accessory.
Note when checking with Pneumatic Cylinders I (CB-029SA).
(Example: Dimensions of SSD2-I-32 are the same as SSD-I2-32.)

● Rod clevis (Y)

・ø12 to ø25



・ø32 to ø100



*1: ø20/25 is SR RR.
*2: Pin (including C ring) is attached.
*3: Pin for the rod clevis is common with the pin for the clevis.

Model no.	Applicable bore size	AB	CA	CB	CD	CV	E	KK	MB	C	RR	MC	Weight (g)
SSD2-Y-12	ø12	6	16	$5^{+0.4}_{+0.2}$	$5^{+0.048}_{0}$	10	*10	M5 x 0.8	7	2	-	5.5	12
SSD2-Y-16	ø16	11	21	$6.5^{+0.4}_{+0.2}$	$5^{+0.048}_{0}$	12	*12	M6 x 1	10	2	-	7	20
SSD2-Y-20	ø20	13.5	25	$8^{+0.4}_{+0.2}$	$8^{+0.058}_{0}$	16	*16	M8 x 1.25	11.5	-	13.4	9	45
SSD2-Y-25	ø25	16	30	$10^{+0.4}_{+0.2}$	$10^{+0.058}_{0}$	20	*20	M10 x 1.25	14	-	17.1	11	84
SSD2-Y-32	ø32, ø40	16	30	$18^{+0.5}_{+0.3}$	$10^{+0.058}_{0}$	36	ø22	M14 x 1.5	14	-	12	12	120
SSD2-Y-50	ø50, ø63	20	40	$22^{+0.5}_{+0.3}$	$14^{+0.070}_{0}$	44	ø28	M18 x 1.5	20	-	16	16	257
SSD2-Y-80	ø80	23	50	$28^{+0.5}_{+0.3}$	$18^{+0.070}_{0}$	56	ø38	M22 x 1.5	27	-	21	21	589
SSD2-Y-100	ø100	24	55	$32^{+0.5}_{+0.3}$	$22^{+0.084}_{0}$	64	ø44	M26 x 1.5	31	-	24	24	933

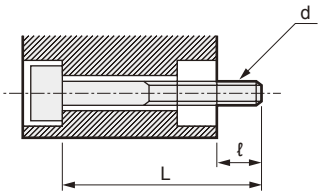
Note 1: Dimensions of SSD2 accessory are the same as the SSD compact accessory.
Note when checking with Pneumatic Cylinders I (CB-029SA).
(Example: Dimensions of SSD2-Y-32 are the same as SSD-Y2-32.)

How to order mounting bolt

SSD2 - BOLT - d x L

Mounting bolt (bolts are provided as 4 bolts/set.)

Reading list



Material: Steel
Treatment: Blackening

d: Mounting bolt screw diameter
L: Mounting bolt length
ℓ: Counterpart side screw-in length
Note: The mounting bolt is indicated as d x L.

● SSD2, SSD2-K (ø12 to ø100)

Bore size	Stroke length	l	d x L			
			SSD2	SSD2-L	SSD2-K	SSD2-KL
ø12 ø16	5	6.5	M3 x 25	M3 x 30	M3 x 30	M3 x 35
	10		x 30	35	x 35	x 40
	15		x 35	x 40	x 40	x 45
	20		x 40	x 45	x 45	x 50
	25		x 45	x 50	x 50	x 55
	30		x 50	x 55	x 55	x 60
ø20	5	6	M5 x 25	M5 x 35	M5 x 30	M5 x 40
	10		x 30	x 40	x 35	x 45
	15		x 35	x 45	x 40	x 50
	20		x 40	x 50	x 45	x 55
	25		x 45	x 55	x 50	x 60
	30		x 50	x 60	x 55	x 65
	35		x 55	x 65	x 60	x 70
	40		x 60	x 70	x 65	x 75
	45		x 65	x 75	x 70	x 80
	50		x 70	x 80	x 75	x 85
ø25	5	8	M5 x 30	M5 x 40	M5 x 35	M5 x 45
	10		x 35	x 45	x 40	x 50
	15		x 40	x 50	x 45	x 55
	20		x 45	x 55	x 50	x 60
	25		x 50	x 60	x 55	x 65
	30		x 55	x 65	x 60	x 70
	35		x 60	x 70	x 65	x 75
	40		x 65	x 75	x 70	x 80
	45		x 70	x 80	x 75	x 85
	50		x 75	x 85	x 80	x 90
ø32	5	7.5 (12.5)	M5 x 30	M5 x 40	M5 x 45	M5 x 55
	10		x 35	x 45	x 50	x 60
	15		x 40	x 50	x 55	x 65
	20		x 45	x 55	x 60	x 70
	25		x 50	x 60	x 65	x 75
	30		x 55	x 65	x 70	x 80
	35		x 60	x 70	x 75	x 85
	40		x 65	x 75	x 80	x 90
	45		x 70	x 80	x 85	x 95
	50		x 75	x 85	x 90	x 100
	75		x 110	x 110	x 125	x 125
	100		x 135	x 135	x 150	x 150
ø40	5	6	M5 x 35	M5 x 45	M5 x 45	M5 x 55
	10		x 40	x 50	x 50	x 60
	15		x 45	x 55	x 55	x 65
	20		x 50	x 60	x 60	x 70
	25		x 55	x 65	x 65	x 75
	30		x 60	x 70	x 70	x 80
	35		x 65	x 75	x 75	x 85
	40		x 70	x 80	x 80	x 90
	45		x 75	x 85	x 85	x 95
	50		x 80	x 90	x 90	x 100
	75		x 115	x 115	x 125	x 125
	100		x 140	x 140	x 150	x 150
ø50	10	11	M6 x 45	M6 x 55	M6 x 55	M6 x 65
	15		x 50	x 60	x 60	x 70
	20		x 55	x 65	x 65	x 75
	25		x 60	x 70	x 70	x 80
	30		x 65	x 75	x 75	x 85
	35		x 70	x 80	x 80	x 90
	40		x 75	x 85	x 85	x 95
	45		x 80	x 90	x 90	x 100
	50		x 85	x 95	x 95	x 105
	75		x 120	x 120	x 130	x 130
	100		x 145	x 145	x 155	x 155
ø63	10	13	M8 x 50	M8 x 60	M8 x 60	M8 x 70
	15		x 55	x 65	x 65	x 75
	20		x 60	x 70	x 70	x 80
	25		x 65	x 75	x 75	x 85
	30		x 70	x 80	x 80	x 90
	35		x 75	x 85	x 85	x 95
	40		x 80	x 90	x 90	x 100
	45		x 85	x 95	x 95	x 105
	50		x 90	x 100	x 100	x 110
	75		x 125	x 125	x 135	x 135
	100		x 150	x 150	x 160	x 160
ø80	10	17.5	M10 x 60	M10 x 70	M10 x 70	M10 x 80
	15		x 65	x 75	x 75	x 85
	20		x 70	x 80	x 80	x 90
	25		x 75	x 85	x 85	x 95
	30		x 80	x 90	x 90	x 100
	35		x 85	x 95	x 95	x 105
	40		x 90	x 100	x 100	x 110
	45		x 95	x 105	x 105	x 115
	50		x 100	x 110	x 110	x 120
	75		x 135	x 135	x 145	x 145
	100		x 160	x 160	x 170	x 170
ø100	10	18	M10 x 70	M10 x 80	M10 x 80	M10 x 90
	15		x 75	x 85	x 85	x 95
	20		x 80	x 90	x 90	x 100
	25		x 85	x 95	x 95	x 105
	30		x 90	x 100	x 100	x 110
	35		x 95	x 105	x 105	x 115
	40		x 100	x 110	x 110	x 120
	45		x 105	x 115	x 115	x 125
	50		x 110	x 120	x 120	x 130
	75		x 145	x 145	x 155	x 155
	100		x 170	x 170	x 180	x 180

* Values in ( ) are for the high load type (SSD2-K/KL).

● SSD2 (ø125 to ø200)

Bore size	Stroke length	l	d x L	
			SSD2	SSD2-L
ø125 ø140	10	20	M12 x 100	M12 x 100
	20		x 110	x 110
	30		x 120	x 120
	40		x 130	x 130
	50		x 140	x 140
	75		x 165	x 165
	100		x 190	x 190
ø160	10	24.2	M14 x 110	M14 x 110
	20		x 120	x 120
	30		x 130	x 130
	40		x 140	x 140
	50		x 150	x 150
	75		x 175	x 175
	100		x 200	x 200
ø180	10	36	M18 x 125	M18 x 125
	20		x 135	x 135
	30		x 145	x 145
	40		x 155	x 155
	50		x 165	x 165
	75		x 190	x 190
	100		x 215	x 215
ø200	10	39	M18 x 135	M18 x 135
	20		x 145	x 145
	30		x 155	x 155
	40		x 165	x 165
	50		x 175	x 175
	75		x 200	x 200
	100		x 225	x 225

● SSD2-X, SSD2-Y, SSD2-M

Bore size	Stroke length	l	d x L			
			SSD2-X, Y	SSD2-XL, YL	SSD2-M	SSD2-ML
ø12 ø16	5	6.5	M3 x 25	M3 x 30	M3 x 30	M3 x 35
	10		x 30	x 35	x 35	x 40
	15				x 40	x 45
	20				x 45	x 50
	25				x 50	x 55
	30				x 55	x 60
ø20	5	6	M5 x 25	M5 x 35	M5 x 30	M5 x 40
	10		x 30	x 40	x 35	x 45
	15				x 40	x 50
	20				x 45	x 55
	25				x 50	x 60
	30				x 55	x 65
	35				x 60	x 70
	40				x 65	x 75
	45				x 70	x 80
	50				x 75	x 85
ø25	5	8	M5 x 30	M5 x 40	M5 x 35	M5 x 45
	10		x 35	x 45	x 40	x 50
	15				x 45	x 55
	20				x 50	x 60
	25				x 55	x 65
	30				x 60	x 70
	35				x 65	x 75
	40				x 70	x 80
	45				x 75	x 85
	50				x 80	x 90
ø32	5	8.5	M5 x 30	M5 x 40	M5 x 40	M5 x 50
	10		x 35	x 45	x 45	x 55
	15				x 50	x 60
	20				x 55	x 65
	25				x 60	x 70
	30				x 65	x 75
	35				x 70	x 80
	40				x 75	x 85
	45				x 80	x 90
	50				x 85	x 95
	75				x 120	x 120
	100				x 145	x 145
ø40	5	6	M5 x 35	M5 x 45	M5 x 35	M5 x 45
	10		x 40	x 50	x 40	x 50
	15				x 45	x 55
	20				x 50	x 60
	25				x 55	x 65
	30				x 60	x 70
	35				x 65	x 75
	40				x 70	x 80
	45				x 75	x 85
	50				x 80	x 90
	75				x 115	x 115
	100				x 140	x 140
ø50	10	11	M6 x 45	M6 x 55	M6 x 45	M6 x 55
	15				x 50	x 60
	20		x 55	x 65	x 55	x 65
	25				x 60	x 70
	30				x 65	x 75
	35				x 70	x 80
	40				x 75	x 85
	45				x 80	x 90
	50				x 85	x 95
	75				x 120	x 120
	100				x 145	x 145
ø63	10	13			M8 x 50	M8 x 60
	15				x 55	x 65
	20				x 60	x 70
	25				x 65	x 75
	30				x 70	x 80
	35				x 75	x 85
	40				x 80	x 90
	45				x 85	x 95
	50				x 90	x 100
	75				x 125	x 125
	100				x 150	x 150

● SSD2-D, SSD2-Q

Bore size	Stroke length	l	d x L			
			SSD2-D	SSD2-DL	SSD2-Q (L)-R	SSD2-Q (L)-H
ø12 ø16	5	6.5	M3 x 30	M3 x 35		
	10		x 35	x 40		
	15		x 40	x 45		
	20		x 45	x 50		
	25		x 50	x 55		
	30		x 55	x 60		
ø20	5	9.5 (11.5) <12>	M5 x 35	M5 x 45		
	10		x 40	x 50	M5 x 70	M5 x 80
	15		x 45	x 55	x 75	x 85
	20		x 50	x 60	x 80	x 90
	25		x 55	x 65	x 85	x 100
	30		x 60	x 70		
	35		x 65	x 75		
	40		x 70	x 80		
	45		x 75	x 85		
	50		x 80	x 90	x 130	x 130
	75				x 155	x 155
	100				x 180	x 180
ø25	5	11.5 (10.5) <9>	M5 x 40	M5 x 50		
	10		x 45	x 55	M5 x 70	M5 x 75
	15		x 50	x 60	x 75	x 80
	20		x 55	x 65	x 80	x 85
	25		x 60	x 70	x 85	x 90
	30		x 65	x 75		
	35		x 70	x 80		
	40		x 75	x 85		
	45		x 80	x 90		
	50		x 85	x 95	x 120	x 120
	75				x 145	x 145
	100				x 170	x 170
ø32	5	10 (12.5) <15>	M5 x 40	M5 x 50		
	10		x 45	x 55	M5 x 75	M5 x 85
	15		x 50	x 60	x 80	x 90
	20		x 55	x 65	x 85	x 95
	25		x 60	x 70	x 90	x 100
	30		x 65	x 75		
	35		x 70	x 80		
	40		x 75	x 85		
	45		x 80	x 90		
	50		x 85	x 95	x 115	x 125
	75		x 120	x 120	x 140	x 150
	100		x 145	x 145	x 165	x 175
ø40	5	10.5 (11.5) <11>	M5 x 50	M5 x 60		
	10		x 55	x 65	M5 x 80	M5 x 90
	15		x 60	x 70	x 85	x 95
	20		x 65	x 75	x 90	x 100
	25		x 70	x 80	x 95	x 105
	30		x 75	x 85		
	35		x 80	x 90		
	40		x 85	x 95		
	45		x 90	x 100		
	50		x 95	x 105	x 120	x 130
	75		x 130	x 130	x 145	x 155
	100		x 155	x 155	x 170	x 175
ø50	10	11	M6 x 55	M6 x 65	M6 x 80	M6 x 90
	15		x 60	x 70	x 85	x 95
	20		x 65	x 75	x 90	x 100
	25		x 70	x 80	x 95	x 105
	30		x 75	x 85		
	35		x 80	x 90		
	40		x 85	x 95		
	45		x 90	x 100		
	50		x 95	x 105	x 120	x 130
	75		x 130	x 130	x 145	x 155
	100		x 155	x 155	x 170	x 175

Bore size	Stroke length	l	d x L			
			SSD2-D	SSD2-DL	SSD2-Q (L)-R	SSD2-Q (L)-H
ø63	10	12 (18) <17>	M8 x 50	M8 x 60	M8 x 90	M8 x 95
	15		x 55	x 65	x 95	x 100
	20		x 60	x 70	x 100	x 105
	25		x 65	x 75	x 105	x 110
	30		x 70	x 80		
	35		x 75	x 85		
	40		x 80	x 90		
	45		x 85	x 95		
	50		x 90	x 100	x 130	x 135
	75		x 125	x 125	x 155	x 160
	100		x 150	x 150	x 180	x 185
ø80	10	16 (12.5) <15>	M10 x 65	M10 x 75		
	15		x 70	x 80		
	20		x 75	x 85		
	25		x 80	x 90	M10 x 130	M10 x 125
	30		x 85	x 95		
	35		x 90	x 100		
	40		x 95	x 105		
	45		x 100	x 110		
	50		x 105	x 115	x 155	x 150
	75		x 140	x 140	x 180	x 180
	100		x 165	x 165	x 205	x 205
ø100	10	16.5 (13) <15.5>	M10 x 75	M10 x 85		
	15		x 80	x 90		
	20		x 85	x 95		
	25		x 90	x 100	M10 x 140	M10 x 135
	30		x 95	x 105		
	35		x 100	x 110		
	40		x 105	x 115		
	45		x 110	x 120		
	50		x 115	x 125	x 165	x 160
	75		x 150	x 150	x 190	x 190
	100		x 175	x 175	x 215	x 215
ø125 ø140	10	20	M12 x 100	M12 x 100		
	20		x 110	x 110		
	30		x 120	x 120		
	40		x 130	x 130		
	50		x 140	x 140		
	75		x 165	x 165		
	100		x 190	x 190		
ø160	10	24.2	M14 x 110	M14 x 110		
	20		x 120	x 120		
	30		x 130	x 130		
	40		x 140	x 140		
	50		x 150	x 150		
	75		x 175	x 175		
	100		x 200	x 200		
ø180	10	36	M18 x 125	M18 x 125		
	20		x 135	x 135		
	30		x 145	x 145		
	40		x 155	x 155		
	50		x 165	x 165		
	75		x 190	x 190		
	100		x 215	x 215		
ø200	10	39	M18 x 135	M18 x 135		
	20		x 145	x 145		
	30		x 155	x 155		
	40		x 165	x 165		
	50		x 175	x 175		
	75		x 200	x 200		
	100		x 225	x 225		

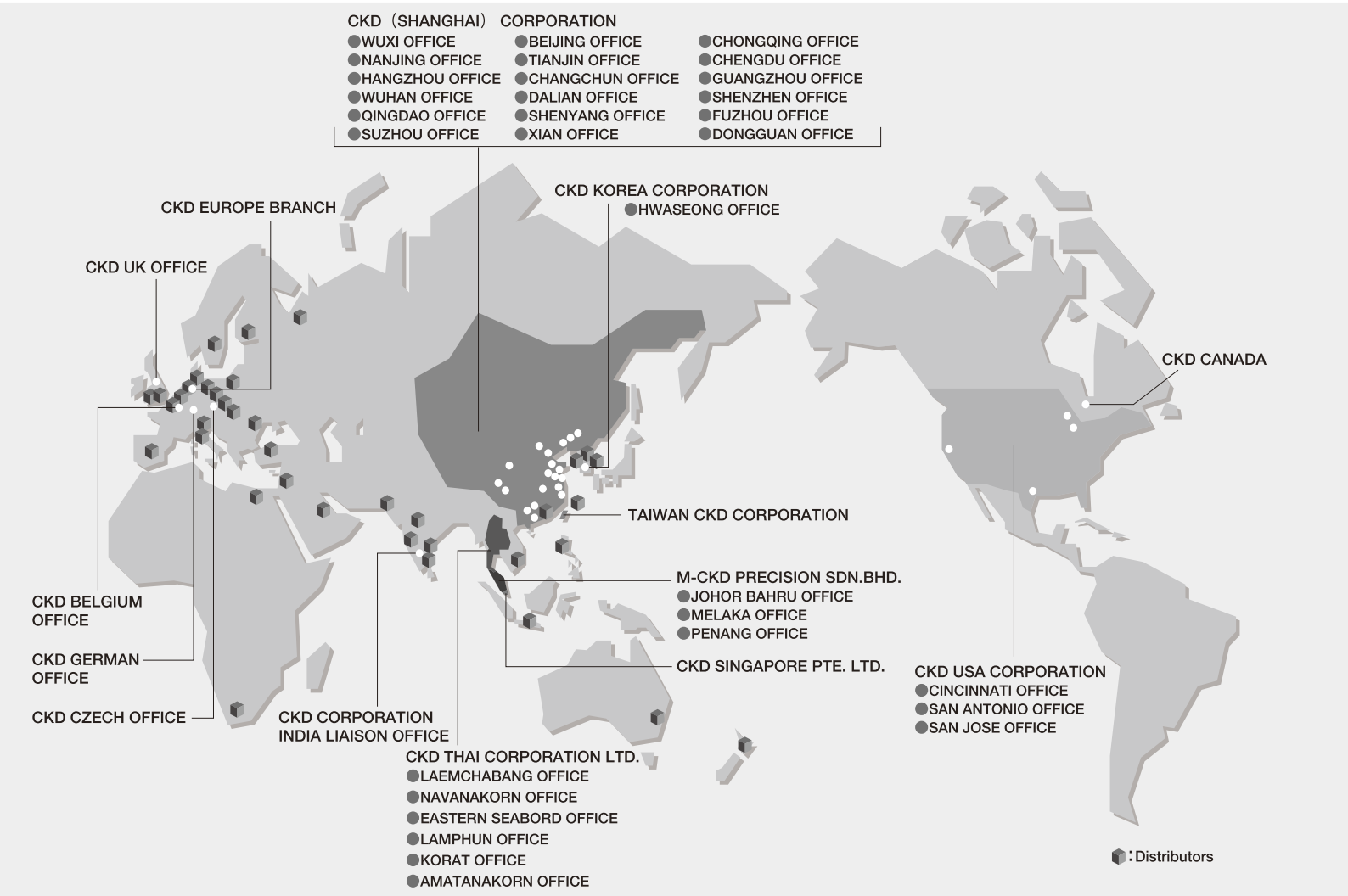
* Values in ( ) apply to SSD2-Q (L) -R.
* Values in < > apply to SSD2-Q (L) -H.

MEMO

MEMO

MEMO

WORLD-NETWORK



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