

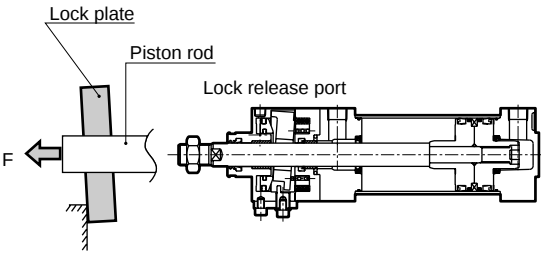
Series variation

Free locking positioning medium bore size cylinder
USC Series

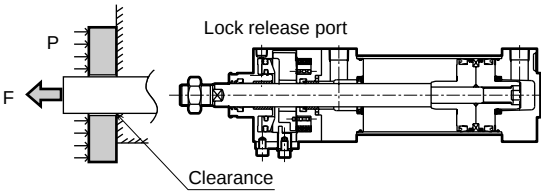
●: Standard, ◎: Option, ■: Not available

Variation	Model no. JIS symbol	Bore size (mm)	Standard stroke length (mm)												Min. stroke length (mm)	Max. stroke length (mm)	Available stroke length (mm)	Custom stroke length (per mm)	Mounting style			Mounting style			Cushion				Option						Accessory					Switch	Page																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
																			Basic type	Axial foot type		Rod end flange type	Head end flange type	Special head end flange type	Eye bracket type	Clevis bracket type	Center trunnion type	Rod end trunnion type	Head end trunnion type	No cushion	Both sides cushion	Rod end cushion	Head end cushion	Bellows (100°C)	Bellows (250°C)	Piston rod material change (stainless steel)	Cushion needle position S	Cushion needle position T	Copper and PTFE free			Rod eye	Rod clevis	Eye bracket	Clevis bracket	Trunnion type No. 2 bracket																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
			00	LB		FA	FB	FC	CA	CB	TC	TA	TB	N																																	B	R	H	J	L	M	S	T	P6	I	Y	B1	B2	B4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Double acting	USC	φ40	●	●	●	●	●	●	●	●	●	●	●	●	1	600	1600	1	●	●																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

Operational explanation



■ Lock
When exhausting air from lock release port, the lock plate tilts, and the piston rod is held.



■ Unlock
Air supply from port A results in election of lock metal. This creates clearance between the lock metal and the piston rod, then the rod can move freely.



Pneumatic components

Safety precautions

Always read this section before starting use.

Refer to Intro 71 for general precautions of the cylinder, and to Intro 78 for general precautions of the cylinder switch.

Free locking positioning medium bore size cylinder USC Series

Design & Selection

⚠ WARNING

■ This cylinder has position locking (holding of cylinder static state) mechanism.

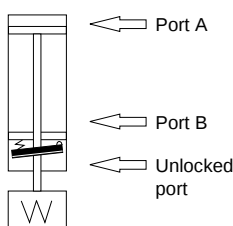
Life drops markedly if used for emergency stops (stopping while the cylinder is moving).

■ If back pressure is applied to the locking mechanism, the lock may be released. Use a discrete valve, or use an individual exhaust type manifold.

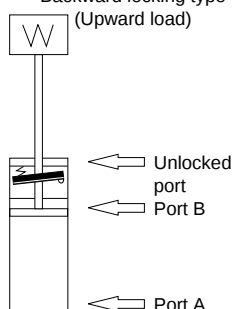
■ Do not apply torque to the rod in locked state because holding force drops and create a hazard. Use a mechanism that does not rotate the rod.

■ To release the lock, when using forward locking, supply pressure to port B, and when using backward locking, supply pressure to port A. Check that load is not applied to the locking mechanism. When both ports A and B are exhausted and the piston is locked, if pressure is supplied to port A for forward locking or to port B for backward locking, the lock may not be released or, even if released, the piston rod may pop out, creating a hazard.

Forward locking type
(Downward load)



Backward locking type
(Upward load)



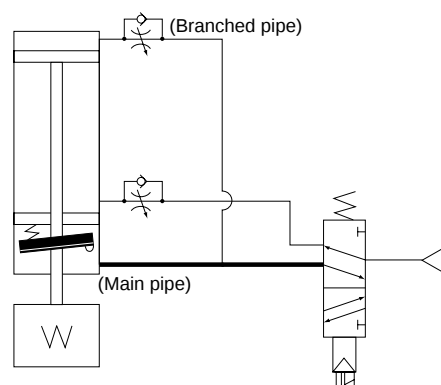
⚠ CAUTION

■ Basic circuit diagram

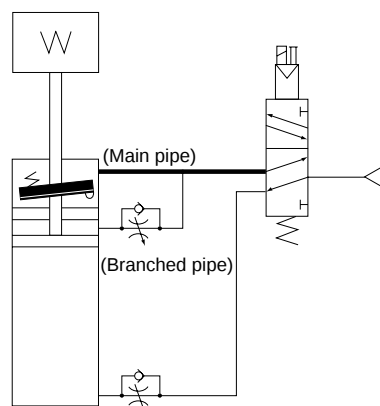
Pipe air piping for this cylinder as shown below. Faults such as a delayed response may result if piping other than that below is used, such as independent piping to the position locking mechanism.

1. As shown below, branch the piping to this cylinder at a position behind the valve, and pipe to the position locking section (connect main pipe to lock release port) and to the cylinder section (connect branched pipe to cylinder port).
2. If cylinder operation is faster than lock release, the lock may not be released or, even if released, the piston rod may pop out. This is hazardous, so design piping so that lock release is faster than cylinder operation.

Forward locking type
(Downward load)



Backward locking type
(Upward load)



Installation & Adjustment

⚠ WARNING

- Do not apply torque to the rod in locked state because holding force drops and create a hazard. Use a mechanism that does not rotate the rod.
- Do not apply torque to the rod in locked state because holding force drops and create a hazard.

⚠ CAUTION

- When using several cylinders synchronized, install a separate guide.
If only cylinders are used, synchronization is not possible, the rod twists, and operation becomes faulty.

During Use & Maintenance

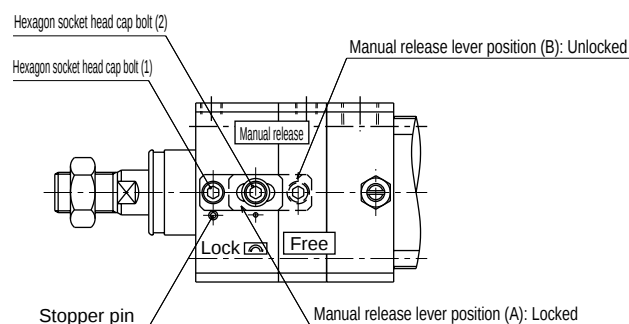
⚠ WARNING

- Do not disassemble the lock unit, since this may cause a hazardous situation.
- To prevent faults, use a dust cover during operation except when manually releasing brakes.
- For safety purposes, prevent the load from dropping under its own weight during maintenance.

⚠ CAUTION

- When locking the first time after leaving the lock released for a long time, a delayed response may occur in the lock. Do not leave the lock pressurized, and operate the lock at each cylinder operation.
(Use the basic circuit diagram shown on page 1402)
- If the cylinder is held while pressure is applied on the locking mechanism, the lock could be released. Thus, do not use the 3-position closed center or 3-position P/A/B solenoid valve.
- Due to the structure, the piston rod drops by about 1 mm when the lock is applied.
- If no air pressure is supplied in vertical mounting, etc., holding force may not be sufficient when the lock is manually released. This may cause the rod to move (drop) with the load's weight.
For safety, take the following measures before manually releasing the lock:
 - Move the load to the lowest end.
 - Provide a stopper on the load.
 - Supply air pressure to the cylinder and balance the load.
- Set the manual release lever to the lock position during normal use.

■ How to unlock manually



● Unlocked

- 1) Loosen the hexagon socket head cap screw (1) 3 or 4 turns.
- 2) Loosen the hexagon socket head cap screw (2) 1 or 2 turns.
- 3) Turn the manual release lever from the manual release lever position (A) to (B) 180° in the direction of the arrow.
- 4) The piston lock is freed.

● Lock operation

- 1) Turn the manual release lever from the manual release lever position (B) to (A) 180° in the direction of the arrow.
- 2) Tighten the hexagon socket head cap screw (1) at the position where the release lever contacts the stopper pin.
- 3) Tighten the hexagon socket head cap screw (2).
- 4) Lock the piston rod.

Note: Turn the release lever in the direction of the arrow when manually releasing the lock.

The release lever must not be removed.

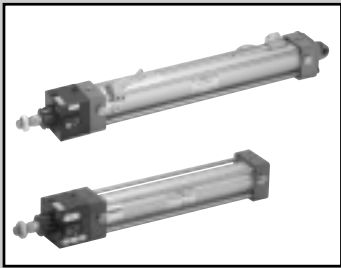
The release lever can be turned by loosening the hexagon socket head cap screw (2) by 1 or 2 turns. Tighten the hexagon socket head cap screw with a torque of 8 to 11 N·m.

- The cylinder may be damaged or may malfunction if a unit with excessive inertia, etc., is moved. Use within the allowable energy absorption range.

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

Free locking positioning medium bore size cylinder
With brake

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



Free locking positioning medium bore size cylinder Double acting single rod type
Double acting coil scraper type

USC/USC-G1 Series

● Bore size: ϕ 40, ϕ 50, ϕ 63, ϕ 80, ϕ 100



Specifications

Descriptions		USC (double acting single rod type)/USC-G1 (double acting with coil scraper)				
Actuation		Double acting				
Working fluid		Compressed air				
Max. working pressure		1.0				
Min. working pressure	Cylinder section	0.1				
	MPa Locking mechanism	0.25				
Withstanding pressure		1.6				
Ambient temperature		-10 to 60 (no freezing)				
Bore size		mm ϕ 40	ϕ 50	ϕ 63	ϕ 80	ϕ 100
Port size	Cylinder section	1/4	3/8	3/8	1/2	1/2
	Rc Locking mechanism	1/8				
Stroke tolerance		mm $^{+0.9}_0$ (to 300) $^{+1.4}_0$ (to 1000)				
Holding force		N 1005	1570	2493	4021	6283
Working piston speed		mm/s 50 to 1000 (Use within the absorbed energy.)				
Cushion		The type with cushion or without cushion can be selected.				
Effective cushion length		mm 14.6	16.6	16.6	20.6	23.6
Lubrication		Not required (when lubricating, use turbine oil Class 1 ISO VG32)				
Allowable energy absorption	Cushioned	J 4.29	8.37	15.8	27.9	49.8
	No cushion	A large energy generated by an external load can not be absorbed, so an external shock absorber should be used.				

Note 1: When kinetic energy is large, such as large load and fast piston speed, etc., install an external shock absorber, and use this within the range of allowable kinetic energy.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Available stroke length (mm)	Min. stroke length (mm)
φ40	25, 50, 75, 100, 150, 200, 250, 300, 350, 400, 450, 500	600	1600	1
φ50			2000	
φ63		2500		
φ80				
φ100				
Note 3				

Note 3

Note 1: Custom stroke length is available per 1mm increment.

Note 2: For the types with switch, min. stroke length varies depending on installation method. Refer to the table below.

When stroke length is shorter than 15 mm, two switches could turn ON at the same time. In this case, adjust the distance between switches as far as possible.

Note 3: Min. stroke length is available from 1mm, however the stroke tolerance should be considered.

Note 4: If the maximum stroke is exceeded, product specifications may not be met, depending on operating conditions. Refer to Ending 70.

Min. stroke length with switch (T type switch)

● T0/T5

Switch quantity	Different surface installation				Same surface installation				Center trunnion installation				Rod end trunnion installation A position can not be detected at rod side stroke end.	Head end trunnion installation A position can not be detected at head side stroke end.
Bore size	1	2	3	4	1	2	3	4	1	2	3	4	1	1
ϕ 40	20 (10)	20 (20)	40 (40)	60 (60)	20 (10)	60 (45)	105 (75)	150 (102)	110 (110)	110 (110)	175 (145)	175 (145)	50 (50)	50 (50)
ϕ 50	15 (10)	20 (20)	40 (40)	60 (60)	15 (10)	20 (20)	65 (50)	65 (60)	135 (135)	135 (135)	135 (135)	135 (135)	60 (60)	60 (60)
ϕ 63	15 (10)	20 (20)	40 (40)	60 (60)	15 (10)	20 (20)	70 (55)	70 (60)	110 (95)	110 (95)	110 (100)	110 (100)	50 (45)	50 (45)
ϕ 80	15 (15)	25 (25)	45 (45)	65 (65)	15 (15)	25 (25)	70 (55)	70 (65)	115 (85)	115 (85)	115 (105)	115 (105)	55 (40)	55 (40)
ϕ 100	15 (15)	25 (25)	45 (45)	70 (70)	15 (15)	25 (25)	70 (55)	70 (70)	125 (95)	125 (95)	125 (115)	125 (115)	60 (45)	60 (45)

Note 1: Values in () are for T*V (Radial lead wire).

Note 2: When stroke length is shorter than 15 mm, two switches could turn ON at the same time. In this case, adjust the distance between switches as far as possible.

Min. stroke length with switch (T type switch)

● T8

Switch quantity	Different surface installation				Same surface installation				Center trunnion installation				Rod end trunnion installation A position can not be detected at rod side stroke end.	Head end trunnion installation A position can not be detected at head side stroke end.
Bore size	1	2	3	4	1	2	3	4	1	2	3	4	1	1
φ40	15 (10)	20 (20)	40 (40)	60 (60)	15 (10)	50 (35)	95 (65)	140 (95)	95 (85)	95 (85)	155 (125)	155 (125)	45 (40)	45 (40)
φ50	10 (10)	20 (20)	40 (40)	60 (60)	10 (10)	20 (20)	70 (55)	70 (60)	115 (115)	115 (115)	135 (135)	135 (135)	50 (50)	50 (50)
φ63	10 (10)	20 (20)	40 (40)	60 (60)	10 (10)	20 (20)	70 (55)	70 (60)	95 (75)	95 (75)	110 (110)	110 (110)	45 (35)	45 (35)
φ80	15 (15)	25 (25)	45 (45)	65 (65)	15 (15)	25 (25)	70 (55)	70 (65)	100 (70)	100 (70)	115 (115)	115 (115)	50 (35)	50 (35)
φ100	15 (15)	25 (25)	45 (45)	65 (65)	15 (15)	25 (25)	70 (55)	70 (65)	110 (80)	110 (80)	125 (125)	125 (125)	55 (40)	55 (40)

Note 1: Values in () are for T*V (Radial lead wire).

Note 2: When stroke length is shorter than 15 mm, two switches could turn ON at the same time. In this case, adjust the distance between switches as far as possible.

● T2/T3

Switch quantity	Different surface installation				Same surface installation				Center trunnion installation				Rod end trunnion installation A position can not be detected at rod side stroke end.	Head end trunnion installation A position can not be detected at head side stroke end.
Bore size	1	2	3	4	1	2	3	4	1	2	3	4	1	1
φ40	20 (10)	20 (15)	25 (25)	40 (40)	20 (10)	60 (45)	105 (75)	150 (105)	105 (75)	105 (75)	165 (135)	165 (135)	50 (35)	50 (35)
φ50	15 (10)	15 (15)	25 (25)	40 (40)	15 (10)	15 (15)	60 (45)	60 (45)	105 (75)	105 (75)	105 (75)	105 (75)	45 (30)	45 (30)
φ63	15 (10)	15 (15)	25 (25)	40 (40)	15 (10)	15 (15)	60 (45)	60 (45)	110 (80)	110 (80)	110 (85)	110 (85)	50 (35)	50 (35)
φ80	15 (10)	15 (15)	30 (30)	45 (45)	15 (10)	15 (15)	60 (45)	60 (45)	115 (85)	115 (85)	115 (90)	115 (90)	55 (40)	55 (40)
φ100	10 (10)	15 (15)	30 (30)	45 (45)	10 (10)	15 (15)	60 (45)	60 (45)	125 (95)	125 (95)	125 (100)	125 (100)	60 (45)	60 (45)

Note 1: Values in () are for T*V (Radial lead wire).

Note 2: When stroke length is shorter than 15 mm, two switches could turn ON at the same time. In this case, adjust the distance between switches as far as possible.

● T1/T2Y/T3Y/T2YD type min. stroke length with switch

	Different surface installation				Same surface installation				Center trunnion installation				Rod end trunnion installation A position can not be detected at rod side stroke end.	Head end trunnion installation A position can not be detected at head side stroke end.
Switch quantity	1	2	3	4	1	2	3	4	1	2	3	4	1	1
φ40	20 (10)	20 (15)	25 (25)	40 (40)	20 (10)	60 (45)	105 (75)	150 (105)	105 (75)	105 (75)	165 (135)	165 (135)	50 (35)	50 (35)
φ50	15 (10)	15 (15)	25 (25)	40 (40)	15 (10)	15 (15)	60 (45)	60 (45)	100 (70)	100 (70)	100 (75)	100 (75)	45 (30)	45 (30)
φ63	15 (10)	15 (15)	25 (25)	40 (40)	15 (10)	15 (15)	60 (45)	60 (45)	105 (75)	105 (75)	105 (85)	105 (85)	50 (35)	50 (35)
φ80	15 (10)	15 (15)	30 (30)	45 (45)	15 (10)	15 (15)	60 (45)	60 (45)	110 (80)	110 (80)	110 (90)	110 (90)	55 (40)	55 (40)
φ100	10 (10)	15 (15)	30 (30)	45 (45)	10 (10)	15 (15)	60 (45)	60 (45)	120 (90)	120 (90)	120 (100)	120 (100)	60 (45)	60 (45)

Note 1: Values in () are for T*V (Radial lead wire). Note that radial lead wire (V) is not available for T2YD.

Note 2: When stroke length is shorter than 15 mm, two switches could turn ON at the same time. In this case, adjust the distance between switches as far as possible.

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

Free locking positioning medium bore size cylinder
With brake

SCP*2	Switch specifications (T type switch)														
CMK2	● 1 color/2 color indicator/strong magnetic field proof														
CMA2	* The T0/T5 switch can be used with 220 VAC. Consult with CKD for working conditions.														
SCM	Descriptions	Proximity 2-wire			Proximity 3-wire			Reed 2-wire					Proximity 2-wire		
SCG		T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T3H/T3V	T3PH/T3PV (Custom order)	T3YH/T3YV	T0H/T0V	T5H/T5V	T8H/T8V		T2YD			
SCA2	Applications	Programmable controller relay, small solenoid valve	Programmable controller		Programmable controller, relay			Programmable controller, relay	Programmable controller, relay, IC circuit (w/o indicator light), serial connection	Programmable controller, relay		Programmable controller			
SCS	Output method	-			NPN output	PNP output	NPN output	-							
CKV2	Power voltage	-			10 to 28 VDC			-							
CA/OV2	Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
SSD	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
CAT	Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Without indicator light	LED (ON lighting)		Red/green LED (ON lighting)			
MDC2	Leakage current	1mA or less with 100 VAC 2mA or less with 200 VAC	1mA or less		10 μA or less			0mA					1mA or less		
MVC															
SMD2															
MSD*															

Note 1: Refer to Ending 1 for other switch specifications.
 Note 2: Max. load current above: 20mA at 25℃ The current will be lower than 20mA if ambient temperature around switch is higher than 20mA.
 (5 to 10mA when 60℃)

Switch specifications (H type switch)

Descriptions	Strong magnetic field proof reed 2 wire	
	H0	H0Y (2 color indicator type)
Applications	Relay, programmable controller	Programmable controller
Load voltage/current	12/24 VDC, 110 VAC 5 to 50mA, 7 to 20mA	24 VDC, 5 to 50mA (Note 2)
Light	Green LED ON lighting	Red/green LED ON lighting
Leakage current	10 μA or less	
Maximum shock resistance	294m/s²	

Note 1: Refer to Ending 1 for other switch specifications.
 Note 2: The maximum load current is the value at 25℃. The current will be lower than 20mA if ambient temperature around switch is higher than 20mA.
 (5 to 10mA at 60℃)

Ending

Cylinder weight table

Cylinder weight table													(Unit: kg)
Bore size	Product weight when stroke length (S) = 0mm							Weight per switch (including mounting bracket)					Additional weight per S = 100mm
	Basic type (00)	Foot type (LB)	Flange type (FA/FB)	Special flange type (FC)	Eye bracket type (CA)	Eye bracket type (CB)	Trunnion type (TA, TB, TC)	T type	H type		T2YD type		
									1m	3m	1m	3m	
φ40	1.40	1.58	1.83	1.49	1.75	1.75	1.78	0.018	0.10	0.20	0.08	0.17	0.39
φ50	2.04	2.21	2.54	2.15	2.48	2.48	2.56						0.46
φ63	2.83	3.2	3.89	3.01	3.38	3.43	3.68						0.50
φ80	4.94	5.71	6.82	5.30	6.48	6.49	6.30						0.90
φ100	8.03	8.95	10.72	8.58	10.18	10.14	10.55						1.12

(Unit: kg)

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

Free locking positioning medium bore size cylinder
With brake

How to order

● Without switch

USC — **LB** - **40** **B** - **100** - **F** — **S** **I**

● R type with switch

USC — **LB** - **40** **B** - **100** - **F** - **T0H** - **R** - **S** **I**

● With strong magnetic field proof switch (H0/H0Y)

USC-L2 - **LB** - **40** **B** - **100** - **F** - **H0Y** - **R** - **S** **I**

A Model no. **B** Mounting style

C Bore size

D Cushion

E Stroke length

F Lock direction

G Switch model no.

* indicates lead wire length.

H Switch quantity
Note 2

I Option
Note 3

J Accessory
Note 4

⚠ Note on model no. selection

Note 1: Refer to page 1404 for min. stroke length with switch.

Note 2: When selecting TA or TB for mounting, the number of switches is limited to "H" (one on head end) for TA, and "R" (one on rod end) for TB.

Note 3: The instantaneous maximum temperature is that at which sparks, swarf, etc., temporarily contact bellows.

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

<Example of model number>

USC-LB-40B-100-F-T0H-R-SI

Model: Free locking positioning medium bore size cylinder

A Model no. : Double acting single rod type

B Mounting style : Axial foot type

C Bore size : ϕ 40mm

D Cushion : Both sides cushioned

E Stroke length : 100mm

F Lock direction : Forward lock

G Switch model no. : Reed T0H switch, lead wire 1m

H Switch quantity : One on rod end

I Option : Cushion needle position S

J Accessory : Rod eye

Symbol	Descriptions		
A Model no.			
USC	Double acting single rod type		
USC-G1	Double acting with coil scraper		
B Mounting style			
00	Basic type		
LB	Axial foot type		
FA	Rod end flange type		
FB	Head end flange type		
FC	Special head end flange type		
CA	Eye bracket type		
CB	Clevis bracket type (pin and snap ring attached)		
TC	Center trunnion type		
TA	Rod end trunnion type		
TB	Head end trunnion type		
C Bore size (mm)			
40	φ 40		
50	φ 50		
63	φ 63		
80	φ 80		
100	φ 100		
D Cushion			
B	Both sides cushioned		
R	Rod end cushion		
H	Head end cushion		
N	No cushion		
E Stroke length (mm)			
Bore size	Stroke length Note 1	Available stroke length	Custom stroke length
φ 40	1 to 600	1600	Per 1 mm increment
φ 50	1 to 600	2000	
φ 63	1 to 600	2500	
φ 80	1 to 700	2500	
φ 100	1 to 800	2500	
F Lock direction			
F	Forward lock		
B	Backward lock		
G Switch model no.			
Refer to the following page for switch model no.			
*Lead wire length			
Blank	1m (standard)		
3	3m (option)		
5	5m (option)		
H Switch quantity			
R	One on rod end		
H	One on head end		
D	Two		
T	Three		
I Option			
		Max. ambient temperature	Instantaneous max. temperature
J	Bellows	100℃	200℃
L	Bellows	250℃	400℃
M	Piston rod material (stainless steel)		
Blank	Cushion needle position R (standard)		
S	Cushion needle position S		
T	Cushion needle position T		
P6	Copper and PTFE free (custom order)		
J Accessory			
I	Rod eye		
Y	Rod clevis (pin and snap ring attached)		
B1	Eye bracket		
B2	Clevis bracket (pin and snap ring attached)		
B4	Trunnion type No. 2 bracket		

Mounting bracket model no.

Bore size (mm)	ϕ 40	ϕ 50	ϕ 63	ϕ 80	ϕ 100
Mounting bracket					
Foot (LB)	S1-LB-40	S1-LB-50	S1-LB-63	S1-LB-80	S1-LB-100
Flange (FA)	USC-FA-40	USC-FA-50	USC-FA-63	USC-FA-80	USC-FA-100
Flange (FB)	S1-FA-40	S1-FA-50	S1-FA-63	S1-FA-80	S1-FA-100
Eye (CA)	S1-CA-40	S1-CA-50	S1-CA-63	S1-CA-80	S1-CA-100
Clevis (CB)	S1-CB-40	S1-CB-50	S1-CB-63	S1-CB-80	S1-CB-100

Note: Foot type mounting bracket is a 2 piece/set.

[G] switch model no.

T type 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*		2 color indicator type	3-wire
T3H*	T3V*			2-wire
T2YH*	T2YV*			3-wire
T3YH*	T3YV*		1 color indicator type	3-wire
T3PH*	T3PV*			3-wire
T2YFH*	T2YFV*			3-wire
T3YFH*	T3YFV*		2 color indicator type (w/o indicator light for preventive maintenance output)	4-wire
T2YMH*	T2YMV*		2 color indicator type (w/ indicator light for preventive maintenance output (1 color))	3-wire
T3YMH*	T3YMV*		Strong magnetic field proof switch	4-wire
T2YD*	-			2-wire
T2YDT*	-			2-wire
T2JH*	T2JV*		Off-delay type	

R switch/H types switch					
Grommet Type	Terminal box type		Contact	Indicator	Lead wire
	Standard type	Splash-proof			
R0*	R0B	R0A	1 color indicator type	1 color indicator for strong magnetic field	2 color indicator for strong magnetic field
H0*	-	-			
H0Y*	-	-			

The switch has been changed to T type switch since October first, 2007.

How to order switch

(T type switch)

- Switch body + mounting bracket

SCA2 - T0H - 40

Switch model no.
(Item ⑥)

Bore size
(Item ⑦ previous page)

- Only switch body

SW - T0H

Switch model no.
(Item ⑥)

- Switch bracket set

SCA2 - TS - 40

Bracket

Bore size
(Item ⑦ previous page)

*To use an ecological T type switch, consult with CKD.

(H type switch)

- Switch body + mounting bracket

SCA2-L2 - H0 - 40

Switch model no.
(Item ⑥)

Bore size
(Item ⑦ previous page)

- Only switch body

SW - H0

Switch model no.
(Item ⑥)

- Mounting bracket

SCA2-L2 - H - 40

Bore size
(Item ⑦ previous page)

(T2YD type switch)

- Switch body + mounting bracket

SCA2 - T2YD - 40

Switch model no.

Bore size
(Item ⑦ previous page)

- Only switch body

SW - T2YD

Switch model no.

- Mounting bracket

SCA2 - T - 40

Bore size
(Item ⑦ previous page)

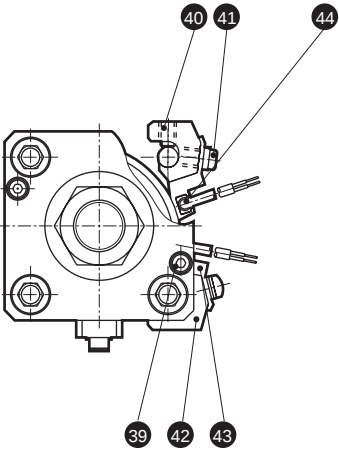
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Free locking positioning medium bore size cylinder
With brake

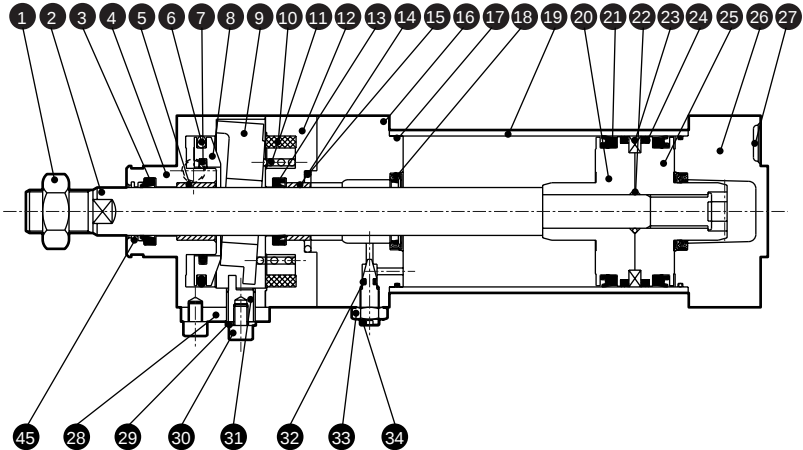
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Internal structure and parts list

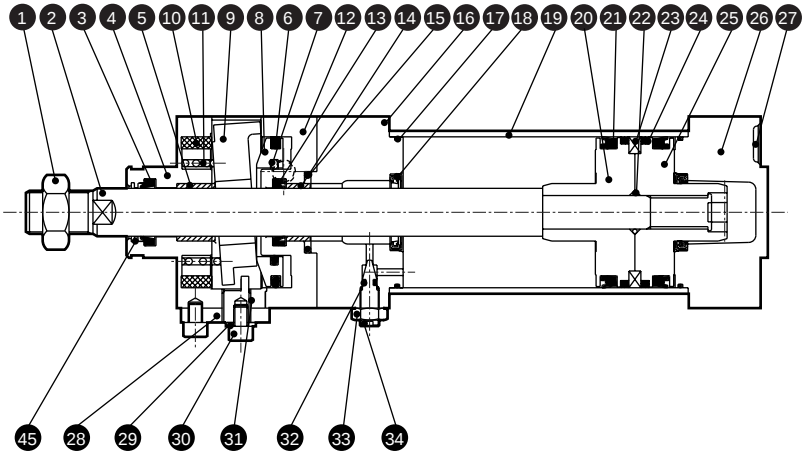
<F, B common>



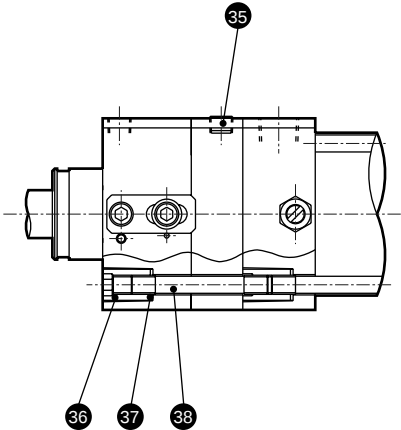
<F: forward locking type>



<B: backward locking type>



<F, B common>



Parts list

No.	Parts name	Material	Remarks	No.	Part name	Material	Remarks
1	Rod nut	Steel	Zinc chromate	24	Wear ring	Polyacetal	
2	Piston rod	Steel	Industrial chrome plating	25	Piston H	Aluminum alloy die-casting	
3	Dust wiper	Nitrile rubber		26	Head cover	Aluminum alloy die-casting	Paint
4	Brake main body A	Aluminum alloy	Black alumite	27	Masking plate	Aluminum	Paint
5	Bush	Oil impregnated bearing alloy		28	Release lever	Steel	
6	Release piston packing seal A	Nitrile rubber		29	Plain washer	Steel	
7	Release piston packing seal B	Nitrile rubber		30	Hexagon socket head cap bolt	Steel	
8	Release piston	Steel	Zinc chromate	31	Release cam	Steel	
9	Lock plate	Special steel		32	Needle gasket	Nitrile rubber	
10	Cushion rubber	Urethane rubber		33	Needle nut	Copper alloy	
11	Spring	Steel	Blackening	34	Cushion needle	Copper alloy	
12	Brake main body B	Aluminum alloy	Black alumite	35	Blanking plug	Steel	
13	Rod packing seal	Nitrile rubber		36	Round nut	Steel	Zinc chromate
14	Bush	Oil impregnated bearing alloy		37	Conical spring washer	Steel	Blackening
15	Gasket	Nitrile rubber		38	Tie rod	Steel	Zinc chromate
16	Rod cover	Aluminum alloy die-casting	Paint	39	Hexagon socket head cap bolt	Steel	
17	Cylinder gasket	Nitrile rubber		40	Hexagon socket head set screw	Steel	Blackening
18	Cushion packing seal	Urethane rubber, steel		41	Cross headed pan	Steel	Zinc chromate
19	Cylinder tube	Aluminum alloy	Hard alumite	42	Switch installation unit	Aluminum alloy	
20	Piston R	Aluminum alloy die-casting		43	Switch holder	Aluminum alloy	
21	Piston packing seal	Nitrile rubber		44	Cylinder switch		
22	Piston gasket	Nitrile rubber		45	Coil scraper	Bronze phosphate	Coil scraper only
23	Magnet	Plastic					

Repair parts list (standard type)

Bore size (mm)	Kit No.	Repair parts number
φ40	USC-40K	
φ50	USC-50K	3 13 15 17
φ63	USC-63K	
φ80	USC-80K	18 21 24 32
φ100	USC-100K	

Note: The locking mechanism must be removed when replacing the repair parts. However, the locking mechanism should not be disassembled as the spring could pop out, or the performance could drop.

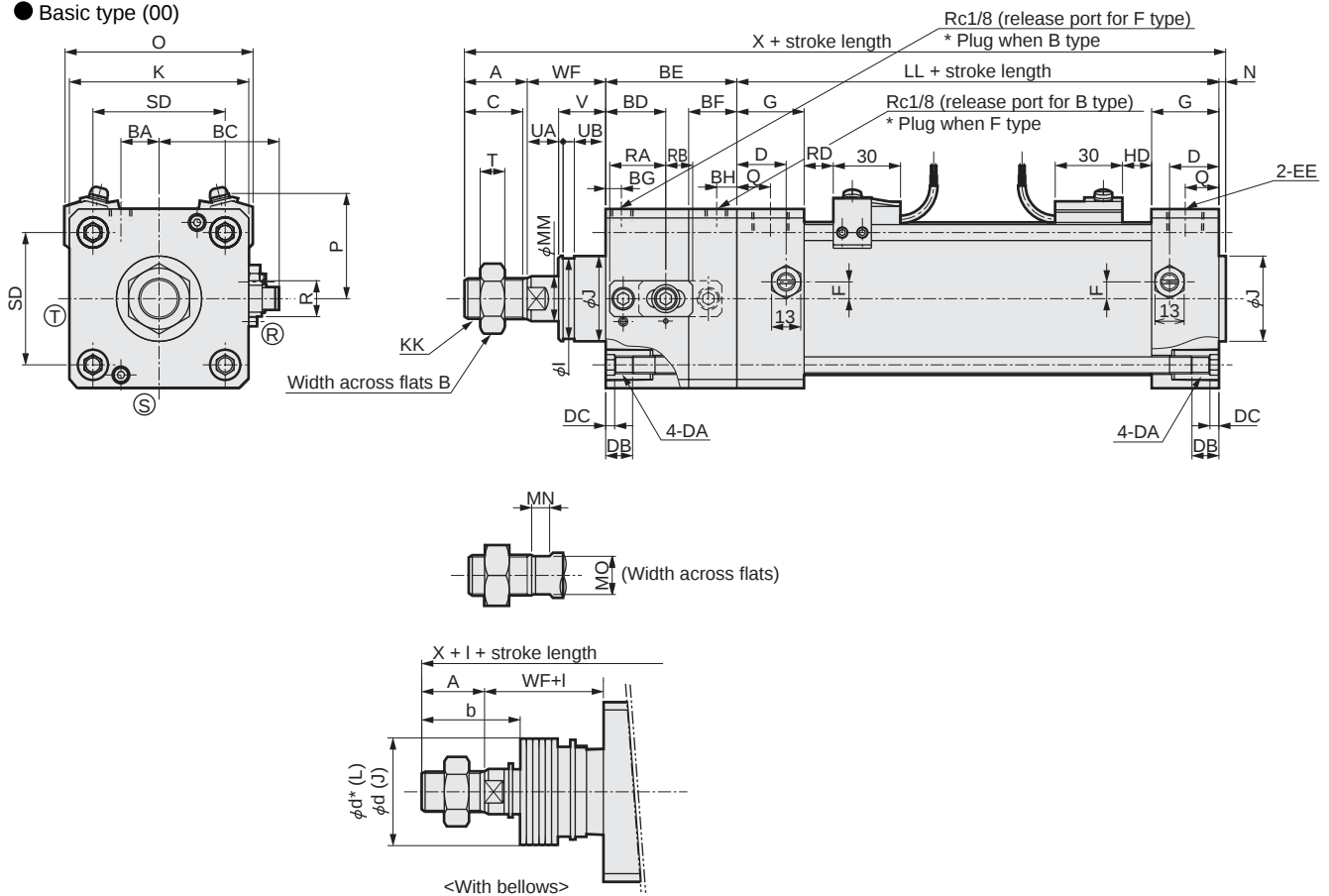
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Free locking positioning medium bore size cylinder
With brake

Dimensions



● Basic type (00)



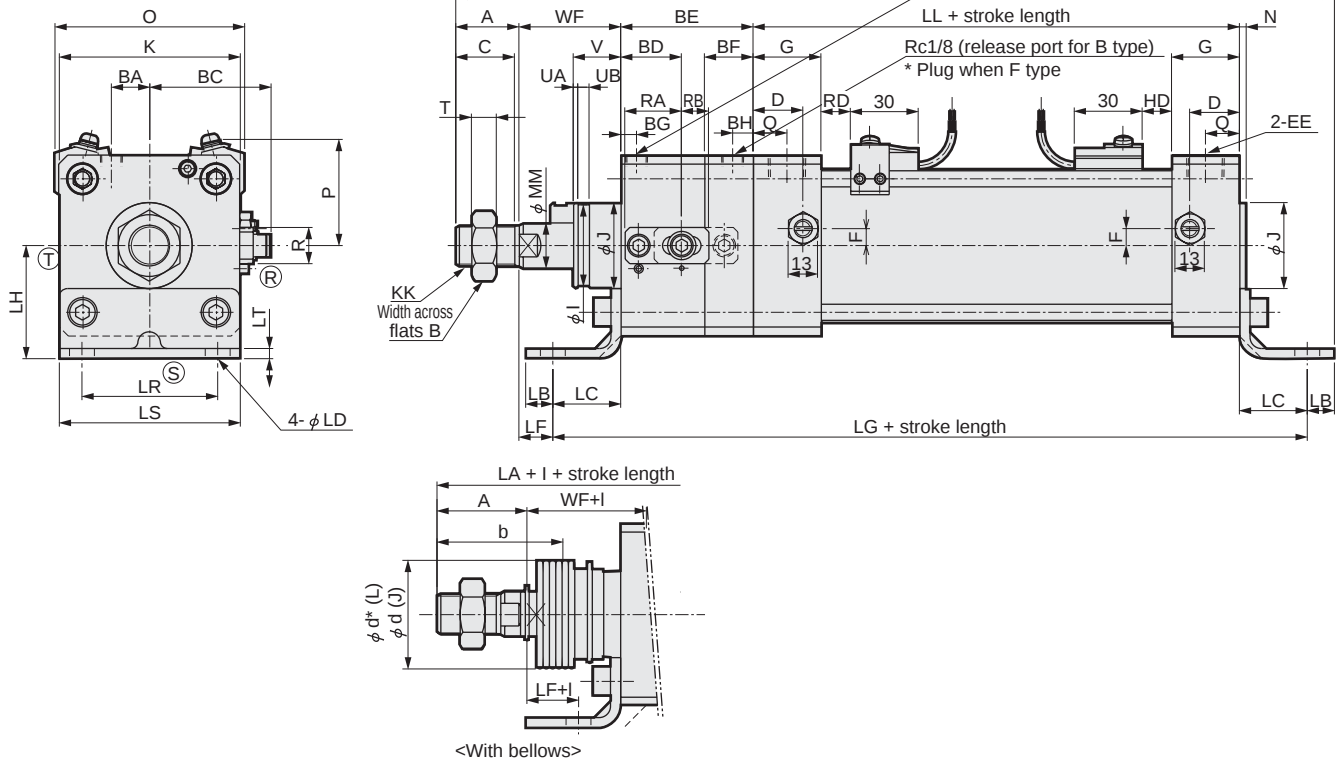
Symbol	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	DA	DB	DC	EE	F	G	J	K	KK
Bore size																				
φ 40	22	22	20	7.5	39.5	22	47	18	7	7	18	M8	12	4	Rc1/4	7.5	26	31	57	M14 x 1.5
φ 50	28	27	26	10	43.5	25	54	20	7	8	20	M8	12	4	Rc3/8	0	28	38	66	M18 x 1.5
φ 63	28	27	26	17	53.5	26.8	58.5	21.5	7	9	22	M8	12	4	Rc3/8	0	30	38	80	M18 x 1.5
φ 80	36	32	34	21	62.5	33.3	71	25	8	10	26	M12	16	5	Rc1/2	0	34	43	98	M22 x 1.5
φ 100	45	41	43	25	72.5	38	81.5	28.5	8	10.5	28	M12	16	5	Rc1/2	0	36	51	118	M26 x 1.5
Symbol	LL	MM	MN	MO	N	Q	SD	T	V	R	RA	RB	I	UA	UB	WF	X			
Bore size																				
φ 40	93	16	8	14	2	13	40.5	8	18.5	16	18	10	29	2	5	33.5	197.5			
φ 50	101	20	8	17	2.5	14	48	11	20.5	16	18	10	36	2	5	37	222.5			
φ 63	105	20	8	17	3	15	59	11	21	16	25	12	36	2	5	35	229.5			
φ 80	116	25	11	22	3.5	17	74	13	23.5	16	25	12	41	2	5	48	274.5			
φ 100	128	30	13	27	4	18	90	16	32	16	25	12	49	3	6	53	311.5			
Symbol	With bellows																			
Bore size	b	d	d*	ℓ																
				50 or less	50 to 100	100 to 150	150 to 200	200 to 300	300 to 400	400 to 500	500 and over	Note 1								
φ 40	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8									
φ 50	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5									
φ 63	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5									
φ 80	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5									
φ 100	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9									
Symbol	With switch																			
Bore size (mm)	T0, T5, T2, T3				T1,T2Y,T3Y T2YF/M,T3YF/M				T8				T2YD				H0*			
	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD
φ 40	66	41.5	11	11	66	41.5	10	10	66	41.5	5	5	66	40	10	10	66	42	4	4
φ 50	73	43	13	13	73	43	12	12	73	43	7	7	73	44.5	12	12	73	44	6	6
φ 63	85	47	13	13	85	47	12	12	85	47	7	7	84	50	12	12	84	47	6	6
φ 80	105	57	14.5	14.5	105	57	13.5	13.5	105	57	8.5	8.5	104	60	13.5	13.5	104	58	7.5	7.5
φ 100	121	63	18.5	18.5	121	63	17.5	17.5	121	63	12.5	12.5	120	68	17.5	17.5	120	64	11.5	11.5

Note 1 : Dimensions below decimal point are rounded up.
 Note 2 : (R), (S) and (T) indicate cushion needle positions.
 Note 3 : Refer to page 1423 for the accessory dimensions.
 RD : Rod end maximum sensitive position
 HD : Head end maximum sensitive position

Dimensions



● Axial foot type (LB)



Symbol	Axial foot type (LB) basic dimensions																				
Bore size	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	EE	F	G	J	K	KK	LL	MM	N	
φ 40	22	22	20	7.5	39.5	22	47	18	7	7	18	Rc1/4	7.5	26	31	57	M14 x 1.5	93	16	2	
φ 50	28	27	26	10	43.5	25	54	20	7	8	20	Rc3/8	0	28	38	66	M18 x 1.5	101	20	2.5	
φ 63	28	27	26	17	53.5	26.8	58.5	21.5	7	9	22	Rc3/8	0	30	38	80	M18 x 1.5	105	20	3	
φ 80	36	32	34	21	62.5	33.3	71	25	8	10	26	Rc1/2	0	34	43	98	M22 x 1.5	116	25	3.5	
φ 100	45	41	43	25	72.5	38	81.5	28.5	8	10.5	28	Rc1/2	0	36	51	118	M26 x 1.5	128	30	4	
Symbol												Installation dimensions									
Bore size	Q	T	V	R	RA	RB	I	UA	UB	WF	X	LA	LB	LC	LD	LF	LG	LH	LR	LS	LT
φ 40	13	8	18.5	16	18	10	29	2	5	33.5	197.5	225	10	19.5	9	14	179	40	40	57	3.2
φ 50	14	11	20.5	16	18	10	36	2	5	37	222.5	254	12	22	9	15	199	40	46	66	4.5
φ 63	15	11	21	16	25	12	36	2	5	35	229.5	268.5	12	30	11	5	223.5	50	60	80	4.5
φ 80	17	13	23.5	16	25	12	41	2	5	48	274.5	322	14	37	14	11	261	60	74	98	6
φ 100	18	16	32	16	25	12	49	3	6	53	311.5	359.5	21	31	14	22	271.5	67	80	118	6
Symbol	With bellows																				
Bore size	b	d	d*	ℓ																	
				50 or less	50 to 100	100 to 150	150 to 200	200 to 300	300 to 400	400 to 500	500 and over	Note 1									
φ 40	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8										
φ 50	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5										
φ 63	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5										
φ 80	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5										
φ 100	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9										
Symbol	With switch																				
Bore size (mm)	T0, T5, T2, T3				T1,T2Y,T3Y T2YF/M,T3YF/M				T8				T2YD				H0*				
	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	
φ 40	66	41.5	11	11	66	41.5	10	10	66	41.5	5	5	66	40	10	10	66	42	4	4	
φ 50	73	43	13	13	73	43	12	12	73	43	7	7	73	44.5	12	12	73	44	6	6	
φ 63	85	47	13	13	85	47	12	12	85	47	7	7	84	50	12	12	84	47	6	6	
φ 80	105	57	14.5	14.5	105	57	13.5	13.5	105	57	8.5	8.5	104	60	13.5	13.5	104	58	7.5	7.5	
φ 100	121	63	18.5	18.5	121	63	17.5	17.5	121	63	12.5	12.5	120	68	17.5	17.5	120	64	11.5	11.5	

Note 1: Dimensions below decimal point are rounded up.

Note 2: (R), (S) and (T) indicate cushion needle positions.

Note 3: Refer to page 1423 for the accessory dimensions.

RD : Rod end maximum sensitive position

HD : Head end maximum sensitive position

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

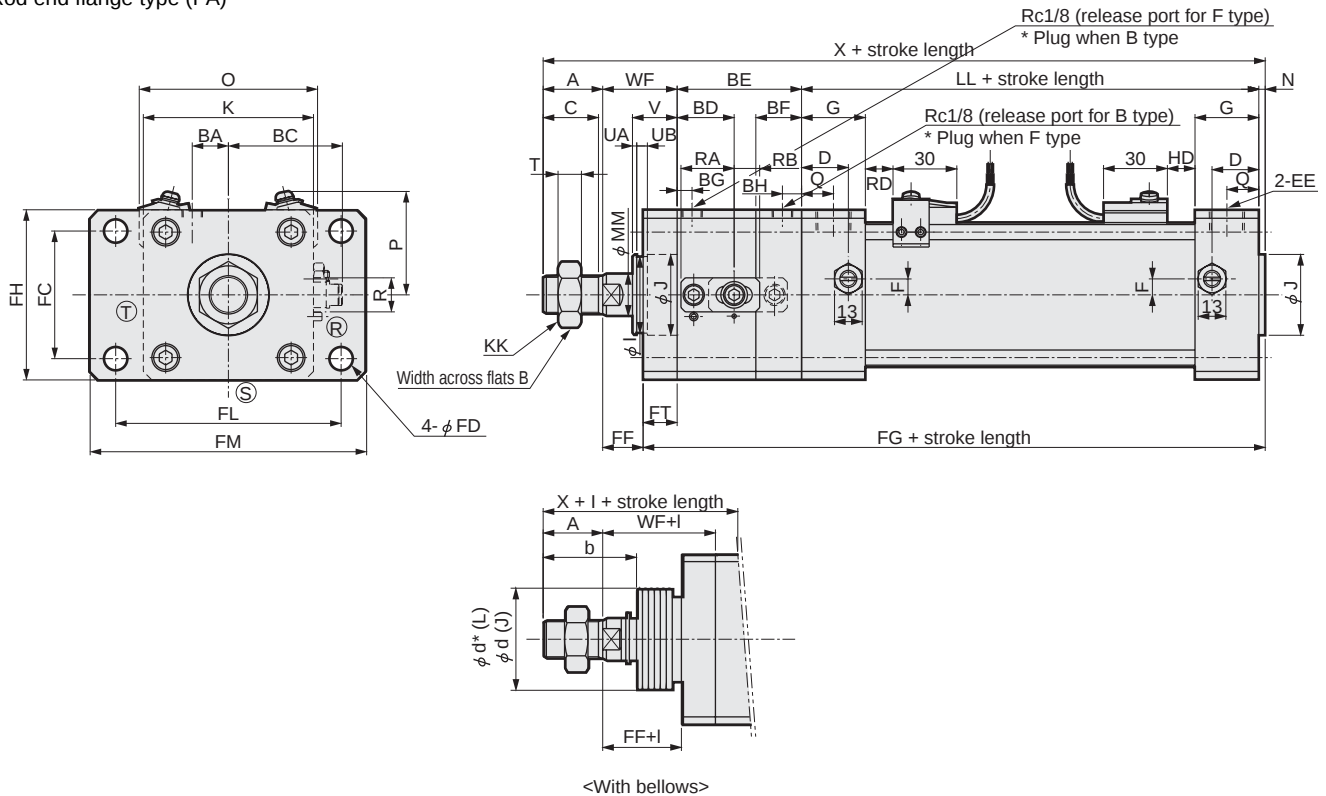
Ending

Free locking positioning medium bore size cylinder
With brake

Dimensions



● Rod end flange type (FA)



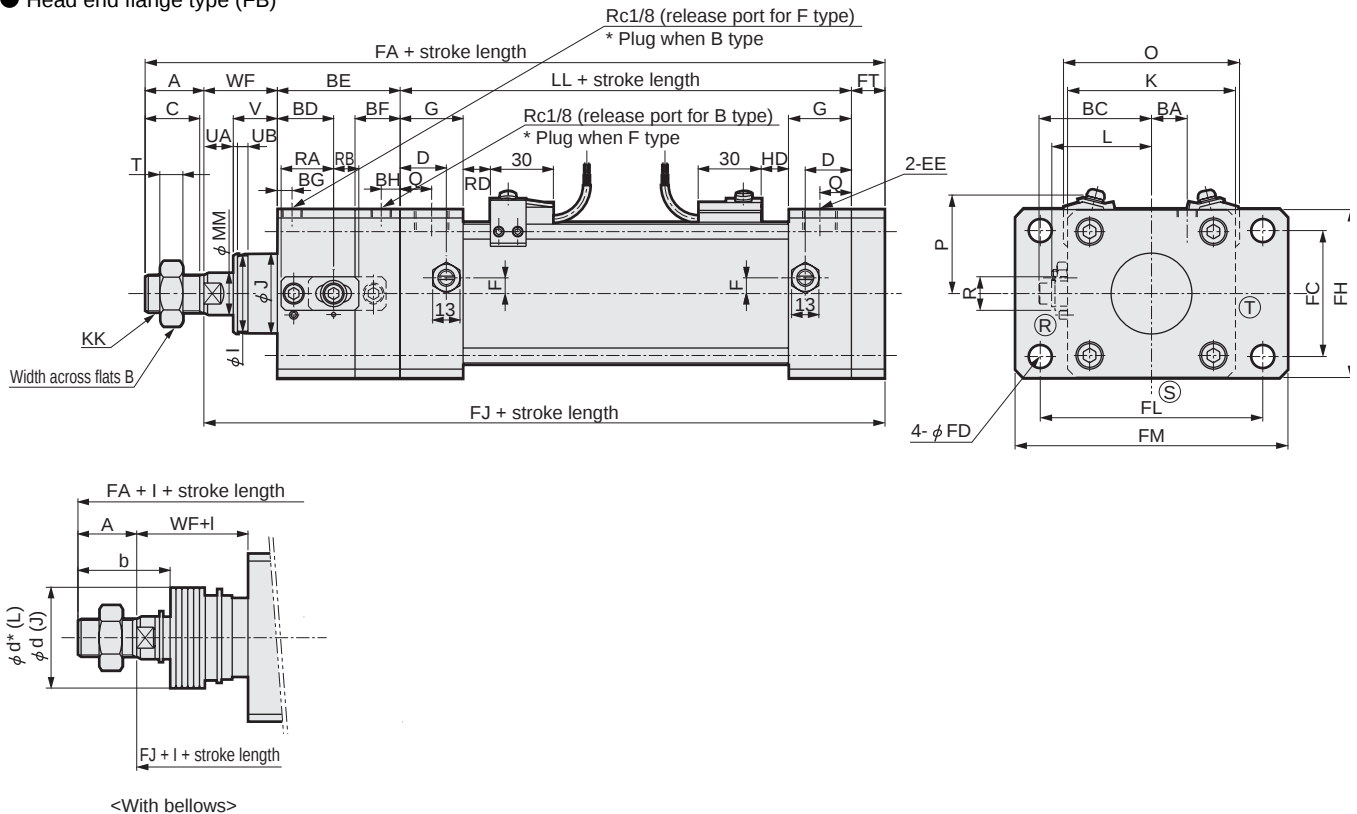
Symbol	Rod end flange type (FA) basic dimensions																			
Bore size	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	EE	F	G	J	K	KK	LL	MM	N
φ 40	22	22	20	7.5	39.5	22	47	18	7	7	18	Rc1/4	7.5	26	31	57	M14 x 1.5	93	16	2
φ 50	28	27	26	10	43.5	25	54	20	7	8	20	Rc3/8	0	28	38	66	M18 x 1.5	101	20	2.5
φ 63	28	27	26	17	53.5	26.8	58.5	21.5	7	9	22	Rc3/8	0	30	38	80	M18 x 1.5	105	20	3
φ 80	36	32	34	21	62.5	33.3	71	25	8	10	26	Rc1/2	0	34	43	98	M22 x 1.5	116	25	3.5
φ 100	45	41	43	25	72.5	38	81.5	28.5	8	10.5	28	Rc1/2	0	36	51	118	M26 x 1.5	128	30	4
Symbol	Q	T	V	R	RA	RB	I	UA	UB	WF	X	Installation dimensions								
Bore size												FC	FD	FF	FG	FH	FL	FM	FT	
φ 40	13	8	18.5	16	18	10	29	2	5	33.5	197.5	40	9	21.5	154	57	80	100	12	
φ 50	14	11	20.5	16	18	10	36	2	5	37	222.5	47	9	25	169.5	65	85	108	12	
φ 63	15	11	21	16	25	12	36	2	5	35	229.5	60	11	19	182.5	80	106	130	16	
φ 80	17	13	23.5	16	25	12	41	2	5	48	274.5	74	14	29	209.5	98	125	153	19	
φ 100	18	16	32	16	25	12	49	3	6	53	311.5	88	14	34	232.5	118	144	180	19	
Symbol	With bellows																			
Bore size	b	d	d*	ℓ																
				50 or less	50 to 100	100 to 150	150 to 200	200 to 300	300 to 400	400 to 500	500 and over	Note 1								
φ 40	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8									
φ 50	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5									
φ 63	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5									
φ 80	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5									
φ 100	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9									
Symbol	With switch																			
Bore size (mm)	T0, T5, T2, T3				T1,T2Y,T3Y T2YF/M,T3YF/M				T8				T2YD				H0*			
	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD
φ 40	66	41.5	11	11	66	41.5	10	10	66	41.5	5	5	66	40	10	10	66	42	4	4
φ 50	73	43	13	13	73	43	12	12	73	43	7	7	73	44.5	12	12	73	44	6	6
φ 63	85	47	13	13	85	47	12	12	85	47	7	7	84	50	12	12	84	47	6	6
φ 80	105	57	14.5	14.5	105	57	13.5	13.5	105	57	8.5	8.5	104	60	13.5	13.5	104	58	7.5	7.5
φ 100	121	63	18.5	18.5	121	63	17.5	17.5	121	63	12.5	12.5	120	68	17.5	17.5	120	64	11.5	11.5

Note 1 : Dimensions below decimal point are rounded up.
 Note 2 : (R), (S) and (T) indicate cushion needle positions.
 Note 3 : Refer to page 1423 for the accessory dimensions.
 RD : Rod end maximum sensitive position
 HD : Head end maximum sensitive position

Dimensions



● Head end flange type (FB)



Symbol	Head end flange type (FB) basic dimensions																				
Bore size	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	EE	F	G	J	K	KK	LL	MM		
φ 40	22	22	20	7.5	39.5	22	47	18	7	7	18	Rc1/4	7.5	26	31	57	M14 x 1.5	93	16		
φ 50	28	27	26	10	43.5	25	54	20	7	8	20	Rc3/8	0	28	38	66	M18 x 1.5	101	20		
φ 63	28	27	26	17	53.5	26.8	58.5	21.5	7	9	22	Rc3/8	0	30	38	80	M18 x 1.5	105	20		
φ 80	36	32	34	21	62.5	33.3	71	25	8	10	26	Rc1/2	0	34	43	98	M22 x 1.5	116	25		
φ 100	45	41	43	25	72.5	38	81.5	28.5	8	10.5	28	Rc1/2	0	36	51	118	M26 x 1.5	128	30		
Symbol	Q	T	V	R	RA	RB	I	UA	UB	WF	X	Installation dimensions									
Bore size	Q	T	V	R	RA	RB	I	UA	UB	WF	X	L	FA	FC	FD	FH	FJ	FL	FM	FT	
φ 40	13	8	18.5	16	18	10	29	2	5	33.5	197.5	38 to 39.5	207.5	40	9	57	185.5	80	100	12	
φ 50	14	11	20.5	16	18	10	36	2	5	37	222.5	41 to 43.5	232	47	9	65	204	85	108	12	
φ 63	15	11	21	16	25	12	36	2	5	35	229.5	47.5 to 50	242.5	60	11	80	214.5	106	130	16	
φ 80	17	13	23.5	16	25	12	41	2	5	48	274.5	56 to 59	290	74	14	98	254	125	153	19	
φ 100	18	16	32	16	25	12	49	3	6	53	311.5	66 to 69	326.5	88	14	118	281.5	144	180	19	
Symbol	With bellows																				
Bore size	b	d	d*	ℓ							500 and over Note 1										
φ 40	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8										
φ 50	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5										
φ 63	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5										
φ 80	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5										
φ 100	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9										
Symbol	With switch																				
Bore size (mm)	T0, T5, T2, T3				T1,T2Y,T3Y T2YF/M,T3YF/M				T8				T2YD				H0*				
φ 40	66	41.5	11	11	66	41.5	10	10	66	41.5	5	5	66	40	10	10	66	42	4	4	
φ 50	73	43	13	13	73	43	12	12	73	43	7	7	73	44.5	12	12	73	44	6	6	
φ 63	85	47	13	13	85	47	12	12	85	47	7	7	84	50	12	12	84	47	6	6	
φ 80	105	57	14.5	14.5	105	57	13.5	13.5	105	57	8.5	8.5	104	60	13.5	13.5	104	58	7.5	7.5	
φ 100	121	63	18.5	18.5	121	63	17.5	17.5	121	63	12.5	12.5	120	68	17.5	17.5	120	64	11.5	11.5	

Note 1 : Dimensions below decimal point are rounded up.
 Note 2 : (R), (S) and (T) indicate cushion needle positions.
 Note 3 : Refer to page1423 for the accessory dimensions.
 RD : Rod end maximum sensitive position
 HD : Head end maximum sensitive position

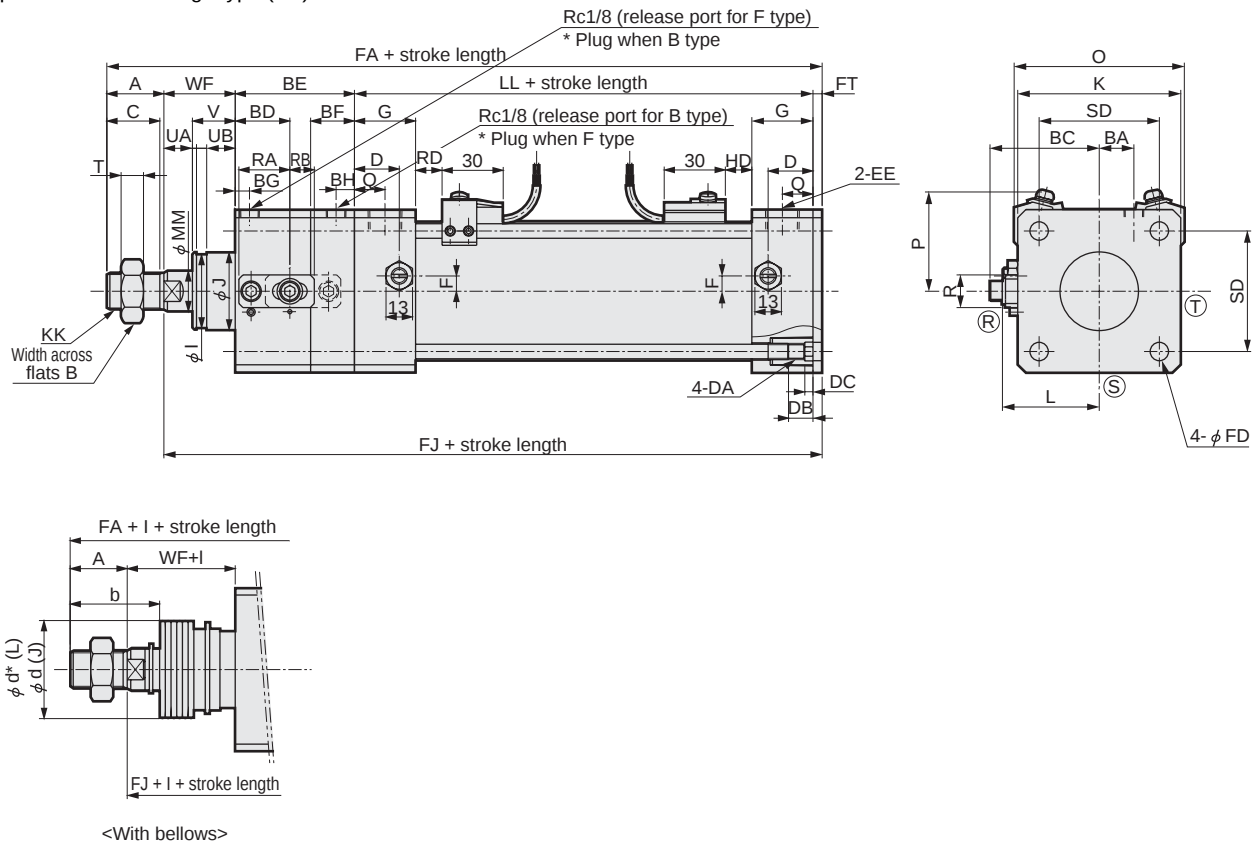
SCP*2
 CMK2
 CMA2
 SCM
 SCG
 SCA2
 SCS
 CKV2
 CA/OV2
 SSD
 CAT
 MDC2
 MVC
 SMD2
 MSD*
 FC*
 STK
 ULK*
 JSK/M2
 JSG
 JSC3
 USSD
 USC
 JSB3
 LMB
 STG
 STS/L
 LCS
 LCG
 LCM
 LCT
 LCY
 STR2
 UCA2
 HCM
 HCA
 SRL2
 SRG
 SRM
 SRT
 MRL2
 MRG2
 SM-25
 CAC3
 UCAC
 RCC2
 MFC
 SHC
 GLC

Ending
 Free locking positioning medium bore size cylinder
 With brake

Dimensions



- Special head end flange type (FC)



Symbol	Special head end flange type (FC) basic dimensions																			
Bore size	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	DA	DB	DC	EE	F	G	J	K	KK
φ 40	22	22	20	7.5	39.5	22	47	18	7	7	18	M8	12	4	Rc1/4	7.5	26	31	57	M14 x 1.5
φ 50	28	27	26	10	43.5	25	54	20	7	8	20	M8	12	4	Rc3/8	0	28	38	66	M18 x 1.5
φ 63	28	27	26	17	53.5	26.8	58.5	21.5	7	9	22	M8	12	4	Rc3/8	0	30	38	80	M18 x 1.5
φ 80	36	32	34	21	62.5	33.3	71	25	8	10	26	M12	16	5	Rc1/2	0	34	43	98	M22 x 1.5
φ 100	45	41	43	25	72.5	38	81.5	28.5	8	10.5	28	M12	16	5	Rc1/2	0	36	51	118	M26 x 1.5
Symbol															Installation dimensions					
Bore size	LL	MM	Q	SD	T	V	R	RA	RB	I	UA	UB	WF	X	L		FA	FD	FJ	FT
φ 40	93	16	13	40.5	8	18.5	16	18	10	29	2	5	33.5	197.5	38 to 39.5		200	9	178	4.5
φ 50	101	20	14	48	11	20.5	16	18	10	36	2	5	37	222.5	41 to 43.5		224.5	9	196.5	4.5
φ 63	105	20	15	59	11	21	16	25	12	36	2	5	35	229.5	47.5 to 50		231	11	203	4.5
φ 80	116	25	17	74	13	23.5	16	25	12	41	2	5	48	274.5	56 to 59		277	14	241	6
φ 100	128	30	18	90	16	32	16	25	12	49	3	6	53	311.5	66 to 69		313.5	14	268.5	6
Symbol	With bellows																			
Bore size	b	d	d*	ℓ																
				50 or less	50 to 100	100 to 150	150 to 200	200 to 300	300 to 400	400 to 500	500 and over					Note 1				
φ 40	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8									
φ 50	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5									
φ 63	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5									
φ 80	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5									
φ 100	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9									
Symbol	With switch																			
Bore size (mm)	T0, T5, T2, T3				T1,T2Y,T3Y T2YF/M,T3YF/M				T8				T2YD				H0*			
	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD
φ 40	66	41.5	11	11	66	41.5	10	10	66	41.5	5	5	66	40	10	10	66	42	4	4
φ 50	73	43	13	13	73	43	12	12	73	43	7	7	73	44.5	12	12	73	44	6	6
φ 63	85	47	13	13	85	47	12	12	85	47	7	7	84	50	12	12	84	47	6	6
φ 80	105	57	14.5	14.5	105	57	13.5	13.5	105	57	8.5	8.5	104	60	13.5	13.5	104	58	7.5	7.5
φ 100	121	63	18.5	18.5	121	63	17.5	17.5	121	63	12.5	12.5	120	68	17.5	17.5	120	64	11.5	11.5

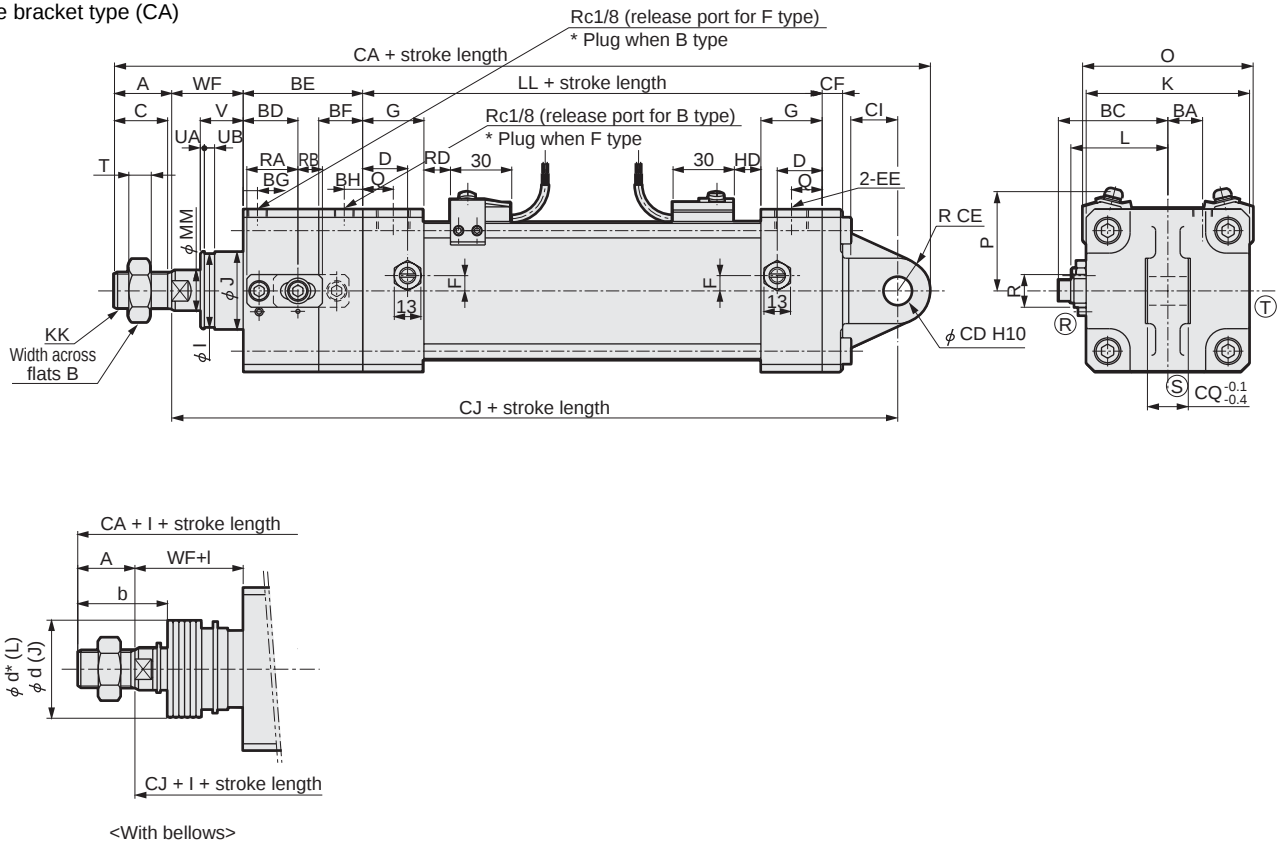
Note 1 : Dimensions below decimal point are rounded up.
 Note 2 : **R**, **S** and **T** indicate cushion needle positions.
 Note 3 : Refer to page 1423 for the accessory dimensions.

RD : Rod end maximum sensitive position
 HD : Head end maximum sensitive position

Dimensions



● Eye bracket type (CA)



Symbol	Eye bracket type (CA) basic dimensions																			
Bore size	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	EE	F	G	J	K	KK	LL	MM	
φ 40	22	22	20	7.5	39.5	22	47	18	7	7	18	Rc1/4	7.5	26	31	57	M14 x 1.5	93	16	
φ 50	28	27	26	10	43.5	25	54	20	7	8	20	Rc3/8	0	28	38	66	M18 x 1.5	101	20	
φ 63	28	27	26	17	53.5	26.8	58.5	21.5	7	9	22	Rc3/8	0	30	38	80	M18 x 1.5	105	20	
φ 80	36	32	34	21	62.5	33.3	71	25	8	10	26	Rc1/2	0	34	43	98	M22 x 1.5	116	25	
φ 100	45	41	43	25	72.5	38	81.5	28.5	8	10.5	28	Rc1/2	0	36	51	118	M26 x 1.5	128	30	
Symbol	Q	T	V	R	RA	RB	I	UA	UB	WF	Installation dimensions									
Bore size											L	CA	CD	CE	CF	CI	CJ	CQ		
φ 40	13	8	18.5	16	18	10	29	2	5	33.5	38 to 39.5	239.5	12 ^{+0.070 0}	12	10	18	205.5	18		
φ 50	14	11	20.5	16	18	10	36	2	5	37	41 to 43.5	264	12 ^{+0.070 0}	12	10	18	224	18		
φ 63	15	11	21	16	25	12	36	2	5	35	47.5 to 50	279.5	14 ^{+0.070 0}	16	10	24	235.5	20		
φ 80	17	13	23.5	16	25	12	41	2	5	48	56 to 59	343	20 ^{+0.084 0}	20	14	30	287	28		
φ 100	18	16	32	16	25	12	49	3	6	53	66 to 69	379.5	20 ^{+0.084 0}	20	16	30	314.5	28		
Symbol	With bellows																			
Bore size	b	d	d*	ℓ																
				50 or less	50 to 100	100 to 150	150 to 200	200 to 300	300 to 400	400 to 500	500 and over	Note 1								
φ 40	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8									
φ 50	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5									
φ 63	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5									
φ 80	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5									
φ 100	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9									
Symbol	With switch																			
Bore size (mm)	T0, T5, T2, T3				T1,T2Y,T3Y T2YF/M,T3YF/M				T8				T2YD				H0*			
	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD
φ 40	66	41.5	11	11	66	41.5	10	10	66	41.5	5	5	66	40	10	10	66	42	4	4
φ 50	73	43	13	13	73	43	12	12	73	43	7	7	73	44.5	12	12	73	44	6	6
φ 63	85	47	13	13	85	47	12	12	85	47	7	7	84	50	12	12	84	47	6	6
φ 80	105	57	14.5	14.5	105	57	13.5	13.5	105	57	8.5	8.5	104	60	13.5	13.5	104	58	7.5	7.5
φ 100	121	63	18.5	18.5	121	63	17.5	17.5	121	63	12.5	12.5	120	68	17.5	17.5	120	64	11.5	11.5

Note 1 : Dimensions below decimal point are rounded up.
 Note 2 : (R), (S) and (T) indicate cushion needle positions.
 Note 3 : Refer to page 1423 for the accessory dimensions.
 RD : Rod end maximum sensitive position
 HD : Head end maximum sensitive position

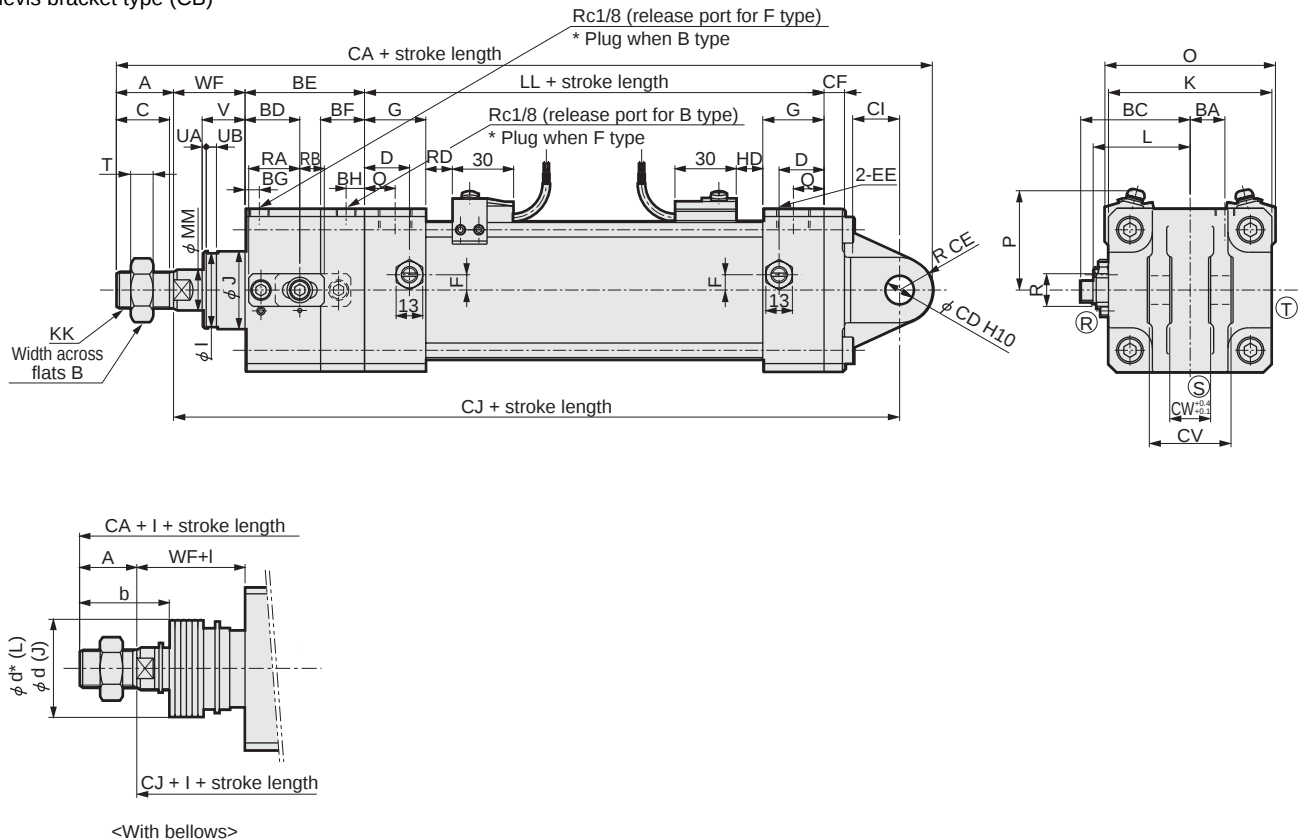
SCP*2
 CMK2
 CMA2
 SCM
 SCG
 SCA2
 SCS
 CKV2
 CA/OV2
 SSD
 CAT
 MDC2
 MVC
 SMD2
 MSD*
 FC*
 STK
 ULK*
 JSK/M2
 JSG
 JSC3
 USSD
 USC
 JSB3
 LMB
 STG
 STS/L
 LCS
 LCG
 LCM
 LCT
 LCY
 STR2
 UCA2
 HCM
 HCA
 SRL2
 SRG
 SRM
 SRT
 MRL2
 MRG2
 SM-25
 CAC3
 UCAC
 RCC2
 MFC
 SHC
 GLC
 Ending

Free locking positioning medium bore size cylinder
 With brake

Dimensions



● Clevis bracket type (CB)



<With bellows>

Clevis bracket type (CB) basic dimensions																			
Symbol	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	EE	F	G	J	K	KK	LL	MM
Bore size																			
ϕ 40	22	22	20	7.5	39.5	22	47	18	7	7	18	Rc1/4	7.5	26	31	57	M14 x 1.5	93	16
HCM	28	27	26	10	43.5	25	54	20	7	8	20	Rc3/8	0	28	38	66	M18 x 1.5	101	20
HCA	28	27	26	17	53.5	26.8	58.5	21.5	7	9	22	Rc3/8	0	30	38	80	M18 x 1.5	105	20
SRL2	36	32	34	21	62.5	33.3	71	25	8	10	26	Rc1/2	0	34	43	98	M22 x 1.5	116	25
ϕ 100	45	41	43	25	72.5	38	81.5	28.5	8	10.5	28	Rc1/2	0	36	51	118	M26 x 1.5	128	30

Installation dimensions																			
Symbol	Q	T	V	R	RA	RB	I	UA	UB	WF	L	CA	CD	CE	CF	CI	CJ	CV	CW
Bore size																			
ϕ 40	13	8	18.5	16	18	10	29	2	5	33.5	38 to 39.5	239.5	12 ^{+0.070} ₀	12	10	18	205.5	36	18
ϕ 50	14	11	20.5	16	18	10	36	2	5	37	41 to 43.5	264	12 ^{+0.070} ₀	12	10	18	224	36	18
ϕ 63	15	11	21	16	25	12	36	2	5	35	47.5 to 50	279.5	14 ^{+0.070} ₀	16	10	24	235.5	40	20
ϕ 80	17	13	23.5	16	25	12	41	2	5	48	56 to 59	343	20 ^{+0.084} ₀	20	14	30	287	56	28
ϕ 100	18	16	32	16	25	12	49	3	6	53	66 to 69	379.5	20 ^{+0.084} ₀	20	16	30	314.5	56	28

With bellows																			
Symbol	b	d	d*	ℓ															
Bore size				50 or less	50 to 100	100 to 150	150 to 200	200 to 300	300 to 400	400 to 500	500 and over Note 1								
ϕ 40	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8								
ϕ 50	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5								
ϕ 63	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5								
ϕ 80	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5								
ϕ 100	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9								

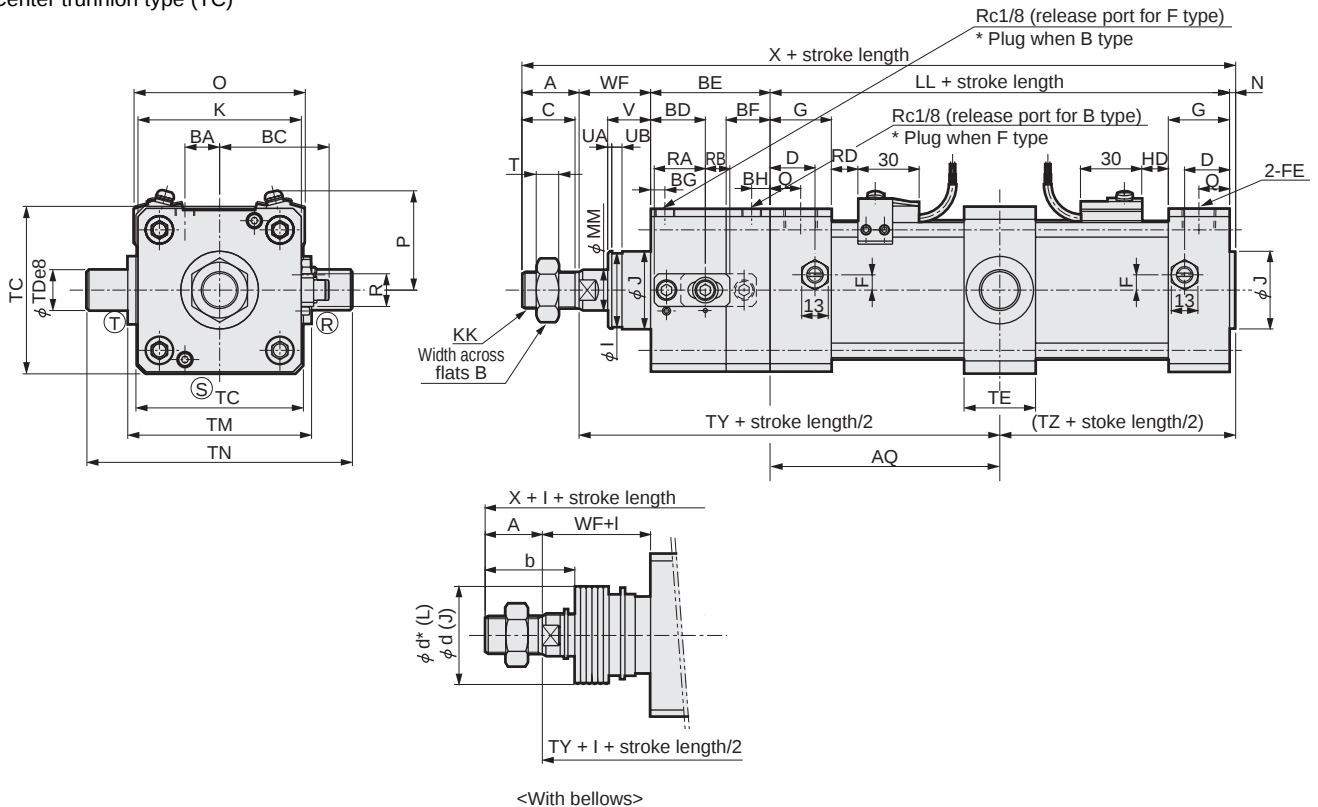
Note 1 : Dimensions below decimal point are rounded up.																			
Note 2 : Ⓐ, Ⓑ and Ⓒ indicate cushion needle positions.																			
Note 3 : Refer to page 1423 for the accessory dimensions.																			
RD	: Rod end maximum sensitive position																		
HD	: Head end maximum sensitive position																		

Note 1 : Dimensions below decimal point are rounded up.
 Note 2 : (R), (S) and (T) indicate cushion needle positions.
 Note 3 : Refer to page 1423 for the accessory dimensions.
 RD : Rod end maximum sensitive position
 HD : Head end maximum sensitive position

Dimensions



● Center trunnion type (TC)



Symbol	Center trunnion type (TC) basic dimensions																			
	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	EE	F	G	J	K	KK	LL	MM	N
Bore size	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	EE	F	G	J	K	KK	LL	MM	N
φ 40	22	22	20	7.5	39.5	22	47	18	7	7	18	Rc1/4	7.5	26	31	57	M14 x 1.5	93	16	2
φ 50	28	27	26	10	43.5	25	54	20	7	8	20	Rc3/8	0	28	38	66	M18 x 1.5	101	20	2.5
φ 63	28	27	26	17	53.5	26.8	58.5	21.5	7	9	22	Rc3/8	0	30	38	80	M18 x 1.5	105	20	3
φ 80	36	32	34	21	62.5	33.3	71	25	8	10	26	Rc1/2	0	34	43	98	M22 x 1.5	116	25	3.5
φ 100	45	41	43	25	72.5	38	81.5	28.5	8	10.5	28	Rc1/2	0	36	51	118	M26 x 1.5	128	30	4
Symbol													Installation dimensions							
Bore size	Q	T	V	R	RA	RB	I	UA	UB	WF	X	AQ	TC	TD	TE	TM	TN	TY	TZ	
φ 40	13	8	18.5	16	18	10	29	2	5	33.5	197.5	46.5 + (Stroke length/2)	57	16 ^{-0.032 -0.059}	30	63	95	127	48.5	
φ 50	14	11	20.5	16	18	10	36	2	5	37	222.5	50.5 + (Stroke length/2)	67	18 ^{-0.032 -0.059}	30	80	116	141.5	53	
φ 63	15	11	21	16	25	12	36	2	5	35	229.5	52.5 + (Stroke length/2)	82	20 ^{-0.040 -0.073}	35	90	130	146	55.5	
φ 80	17	13	23.5	16	25	12	41	2	5	48	274.5	58 + (Stroke length/2)	100	25 ^{-0.040 -0.073}	40	115	165	177	61.5	
φ 100	18	16	32	16	25	12	49	3	6	53	311.5	64 + (Stroke length/2)	121	35 ^{-0.050 -0.089}	50	135	205	198.5	68	

Symbol	With bellows									
Bore size	b	d	d*	ℓ						
				50 or less	50 to 100	100 to 150	150 to 200	200 to 300	300 to 400	400 to 500
φ 40	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5
φ 50	47	47	48	22	36	49	63	90	119	146
φ 63	45	47	48	22	36	49	63	90	119	146
φ 80	58.5	53	55	14	26	38	49	72	96	119
φ 100	69.5	61	65	20	32	42	53	76	98	120

Symbol	With switch															
Bore size (mm)	T0, T5, T2, T3				T1, T2Y, T3Y T2YF/M, T3YF/M				T8				T2YD			
	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD
φ 40	66	41.5	11	11	66	41.5	10	10	66	41.5	5	5	66	40	10	10
φ 50	73	43	13	13	73	43	12	12	73	43	7	7	73	44.5	12	12
φ 63	85	47	13	13	85	47	12	12	85	47	7	7	84	50	12	12
φ 80	105	57	14.5	14.5	105	57	13.5	13.5	105	57	8.5	8.5	104	60	13.5	13.5
φ 100	121	63	18.5	18.5	121	63	17.5	17.5	121	63	12.5	12.5	120	68	17.5	17.5

Note 1 : Dimensions below decimal point are rounded up.
 Note 2 : (R), (S) and (T) indicate cushion needle positions.
 Note 3 : Refer to page 1423 for the accessory dimensions.
 RD : Rod end maximum sensitive position
 HD : Head end maximum sensitive position

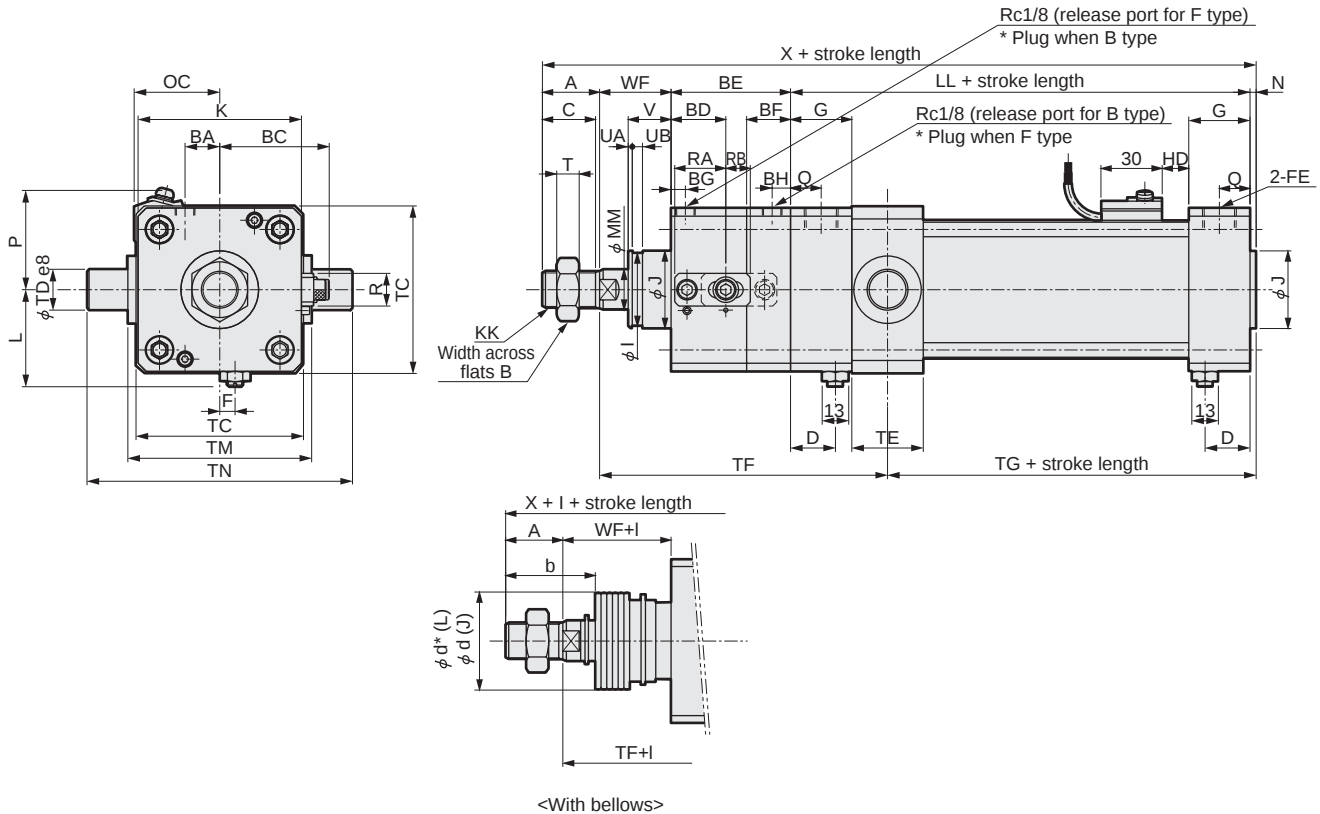
SCP*2
 CMK2
 CMA2
 SCM
 SCG
 SCA2
 SCS
 CKV2
 CA/OV2
 SSD
 CAT
 MDC2
 MVC
 SMD2
 MSD*
 FC*
 STK
 ULK*
 JSK/M2
 JSG
 JSC3
 USSD
 USC
 JSB3
 LMB
 STG
 STS/L
 LCS
 LCG
 LCM
 LCT
 LCY
 STR2
 UCA2
 HCM
 HCA
 SRL2
 SRG
 SRM
 SRT
 MRL2
 MRG2
 SM-25
 CAC3
 UCAC
 RCC2
 MFC
 SHC
 GLC

Ending
 Free locking positioning medium bore size cylinder
 With brake

Dimensions



● Rod end trunnion type (TA)



Symbol	Rod type trunnion type (TA) basic dimensions																				
	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	EE	F	G	J	K	KK	LL	MM	N	
Bore size																					
φ 40	22	22	20	7.5	39.5	22	47	18	7	7	18	Rc1/4	7.5	26	31	57	M14 x 1.5	93	16	2	
φ 50	28	27	26	10	43.5	25	54	20	7	8	20	Rc3/8	0	28	38	66	M18 x 1.5	101	20	2.5	
φ 63	28	27	26	17	53.5	26.8	58.5	21.5	7	9	22	Rc3/8	0	30	38	80	M18 x 1.5	105	20	3	
φ 80	36	32	34	21	62.5	33.3	71	25	8	10	26	Rc1/2	0	34	43	98	M22 x 1.5	116	25	3.5	
φ 100	45	41	43	25	72.5	38	81.5	28.5	8	10.5	28	Rc1/2	0	36	51	118	M26 x 1.5	128	30	4	
Symbol												Installation dimensions									
Bore size	Q	T	V	R	RA	RB	I	UA	UB	WF	X	L		TC	TD	TE	TF	TG	TM	TN	
φ 40	13	8	18.5	16	18	10	29	2	5	33.5	197.5	38 to 39.5		57	16 ^{-0.032 -0.059}	30	121.5	54	63	95	
φ 50	14	11	20.5	16	18	10	36	2	5	37	222.5	41 to 43.5		67	18 ^{-0.032 -0.059}	30	134	60.5	80	116	
φ 63	15	11	21	16	25	12	36	2	5	35	229.5	47.5 to 50		82	20 ^{-0.040 -0.073}	35	141	60.5	90	130	
φ 80	17	13	23.5	16	25	12	41	2	5	48	274.5	56 to 59		100	25 ^{-0.040 -0.073}	40	173	65.5	115	165	
φ 100	18	16	32	16	25	12	49	3	6	53	311.5	66 to 69		121	35 ^{-0.050 -0.089}	50	195.5	71	135	205	
Symbol	With bellows																				
Bore size	b	d	d*	ℓ																	
				50 or less	50 to 100	100 to 150	150 to 200	200 to 300	300 to 400	400 to 500	500 and over	Note 1									
φ 40	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8										
φ 50	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5										
φ 63	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5										
φ 80	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5										
φ 100	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9										
Symbol	With switch																				
Bore size (mm)	T0, T5, T2, T3				T1,T2Y,T3Y T2YF/M,T3YF/M				T8				T2YD				H0*				
	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	O	P	RD	HD	
φ 40	66	41.5	11	11	66	41.5	10	10	66	41.5	5	5	66	40	10	10	66	42	4	4	
φ 50	73	43	13	13	73	43	12	12	73	43	7	7	73	44.5	12	12	73	44	6	6	
φ 63	85	47	13	13	85	47	12	12	85	47	7	7	84	50	12	12	84	47	6	6	
φ 80	105	57	14.5	14.5	105	57	13.5	13.5	105	57	8.5	8.5	104	60	13.5	13.5	104	58	7.5	7.5	
φ 100	121	63	18.5	18.5	121	63	17.5	17.5	121	63	12.5	12.5	120	68	17.5	17.5	120	64	11.5	11.5	

Note 1 : Dimensions below decimal point are rounded up.

Note 2 : (R), (S) and (T) indicate cushion needle positions.

Note 3 : Refer to page 1423 for the accessory dimensions.

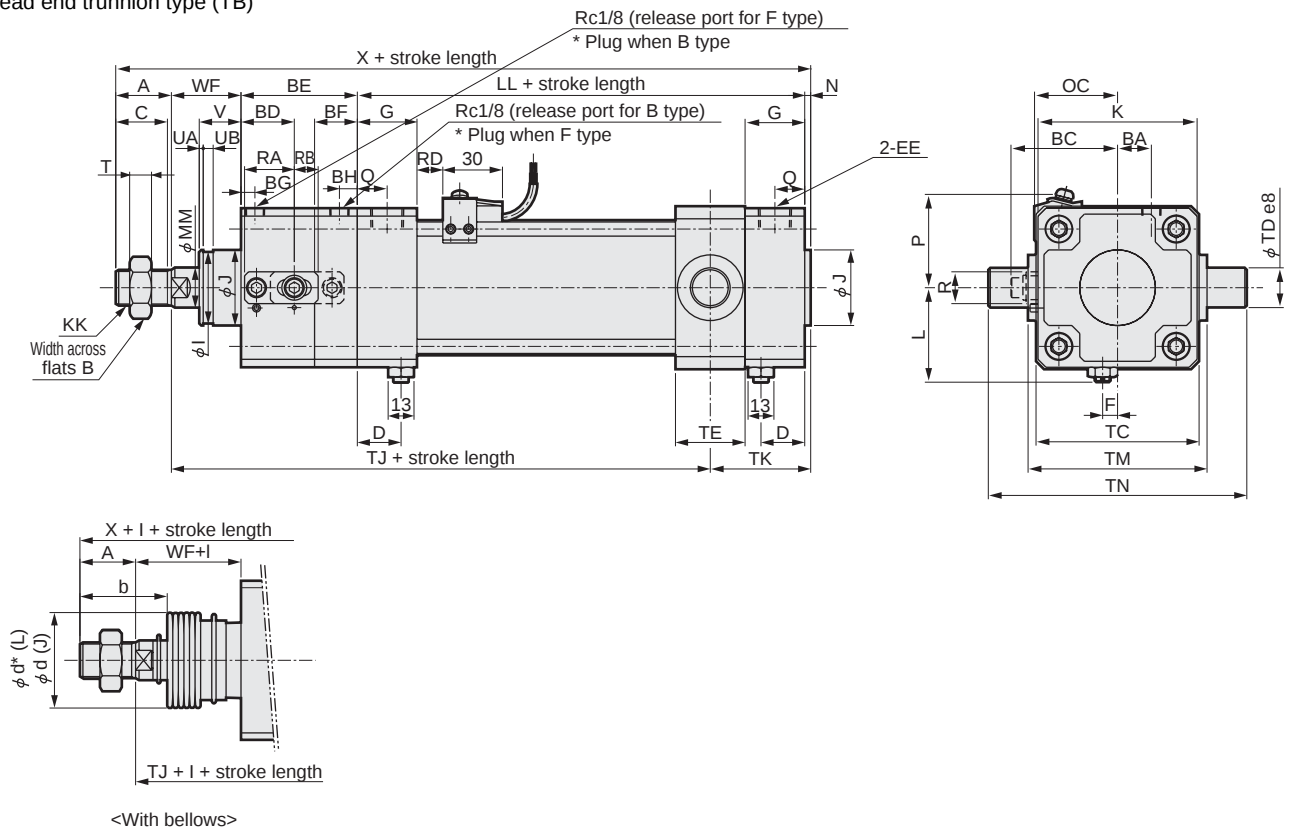
RD : Rod end maximum sensitive position

HD : Head end maximum sensitive position

Dimensions



● Head end trunnion type (TB)



Symbol	Head end trunnion type (TB) basic dimensions																				
Bore size	A	B	C	BA	BC	BD	BE	BF	BG	BH	D	EE	F	G	J	K	KK	LL	MM	N	
φ 40	22	22	20	7.5	39.5	22	47	18	7	7	18	Rc1/4	7.5	26	31	57	M14 x 1.5	93	16	2	
φ 50	28	27	26	10	43.5	25	54	20	7	8	20	Rc3/8	0	28	38	66	M18 x 1.5	101	20	2.5	
φ 63	28	27	26	17	53.5	26.8	58.5	21.5	7	9	22	Rc3/8	0	30	38	80	M18 x 1.5	105	20	3	
φ 80	36	32	34	21	62.5	33.3	71	25	8	10	26	Rc1/2	0	34	43	98	M22 x 1.5	116	25	3.5	
φ 100	45	41	43	25	72.5	38	81.5	28.5	8	10.5	28	Rc1/2	0	36	51	118	M26 x 1.5	128	30	4	
Symbol	Installation dimensions																				
Bore size																					
φ 40	Q	T	V	R	RA	RB	I	UA	UB	WF	X	L		TC	TD	TE	TJ	TK	TM	TN	
φ 40	13	8	18.5	16	18	10	29	2	5	33.5	197.5	38 to 39.5		57	16	-0.032 -0.059	30	132	43.5	63	95
φ 50	14	11	20.5	16	18	10	36	2	5	37	222.5	41 to 43.5		67	18	-0.032 -0.059	30	148.5	46	80	116
φ 63	15	11	21	16	25	12	36	2	5	35	229.5	47.5 to 50		82	20	-0.040 -0.073	35	150.5	51	90	130
φ 80	17	13	23.5	16	25	12	41	2	5	48	274.5	56 to 59		100	25	-0.040 -0.073	40	180.5	58	115	165
φ 100	18	16	32	16	25	12	49	3	6	53	311.5	66 to 69		121	35	-0.050 -0.089	50	201	65.5	135	205
Symbol	With bellows																				
Bore size	b	d	d*	ℓ																	
				50 or less	50 to 100	100 to 150	150 to 200	200 to 300	300 to 400	400 to 500	500 and over ^{Note 1}										
φ 40	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8										
φ 50	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5										
φ 63	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5										
φ 80	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5										
φ 100	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9										
Symbol	With switch																				
Bore size (mm)	T0, T5, T2, T3				T1,T2Y,T3Y T2YF/M,T3YF/M				T8				T2YD				H0*				
φ 40	66	41.5	11	11	66	41.5	10	10	66	41.5	5	5	66	40	10	10	66	42	4	4	
φ 50	73	43	13	13	73	43	12	12	73	43	7	7	73	44.5	12	12	73	44	6	6	
φ 63	85	47	13	13	85	47	12	12	85	47	7	7	84	50	12	12	84	47	6	6	
φ 80	105	57	14.5	14.5	105	57	13.5	13.5	105	57	8.5	8.5	104	60	13.5	13.5	104	58	7.5	7.5	
φ 100	121	63	18.5	18.5	121	63	17.5	17.5	121	63	12.5	12.5	120	68	17.5	17.5	120	64	11.5	11.5	

Note 1 : Dimensions below decimal point are rounded up.
 Note 2 : (R), (S) and (T) indicate cushion needle positions.
 Note 3 : Refer to page 1423 for the accessory dimensions.
 RD : Rod end maximum sensitive position
 HD : Head end maximum sensitive position

Free locking positioning medium bore size cylinder
With brake

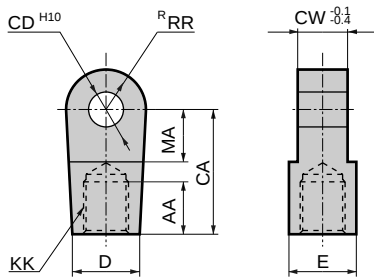
MEMO

Accessory (rod eye/clevis, bracket, pin) dimensions

● Rod eye (I)



Material: Cast iron

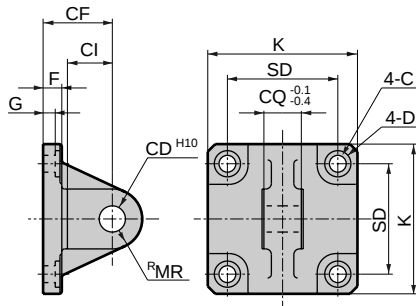


Model no.	Applicable bore size (mm)	AA	CA	CD	CW	D	E	KK	MA	RR	Weight (kg)
S1-I-40	40	20	50	12 ^{+0.070} ₀	18	27	27	M14 x 1.5	21	16	0.26
S1-I-50	50	21	50	12 ^{+0.070} ₀	18	27	27	M18 x 1.5	21	16	0.24
S1-I-63	63	21	50	14 ^{+0.070} ₀	20	27	27	M18 x 1.5	21	16	0.25
S1-I-80	80	30	70	20 ^{+0.084} ₀	28	46	41	M22 x 1.5	30	25	0.88
S1-I-100	100	30	70	20 ^{+0.084} ₀	28	46	41	M26 x 1.5	30	25	0.84

● Eye bracket (B1)



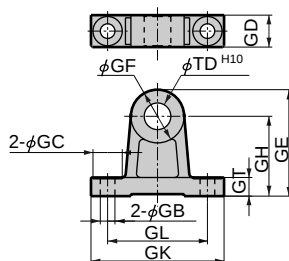
Material: Cast iron



Model no.	Applicable bore size (mm)	C	CD	CF	CI	CQ	D	F	G	K	MR	SD	Weight (kg)
S1-B1-40	40	9	12 ^{+0.070} ₀	32	18	18	14	10	6.5	57	12	40.5	0.32
S1-B1-50	50	9	12 ^{+0.070} ₀	32	18	18	14	10	6.5	66	12	48	0.38
S1-B1-63	63	9	14 ^{+0.070} ₀	37	24	20	14	10	6.5	80	16	59	0.57
S1-B1-80	80	14	20 ^{+0.084} ₀	52	30	28	20	14	10.5	98	20	74	1.27
S1-B1-100	100	14	20 ^{+0.084} ₀	52	30	28	20	16	10.5	118	20	90	1.64

● Trunnion type No. 2 bracket

Material: Cast iron



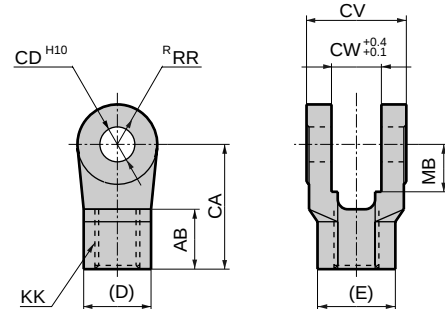
Model no.	GB	GC	GD	GE	GF	GH	GK	GL	GT	TD	Weight (kg)
S1-B4-40	9	17	19	61	32	45	80	60	12	16 ^{+0.070} ₀	0.25
S1-B4-50	9	17	19	63	36	45	85	65	12	18 ^{+0.070} ₀	0.28
S1-B4-63	11	22	24	80	40	60	100	75	14	20 ^{+0.084} ₀	0.52
S1-B4-80	14	24	26	85	50	60	115	85	14	25 ^{+0.084} ₀	0.70
S1-B4-100	14	24	35	107	64	75	130	100	17	35 ^{+0.100} ₀	1.48

- Installation dimensions of clevis type, knuckle, and No.2 bracket (CD, CW, CQ) are same. All combinations are possible.
- Specify the model no. when placing an order.

● Rod clevis (Y)



Material: Cast iron



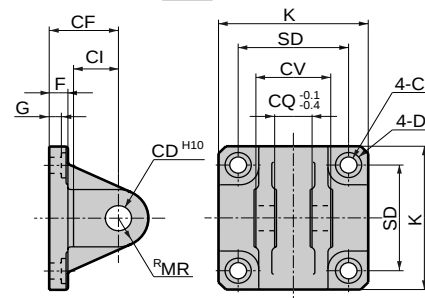
Model no.	Applicable bore size (mm)	AB	CA	CD	CV	CW	D	E	KK	MB	RR	Weight (kg)
S1-Y-40	40	24	50	12 ^{+0.070} ₀	36	18	27	31.2	M14 x 1.5	19	16	0.25
S1-Y-50	50	24	50	12 ^{+0.070} ₀	36	18	27	31.2	M18 x 1.5	19	16	0.24
S1-Y-63	63	24	50	14 ^{+0.070} ₀	40	20	27	31.2	M18 x 1.5	19	16	0.26
S1-Y-80	80	35	70	20 ^{+0.084} ₀	56	28	41	47.3	M22 x 1.5	30	25	0.90
S1-Y-100	100	35	70	20 ^{+0.084} ₀	56	28	41	47.3	M26 x 1.5	30	25	0.85

Note 1: MB dimension indicates CW dimension effective length.
Note 2: A pin and a snap ring are attached.

● Clevis bracket (B2)



Material: Cast iron



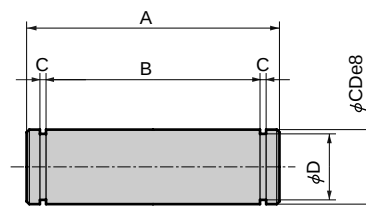
Model no.	Applicable bore size (mm)	C	CD	CF	CI	CV	CQ	D	F	G	K	MR	SD	Weight (kg)
S1-B2-40	40	9	12 ^{+0.070} ₀	32	18	36	18	14	10	6.5	57	12	40.5	0.36
S1-B2-50	50	9	12 ^{+0.070} ₀	32	18	36	18	14	10	6.5	66	12	48	0.41
S1-B2-63	63	9	14 ^{+0.070} ₀	37	24	40	20	14	10	6.5	80	16	59	0.62
S1-B2-80	80	14	20 ^{+0.084} ₀	52	30	56	28	20	14	10.5	98	20	74	1.48
S1-B2-100	100	14	20 ^{+0.084} ₀	52	30	56	28	20	16	10.5	118	20	90	1.82

Note 1: A pin and a snap ring are attached

● Pin (P)



Material: Steel



Model no.	Applicable bore size (mm)	A	B	C	D	CD	Weight (kg)	Snap ring
S1-P-40	40,50	43.5	36.3	1.15	11.5	12 ^{+0.032} _{0.059}	0.04	Axis C type 12
S1-P-63	63	47.5	40.2	1.15	13.4	14 ^{+0.032} _{0.059}	0.06	Axis C type 14
S1-P-80	80,100	64	56.2	1.35	19	20 ^{+0.040} _{0.073}	0.16	Axis C type 20

Note: For clevis bracket, rod clevis and clevis bracket types, a pin and a snap ring are attached.

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

Free locking positioning medium bore size cylinder
With brake