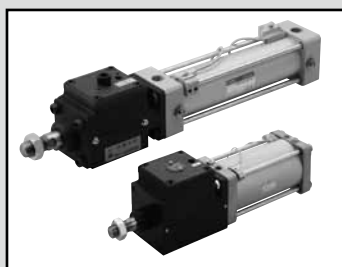


LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Brake cylinder: Double acting, single rod/double acting, no-lubrication

JSC3/JSC4-N Series

- Bore size:
JSC3: $\phi 40/\phi 50/\phi 63/\phi 80/\phi 100$
JSC4: $\phi 125/\phi 140/\phi 160/\phi 180$

JIS symbol



Specifications

Descriptions		JSC3 (with switch)					JSC3-S (with switch)					JSC4-N			
Bore size	mm	φ40	φ50	φ63	φ80	φ100	φ40	φ50	φ63	φ80	φ100	φ125	φ140	φ160	φ180
Actuation		Double acting					Double acting/low pressure release					Double acting			
Working fluid		Compressed air													
Max. working pressure		1.0 (≈150 psi, 10 bar)													
Min. working	Brake section	0.3 (≈44 psi, 3 bar)					0.25 (≈36 psi, 2.5 bar)					0.3 (≈44 psi, 3 bar)			
pressure	Cylinder	0.1 (≈15 psi, 1 bar)					0.1 (≈15 psi, 1 bar)					0.05 (≈7.3 psi, 0.5 bar)			
Proof pressure		1.6 (≈230 psi, 16 bar)													
Ambient temperature		-10 (14°F) to 60 (140°F) (no freezing)					-10 (14°F) to 60 (140°F) (no freezing)					-5 (23°F) to 60 (140°F) (no freezing)			
Port size	Brake section	Rc1/8		Rc1/4		Rc3/8	Rc1/8		Rc1/4		Rc3/8	Rc1/2			
	Cylinder	Rc1/4		Rc3/8		Rc1/2	Rc1/4		Rc3/8		Rc1/2	Rc1/2		Rc3/4	
Stroke tolerance		^{+0.9} ₀ (to 360) ^{+1.4} ₀ (to 1000)					^{+1.0} ₀ (to 360) ^{+1.4} ₀ (to 1000)					^{+1.0} ₀ (to 300), ^{+1.4} ₀ (to 1000), ^{+1.8} ₀ (to 2000)			
Working piston speed		50 to 1000 (Operate within the allowable absorbed energy.)													
Cushion		Air cushion													
Effective air cushion length		14.6	16.6		20.6	23.6	14.6	16.6		20.6	23.6	21.6			
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)													
Holding force		980	1569	2451	3922	6178	784	1255	1961	3138	4941	9600	12000	15800	20000
Allowable absorbed energy	Cushioned	4.29	8.37	15.8	27.9	49.8	4.29	8.37	15.8	27.9	49.8	63.6	91.5	116	152
	Without cushion	0.067	0.079	0.079	0.201	0.301	0.067	0.079	0.079	0.201	0.301	0.371	0.386	0.386	0.958
		Note: Without any cushion, this product cannot absorb large energy generated by an external load. We recommend using an external shock absorber.													

Stroke length

Bore size (mm)		Standard stroke length (mm)	Max. stroke length (mm)	Available stroke length (mm)	Min. stroke length (mm)
JSC3	φ40	50, 75, 100, 150, 200, 250, 300, 350, 400, 450, 500	600	1600	1
	φ50			2000	
	φ63		700	2500	
	φ80				
	φ100				
JSC4	φ125	800	2000	1	
	φ140				
	φ160	900			
	φ180				

*1 : If the max. stroke length is exceeded, product specifications may not be met, depending on operating conditions. Refer to Ending Page 69 for details.
The custom stroke length is available in 1 mm increments.

*2 : The max. stroke length available for $\phi 63$ to $\phi 100$ bore size models with bellows is 2000 mm.

Min. stroke length with switch (T switch)

- Min. stroke length with T0/T5 switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting Position cannot be detected at the rod side stroke end.	Head side trunnion mounting No position detection at head side stroke end.
Bore size	1	2	3	4	1	2	3	4	1	2	3	4	1	1
$\phi 40$	20(10)	20(20)	40(40)	60(60)	20(10)	60(45)	105(75)	150(105)	110(110)	110(110)	175(145)	175(145)	50(50)	50(50)
$\phi 50$	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)
$\phi 63$	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)
$\phi 80$	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)
$\phi 100$	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)

*1 : The values in () are of T*V (radial lead wire).

*2 : When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

Min. stroke length with JSC3 switch (T switch)

● T8 min. stroke with switch

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting Position cannot be detected at the rod side stroke end.	Head side trunnion mounting No position detection 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)

*1: The values in () are of T*V (radial lead wire).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

● Min. stroke length with T2/T3 switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting Position cannot be detected at the rod side stroke end.	Head side trunnion mounting No position detection 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)

*1: The values in () are of T*V (radial lead wire).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

● Min. stroke length with T1/T2Y/T3Y/T2YD switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting Position cannot be detected at the rod side stroke end.	Head side trunnion mounting No position detection 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)	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)

*1: The values in () are of T*V (radial lead wire). T2YD does not have a radial lead wire (V).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

● Min. stroke length with T2W/T3W switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting Position cannot be detected at the rod side stroke end.	Head side trunnion mounting No position detection at head side stroke end.
Bore size	1	2	3	4	1	2	3	4	1	2	3	4	1	1
φ40	20(5)	20(10)	20(15)	25(25)	20(5)	65(50)	110(80)	155(110)	110(80)	110(80)	170(140)	170(140)	50(35)	50(35)
φ50	20(5)	20(10)	20(15)	20(20)	20(5)	20(10)	65(40)	65(40)	110(80)	110(80)	110(60)	110(60)	50(35)	50(35)
φ63	20(5)	20(10)	20(15)	25(25)	20(5)	20(10)	65(40)	65(40)	115(85)	115(85)	115(65)	115(65)	55(40)	55(40)
φ80	15(5)	15(10)	15(15)	25(25)	15(5)	15(10)	60(40)	60(40)	120(90)	120(90)	120(70)	120(70)	55(40)	55(40)
φ100	10(5)	10(10)	20(20)	25(25)	10(5)	10(10)	60(40)	60(40)	130(100)	130(100)	130(85)	130(85)	60(45)	60(45)

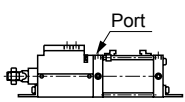
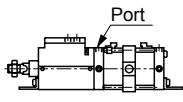
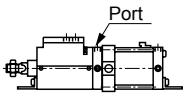
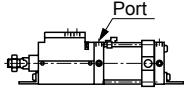
*1: The values in () are of T*V (radial lead wire).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

Min. stroke length with JSC4 switch (T switch)

● φ125 to φ180

(Unit: mm)

Descriptions	Stroke length when mounted on the same surface	Center trunnion mounting stroke	Rod side trunnion mounting stroke	Head side trunnion mounting stroke
Bore size (mm)				
				
φ125	20 or more	120 or more	70 or more	
φ140		125 or more	75 or more	
φ160		130 or more	80 or more	
φ180		135 or more	85 or more	

JSC3/JSC4 Series

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Switch specifications (T type switch)

● 1-color/2-color display/for AC magnetic field proof

Descriptions	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire (*4)							Proximity 2-wire
	T1H/ T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/T3PV (custom)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V		T8H/T8V			T2YD T2YDPT	
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay	For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller	
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*2)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	≤50 mA	≤20 mA	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Without indicator lamp	LED (Lit when ON)			Red/green LED (Lit when ON)		
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33	1 m:18	1 m:33	1 m:18	1 m:18		1 m:33	1 m:18	1 m:18			1 m:33			1 m:61	
	3 m:87	3 m:49	3 m:87	3 m:49	3 m:49		3 m:87	3 m:49	3 m:49			3 m:87			3 m:166	
	5 m:142	5 m:80	5 m:142	5 m:80	5 m:80		5 m:142	5 m:80	5 m:80			5 m:142			5 m:272	

*1 : Refer to Ending Page 1 for other switch specifications.
*2 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)
*3 : Switch for AC magnetic field (T2YD) cannot be used in DC magnetic field.
*4 : The T0/T5 switch can also be used with 220 VAC. Contact CKD about working conditions.
*5 : Dimensions depend on switch model No. Refer to Ending Page 18 for details.

JSC3/JSC4 Series

Specifications

Cylinder weight

● JSC3(φ40 to φ100)

[Unit: kg]

Item/mounting	Product weight when stroke length (S) = 0 mm						Switch weight	Mounting bracket weight		Additional weight per S = 100 mm
Bore size (mm)	Basic (00)	Foot (LB)	Flange (FA, FB)	Eye bracket (CA)	Clevis bracket (CB)	Trunnion (TC)		T type	H type	
φ40	2.48	2.66	2.91	2.83	2.83	2.86	Refer to the weight in the switch specifications.	0.024	0.028	0.39
φ50	3.47	3.67	3.97	3.87	3.87	3.97		0.022	0.026	0.46
φ63	5.09	5.49	6.19	5.79	5.79	5.89		0.020	0.024	0.50
φ80	8.15	8.85	9.95	9.65	9.65	9.45		0.026	0.029	0.90
φ100	14.70	15.70	17.40	16.90	16.90	17.30		0.024	0.028	1.12
(Example) Product weight of JSC3-LB-50B-200-T0H-D Product weight for stroke length 0 mm 3.67 kg Additional weight for stroke length 200 mm... $0.46 \times \frac{200}{100} = 0.92$ kg Weight of 2 TOH switches $0.018 \times 2 = 0.036$ kg Weight of 2 mounting brackets $0.022 \times 2 = 0.044$ kg Product weight $3.67 + 0.92 + 0.036 + 0.044 = 4.670$ kg										

● JSC4(φ125 to φ180)

[Unit: kg]

Item/mounting	Product weight when stroke length (S) = 0 mm					Switch weight		Additional weight per S = 100 mm
Bore size (mm)	Axial foot (LB)	Flange (FA/FB)	Eye bracket (CA)	Clevis bracket (CB)	Trunnion (TA/TB/TC)	Switch	Mounting bracket	
φ125	25.72	27.52	27.22	27.32	27.62	Refer to the weight in the switch specifications.	0.028	1.54
φ140	32.95	36.35	34.75	34.95	34.15		0.030	1.78
φ160	42.85	46.65	44.75	45.05	46.15		0.034	2.22
φ180	61.55	69.05	64.45	64.95	65.15		0.038	2.96
(Example) Product weight of JSC4-LN-LB-125B-300-T0H-D Product weight when S = 0 mm 25.72 kg Additional weight when S = 300mm $1.54 \times \frac{300}{100} = 4.62$ kg Weight of 2 switches (T0H-D) $0.018 \times 2 = 0.036$ kg Weight of 2 switch brackets $0.028 \times 2 = 0.056$ kg Product weight $25.72 + 4.62 + 0.036 + 0.056 = 30.432$ kg								

Theoretical thrust table

[Unit: N]

Bore size (mm)		Operating direction	Working pressure MPa										
			0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
JSC3	φ40	Push	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
		Pull	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
	φ50	Push	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
		Pull	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
	φ63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
		Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
	φ80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
		Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
	φ100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
		Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3
JSC4	φ125	Push	1.23×10^3	1.84×10^3	2.45×10^3	3.68×10^3	4.91×10^3	6.14×10^3	7.36×10^3	8.59×10^3	9.82×10^3	1.10×10^4	1.23×10^4
		Pull	1.13×10^3	1.70×10^3	2.26×10^3	3.39×10^3	4.52×10^3	5.65×10^3	6.79×10^3	7.92×10^3	9.05×10^3	1.02×10^4	1.13×10^4
	φ140	Push	1.54×10^3	2.31×10^3	3.08×10^3	4.62×10^3	6.16×10^3	7.70×10^3	9.24×10^3	1.08×10^4	1.23×10^4	1.39×10^4	1.54×10^4
		Pull	1.44×10^3	2.16×10^3	2.89×10^3	4.33×10^3	5.77×10^3	7.22×10^3	8.66×10^3	1.01×10^4	1.15×10^4	1.30×10^4	1.44×10^4
	φ160	Push	2.01×10^3	3.02×10^3	4.02×10^3	6.03×10^3	8.04×10^3	1.01×10^4	1.21×10^4	1.41×10^4	1.61×10^4	1.81×10^4	2.01×10^4
		Pull	1.88×10^3	2.83×10^3	3.77×10^3	5.65×10^3	7.54×10^3	9.42×10^3	1.13×10^4	1.32×10^4	1.51×10^4	1.70×10^4	1.88×10^4
	φ180	Push	2.54×10^3	3.82×10^3	5.09×10^3	7.63×10^3	1.02×10^4	1.27×10^4	1.53×10^4	1.78×10^4	2.04×10^4	2.29×10^4	2.54×10^4
		Pull	2.39×10^3	3.58×10^3	4.77×10^3	7.16×10^3	9.54×10^3	1.19×10^4	1.43×10^4	1.67×10^4	1.91×10^4	2.15×10^4	2.39×10^4

How to order (φ40 to φ100)

Without switch (built-in magnet for switch)

JSC3 - **LB** - **40** - **B** - **50** - **S** - **I**

With switch (built-in magnet for switch)

JSC3 - **LB** - **40** - **B** - **50** - **T0H** - **R** - **S** - **I**

With strong magnetic field proof (for H0, H0Y switches) switch (built-in magnet for switch)

JSC3 - **L2** - **LB** - **40** - **B** - **50** - **H0** - **R** - **S** - **I**

Model No.

A Brake release pressure

B Mounting
*1

C Bore size

D Port thread

E Cushion

F Stroke length
*2
*3
*4

G Switch model No.
* indicates the lead wire length.

H Switch quantity
*5

I Option
*6

J Accessory
*7

⚠ Precautions for model No. selection

- *1 : Mounting bracket will be shipped assembled with the product.
(Head side special flange is attached separately)
- *2 : If the stroke exceeds the max. stroke length, refer to Ending Page 69.
- *3 : The max. stroke length available for φ63 to φ100 bore size models with bellows is 2000 mm.
- *4 : Refer to page 764 for the min. stroke length with switch.
- *5 : When selecting TA or TB as mounting, the switch quantity is limited to "H" (1 on head side) for TA, and "R" (1 on rod side) for TB.
- *6 : For S, T, and G position indications, check the respective dimensions.
- *7 : "I" and "Y" cannot be selected together.
- *8 : Refer to Ending Page 85 for custom specifications of rod end form.

[Example of model No.]

JSC3-LB-40B-50-T0H-R-S-I

Model: Brake cylinder double acting

- A** Brake release pressure : Standard 0.3 MPa
- B** Mounting : Axial foot
- C** Bore size : φ40 mm
- D** Port thread : Rc thread
- E** Cushion : Both sides cushioned
- F** Stroke length : 50mm
- G** Switch model No. : Reed switch T0H, lead wire 1 m
- H** Switch quantity : 1 on rod side
- I** Option : Cushion needle position S
- J** Accessory : Rod eye

Code	Content		
A Brake release pressure			
Blank	Standard (0.3 MPa)		
S	Low pressure release (0.25 MPa)		
B Mounting			
00	Basic		
LB	Axial foot		
FA	Rod side flange		
FB	Head side flange		
FC	Head side special flange		
CA	Eye bracket		
CB	Clevis bracket (pin and snap ring attached)		
TC	Intermediate trunnion		
TA	Rod side trunnion		
TB	Head side trunnion		
C Bore size (mm)			
40	φ40		
50	φ50		
63	φ63		
80	φ80		
100	φ100		
D Port thread			
Blank	Rc thread		
N	NPT thread (custom order product)		
G	G thread (custom order product)		
E Cushion			
B	Both sides cushioned		
R	Rod side cushioned		
H	Head side cushioned		
N	Without cushion		
F Stroke length (mm)			
Bore size	Stroke length *4	Available stroke length	Custom stroke length
φ40	1 to 600	1600	In 1 mm increments
φ50	1 to 600	2000	
φ63	1 to 600	2500	
φ80	1 to 700	2500	
φ100	1 to 800	2500	
G Switch model No.		Refer to the switch model numbers on the following page.	
* Lead wire length			
Blank	1 m (standard)		
3	3 m (option)		
5	5 m (option)		
H Switch quantity			
R	1 on rod side		
H	1 on head side		
D	2		
T	3		
4	4 (when there are more than 4 switches, indicate switch quantity.)		
I Option			
		Max. ambient temperature	instantaneous max. temp.
J	Bellows	100°C	200°C
L	Bellows	250°C	400°C
M	Piston rod material (stainless steel)		
Blank	Cushion needle position R (standard)		
S	Cushion needle position S		
T	Cushion needle position T		
G	With indicator		
J Accessory			
I	Rod eye		
Y	Rod clevis (pin and snap ring attached)		
B1	Eye bracket		
B2	Clevis bracket (pin and snap ring attached)		
B3	Eye bracket		
B4	Trunnion No. 2 bracket (2 pcs./set)		

[G] Switch model No.

T type switch						
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire
			AC	DC		
TOH*	TOV*	Reed	●	●	1-color display	2-wire
T5H*	T5V*		●	●	Without indicator lamp	
T8H*	T8V*		●	●	1-color display	
T1H*	T1V*		●		1-color display	2-wire
T2H*	T2V*		●	3-wire		
T3H*	T3V*		●			
T2WH*	T2WV*	Proximity		●		2-wire
T2YH*	T2YV*			●	2-color display	3-wire
T3WH*	T3WV*			●		
T3YH*	T3YV*			●		
T3PH*	T3PV*			●		1-color display (custom order)
T2YD*	-			●	2-color display	2-wire
T2YDT*	-		●	AC magnetic field		
T2JH*	T2JV*		●	1-color display off-delay	2-wire	
H type switch						
HO*	-	Reed	●	●	Strong magnetic field proof	2-wire
HOY*	-			●	Strong magnetic field 2-color display	

How to order brake unit

JSC3 - 40 - BRAKE-UNIT

Bore size (Item © on the previous page)

● Mounting FA

JSC3 - FA - 40 - BRAKE-UNIT

Bore size (Item © on the previous page)

How to order T type switch

● Switch body + mounting bracket set

JSC3 - T0H - 40

Switch model No. (Item ©) Bore size (Item © on the previous page)

● Switch body only

SW - T0H

Switch model No. (Item ©)

● Mounting bracket set

JSC3 - TS - 40

Mounting bracket Bore size (Item © on the previous page)

How to order T2YD type switch

● Switch body + mounting bracket set

·φ40 to φ100

JSC3 - T2YD - 40

Switch model No. (Item ©) Bore size (Item © on the previous page)

● Switch body only

·φ40 to φ100

SW - T2YD

Switch model No. (Item ©)

● Mounting bracket set

JSC3 - T - 40

Mounting bracket Bore size (Item © on the previous page)

How to order H type switch

● Switch body + mounting bracket set

JSC3-L2 - H0 - 40

Switch model No. (Item ©) Bore size (Item © on the previous page)

● Switch body only

SW - H0

Switch model No. (Item ©)

● Mounting bracket set

JSC3-L2 - H - 40

Mounting bracket Bore size (Item © on the previous page)

How to order mounting bracket

● φ40 to φ100

Bore size (mm)	φ40	φ50	φ63	φ80	φ100
Mounting bracket					
Foot (LB) *1	JSC3-40-LB	JSC3-50-LB	JSC3-63-LB	JSC3-80-LB	JSC3-100-LB
Flange (FB)	JSC3-40-FB	JSC3-50-FB	JSC3-63-FB	JSC3-80-FB	JSC3-100-FB
Eye bracket (CA)	S1-CA-40	S1-CA-50	S1-CA-63	S1-CA-80	S1-CA-100
Clevis bracket (CB) *2	S1-CB-40	S1-CB-50	S1-CB-63	S1-CB-80	S1-CB-100

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

*2: A pin and a snap ring are attached.

*3: All mounting brackets have mounting bolts attached.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

JSC4-N Series

How to order (φ125 to 180)

Without switch (without magnet for switch)

JSC4-N - **LB** - **125** - **B** - **50** - **S** - **I**

With switch (built-in magnet for switch)

JSC4-LN - **LB** - **125** - **B** - **50** - **T0H** - **R** - **S** - **I**

A Mounting
*1

B Bore size

C Port thread

D Cushion

E Stroke length

F Switch model No.
* indicates the lead wire length.

G Switch quantity
*3

H Option

I Accessory
*5

⚠ Precautions for model No. selection

- *1 : Mounting bracket will be shipped assembled with the product.
- *2 : Refer to page 765 for the min. stroke length with switch.
- *3 : When selecting TA or TB as mounting, the switch quantity is limited to "H" (1 on head side) for TA, and R (1 on rod side) for TB.
- *4 : Refer to page 771 for the cushion needle position indication.
- *5 : "I" and "Y" cannot be selected together.

[Example of model No.]

JSC4-LN-LB-125B-50-T0H-R-SI

Model: Brake cylinder double acting/no-lubrication

- A** Mounting : Axial foot
- B** Bore size : φ125 mm
- C** Port thread : Rc thread
- D** Cushion : Both sides cushioned
- E** Stroke length : 50mm
- F** Switch model No. : Reed switch T0H, lead wire 1 m
- G** Switch quantity : 1 on rod side
- H** Option : Cushion needle position S
- I** Accessory : Rod eye

Code	Content					
A Mounting						
LB	Axial foot					
FA	Rod side flange					
FB	Head side flange					
CA	Eye bracket					
CB	Clevis bracket (pin and snap ring attached)					
TC	Intermediate trunnion					
TA	Rod side trunnion					
TB	Head side trunnion					
B Bore size (mm)						
125	φ125					
140	φ140					
160	φ160					
180	φ180					
C Port thread						
Blank	Rc thread					
N	NPT thread (custom order product)					
G	G thread (custom order product)					
D Cushion						
B	Both sides cushioned					
R	Rod side cushioned					
H	Head side cushioned					
N	Without cushion					
E Stroke length (mm)						
Bore size	Stroke length	Available stroke	Custom stroke length			
φ125	1 to 800	2000	In 1 mm increments			
φ140	1 to 800	2000				
φ160	1 to 800	2000				
φ180	1 to 900	2000				
F Switch model No.						
Axial lead wire	Radial lead wire	Contact	Voltage AC DC	Indicator	Lead wire	
T0H*	T0V*	Reed	● ●	1-color display	2-wire	
T5H*	T5V*		● ●	Without indicator lamp		
T8H*	T8V*		● ●	1-color display		
T1H*	T1V*		●	1-color display		2-wire
T2H*	T2V*					
T3H*	T3V*	●	display		3-wire	
T3PH*	T3PV*	Proximity		1-color display (PNP output) (custom)	3-wire	
T2WH*	T2WV*		●	2-color display	2-wire	
T2YH*	T2YV*		●		3-wire	
T3WH*	T3WV*		●			
T3YH*	T3YV*		●			
T2JH*	T2JV*			●	1-color display Off-delay	2-wire
T2YD*	-			●	2-color display for	2-wire
T2YDT*	-			●	AC magnetic field	
* Lead wire length						
Blank	1 m (standard)					
3	3 m (option)					
5	5 m (option)					
G Switch quantity						
R	1 on rod side					
H	1 on head side					
D	2					
T	3					
4	4					
H Option						
		Max. ambient temp.		instantaneous max. temp.		
J	Bellows	60°C		100°C		
K	Bellows	100°C		200°C		
L	Bellows	250°C		400°C		
M	Piston rod material (stainless steel)					
Blank	Cushion needle position (standard)			Standard		
R	Cushion needle position R					
S	Cushion needle position S					
T	Cushion needle position T					
C2	With cushion section check valve					
I Accessory						
I	Rod eye					
Y	Rod clevis (pin and snap ring attached)					
B1	Eye bracket					
B2	Clevis bracket					

How to order brake unit

JSC4 - 125 - BRAKE-UNIT

↓

Bore size (Item ⑧ on the previous page)

How to order T type switch

● Switch body + mounting bracket set

JSC4-LN - T0H - 125

↓ ↓

Switch model No. Bore size
(Item ⑤ on the previous page) (Item ⑧ on the previous page)

● Switch body only

SW - T0H

↓

Switch model No.
(Item ⑤ on the previous page)

● Mounting bracket set

JSC4-LN - TS - 125

↓

Bore size
(Item ⑧ on the previous page)

How to order T2YD type switch

● Switch body + mounting bracket set

JSC4-LN - T2YD - 125

↓ ↓

Switch model No. Bore size
(Item ⑤ on the previous page) (Item ⑧ on the previous page)

● Switch body only

SW - T2YD

↓

Switch model No.
(Item ⑤ on the previous page)

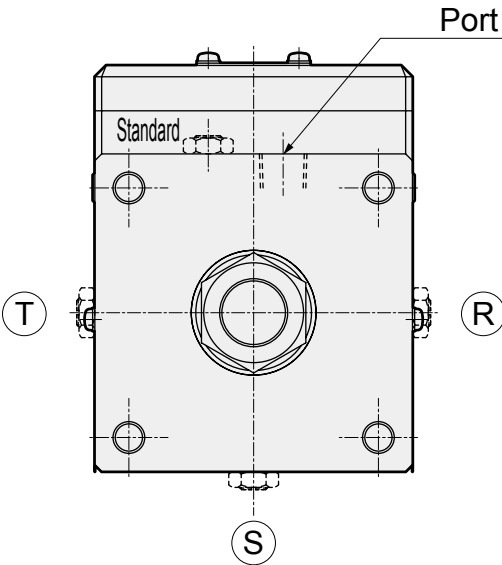
● Mounting bracket set

JSC4-LN - T - 125

↓

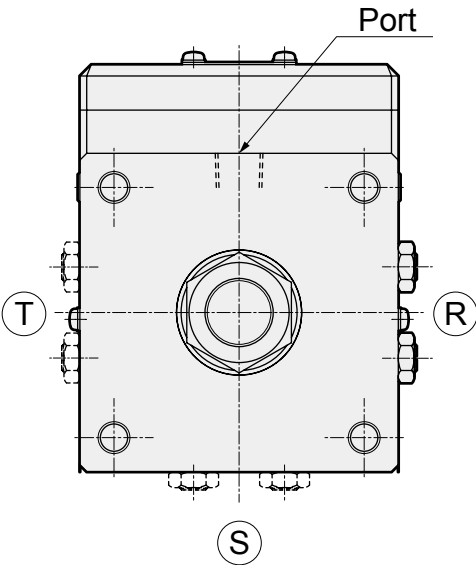
Bore size
(Item ⑧ on the previous page)

Cushion needle position (needle position from rod direction with the port on the top side)



When selecting option R, S, or T for a certified class 2 pressure vessel, the port position should be in the center as shown in the figure to the right, and the needle position should be in the offset position.

Certified class 2 pressure vessel stroke length	
Bore size	Stroke length
φ160	1948 or more
φ180	1526 or more



Class 2 pressure vessel certification
Option R, S, or T

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

● φ40 to φ100

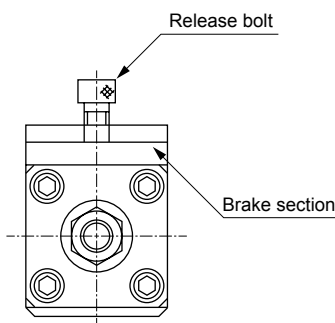
Material of mounting bracket

Mounting	Material	Remarks
LB	Steel	Paint
FA/FB	Steel	Paint
CA/CB	Cast iron	Paint
TC	Cast iron	Paint

Release bolt size (hexagon socket head cap screw)

Bore size	Size	
	JSC3	JSC3-V
φ40/φ50	M10×8	M10×29
φ63	M12×9	M12×30
φ80	M14×10	M14×31
φ100	M16×12	M16×40

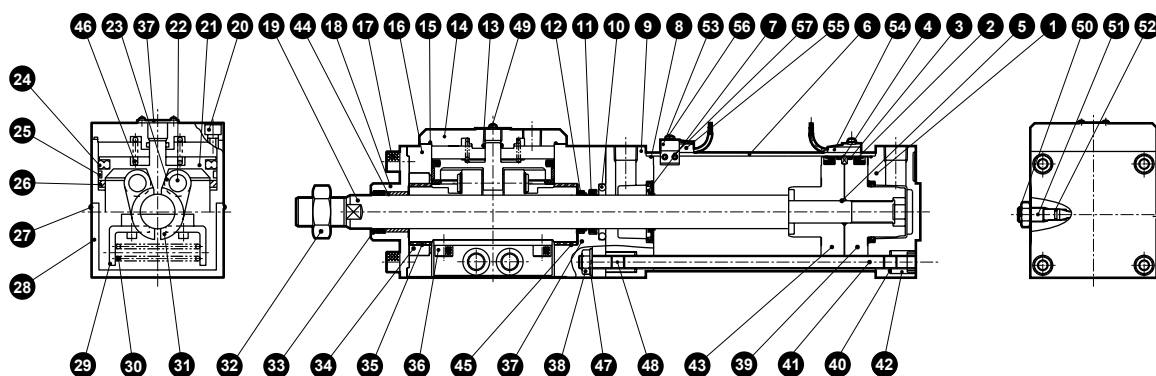
How to release the brake manually



Note: How to release the brake

- The brakes are released by turning the release bolt (attached with product) two or three times to screw it into the female thread (next to brake release port) on top of the brake. (Always remove the release bolt during normal use.)
- To manually release the brake, always use the release bolt attached with the product. Using any other bolt may prevent the brake from functioning properly.

Internal structure and parts list



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Head cover	Aluminum alloy die-casting	Paint	28	Cover	Steel	Paint
2	Piston packing	Nitrile rubber		29	Spring holder	Steel	Zinc chromate
3	Wear ring	Polyacetal resin		30	Spring	Steel	
4	Magnet	Plastic		31	Brake shoe metal	Cast iron	Nickeling
5	Piston gasket	Nitrile rubber		32	Rod nut	Steel	Zinc chromate
6	Cylinder tube	Aluminum alloy	Hard alumite	33	Dust wiper	Nitrile rubber	
7	Cushion packing	Nitrile rubber, steel		34	DU ring	Steel	Black finish
8	Cylinder gasket	Nitrile rubber		35	Bush	Oil impregnated bearing alloy	
9	Rod cover	Aluminum alloy die-casting	Paint	36	Hexagon socket head cap screw	Alloy steel	Black finish
10	Metal seal	Nitrile rubber		37	Dust cover	Aluminum alloy	Paint
11	Rod packing	Nitrile rubber		38	Hexagon nut	Steel	Black finish
12	Dust wiper	Nitrile rubber		39	Piston H	Aluminum alloy die-casting	
13	Cap gasket A	Nitrile rubber		40	Tie rod	Steel	Zinc chromate
14	Body cap	Cast iron	Nitriding	41	Conical spring washer	Steel	Black finish
15	Cap gasket B	Nitrile rubber		42	Round nut	Steel	Zinc chromate
16	Brake body	Aluminum alloy casting	Alumite	43	Piston R	Aluminum alloy die-casting	
17	Hexagon socket head cap screw	Alloy steel	Black finish	44	Bush B	Oil impregnated bearing alloy	
18	Rod metal	Steel	Manganese phosphate	45	Thrust washer		
19	Piston rod	Steel	Industrial chrome plating	46	Spring	Steel	Paint
20	Hexagon socket head cap screw	Alloy steel	Black finish	47	Toothed washer	Steel	Black finish
21	Brake piston	Cast iron	Manganese phosphate	48	Hexagon socket set screw	Alloy steel	Black finish
22	Parallel pin	Steel		49	Phillips pan head machine screw/captive washer	Steel	Zinc chromate
23	Bearing			50	Cushion needle	Copper alloy	Nickeling
24	Piston packing B	Nitrile rubber		51	Needle nut	Copper alloy	Nickeling
25	Wear ring	Polyacetal resin		52	Needle gasket	Nitrile rubber	
26	Cushion rubber	Urethane rubber		With switch			
27	Phillips pan head machine screw	Steel	Zinc chromate	53	Switch mounting base	Aluminum alloy	
				54	Switch holder	Aluminum alloy	
				55	Phillips pan head machine screw	Steel	Zinc chromate
				56	Hexagon socket set screw	Alloy steel	Black finish
				57	Cylinder switch		

Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
φ40	JSC3-40K	
φ50	JSC3-50K	
φ63	JSC3-63K	
φ80	JSC3-80K	
φ100	JSC3-100K	

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

Note: Never disassemble the brake section, as the powerful spring installed can be dangerous.

● $\phi 125$ to $\phi 180$

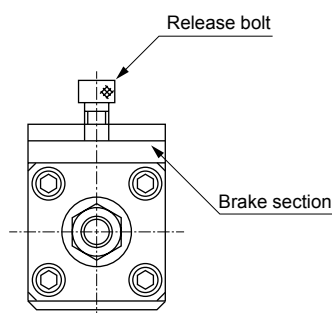
Material of mounting bracket

Mounting	Material	Remarks
LB	Steel	Paint
FA	Carbon steel	Parkerizing
CA	Cast iron	Paint
CB	Cast iron	Paint
TC/TA/TB	Cast iron	Paint
FB	Carbon steel	Paint

Release bolt size (hexagon socket head cap screw)

Bore size	Size
$\phi 125$	M24 x 16 or higher
$\phi 140$	M24 x 20 or higher
$\phi 160$	M24 x 20 or higher
$\phi 180$	M24 x 24 or higher

How to release the brake manually



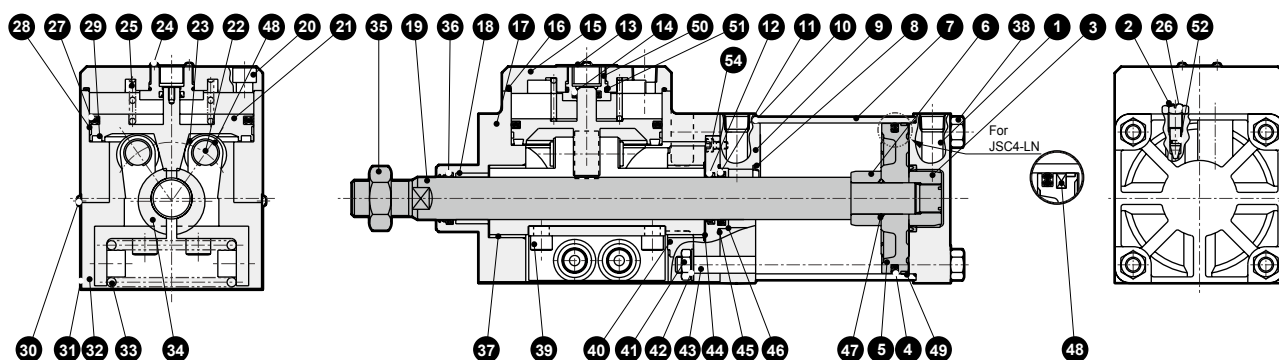
Note: How to release the brake

The brakes are released by turning the release bolt (attached with product) two or three times to screw it into the female thread (next to brake release port) on top of the brake.

(Always remove the release bolt during normal use.)

To manually release the brake, always use the release bolt attached with the product. Using any other bolt may prevent the brake from functioning properly.

Internal structure and parts list



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Head cover	Aluminum alloy casting	Chromate	28	Wear ring	Polyacetal resin	
2	Cushion needle	Copper alloy		29	Cushion rubber	Urethane rubber	
3	Cushion ring A	Steel	Zinc chromate	30	Phillips pan head machine screw	Steel	Zinc chromate
4	Piston packing	Nitrile rubber		31	Cover	Steel	Paint
5	Piston	Aluminum alloy casting		32	Spring holder	Steel	Manganese phosphate
6	Cushion ring B	Steel	Zinc chromate	33	Spring	Steel	Black finish
7	Cylinder tube	Aluminum alloy	Hard alumite	34	Brake shoe metal	Cast iron	Nickeling
8	Cushion packing	Nitrile rubber/steel		35	Rod nut	Steel	Zinc chromate
9	Rod cover	Aluminum alloy casting	Chromate	36	Dust wiper	Nitrile rubber	
10	Cylinder gasket	Nitrile rubber		37	Bush A	Oiles drymet	
11	Rod packing	Nitrile rubber		38	Hexagon nut	Steel	Zinc chromate
12	Dust wiper	Nitrile rubber		39	Hexagon socket head cap screw	Alloy steel	Black finish
13	Dust cover	Aluminum alloy	Alumite	40	Ring	Steel	Black finish
14	Rod packing	Nitrile rubber		41	Hexagon nut	Steel	Zinc chromate
15	Body cap	Aluminum alloy casting	Black alumite	42	Toothed washer	Steel	Zinc chromate
16	Cap gasket	Nitrile rubber		43	Tie rod	Steel	Zinc chromate
17	Brake body	Aluminum cast iron	Alumite	44	Thrust washer	Steel	
18	Bush B	Oil impregnated bearing alloy		45	Metal gasket	Nitrile rubber	
19	Piston rod	Steel	Industrial chrome plating	46	Rod metal	Cast iron	Zinc chromate
20	Hexagon socket head cap screw	Alloy steel	Black finish	47	Piston gasket	Nitrile rubber	
21	Brake piston	Cast iron	Manganese phosphate	48	Magnet	Rubber	JSC4-LN only
22	Bearing pin	Steel		49	Wear ring	Polyacetal resin	
23	Bearing	-		50	Body cap	Cast iron	Manganese phosphate
24	Phillips pan head machine screw/captive washer	Steel	Zinc chromate	51	O-ring	Nitrile rubber	
25	Spring	Steel	Paint	52	Needle gasket	Nitrile rubber	
26	Needle nut	Steel	Zinc chromate	53	E type snap ring	Steel	Zinc chromate
27	Piston packing B	Nitrile rubber		54	Hexagon socket head cap screw	Steel	Black finish

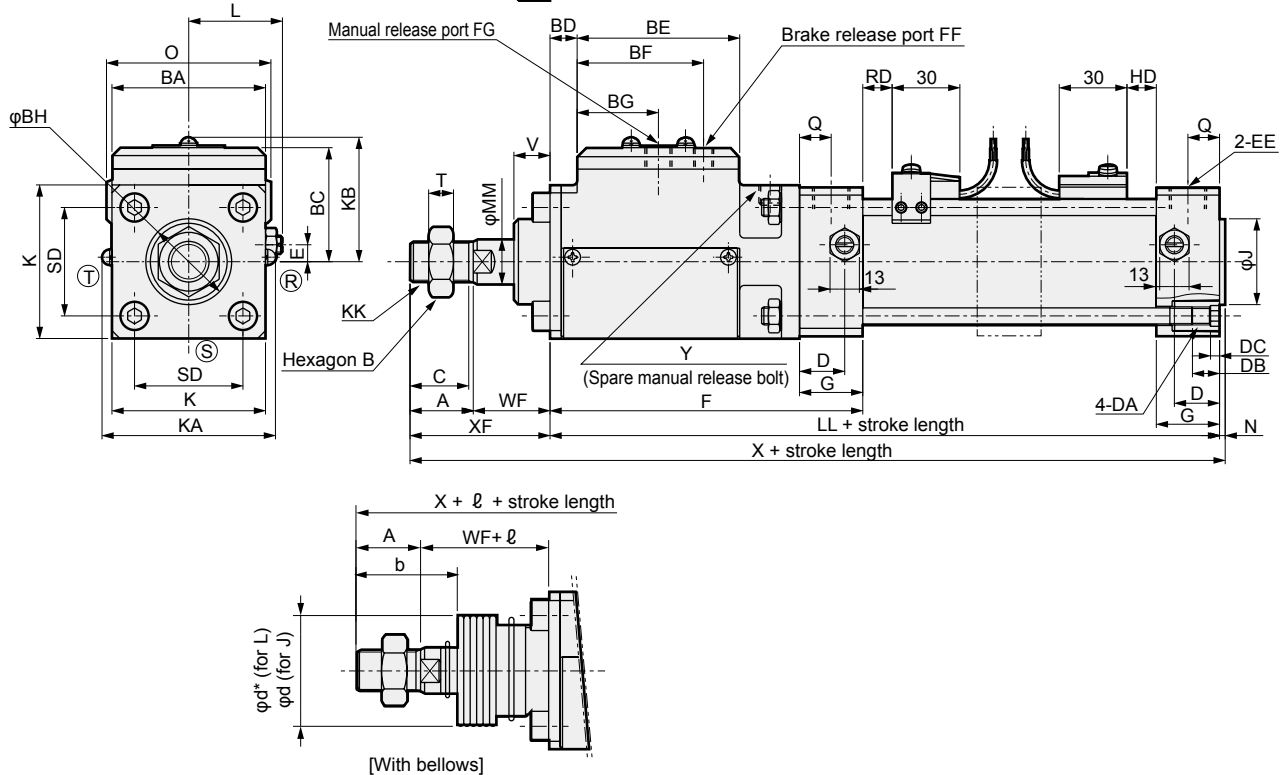
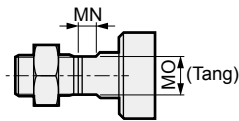
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
$\phi 125$	JSC4-N-125K	4 8 10 11 12
$\phi 140$	JSC4-N-140K	36 45 49 52
$\phi 160$	JSC4-N-160K	
$\phi 180$	JSC4-N-180K	

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions (φ40 to φ100)

Basic (00)



*1 : For the ℓ dimension, round up below the decimal point.

*2 : $\textcircled{R}$, $\textcircled{S}$ and $\textcircled{T}$ indicate the cushion needle position.

*3 : Manual release bolt is attached.

*4 : For the dimensions of the accessories, refer to pages 796 and 797.

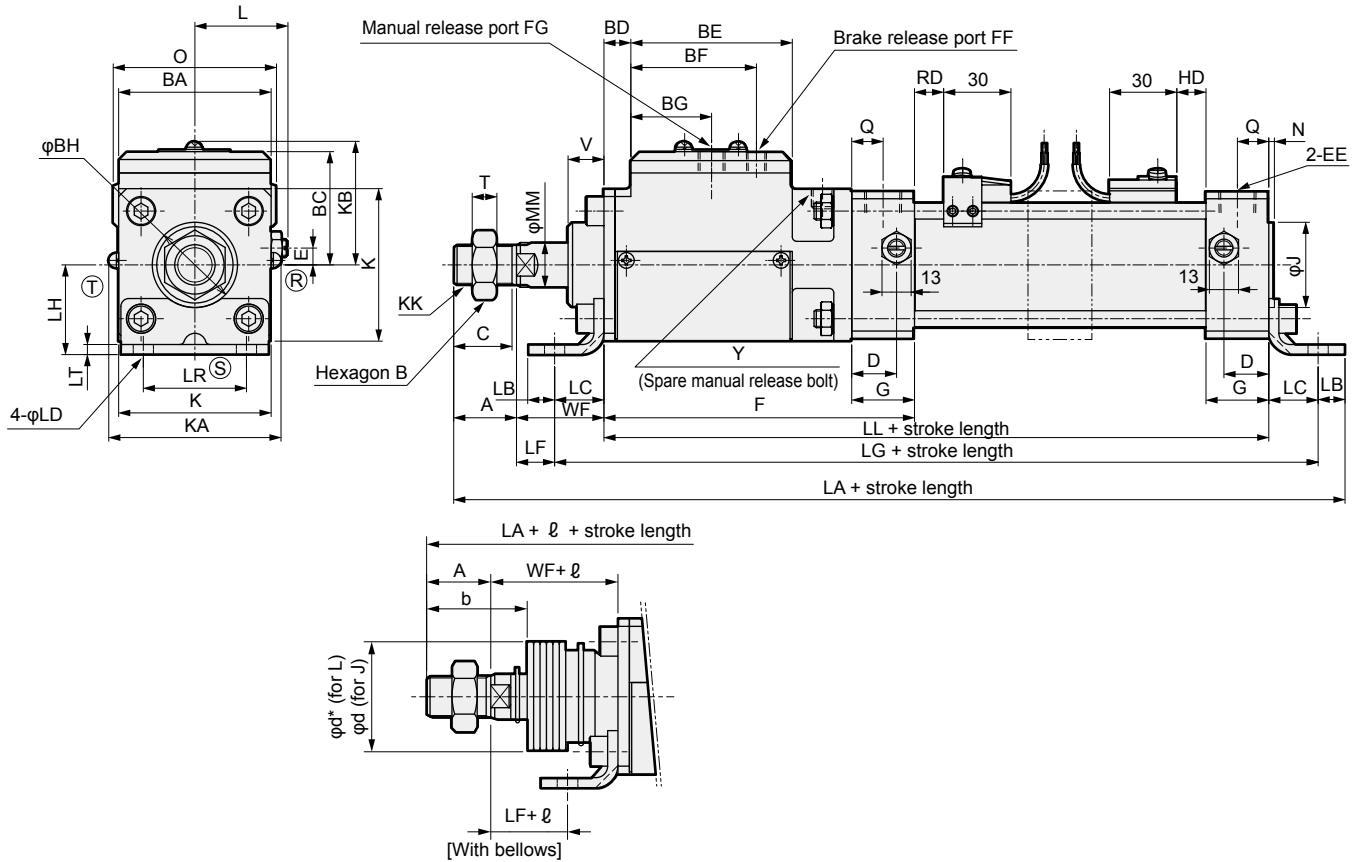
*5 : Non-sag block (2-dashed line) will be added depending on the stroke length. Refer to page 784 for details on dimensions.

Code	Basic (00) basic dimensions																							
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	BH	C	D	DA	DB	DC	E	EE	F	FF	FG	G	J	K		
φ40	22	22	57	46	9	62	51	31	31	20	18	M8	12	4	7.5	Rc1/4	121	Rc1/8	M10	26	31	57		
φ50	28	27	68	50.5	12	72	56	36	38	26	20	M8	12	4	0	Rc3/8	138.5	Rc1/8	M10	28	38	68		
φ63	28	27	80	54	13	86	70	43	38	26	22	M8	12	4	0	Rc3/8	154	Rc1/4	M12	30	38	80		
φ80	36	32	98	66	13	106	80	53	43	34	26	M12	16	5	0	Rc1/2	179.5	Rc1/4	M14	34	43	98		
φ100	45	41	118	74	17.5	132	101	66	51	43	28	M12	16	5	0	Rc1/2	220.5	Rc3/8	M16	36	51	118		
Code																		With switch						
Bore size (mm)	KA	KB	KK	L		LL	MM	MN	M0	N	Q	SD	T	V	WF	X	XF	Y	O	T0, T5, T2, T3	T1, T2Y, T3Y, T2J, T2YD/T			
																				RD	HD	RD	HD	
φ40	66	50.5	M14×1.5	38	to 39.5		188	16	8	14	2	13	40.5	8	15	30	242	52	M10 depth 9	66	11	11	10	10
φ50	77	55	M18×1.5	41.0	to 43.5		211.5	20	8	17	2.5	14	48	11	16	34	276	62	M10 depth 9	73	13	13	12	12
φ63	89	58.5	M18×1.5	47.5	to 50.0		229	20	8	17	3	15	59	11	16	30	290	58	M12 depth 10	85	13	13	12	12
φ80	107	70.5	M22×1.5	56	to 59		261.5	25	11	22	3.5	17	74	13	17.5	43.5	344.5	79.5	M14 depth 11	105	14.5	14.5	13.5	13.5
φ100	127	78.5	M26×1.5	66	to 69		312.5	30	13	27	4	18	90	16	26	48	409.5	93	M16 depth 13	121	18.5	18.5	17.5	17.5
Code							With bellows						ℓ											
Bore size (mm)	T8		T2W, T3W		HO, HOY		A	WF	FF	b	d	d*	50 or less	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 or more				
	RD	HD	RD	HD	RD	HD																		
φ40	5	5	13	13	4	4	22	30	22	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8				
φ50	7	7	15	15	6	6	28	34	27	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5				
φ63	7	7	15	15	6	6	28	30	22	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5				
φ80	8.5	8.5	16.5	16.5	7.5	7.5	36	43.5	30.5	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5				
φ100	12.5	12.5	20.5	20.5	11.5	11.5	45	48	35.5	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9				

Dimensions (φ40 to φ100)



● Axial foot (LB)



*1 : For the ℓ dimension, round up below the decimal point.

*2 : $\textcircled{R}$, $\textcircled{S}$ and $\textcircled{T}$ indicate the cushion needle position.

*3 : Manual release bolt is attached.

*4 : For the dimensions of the accessories, refer to pages 796 and 797.

*5 : Non-sag block (2-dashed line) will be added depending on the stroke length. Refer to page 784 for details on dimensions.

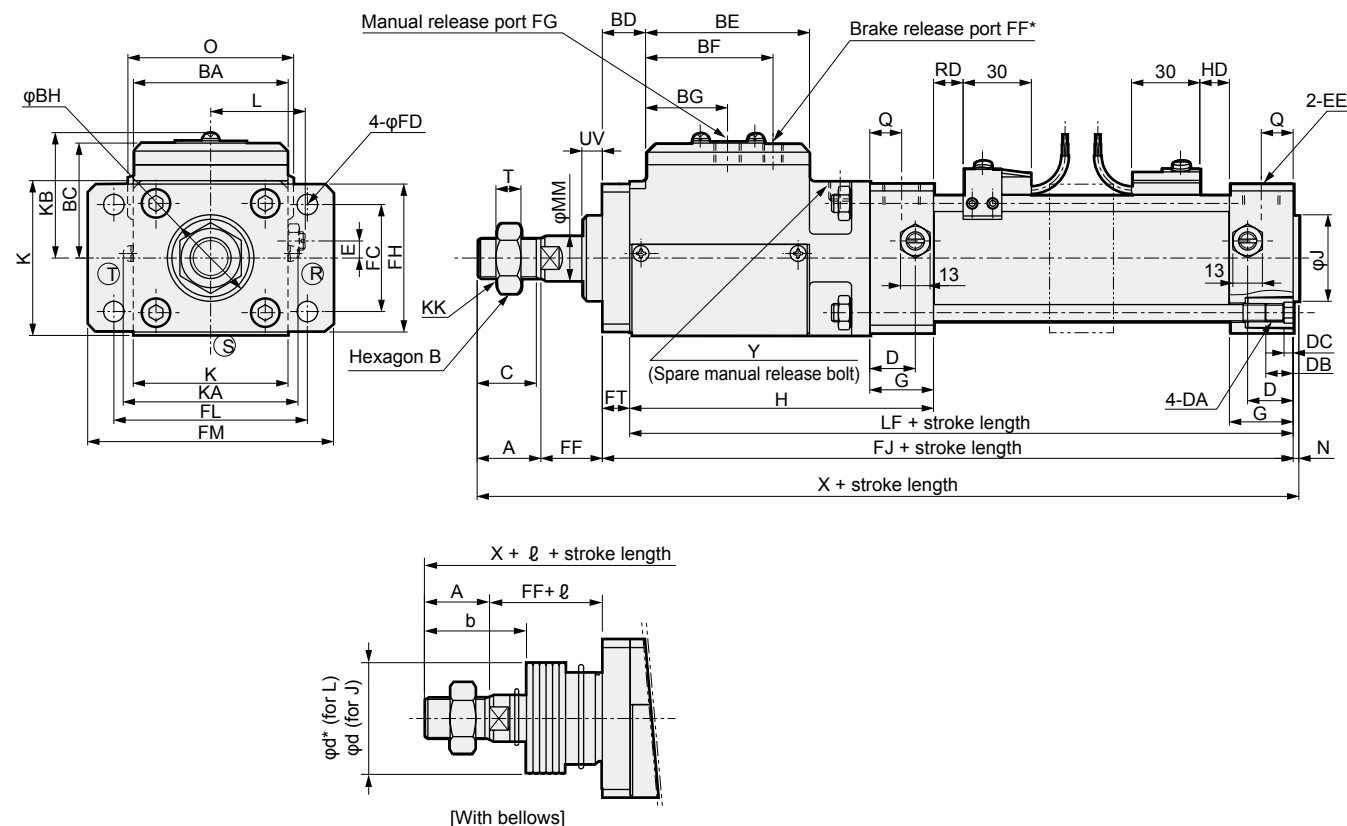
Code	Axial foot (LB) basic dimensions																									
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	BH	C	D	E	EE	F	FG	FF	G	J	K	KA	KB					
φ40	22	22	57	46	9	62	51	31	31	20	18	7.5	Rc1/4	121	M10	Rc1/8	26	31	57	66	50.5					
φ50	28	27	68	50.5	12	72	56	36	38	26	20	0	Rc3/8	138.5	M10	Rc1/8	28	38	68	77	55					
φ63	28	27	80	54	13	86	70	43	38	26	22	0	Rc3/8	154	M12	Rc1/4	30	38	80	89	58.5					
φ80	36	32	98	66	13	106	80	53	43	34	26	0	Rc1/2	179.5	M14	Rc1/4	34	43	98	107	70.5					
φ100	45	41	118	74	17.5	132	101	66	51	43	28	0	Rc1/2	220.5	M16	Rc3/8	36	51	118	127	78.5					
Code												Mounting dimensions								With switch						
Bore size (mm)	KK		L		LL	MM	N	Q	T	V	WF	Y	LA	LB	LC	LD	LF	LG	LH	LR	LT	O	T0, T5, T2, T3	T1, T2Y, T3Y, T2J, T2YD/T		
																							RD	HD	RD	HD
φ40	M14×1.5		38 to 39.5	188	16	2	13	8	15	30	M10 depth 9	269.5	10	19.5	9	10.5	227	40	40	3.2	66	11	11	10	10	
φ50	M18×1.5		41.0 to 43.5	211.5	20	2.5	14	11	16	34	M10 depth 9	307.5	12	22	9	12	255.5	40	46	4.5	73	13	13	12	12	
φ63	M18×1.5		47.5 to 50.0	229	20	3	15	11	16	30	M12 depth 10	329	12	30	11	0	289	50	60	4.5	85	13	13	12	12	
φ80	M22×1.5		56 to 59	261.5	25	3.5	17	13	17.5	43.5	M14 depth 11	392	14	37	14	6.5	335.5	60	74	6.0	105	14.5	14.5	13.5	13.5	
φ100	M26×1.5		66 to 69	312.5	30	4	18	16	26	48	M16 depth 13	457.5	21	31	14	17	374.5	67	80	6.0	121	18.5	18.5	17.5	17.5	
Code												With bellows					ℓ									
Bore size (mm)	T8		T2W, T3W		HO, HOY		A	WF	FF	b	d	d*	50 or less	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 or more						
	RD	HD	RD	HD	RD	HD																				
φ40	5	5	13	13	4	4	22	30	22	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8						
φ50	7	7	15	15	6	6	28	34	27	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5						
φ63	7	7	15	15	6	6	28	30	22	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5						
φ80	8.5	8.5	16.5	16.5	7.5	7.5	36	43.5	30.5	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5						
φ100	12.5	12.5	20.5	20.5	11.5	11.5	45	48	35.5	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9						

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions (φ40 to φ100)



● Rod side flange (FA)



*1 : For the ℓ dimension, round up below the decimal point.

*2 : Ⓡ, Ⓢ and Ⓣ indicate the cushion needle position.

*3 : Reassembly to the head side flange is not possible because the rod metal is not fixed.

*4 : Manual release bolt is attached.

*5 : For the dimensions of the accessories, refer to pages 796 and 797.

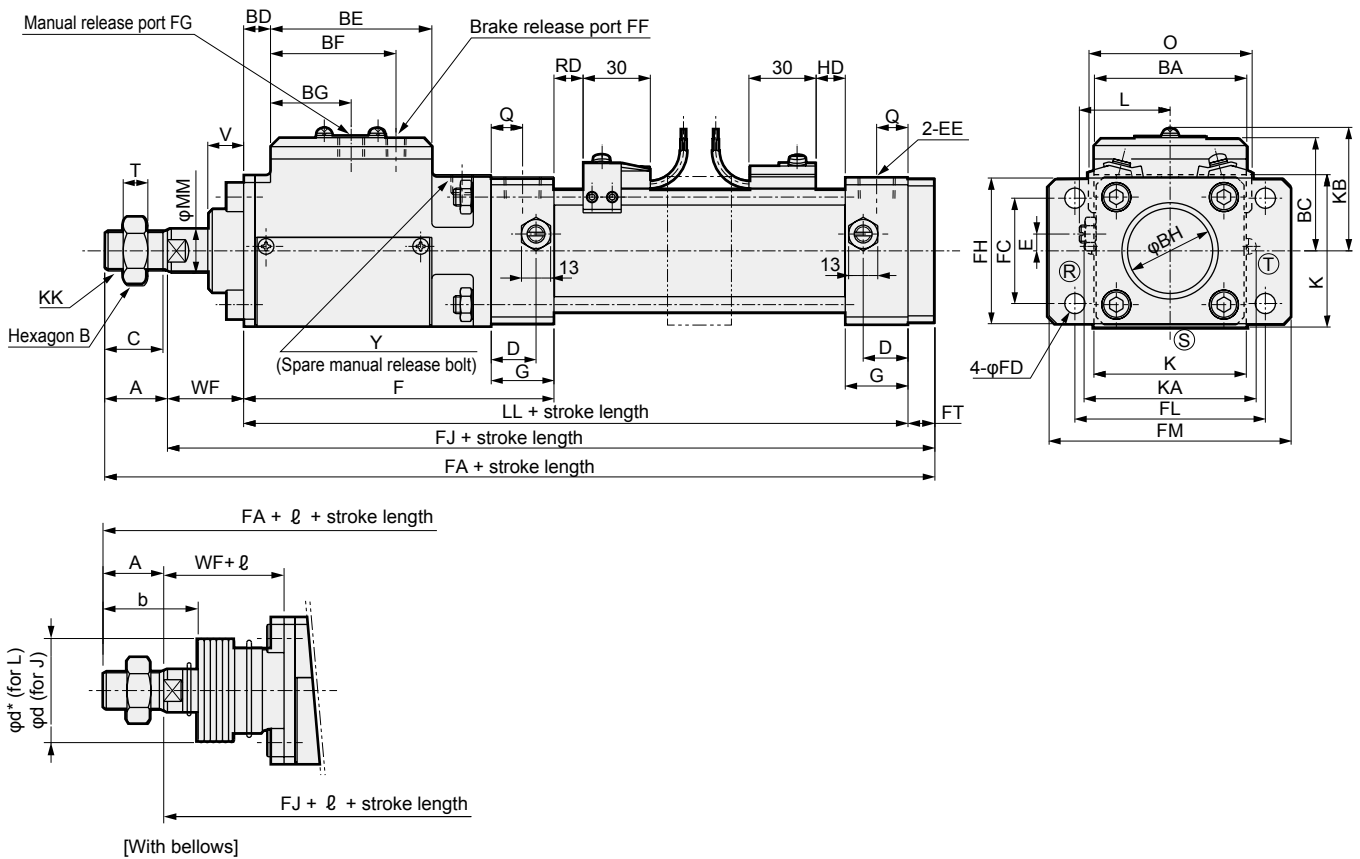
*6 : Non-sag block (2-dashed line) will be added depending on the stroke length. Refer to page 784 for details on dimensions.

Code		Rod side flange (FA) basic dimensions																													
Bore size (mm)		A	B	BA	BC	BD	BE	BF	BG	BH	C	D	DA	DC	DB	E	EE	FF*	FG	G	H	J	K	KA							
φ40		22	22	57	46	17	62	51	31	31	20	18	M8	4	12	7.5	Rc1/4	Rc1/8	M10	26	117	31	57	66							
φ50		28	27	68	50.5	19	72	56	36	38	26	20	M8	4	12	0	Rc3/8	Rc1/8	M10	28	134	38	68	77							
φ63		28	27	80	54	21	86	70	43	38	26	22	M8	4	12	0	Rc3/8	Rc1/4	M12	30	146	38	80	89							
φ80		36	32	98	66	26	106	80	53	43	34	26	M12	5	16	0	Rc1/2	Rc1/4	M14	34	173.5	43	98	107							
φ100		45	41	118	74	30	132	101	66	51	43	28	M12	5	16	0	Rc1/2	Rc3/8	M16	36	214.5	51	118	127							
Code														Mounting dimensions								With switch									
Bore size (mm)		KB	KK	L	LF	MM	N	Q	T	UV	X	Y	FC	FD	FF	FH	FJ	FL	FM	FT	O	T0, T5, T2, T3		T1, T2Y, T3Y, T2J, T2YD/T							
																						RD	HD	RD	HD						
φ40		50.5	M14×1.5	38 to 39.5	184	16	2	13	8	7	242	M10 depth 9	40	9	22	57	196	80	100	12	66	11	11	10	10						
φ50		55	M18×1.5	41.0 to 43.5	207	20	2.5	14	11	8.5	276	M10 depth 9	47	9	27	65	219	85	108	12	73	13	13	12	12						
φ63		58.5	M18×1.5	47.5 to 50.0	221	20	3	15	11	8	290	M12 depth 10	60	11	22	80	237	106	130	16	85	13	13	12	12						
φ80		70.5	M22×1.5	56 to 59	255.5	25	3.5	17	13	4.5	344.5	M14 depth 11	74	14	30.5	98	274.5	125	153	19	105	14.5	14.5	13.5	13.5						
φ100		78.5	M26×1.5	66 to 69	306	30	4	18	16	13	409.5	M16 depth 13	88	14	35	118	325	144	180	19	121	18.5	18.5	17.5	17.5						
Code												With bellows										ℓ									
Bore size (mm)		T8		T2W, T3W		HO, HOY		A	WF	FF	b	d	d*	50 or less	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 or more										
		RD	HD	RD	HD	RD	HD																								
φ40		5	5	13	13	4	4	22	30	22	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length(3.0) + 8										
φ50		7	7	15	15	6	6	28	34	27	47	47	48	22	36	49	63	90	119	146	(Stroke length(3.6) + 7.5										
φ63		7	7	15	15	6	6	28	30	22	45	47	48	22	36	49	63	90	119	146	(Stroke length(3.6) + 7.5										
φ80		8.5	8.5	16.5	16.5	7.5	7.5	36	43.5	30.5	58.5	53	55	14	26	38	49	72	96	119	(Stroke length(4.3) + 2.5										
φ100		12.5	12.5	20.5	20.5	11.5	11.5	45	48	35	69.5	61	65	20	32	42	53	76	98	120	(Stroke length(4.5) + 9										

Dimensions (φ40 to φ100)



● Head side flange (FB)



- *1 : For the ℓ dimension, round up below the decimal point.
 *2 : (R), (S) and (T) indicate the cushion needle position.
 *3 : Reassembly to the rod side flange is not possible because the piston rod protruding length (from the flange end), rod metal and flange mounting bolt are different.
 *4 : Manual release bolt is attached.
 *5 : For the dimensions of the accessories, refer to pages 796 and 797.
 *6 : Non-sag block (2-dashed line) will be added depending on the stroke length. Refer to page 784 for details on dimensions.

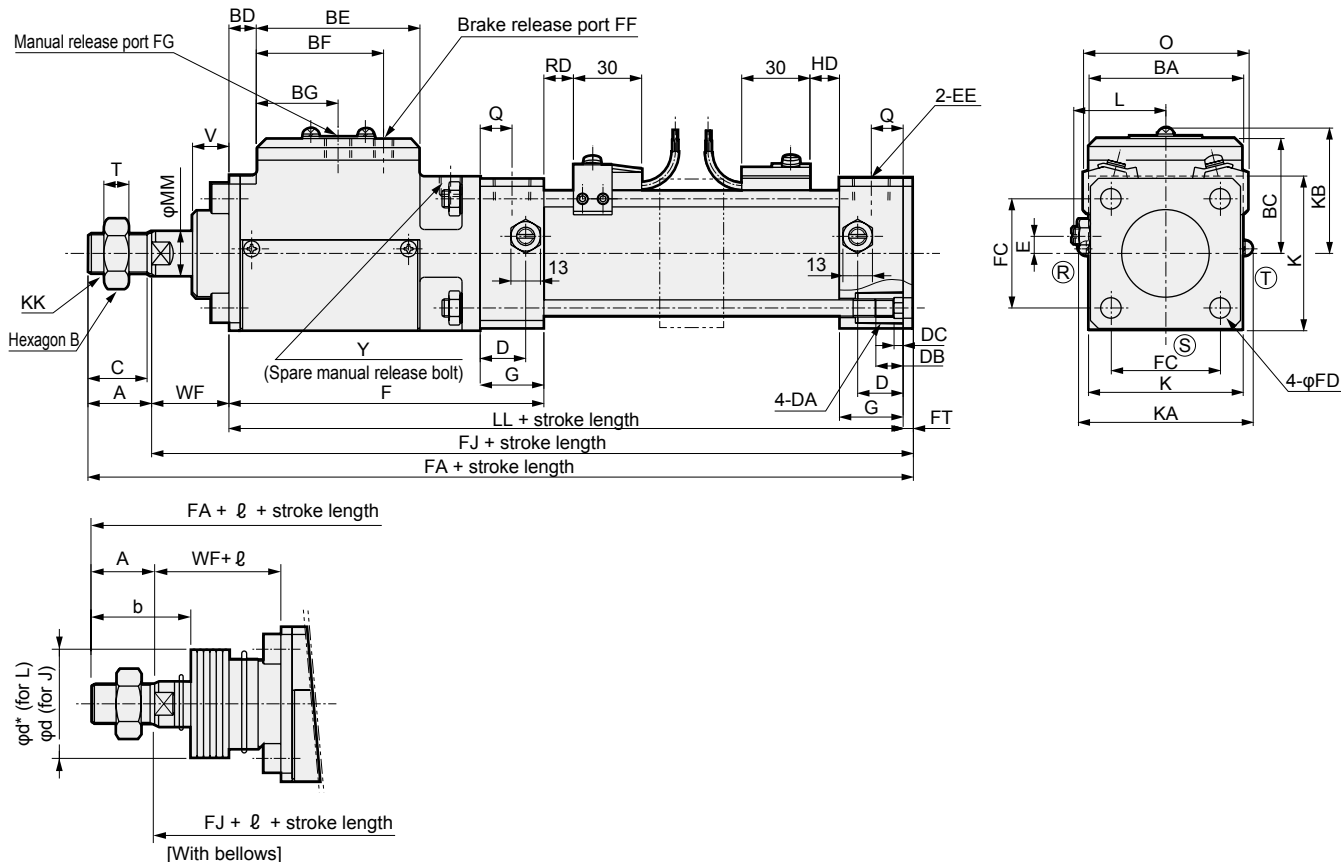
Code	Head side flange (FB) basic dimensions																					
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	BH	C	D	E	EE	F	FG	FF	G	K	KA	KB		
φ40	22	22	57	46	9	62	51	31	31	20	18	7.5	Rc1/4	121	M10	Rc1/8	26	57	66	50.5		
φ50	28	27	68	50.5	12	72	56	36	38	26	20	0	Rc3/8	138.5	M10	Rc1/8	28	68	77	55		
φ63	28	27	80	54	13	86	70	43	38	26	22	0	Rc3/8	154	M12	Rc1/4	30	80	89	58.5		
φ80	36	32	98	66	13	106	80	53	43	34	26	0	Rc1/2	179.5	M14	Rc1/4	34	98	107	70.5		
φ100	45	41	118	74	17.5	132	101	66	51	43	28	0	Rc1/2	220.5	M16	Rc3/8	36	118	127	78.5		
Code											Mounting dimensions								With switch			
Bore size (mm)	KK	L	LL	MM	Q	T	V	WF	Y	FA	FC	FD	FH	FJ	FL	FM	FT	O	T0, T5, T2, T3 T1, T2Y, T3Y, T2J, T2YD/T			
																			RD	HD	RD	HD
φ40	M14×1.5	38 to 39.5	188	16	13	8	15	30	M10 depth 9	252	40	9	57	230	80	100	12	66	11	11	10	10
φ50	M18×1.5	41.0 to 43.5	211.5	20	14	11	16	34	M10 depth 9	285.5	47	9	65	257.5	85	108	12	73	13	13	12	12
φ63	M18×1.5	47.5 to 50.0	229	20	15	11	16	30	M12 depth 10	303	60	11	80	275	106	130	16	85	13	13	12	12
φ80	M22×1.5	56 to 59	261.5	25	17	13	17.5	43.5	M14 depth 11	360	74	14	98	324	125	153	19	105	14.5	14.5	13.5	13.5
φ100	M26×1.5	66 to 69	312.5	30	18	16	26	48	M16 depth 13	424.5	88	14	118	379.5	144	180	19	121	18.5	18.5	17.5	17.5
Code							With bellows						ℓ									
Bore size (mm)	T8		T2W, T3W		HO, HOY		A	WF	FF	b	d	d*	50 or less	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 or more		
	RD	HD	RD	HD	RD	HD																
φ40	5	5	13	13	4	4	22	30	22	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8		
φ50	7	7	15	15	6	6	28	34	27	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5		
φ63	7	7	15	15	6	6	28	30	22	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5		
φ80	8.5	8.5	16.5	16.5	7.5	7.5	36	43.5	30.5	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5		
φ100	12.5	12.5	20.5	20.5	11.5	11.5	45	48	35.5	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9		

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions (φ40 to φ100)



● Head side special flange (FC)



*1 : For the ℓ dimension, round up below the decimal point.

*2 : (R), (S) and (T) indicate the cushion needle position.

*3 : Manual release bolt is attached.

*4 : For the dimensions of the accessories, refer to pages 796 and 797.

*5 : Non-sag block (2-dashed line) will be added depending on the stroke length. Refer to page 784 for details on dimensions.

Code	Head side flange (FC) basic dimensions																		
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	C	D	DA	DB	DC	EE	F	FG	FF	G	K
φ40	22	22	57	46	9	62	51	31	20	18	M8	12	4	Rc1/4	121	M10	Rc1/8	26	57
φ50	28	27	68	50.5	12	72	56	36	26	20	M8	12	4	Rc3/8	138.5	M10	Rc1/8	28	68
φ63	28	27	80	54	13	86	70	43	26	22	M8	12	4	Rc3/8	154	M12	Rc1/4	30	80
φ80	36	32	98	66	13	106	80	53	34	26	M12	16	5	Rc1/2	179.5	M14	Rc1/4	34	98
φ100	45	41	118	74	17.5	132	101	66	43	28	M12	16	5	Rc1/2	220.5	M16	Rc3/8	36	118

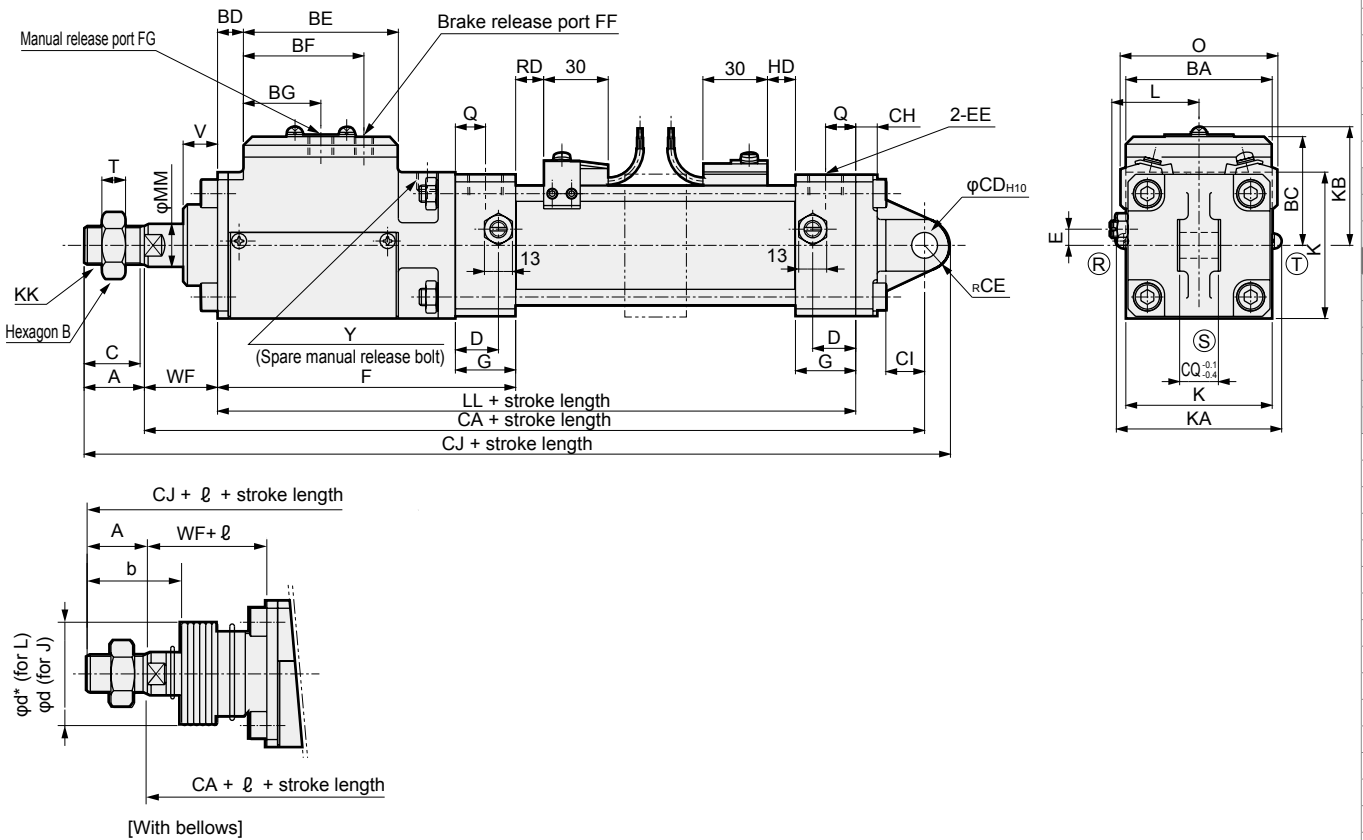
Code	Mounting dimensions										With switch			
Bore size (mm)	KB	L	LL	MM	Q	T	V	WF	Y	FA	FC	FD	FJ	FT
φ40	50.5	38 to 39.5	188	16	13	8	15	30	M10 depth 9	244.5	40.5	9	222.5	4.5
φ50	55	41.0 to 43.5	211.5	20	14	11	16	34	M10 depth 9	278	48	9	250	4.5
φ63	58.5	47.5 to 50.0	229	20	15	11	16	30	M12 depth 10	291.5	59	9	263.5	4.5
φ80	70.5	56 to 59	261.5	25	17	13	17.5	43.5	M14 depth 11	347	74	14	311	6
φ100	78.5	66 to 69	312.5	30	18	16	26	48	M16 depth 13	411.5	90	14	366.5	6

Code								With bellows						ℓ								
Bore size (mm)	T8		T2W, T3W		HO, HOY		A	WF	FF	b	d	d*	50 or less	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 or more		
	RD	HD	RD	HD	RD	HD																
φ40	5	5	13	13	4	4	22	30	22	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8		
φ50	7	7	15	15	6	6	28	34	27	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5		
φ63	7	7	15	15	6	6	28	30	22	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5		
φ80	8.5	8.5	16.5	16.5	7.5	7.5	36	43.5	30.5	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5		
φ100	12.5	12.5	20.5	20.5	11.5	11.5	45	48	35.5	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9		

Dimensions (φ40 to φ100)



● Eye bracket (CA)



*1 : For the ℓ dimension, round up below the decimal point.

*2 : (R), (S) and (T) indicate the cushion needle position.

*3 : For the dimensions of the accessories, refer to pages 796 and 797.

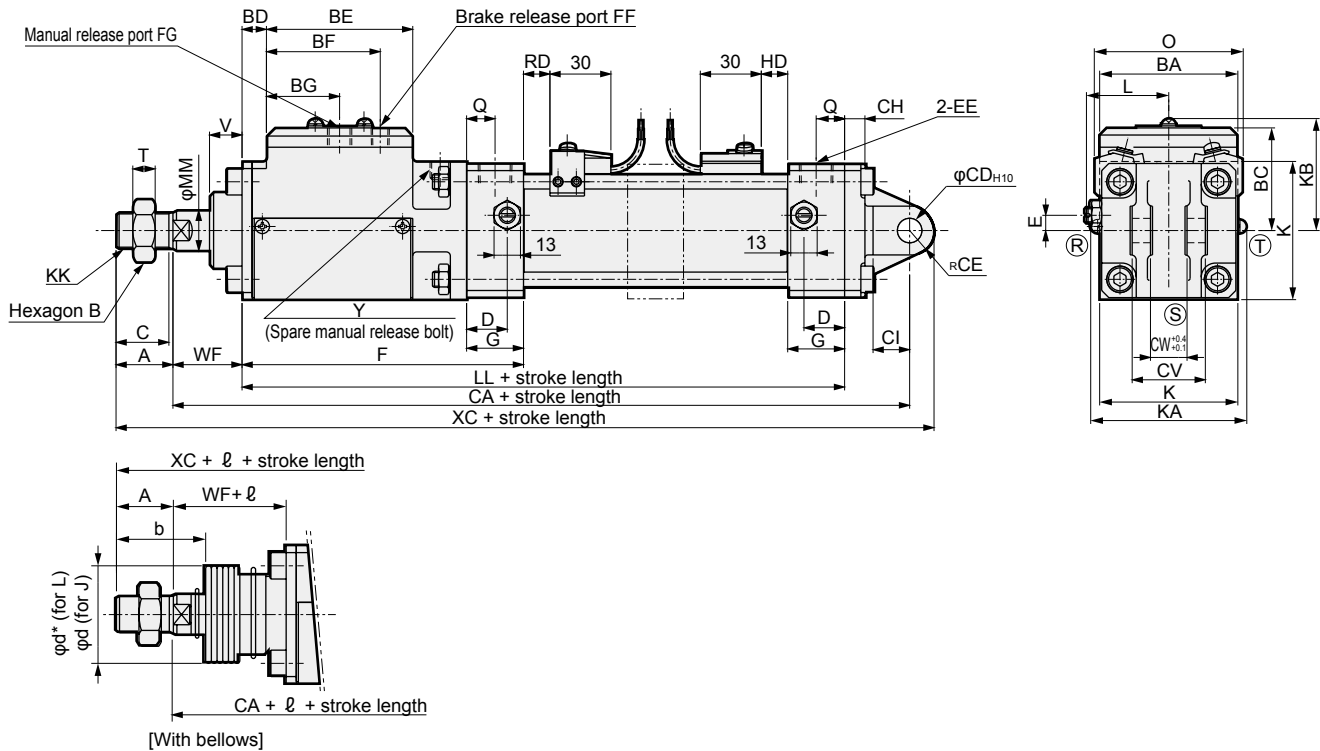
*4 : Non-sag block (2-dashed line) will be added depending on the stroke length. Refer to page 784 for details on dimensions.

Code		Eye bracket (CA) basic dimensions																					
Bore size (mm)		A	B	BA	BC	BD	BE	BF	BG	C	D	E	EE	F	FF	FG	G	K	KK	KA			
φ40		22	22	57	46	9	62	51	31	20	18	7.5	Rc1/4	121	Rc1/8	M10	26	57	M14×1.5	66			
φ50		28	27	68	50.5	12	72	56	36	26	20	0	Rc3/8	138.5	Rc1/8	M10	28	68	M18×1.5	77			
φ63		28	27	80	54	13	86	70	43	26	22	0	Rc3/8	154	Rc1/4	M12	30	80	M18×1.5	89			
φ80		36	32	98	66	13	106	80	53	34	26	0	Rc1/2	179.5	Rc1/4	M14	34	98	M22×1.5	107			
φ100		45	41	118	74	17.5	132	101	66	43	28	0	Rc1/2	220.5	Rc3/8	M16	36	118	M26×1.5	127			
Code												Mounting dimensions							With switch				
Bore size (mm)		KB	L	LL	MM	Q	T	V	WF	Y	CA		CD	CE	CH	CI	CJ	CQ	O	T0, T5, T2, T3	T1, T2Y, T3Y, T2J, T2YD/T		
																				RD	HD	RD	HD
φ40		50.5	38 to 39.5	188	16	13	8	15	30	M10 depth 9	250		12	12	10	18	284	18	66	11	11	10	10
φ50		55	41.0 to 43.5	211.5	20	14	11	16	34	M10 depth 9	277.5		12	12	10	18	317.5	18	73	13	13	12	12
φ63		58.5	47.5 to 50.0	229	20	15	11	16	30	M12 depth 10	296		14	16	10	24	340	20	85	13	13	12	12
φ80		70.5	56 to 59	261.5	25	17	13	17.5	43.5	M14 depth 11	357		20	20	14	30	413	28	105	14.5	14.5	13.5	13.5
φ100		78.5	66 to 69	312.5	30	18	16	26	48	M16 depth 13	412.5		20	20	16	30	477.5	28	121	18.5	18.5	17.5	17.5
Code									With bellows					ℓ									
Bore size (mm)		T8		T2W, T3W		HO, HOY		A		WF	FF	b	d	d*	50 or less	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 or more	
		RD	HD	RD	HD	RD	HD																
φ40		5	5	13	13	4	4	22	30	22	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8		
φ50		7	7	15	15	6	6	28	34	27	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5		
φ63		7	7	15	15	6	6	28	30	22	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5		
φ80		8.5	8.5	16.5	16.5	7.5	7.5	36	43.5	30.5	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5		
φ100		12.5	12.5	20.5	20.5	11.5	11.5	45	48	35.5	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9		

Dimensions (φ40 to φ100)



● Clevis bracket (CB)



*1 : For the ℓ dimension, round up below the decimal point.

*2 : (R), (S) and (T) indicate the cushion needle position.

*3 : A pin and a snap ring are attached.

*4 : For the dimensions of the accessories, refer to pages 796 and 797.

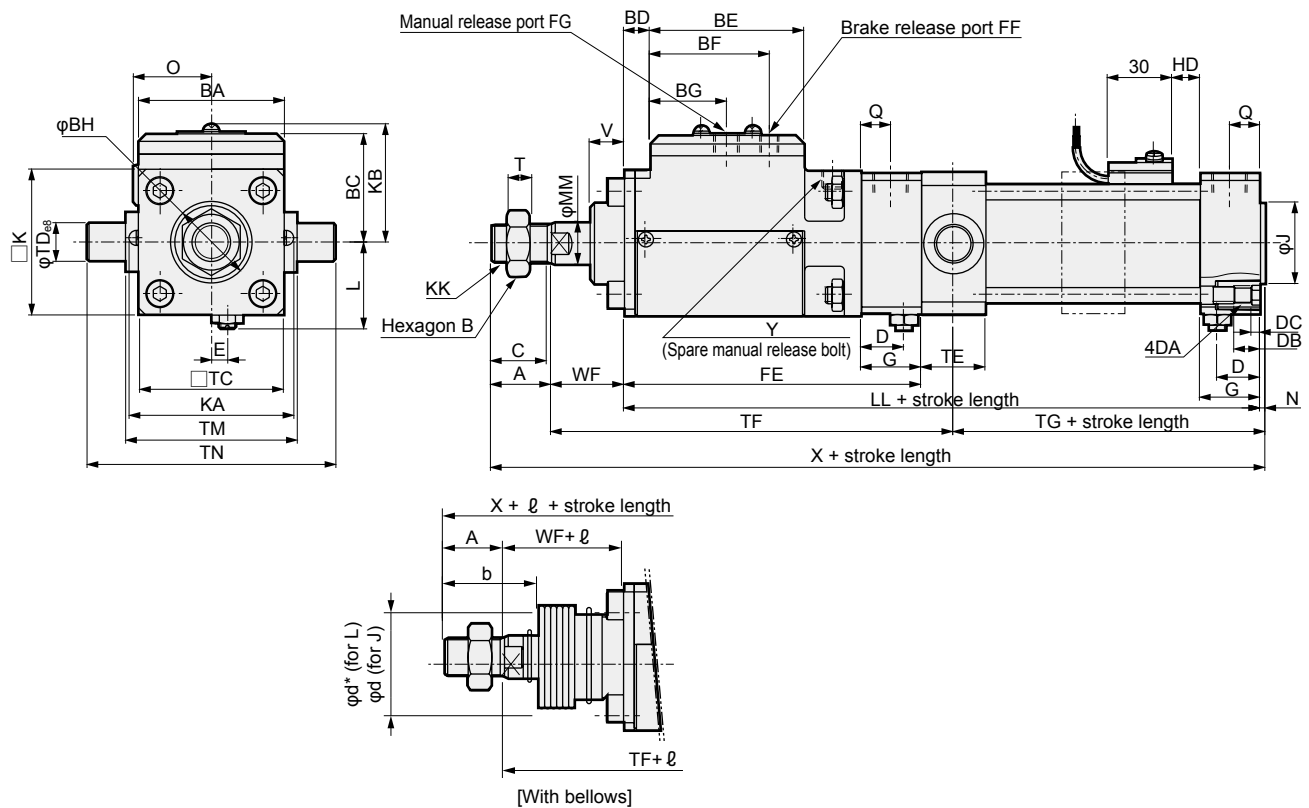
*5 : Non-sag block (2-dashed line) will be added depending on the stroke length. Refer to page 784 for details on dimensions.

Code	Clevis bracket (CB) basic dimensions																					
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	C	D	EE	F	FF	FG	G	K	KK	KA				
φ40	22	22	57	46	9	62	51	31	20	18	Rc1/4	121	Rc1/8	M10	26	57	M14×1.5	66				
φ50	28	27	68	50.5	12	72	56	36	26	20	Rc3/8	138.5	Rc1/8	M10	28	68	M18×1.5	77				
φ63	28	27	80	54	13	86	70	43	26	22	Rc3/8	154	Rc1/4	M12	30	80	M18×1.5	89				
φ80	36	32	98	66	13	106	80	53	34	26	Rc1/2	179.5	Rc1/4	M14	34	98	M22×1.5	107				
φ100	45	41	118	74	17.5	132	101	66	43	28	Rc1/2	220.5	Rc3/8	M16	36	118	M26×1.5	127				
Code											Mounting dimensions								With switch			
Bore size (mm)	KB	L	LL	MM	Q	T	V	WF	XC	Y	CA	CD	CE	CH	CI	CV	CW	O	T0, T5, T2, T3		T1, T2Y, T3Y, T2J, T2YD/T	
																			RD	HD	RD	HD
φ40	50.5	38 to 39.5	188	16	13	8	15	30	284	M10 depth 9	250	12	12	10	18	36	18	66	11	11	10	10
φ50	55	41.0 to 43.5	211.5	20	14	11	16	34	317.5	M10 depth 9	277.5	12	12	10	18	36	18	73	13	13	12	12
φ63	58.5	47.5 to 50.0	229	20	15	11	16	30	340	M12 depth 10	296	14	16	10	24	40	20	85	13	13	12	12
φ80	70.5	56 to 59	261.5	25	17	13	17.5	43.5	413	M14 depth 11	357	20	20	14	30	56	28	105	14.5	14.5	13.5	13.5
φ100	78.5	66 to 69	312.5	30	18	16	26	48	477.5	M16 depth 13	412.5	20	20	16	30	56	28	121	18.5	18.5	17.5	17.5
Code							With bellows						ℓ									
Bore size (mm)	T8		T2W, T3W		HO, HOY		A	WF	FF	b	d	d*	50 or less	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 or more		
	RD	HD	RD	HD	RD	HD																
φ40	5	5	13	13	4	4	22	30	22	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length)3.0) + 8		
φ50	7	7	15	15	6	6	28	34	27	47	47	48	22	36	49	63	90	119	146	(Stroke length)3.6) + 7.5		
φ63	7	7	15	15	6	6	28	30	22	45	47	48	22	36	49	63	90	119	146	(Stroke length)3.6) + 7.5		
φ80	8.5	8.5	16.5	16.5	7.5	7.5	36	43.5	30.5	58.5	53	55	14	26	38	49	72	96	119	(Stroke length)4.3) + 2.5		
φ100	12.5	12.5	20.5	20.5	11.5	11.5	45	48	35.5	69.5	61	65	20	32	42	53	76	98	120	(Stroke length)4.5) + 9		

Dimensions (φ40 to φ100)



● Rod side trunnion (TA)



*1 : For the ℓ dimension, round up below the decimal point.

*2 : Position cannot be detected at rod side stroke end.

*3 : The position of the cushion needle cannot be detected.

*4 : For the dimensions of the accessories, refer to pages 796 and 797.

*5 : Non-sag block (2-dashed line) will be added depending on the stroke length. Refer to page 784 for details on dimensions.

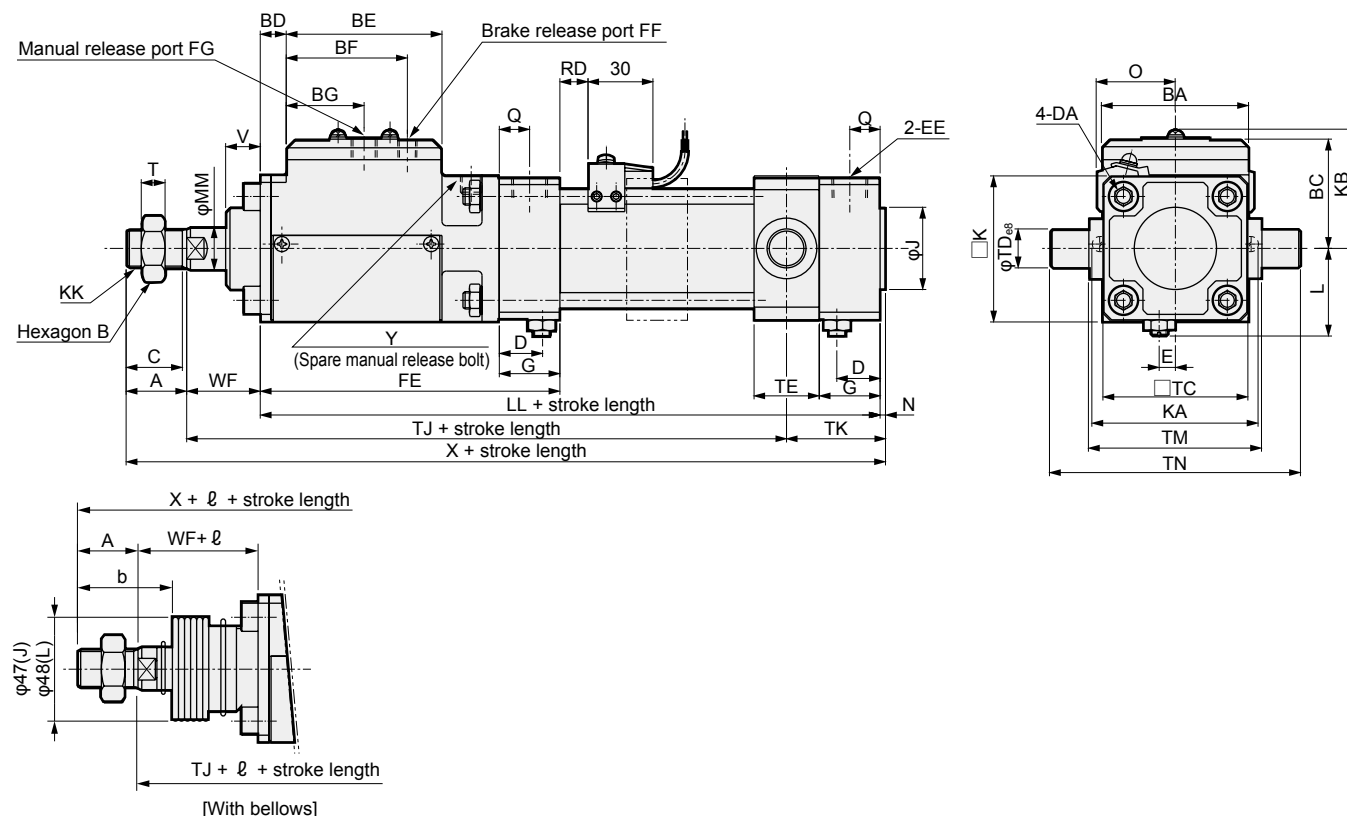
Code	Rod side trunnion (TA) basic dimensions																							
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	BH	C	D	DA	DB	DC	E	EE	FE	FF	FG	G	J	K		
φ40	22	22	57	46	9	62	51	31	31	20	18	M8	12	4	7.5	Rc1/4	121	Rc1/8	M10	26	31	57		
φ50	28	27	68	50.5	12	72	56	36	38	26	20	M8	12	4	0	Rc3/8	138.5	Rc1/8	M10	28	38	68		
φ63	28	27	80	54	13	86	70	43	38	26	22	M8	12	4	0	Rc3/8	154	Rc1/4	M12	30	38	80		
φ80	36	32	98	66	13	106	80	53	43	34	26	M12	16	5	0	Rc1/2	179.5	Rc1/4	M14	34	43	98		
φ100	45	41	118	74	17.5	132	101	66	51	43	28	M12	16	5	0	Rc1/2	220.5	Rc3/8	M16	36	51	118		
Code															Mounting dimensions						With switch			
Bore size (mm)	KA	KB	KK	L	LL	MM	N	Q	T	V	WF	X	Y	TC	TD	TE	TF	TG	TM	TN	O			
φ40	66	50.5	M14×1.5	38 to 39.5	188	16	2	13	8	15	30	242	M10 depth 9	57	16	30	166.5	53.5	63	95	33			
φ50	77	55	M18×1.5	41.0 to 43.5	211.5	20	2.5	14	11	16	34	276	M10 depth 9	67	18	30	188	60	80	116	36.5			
φ63	89	58.5	M18×1.5	47.5 to 50.0	229	20	3	15	11	16	30	290	M12 depth 10	82	20	35	202	60	90	130	42.5			
φ80	107	70.5	M22×1.5	56 to 59	261.5	25	3.5	17	13	17.5	43.5	344.5	M14 depth 11	100	25	40	243.5	65	115	165	52.5			
φ100	127	78.5	M26×1.5	66 to 69	312.5	30	4	18	16	26	48	409.5	M16 depth 13	121	35	50	294	70.5	135	205	60.5			
Code											With bellows				ℓ									
Bore size (mm)	T0, T5, T2, T3	T1, T2Y, T3Y, T2J, T2YD/T			T8	T2W, T3W		HO, HOY		A	WF	FF	b	d	d*	50 or less	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 or more	
	HD	HD		HD	HD	HD																		
φ40	11	10			5	13		4		22	30	22	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8	
φ50	13	12			7	15		6		28	34	27	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5	
φ63	13	12			7	15		6		28	30	22	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5	
φ80	14.5	13.5			8.5	16.5		7.5		36	43.5	30.5	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5	
φ100	18.5	17.5			12.5	20.5		11.5		45	48	35.5	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9	

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions (φ40 to φ100)



● Head side trunnion (TB)



*1 : For the ℓ dimension, round up below the decimal point.

*2 : Position cannot be detected at head side stroke end.

*3 : The position of the cushion needle cannot be changed.

*4 : For the dimensions of the accessories, refer to pages 796 and 797.

*5 : Non-sag block (2-dashed line) will be added depending on the stroke length. Refer to page 784 for details on dimensions.

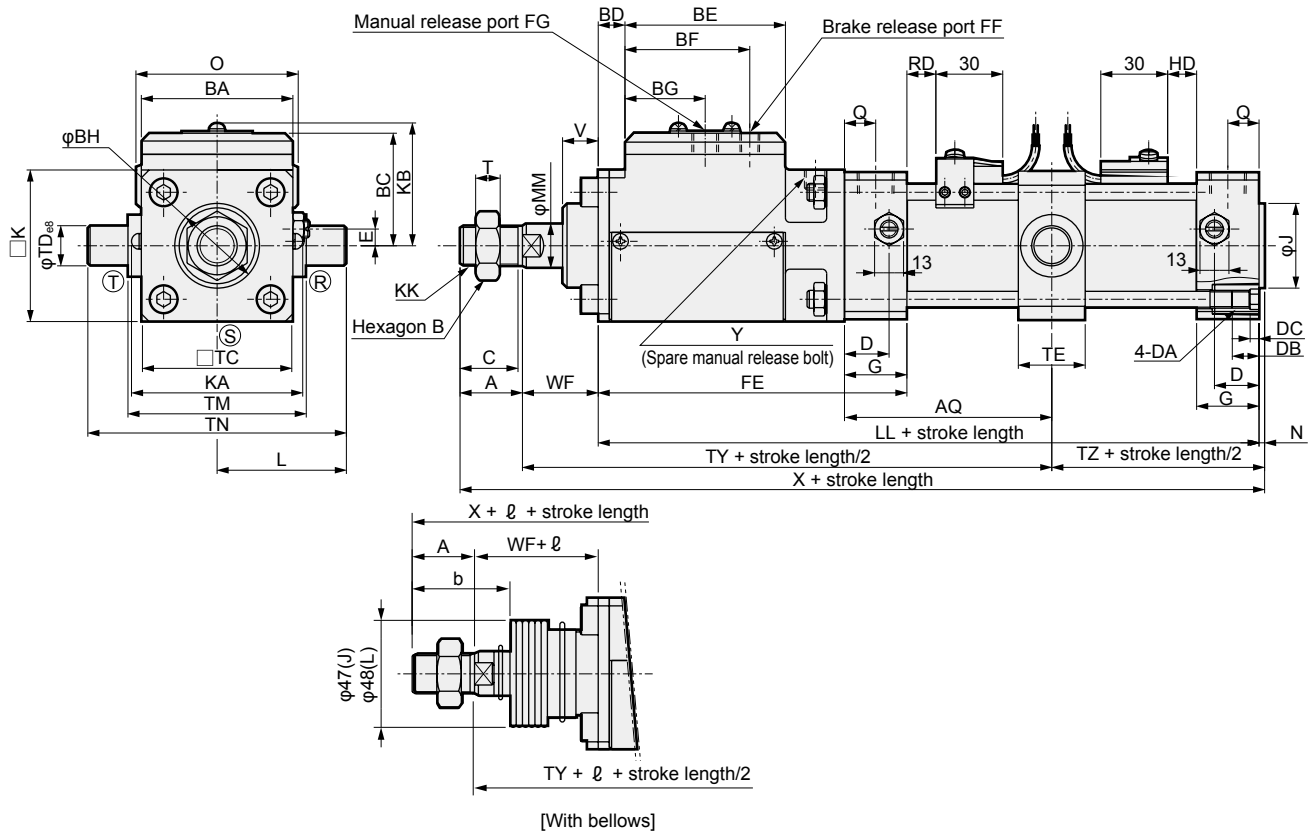
Code	Head side trunnion (TB) basic dimensions																		
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	BH	C	D	DA	EE	FE	FF	FG	G	J	KA
φ40	22	22	57	46	9	62	51	31	31	20	18	M8	Rc1/4	121	Rc1/8	M10	26	31	57
φ50	28	27	68	50.5	12	72	56	36	38	26	20	M8	Rc3/8	138.5	Rc1/8	M10	28	38	68
φ63	28	27	80	54	13	86	70	43	38	26	22	M8	Rc3/8	154	Rc1/4	M12	30	38	80
φ80	36	32	98	66	13	106	80	53	43	34	26	M12	Rc1/2	179.5	Rc1/4	M14	34	43	98
φ100	45	41	118	74	17.5	132	101	66	51	43	28	M12	Rc1/2	220.5	Rc3/8	M16	36	51	118

Code	Mounting dimensions													With switch				
Bore size (mm)	KB	KK	L	LL	MM	N	Q	T	V	WF	X	Y	TC	TD	TE	TJ	TK	TM
φ40	50.5	M14×1.5	38 to 39.5	188	16	2	13	8	15	30	242	M10 depth 9	57	16	30	176.5	43.5	63
φ50	55	M18×1.5	41.0 to 43.5	211.5	20	2.5	14	11	16	34	276	M10 depth 9	67	18	30	202	46	80
φ63	58.5	M18×1.5	47.5 to 50.0	229	20	3	15	11	16	30	290	M12 depth 10	82	20	35	211	51	90
φ80	70.5	M22×1.5	56 to 59	261.5	25	3.5	17	13	17.5	43.5	344.5	M14 depth 11	100	25	40	250.5	58	115
φ100	78.5	M26×1.5	66 to 69	312.5	30	4	18	16	26	48	409.5	M16 depth 13	121	35	50	299	65.5	135

Code	With bellows						ℓ											
Bore size (mm)	T0, T5, T2, T3	T1, T2Y, T3Y, T2J, T2YD/T	T8	T2W, T3W	HO, HOY		RD	RD	RD	RD	RD	A	WF	FF	b	d	d*	50 or less
φ40	11	10	5	13	4	22	30	22	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5
φ50	13	12	7	15	6	28	34	27	47	47	48	22	36	49	63	90	119	146
φ63	13	12	7	15	6	28	30	22	45	47	48	22	36	49	63	90	119	146
φ80	14.5	13.5	8.5	16.5	7.5	36	43.5	30.5	58.5	53	55	14	26	38	49	72	96	119
φ100	18.5	17.5	12.5	20.5	11.5	45	48	35.5	69.5	61	65	20	32	42	53	76	98	120

Dimensions (φ40 to φ100)

● Intermediate trunnion (TC)



*1 : For the ℓ dimension, round up below the decimal point.

*2 : ®, ® and ① indicate the cushion needle position.

*3 : For the dimensions of the accessories, refer to pages 796 and 797.

Code	Intermediate trunnion (TC) basic dimensions																							
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	BH	C	D	DA	DB	DC	E	EE	FE	FF	FG	G	J	K	KA	KB
φ40	22	22	57	46	9	62	51	31	31	20	18	M8	12	4	7.5	Rc1/4	121	Rc1/8	M10	26	31	57	66	50.5
φ50	28	27	68	50.5	12	72	56	36	38	26	20	M8	12	4	0	Rc3/8	138.5	Rc1/8	M10	28	38	68	77	55
φ63	28	27	80	54	13	86	70	43	38	26	22	M8	12	4	0	Rc3/8	154	Rc1/4	M12	30	38	80	89	58.5
φ80	36	32	98	66	13	106	80	53	43	34	26	M12	16	5	0	Rc1/2	179.5	Rc1/4	M14	34	43	98	107	70.5
φ100	45	41	118	74	17.5	132	101	66	51	43	28	M12	16	5	0	Rc1/2	220.5	Rc3/8	M16	36	51	118	127	78.5
Code													Mounting dimensions								With switch			
Bore size (mm)	KK	L	LL	MM	N	Q	T	V	WF	X	Y	AQ	TC	TD	TE	TM	TN	TY	TZ	O	T0, T5, T2, T3	T1	T2, T3, T4, T2YD/T	
																					RD	HD	RD	HD
φ40	M14×1.5	38 to 39.5	188	16	2	13	8	15	30	242	M10 depth 9	46.5+ Stroke length 2	57	16	30	63	95	171.5	48.5	66	11	11	10	10
φ50	M18×1.5	41.0 to 43.5	211.5	20	2.5	14	11	16	34	276	M10 depth 9	50.5+ Stroke length 2	67	18	30	80	116	195	53	73	13	13	12	12
φ63	M18×1.5	47.5 to 50.0	229	20	3	15	11	16	30	290	M12 depth 10	52.5+ Stroke length 2	82	20	35	90	130	206.5	55.5	85	13	13	12	12
φ80	M22×1.5	56 to 59	261.5	25	3.5	17	13	17.5	43.5	344.5	M14 depth 11	58+ Stroke length 2	100	25	40	115	165	247	61.5	105	14.5	14.5	13.5	13.5
φ100	M26×1.5	66 to 69	312.5	30	4	18	16	26	48	409.5	M16 depth 13	64+ Stroke length 2	121	35	50	135	205	296.5	68	121	18.5	18.5	17.5	17.5
Code							With bellows						ℓ											
Bore size (mm)	T8		T2W, T3W		HO, HOY		A	WF	FF	b	d	d*	50 or less	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 or more				
	RD	HD	RD	HD	RD	HD																		
φ40	5	5	13	13	4	4	22	30	22	41	40	40	25.5	41.5	58.5	75.5	108.5	141.5	174.5	(Stroke length/3.0) + 8				
φ50	7	7	15	15	6	6	28	34	27	47	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5				
φ63	7	7	15	15	6	6	28	30	22	45	47	48	22	36	49	63	90	119	146	(Stroke length/3.6) + 7.5				
φ80	8.5	8.5	16.5	16.5	7.5	7.5	36	43.5	30.5	58.5	53	55	14	26	38	49	72	96	119	(Stroke length/4.3) + 2.5				
φ100	12.5	12.5	20.5	20.5	11.5	11.5	45	48	35.5	69.5	61	65	20	32	42	53	76	98	120	(Stroke length/4.5) + 9				

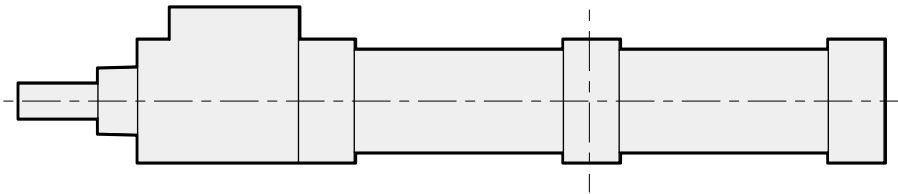
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

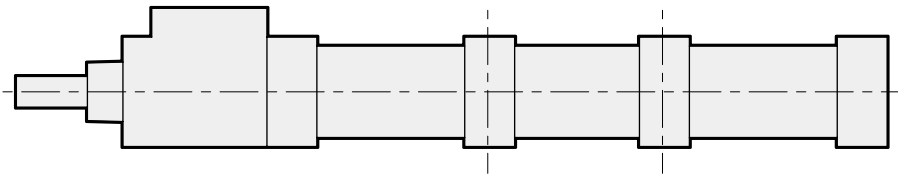
● About the non-sag block (φ40 to φ100)

Depending on its stroke length, a non-sag block will be added to the middle part of the cylinder.
The number of non-sag blocks to be added differs depending on the bore size and the stroke length as shown in the table below.

Number of non-sag blocks depending on stroke length		
Tube size (mm)	Stroke length (mm)	Number of non-sag blocks
φ40	1200 to 1600	1
φ50	1200 to 1800	1
	1801 to 2000	2
φ63	1200 to 1800	1
	1801 to 2500	2
φ80	1500 to 2000	1
	2001 to 2500	2
φ100	1500 to 2000	1
	2001 to 2500	2

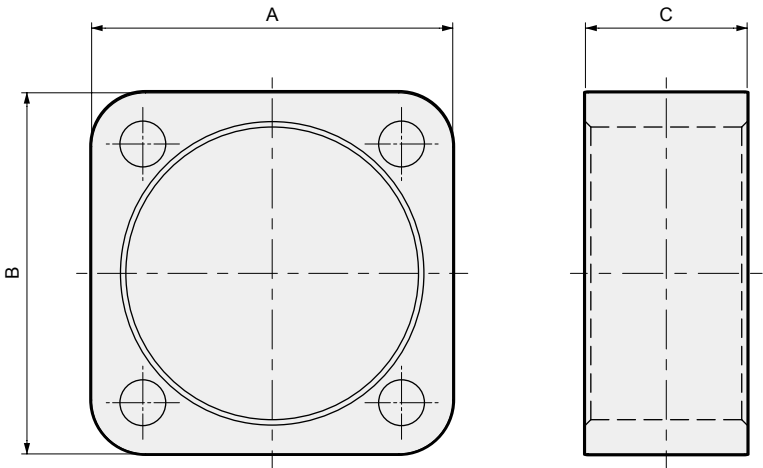


One non-sag block: To be added to the middle point between the covers.



Two non-sag blocks: mount the 2 blocks so that the length of the 2 covers will be divided into 3 equal parts.

The dimensions of non-sag blocks are as shown in the figure below. When attaching the cylinder, take into account the dimensions of the non-sag blocks.



Non-sag block dimensions table			
Tube size (mm)	Non-sag block dimensions		
	A	B	C
φ40	56	57	30
φ50	66	67	30
φ63	81	82	35
φ80	99	100	40
φ100	120	121	50

MEMO

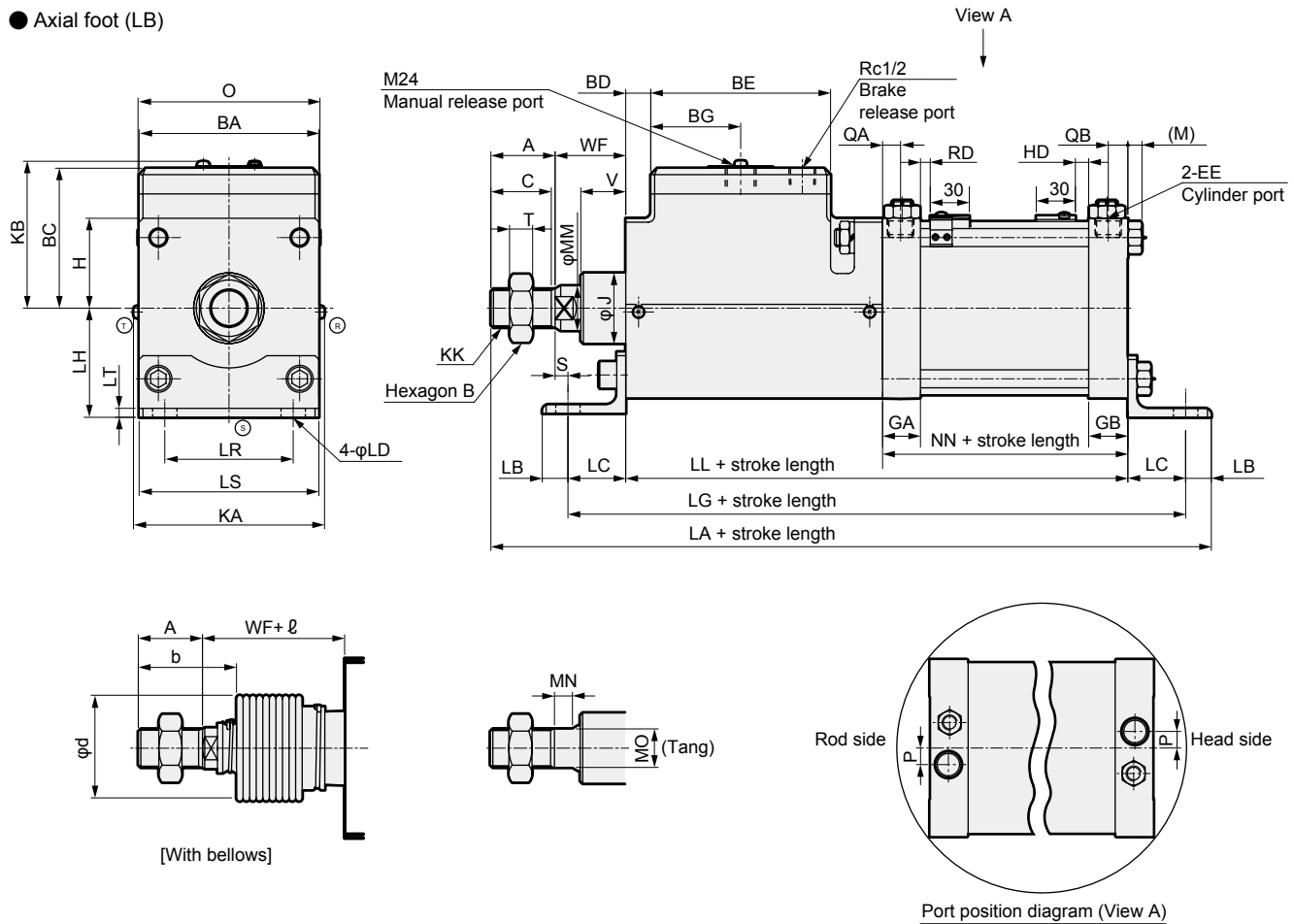
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

JSC4-N Series

Dimensions (φ125 to φ180)



● Axial foot (LB)



*1 : Ⓜ, Ⓢ and Ⓣ indicate the cushion needle position.

*2 : l dimensions below decimal point are rounded up.

*3 : For the dimensions of the accessories, refer to page 798.

RD: Rod side max. sensitivity position

HD: Head side max. sensitivity position

Code	Axial foot (LB) basic dimensions																		
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	C	EE	F	GA	GB	J	KA	KB	KK	LL	M
φ125	50	46	140	109	19.5	140	118	70	47	Rc1/2	200	29.5	30.5	55	150	115	M30×1.5	291	11
φ140	50	46	157	116.5	18.5	157	128.5	78.5	47	Rc3/4	216	33.5	34.5	55	167	122.5	M30×1.5	318	11
φ160	56	55	177	128	23	177	146.5	88.5	53	Rc3/4	245	33.5	34.5	62.5	190	134	M36×1.5	350	13
φ180	63	60	200	146	14	200	170	100	60	Rc3/4	264	33.5	34.5	68.5	213	152	M40×1.5	373	15

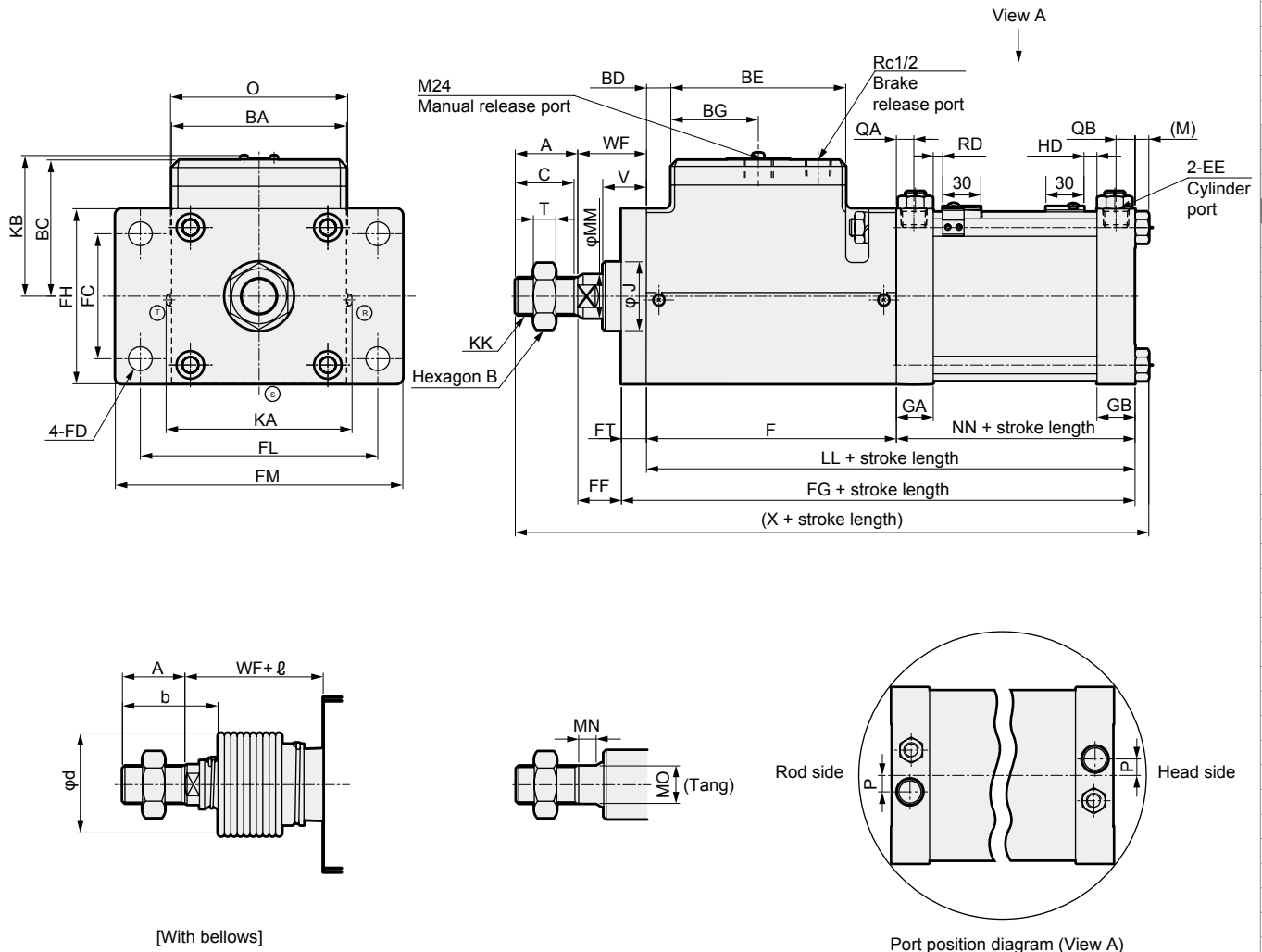
Code	Mounting dimensions										
Bore size (mm)	MM	MN	MO	NN	P	QA	QB	S	T	V	WF
φ125	35	14	30	91	13	14	15	10	18	35	55
φ140	35	14	30	102	15	16	17	7	18	35	57
φ160	40	16	36	105	15	16	17	18.5	21	48	71.5
φ180	45	18	41	109	15	16	17	18.5	24	53	78.5

Code	With bellows			With switch							
Bore size (mm)				T0, T5, T2, T3		T2W, T3W		T2Y, T3Y, T2YD, T1, T2J		T8	
	b	d	l	RD	HD	RD	HD	RD	HD	RD	HD
φ125	74	75	(Stroke length/4.55) + 11	8.5	4.0	10.5	5.5	7.5	2.5	2.5	0.0
φ140	74	75	(Stroke length/4.55) + 9	8.5	7.0	10.5	8.5	7.5	5.5	2.5	0.5
φ160	81	80	(Stroke length/5.15) + 9	10.5	8.0	12.5	10.0	9.5	7.0	4.5	1.5
φ180	90	90	(Stroke length/5.15) + 9	13.0	9.5	14.5	11.5	11.5	8.5	6.5	3.5

Dimensions (φ125 to φ180)



● Rod side flange (FA)



[With bellows]

Port position diagram (View A)

*1 : ®, ® and ① indicate the cushion needle position.

*2 : l dimensions below decimal point are rounded up.

*3 : For the dimensions of the accessories, refer to page 798.

RD: Rod side max. sensitivity position

HD: Head side max. sensitivity position

Code	Rod side flange (FA) basic dimensions																		
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	C	EE	F	GA	GB	J	KA	KB	KK	LL	M
φ125	50	46	140	109	19.5	140	118	70	47	Rc1/2	200	29.5	30.5	55	150	115	M30×1.5	291	11
φ140	50	46	157	116.5	18.5	157	128.5	78.5	47	Rc3/4	216	33.5	34.5	55	167	122.5	M30×1.5	318	11
φ160	56	55	177	128	23	177	146.5	88.5	53	Rc3/4	245	33.5	34.5	62.5	190	134	M36×1.5	350	13
φ180	63	60	200	146	14	200	170	100	60	Rc3/4	264	33.5	34.5	68.5	213	152	M40×1.5	373	15

Code	Mounting dimensions																		
Bore size (mm)	MM	MN	MO	NN	P	QA	QB	T	V	WF	X	FC	FD	FF	FG	FH	FL	FM	FT
φ125	35	14	30	91	13	14	15	18	35	55	407	100	19	35	311	140	190	230	20
φ140	35	14	30	102	15	16	17	18	35	57	436	112	19	37	338	157	212	250	20
φ160	40	16	36	105	15	16	17	21	48	71.5	490.5	118	19	49.5	372	177	236	280	22
φ180	45	18	41	109	15	16	17	24	53	78.5	529.5	132	24	53.5	398	200	265	310	25

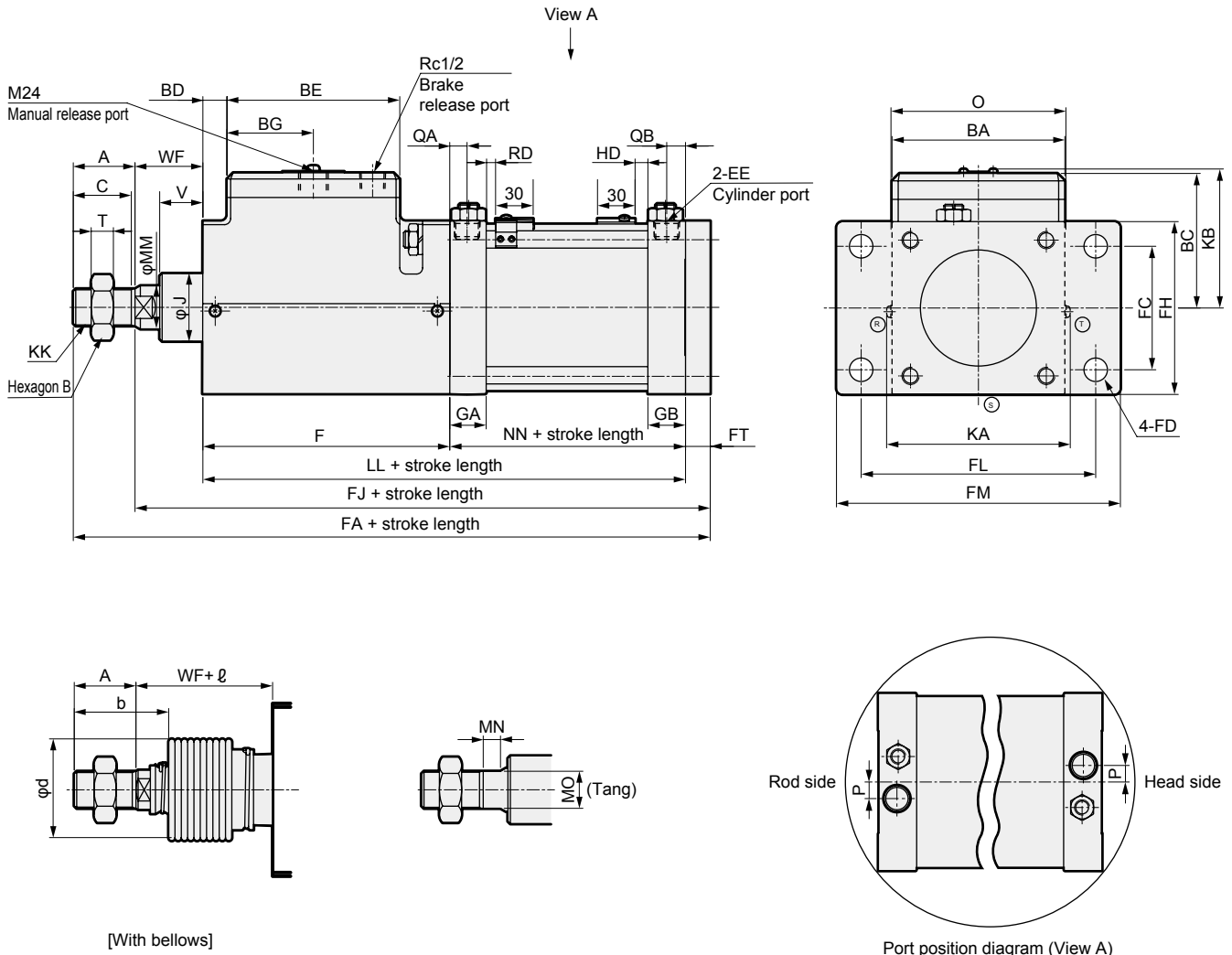
Code	With bellows				With switch							
Bore size (mm)					T0, T5, T2, T3		T2W, T3W		T2Y, T3Y, T2YD, T1, T2J		T8	
	b	d	l		RD	HD	RD	HD	RD	HD	RD	HD
φ125	74	75	(Stroke length/4.55) + 11		8.5	4.0	10.5	5.5	7.5	2.5	2.5	0.0
φ140	74	75	(Stroke length/4.55) + 9		8.5	7.0	10.5	8.5	7.5	5.5	2.5	0.5
φ160	81	80	(Stroke length/5.15) + 9		10.5	8.0	12.5	10.0	9.5	7.0	4.5	1.5
φ180	90	90	(Stroke length/5.15) + 9		13.0	9.5	14.5	11.5	11.5	8.5	6.5	3.5

JSC4-N Series

Dimensions (φ125 to φ180)



● Head side flange (FB)



*1 : ⑧, ⑨ and ⑩ indicate the cushion needle position.

*2 : ℓ dimensions below decimal point are rounded up.

*3 : For the dimensions of the accessories, refer to page 798.

RD: Rod side max. sensitivity position

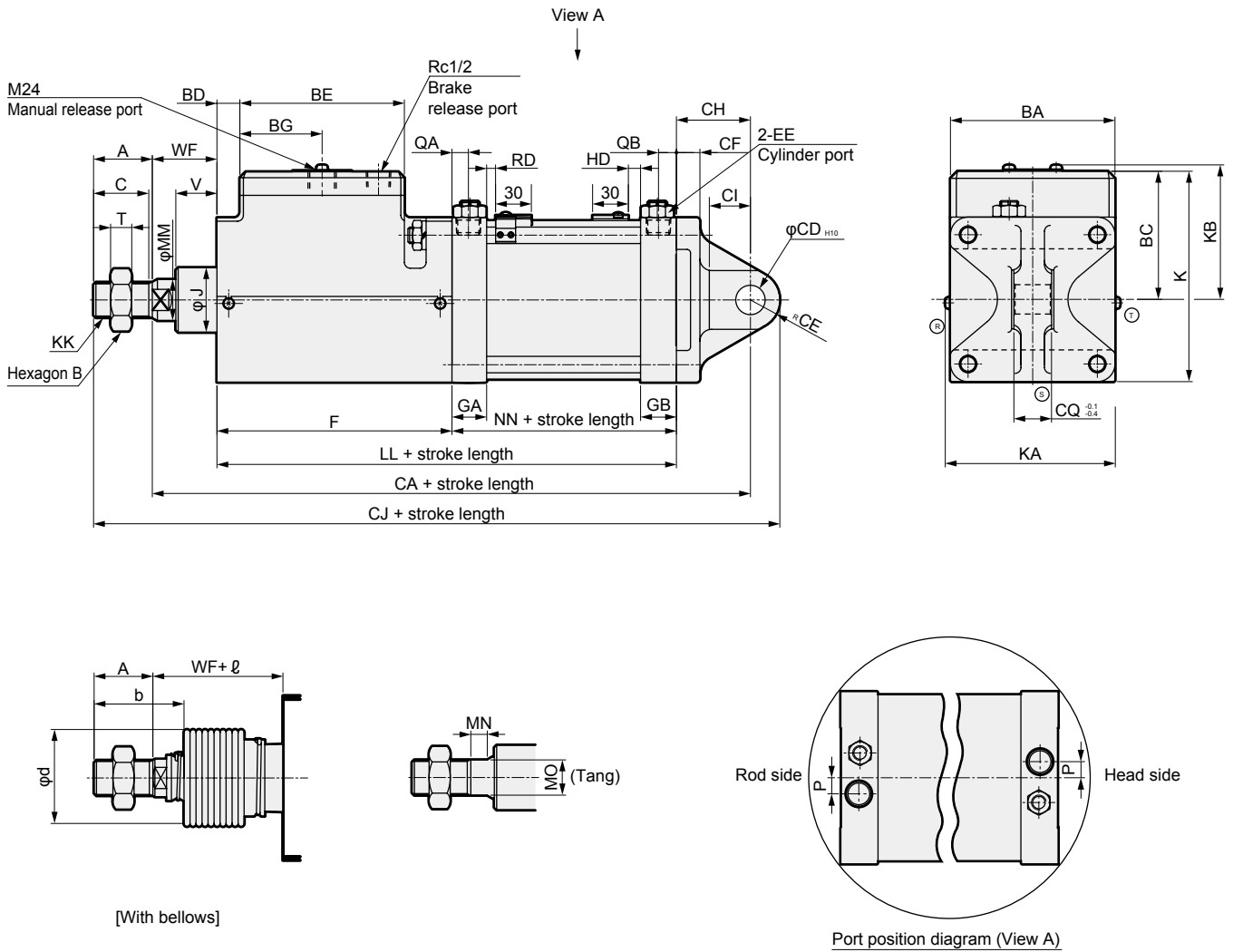
HD: Head side max. sensitivity position

Code	Head side flange (FB) basic dimensions																		
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	C	EE	F	GA	GB	J	KA	KB	KK	LL	MM
φ125	50	46	140	109	19.5	140	118	70	47	Rc1/2	200	29.5	30.5	55	150	115	M30×1.5	291	35
φ140	50	46	157	116.5	18.5	157	128.5	78.5	47	Rc3/4	216	33.5	34.5	55	167	122.5	M30×1.5	318	35
φ160	56	55	177	128	23	177	146.5	88.5	53	Rc3/4	245	33.5	34.5	62.5	190	134	M36×1.5	350	40
φ180	63	60	200	146	14	200	170	100	60	Rc3/4	264	33.5	34.5	68.5	213	152	M40×1.5	373	45
Code											Mounting dimensions								
Bore size (mm)	MN	MO	NN	P	QA	QB	T	V	WF	FA	FC	FD	FH	FJ	FL	FM	FT		
φ125	14	30	91	13	14	15	18	35	55	410	100	19	140	360	190	230	14		
φ140	14	30	102	15	16	17	18	35	57	444	112	19	157	394	212	112	19		
φ160	16	36	105	15	16	17	21	48	71.5	496.5	118	19	177	440.5	236	118	19		
φ180	18	41	109	15	16	17	24	53	78.5	539.5	132	24	200	476.5	265	132	25		
Code	With bellows						With switch												
Bore size (mm)							T0,T5,T2,T3		T2W,T3W		T2Y,T3Y,T2YD,T1,T2J				T8				
	b	d	ℓ				RD	HD	RD	HD	RD		HD		RD	HD			
φ125	74	75	(Stroke length/4.55) + 11				8.5	4.0	10.5	5.5	7.5		2.5		2.5	0.0			
φ140	74	75	(Stroke length/4.55) + 9				8.5	7.0	10.5	8.5	7.5		5.5		2.5	0.5			
φ160	81	80	(Stroke length/5.15) + 9				10.5	8.0	12.5	10.0	9.5		7.0		4.5	1.5			
φ180	90	90	(Stroke length/5.15) + 9				13.0	9.5	14.5	11.5	11.5		8.5		6.5	3.5			

Dimensions (φ125 to φ180)



● Eye bracket (CA)



*1 : ®, ® and ⑦ indicate the cushion needle position.

*2 : ℓ dimensions below decimal point are rounded up.

*3 : For the dimensions of the accessories, refer to page 798.

RD: Rod side max. sensitivity position

HD: Head side max. sensitivity position

Code	Eye bracket (CA) basic dimensions																		
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	C	EE	F	GA	GB	J	KA	KB	KK	LL	MM
φ125	50	46	140	109	19.5	140	118	70	47	Rc1/2	200	29.5	30.5	55	150	115	M30×1.5	291	35
φ140	50	46	157	116.5	18.5	157	128.5	78.5	47	Rc3/4	216	33.5	34.5	55	167	122.5	M30×1.5	318	35
φ160	56	55	177	128	23	177	146.5	88.5	53	Rc3/4	245	33.5	34.5	62.5	190	134	M36×1.5	350	40
φ180	63	60	200	146	14	200	170	100	60	Rc3/4	264	33.5	34.5	68.5	213	152	M40×1.5	373	45

Code	Mounting dimensions									
Bore size (mm)	MN	MO	NN	P	QA	QB	T	V	WF	CA
φ125	14	30	91	13	14	15	18	35	55	409
φ140	14	30	102	15	16	17	18	35	57	450
φ160	16	36	105	15	16	17	21	48	71.5	496.5
φ180	18	41	109	15	16	17	24	53	78.5	541.5

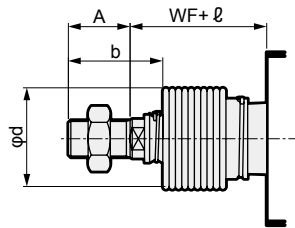
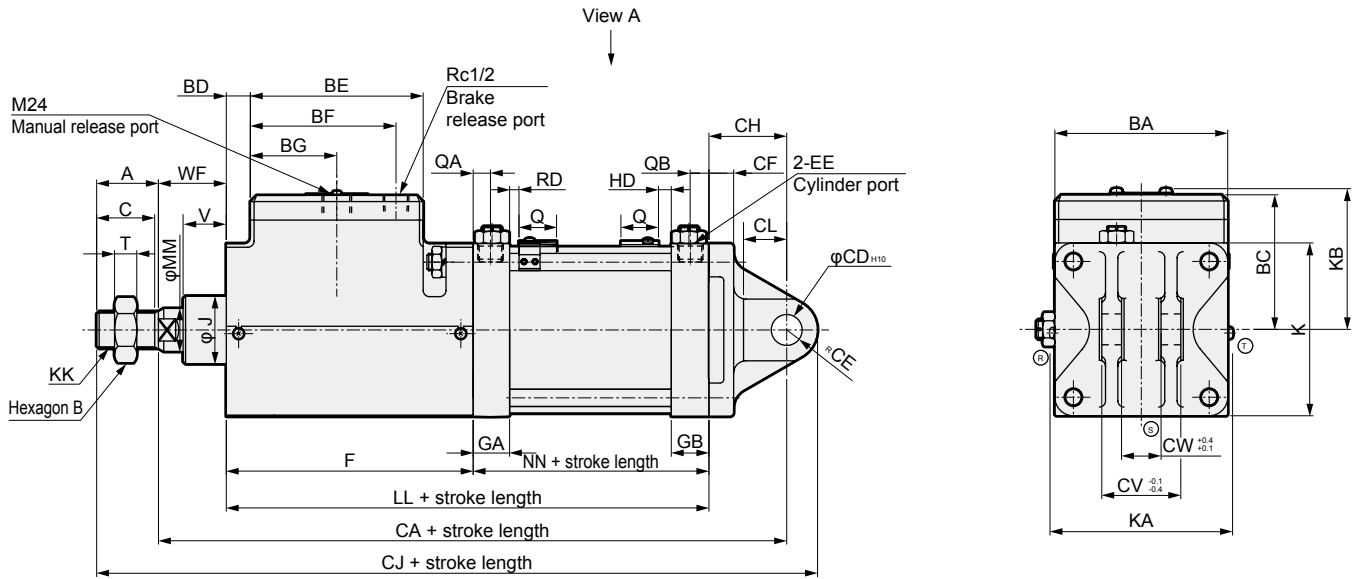
Code	With bellows					With switch									
Bore size (mm)	b	d	ℓ			T0, T5, T2, T3		T2W, T3W		T2Y, T3Y, T2YD, T1, T2J		T8			
						RD	HD	RD	HD	RD	HD	RD	HD	RD	HD
φ125	74	75	(Stroke length/4.55) + 11			8.5	4.0	10.5	5.5	7.5	2.5	2.5	0.0		
φ140	74	75	(Stroke length/4.55) + 9			8.5	7.0	10.5	8.5	7.5	5.5	2.5	0.5		
φ160	81	80	(Stroke length/5.15) + 9			10.5	8.0	12.5	10.0	9.5	7.0	4.5	1.5		
φ180	90	90	(Stroke length/5.15) + 9			13.0	9.5	14.5	11.5	11.5	8.5	6.5	3.5		

JSC4-N Series

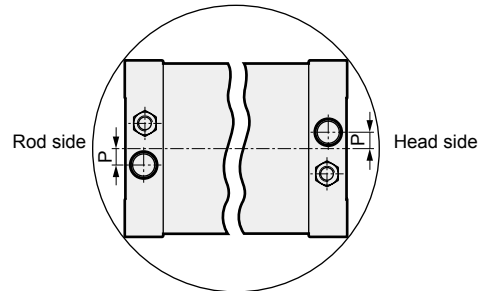
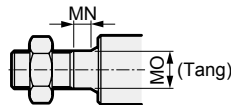
Dimensions (φ125 to φ180)



● Clevis bracket (CB)



[With bellows]



Port position diagram (View A)

*1 : ⑧, ⑨ and ⑩ indicate the cushion needle position.

*2 : ℓ dimensions below decimal point are rounded up.

*3 : For the dimensions of the accessories, refer to page 798.

RD: Rod side max. sensitivity position

HD: Head side max. sensitivity position

Code	Clevis bracket (CB) basic dimensions																		
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	C	EE	F	GA	GB	J	KA	KB	KK	LL	MM
φ125	50	46	140	109	19.5	140	118	70	47	Rc1/2	200	29.5	30.5	55	150	115	M30×1.5	291	35
φ140	50	46	157	116.5	18.5	157	128.5	78.5	47	Rc3/4	216	33.5	34.5	55	167	122.5	M30×1.5	318	35
φ160	56	55	177	128	23	177	146.5	88.5	53	Rc3/4	245	33.5	34.5	62.5	190	134	M36×1.5	350	40
φ180	63	60	200	146	14	200	170	100	60	Rc3/4	264	33.5	34.5	68.5	213	152	M40×1.5	373	45

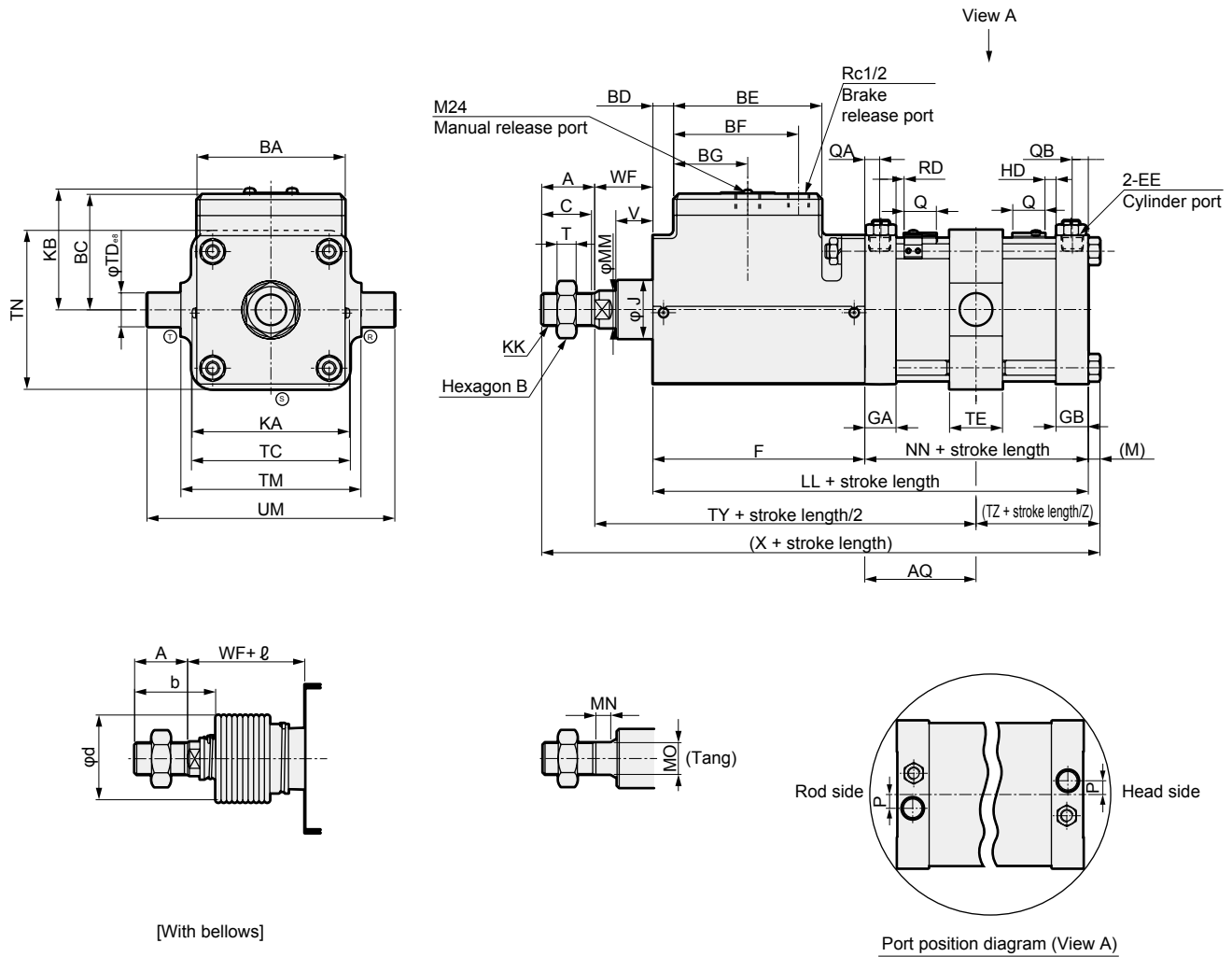
Code											Mounting dimensions								
Bore size (mm)	MN	MO	NN	P	QA	QB	T	V	WF	CA	CD	CE	CF	CH	CI	CJ	CV	CW	
φ125	14	30	91	13	14	15	18	35	55	409	25	25	20	63	35	484	64	32	
φ140	14	30	102	15	16	17	18	35	57	450	28	28	22	75	40	528	72	36	
φ160	16	36	105	15	16	17	21	48	71.5	496.5	32	32	24	75	40	584.5	80	40	
φ180	18	41	109	15	16	17	24	53	78.5	541.5	40	40	25	90	55	644.5	100	50	

Code	With bellows					With switch									
Bore size (mm)						T0,T5,T2,T3		T2W,T3W		T2Y,T3Y,T2YD,T1,T2J				T8	
	b	d	ℓ			RD	HD	RD	HD	RD		HD		RD	HD
φ125	74	75	(Stroke length/4.55) + 11			8.5	4.0	10.5	5.5	7.5		2.5		2.5	0.0
φ140	74	75	(Stroke length/4.55) + 9			8.5	7.0	10.5	8.5	7.5		5.5		2.5	0.5
φ160	81	80	(Stroke length/5.15) + 9			10.5	8.0	12.5	10.0	9.5		7.0		4.5	1.5
φ180	90	90	(Stroke length/5.15) + 9			13.0	9.5	14.5	11.5	11.5		8.5		6.5	3.5

Dimensions (φ125 to φ180)



● Intermediate trunnion (TC)



[With bellows]

Port position diagram (View A)

*1 : ®, ® and ① indicate the cushion needle position.

*2 : ℓ dimensions below decimal point are rounded up.

*3 : For the dimensions of the accessories, refer to page 798.

RD: Rod side max. sensitivity position

HD: Head side max. sensitivity position

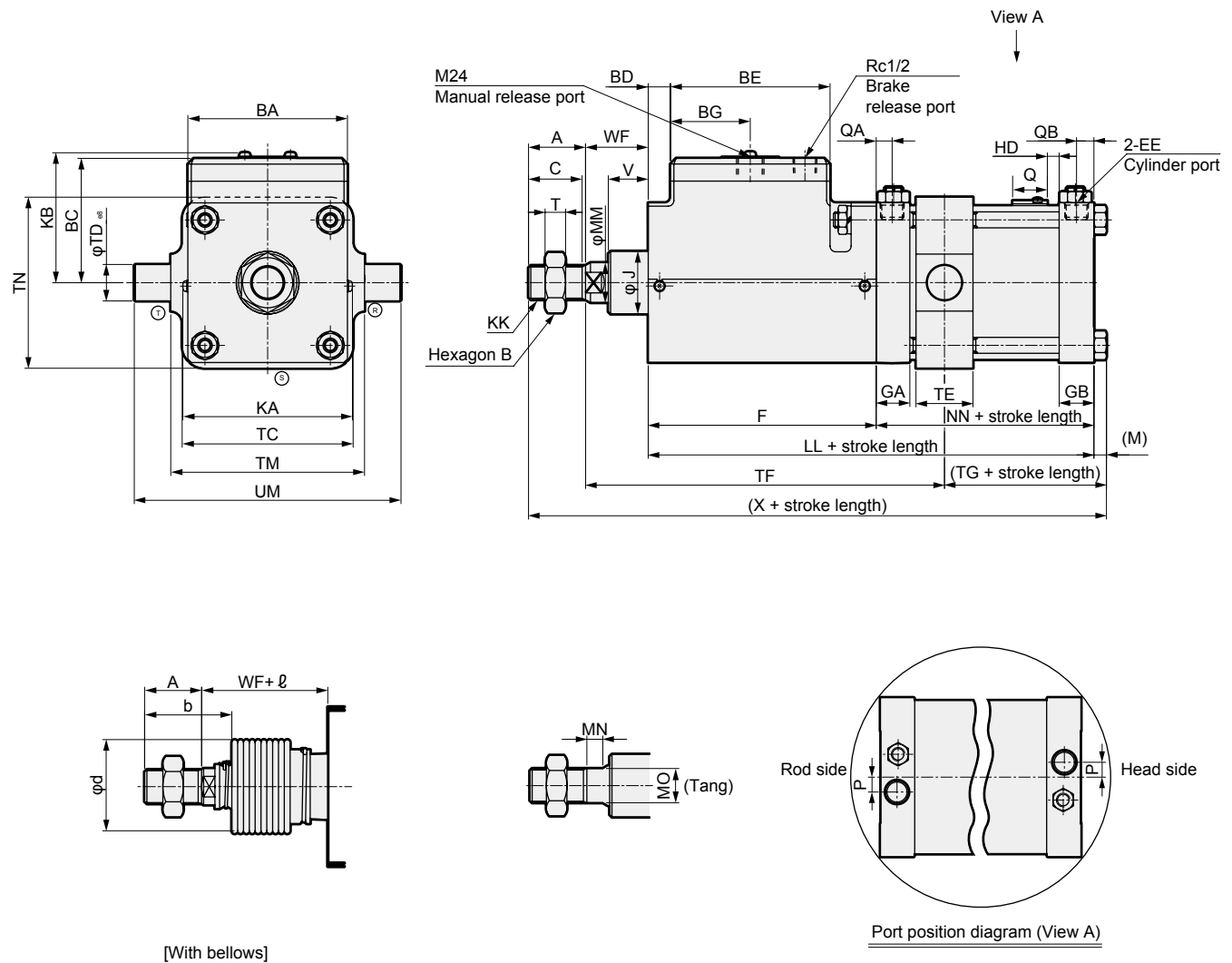
Code	Intermediate trunnion (TC) basic dimensions																		
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	C	EE	F	GA	GB	J	KA	KB	KK	LL	M
φ125	50	46	140	109	19.5	140	118	70	47	Rc1/2	200	29.5	30.5	55	150	115	M30×1.5	291	11
φ140	50	46	157	116.5	18.5	157	128.5	78.5	47	Rc3/4	216	33.5	34.5	55	167	122.5	M30×1.5	318	11
φ160	56	55	177	128	23	177	146.5	88.5	53	Rc3/4	245	33.5	34.5	62.5	190	134	M36×1.5	350	13
φ180	63	60	200	146	14	200	170	100	60	Rc3/4	264	33.5	34.5	68.5	213	152	M40×1.5	373	15
Code												Mounting dimensions							
Bore size (mm)	MM	MN	MO	NN	P	QA	QB	T	V	WF	X	AQ		TC	TN	TD	TE	TM	UM
φ125	35	14	30	91	13	14	15	18	35	55	407	45.5 + stroke length/2		150	150	32	50	170	234
φ140	35	14	30	102	15	16	17	18	35	57	436	51 + stroke length/2		154	170	36	55	190	262
φ160	40	16	36	105	15	16	17	21	48	71.5	490.5	52.5 + stroke length/2		190	190	40	60	212	292
φ180	45	18	41	109	15	16	17	24	53	78.5	529.5	54.5 + stroke length/2		210	210	45	65	236	326
Code	Mounting dimensions		With bellows						With switch										
Bore size (mm)									T0,T5,T2,T3		T2W,T3W		T2Y,T3Y,T2YD,T1,T2J			T8			
	TY	TZ	b	d	ℓ			RD	HD	RD	HD	RD		HD	RD	HD			
φ125	300	57	74	75	(Stroke length/4.55) + 11			8.5	4.0	10.5	5.5	7.5		2.5	2.5	0.0			
φ140	323.5	62.5	74	75	(Stroke length/4.55) + 9			8.5	7.0	10.5	8.5	7.5		5.5	2.5	0.5			
φ160	368.5	66	81	80	(Stroke length/5.15) + 9			10.5	8.0	12.5	10.0	9.5		7.0	4.5	1.5			
φ180	396.5	70	90	90	(Stroke length/5.15) + 9			13.0	9.5	14.5	11.5	11.5		8.5	6.5	3.5			

JSC4-N Series

Dimensions (φ125 to φ180)



● Rod side trunnion (TA)



[With bellows]

Port position diagram (View A)

*1 : ⑥, ⑤ and ① indicate the cushion needle position.

*2 : ℓ dimensions below decimal point are rounded up.

*3 : For the dimensions of the accessories, refer to page 798.

RD: Rod side max. sensitivity position

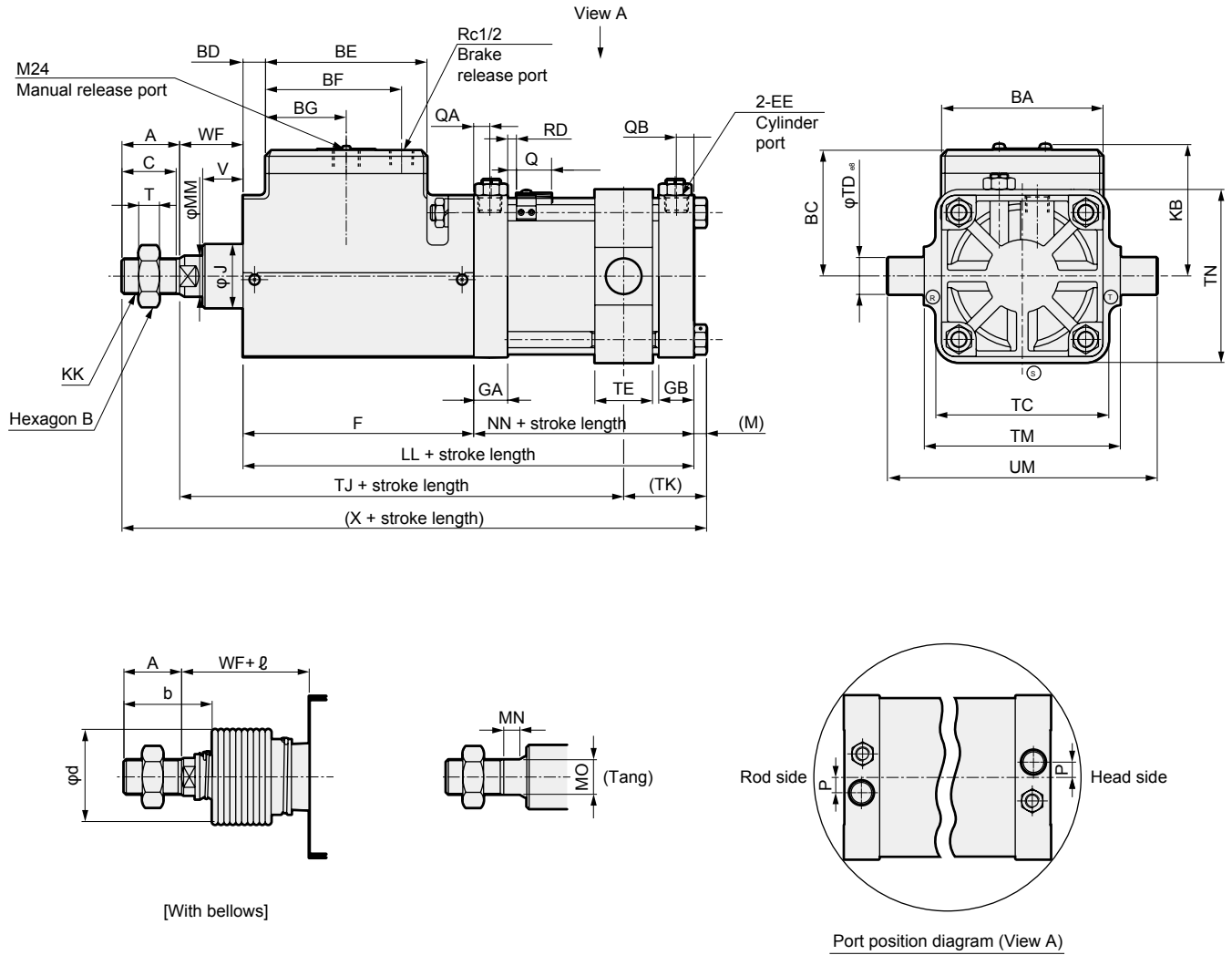
HD: Head side max. sensitivity position

Code	Rod side trunnion (TA) basic dimensions																		
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	C	EE	F	GA	GB	J	KA	KB	KK	LL	M
φ125	50	46	140	109	19.5	140	118	70	47	Rc1/2	200	29.5	30.5	55	150	115	M30×1.5	291	11
φ140	50	46	157	116.5	18.5	157	128.5	78.5	47	Rc3/4	216	33.5	34.5	55	167	122.5	M30×1.5	318	11
φ160	56	55	177	128	23	177	146.5	88.5	53	Rc3/4	245	33.5	34.5	62.5	190	134	M36×1.5	350	13
φ180	63	60	200	146	14	200	170	100	60	Rc3/4	264	33.5	34.5	68.5	213	152	M40×1.5	373	15
Code	Mounting dimensions																		
Bore size (mm)	MM	MN	MO	NN	P	QA	QB	T	V	WF	X	TC	TD	TE	TF	TG	TM	TN	UM
φ125	35	14	30	91	13	14	15	18	35	55	407	150	32	50	315	42	170	150	234
φ140	35	14	30	102	15	16	17	18	35	57	436	154	36	55	339.5	46.5	190	170	262
φ160	40	16	36	105	15	16	17	21	48	71.5	490.5	190	40	60	385.5	49	212	190	292
φ180	45	18	41	109	15	16	17	24	53	78.5	529.5	210	45	65	414	52.5	236	210	326
Code	With bellows									With switch									
Bore size (mm)	b	d	ℓ			T0,T5,T2,T3		T2W,T3W		T2Y,T3Y,T2YD,T1,T2J		T8							
						RD	HD	RD	HD	RD	HD	RD	HD						
φ125	74	75	(Stroke length/4.55) + 11			8.5	4.0	10.5	5.5	7.5	2.5	2.5	0.0						
φ140	74	75	(Stroke length/4.55) + 9			8.5	7.0	10.5	8.5	7.5	5.5	2.5	0.5						
φ160	81	80	(Stroke length/5.15) + 9			10.5	8.0	12.5	10.0	9.5	7.0	4.5	1.5						
φ180	90	90	(Stroke length/5.15) + 9			13.0	9.5	14.5	11.5	11.5	8.5	6.5	3.5						

Dimensions (φ125 to φ180)



● Head side trunnion (TB)



*1 : ®, ® and ① indicate the cushion needle position.

*2 : l dimensions below decimal point are rounded up.

*3 : For the dimensions of the accessories, refer to page 798.

RD: Rod side max. sensitivity position

HD: Head side max. sensitivity position

Code	Head side trunnion (TB) basic dimensions																		
Bore size (mm)	A	B	BA	BC	BD	BE	BF	BG	C	EE	F	GA	GB	J	KA	KB	KK	LL	M
φ125	50	46	140	109	19.5	140	118	70	47	Rc1/2	200	29.5	30.5	55	150	115	M30×1.5	291	11
φ140	50	46	157	116.5	18.5	157	128.5	78.5	47	Rc3/4	216	33.5	34.5	55	167	122.5	M30×1.5	318	11
φ160	56	55	177	128	23	177	146.5	88.5	53	Rc3/4	245	33.5	34.5	62.5	190	134	M36×1.5	350	13
φ180	63	60	200	146	14	200	170	100	60	Rc3/4	264	33.5	34.5	68.5	213	152	M40×1.5	373	15
Code	Mounting dimensions																		
Bore size (mm)	MM	MN	MO	NN	P	QA	QB	T	V	WF	X	TC	TD	TE	TJ	TK	TM	TN	UM
φ125	35	14	30	91	13	14	15	18	35	55	407	150	32	50	285	72	170	150	234
φ140	35	14	30	102	15	16	17	18	35	57	436	154	36	55	307.5	78.5	190	170	262
φ160	40	16	36	105	15	16	17	21	48	71.5	490.5	190	40	60	351.5	83	212	190	292
φ180	45	18	41	109	15	16	17	24	53	78.5	529.5	210	45	65	379	87.5	236	210	326
Code	With bellows										With switch								
Bore size (mm)	b	d	l			T0, T5, T2, T3		T2W, T3W		T2Y, T3Y, T2YD, T1, T2J		T8							
						RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	HD
φ125	74	75	(Stroke length/4.55) + 11			8.5	4.0	10.5	5.5	7.5	2.5	2.5	0.0						
φ140	74	75	(Stroke length/4.55) + 9			8.5	7.0	10.5	8.5	7.5	5.5	2.5	0.5						
φ160	81	80	(Stroke length/5.15) + 9			10.5	8.0	12.5	10.0	9.5	7.0	4.5	1.5						
φ180	90	90	(Stroke length/5.15) + 9			13.0	9.5	14.5	11.5	11.5	8.5	6.5	3.5						

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

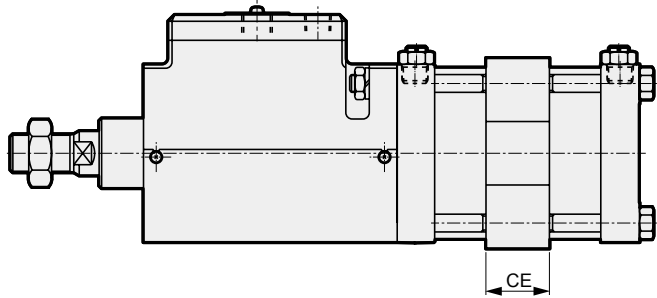
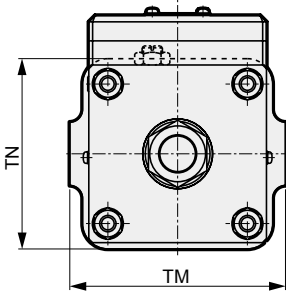
● About the non-sag block (φ125, φ140)

A non-sag block will be added to the middle part of the cylinder if the stroke length is in the range given in the table below.

Additional stroke length to the non-sag block

Bore size (mm)	Stroke length (mm)
φ125	1801 to 2000
φ140	

Code	TM	TN	CE
Bore size (mm)			
φ125	150	150	50
φ140	190	170	55



MEMO

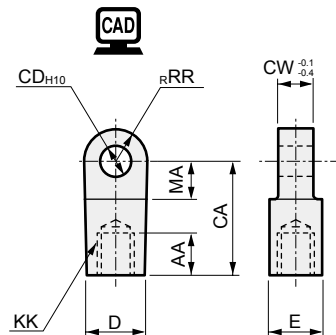
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

JSC3 Series common accessory dimensions (rod eye/No. 2 bracket) $\phi 40$ to $\phi 100$

- The installation dimensions for the clevis, rod eye, and No. 2 bracket (ϕCD , CW , CQ) are all the same, and any combination is possible.
- Specify the model No. when placing an order.

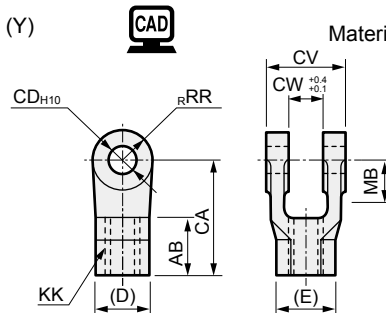
● Rod eye/clevis dimensions

Rod eye (I)



Material: Cast iron
Painting

Rod clevis (Y)



Material: Cast iron
Painting

Model No.	Bore size (mm)	AA	CA	CD	CW	D	E	KK	MA	RR	Weight (kg)
S1-I-40	40	20	50	12	18	27	27	M14×1.5	21	16	0.26
S1-I-50	50	21	50	12	18	27	27	M18×1.5	21	16	0.24
S1-I-63	63	21	50	14	20	27	27	M18×1.5	21	16	0.25
S1-I-80	80	30	70	20	28	46	41	M22×1.5	30	25	0.80
S1-I-100	100	30	70	20	28	46	41	M26×1.5	30	25	0.84

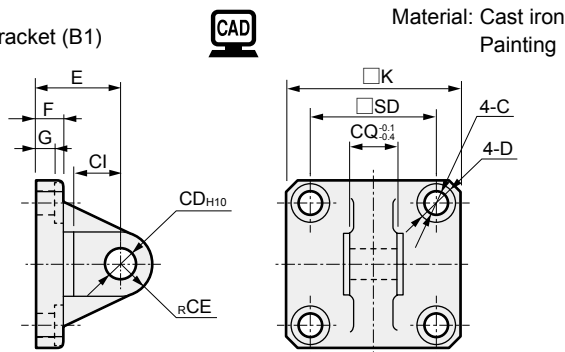
Model No.	Bore size (mm)	AB	CA	CD	CV	CW	D	E	KK	MB	RR	Weight (kg)
S1-Y-40	40	24	50	12	36	18	27	31.2	M14×1.5	19	16	0.25
S1-Y-50	50	24	50	12	36	18	27	31.2	M18×1.5	19	16	0.24
S1-Y-63	63	24	50	14	40	20	27	31.2	M18×1.5	19	16	0.26
S1-Y-80	80	35	70	20	56	28	41	47.3	M22×1.5	30	25	0.90
S1-Y-100	100	35	70	20	56	28	41	47.3	M26×1.5	30	25	0.85

*1: The MB dimension is the effective length of the CW dimension.

*2: A pin and a snap ring are attached.

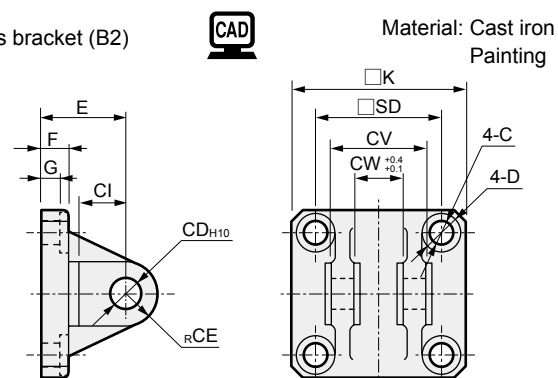
● No. 2 bracket dimensions

Eye bracket (B1)



Material: Cast iron
Painting

Clevis bracket (B2)



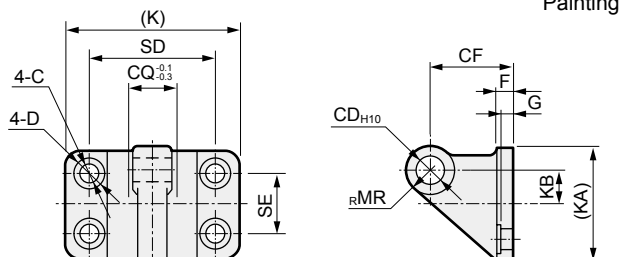
Material: Cast iron
Painting

Model No.	Bore size (mm)	C	CD	CE	CI	CQ	D	E	F	G	K	SD	Weight (kg)
S1-B1-40	40	9	12	12	18	18	14	32	10	6.5	57	40.5	0.32
S1-B1-50	50	9	12	12	18	18	14	32	10	6.5	66	48	0.38
S1-B1-63	63	9	14	16	24	20	14	37	10	6.5	80	59	0.57
S1-B1-80	80	14	20	20	30	28	20	52	14	10.5	98	74	1.27
S1-B1-100	100	14	20	20	30	28	20	52	16	10.5	118	90	1.64

Model No.	Bore size (mm)	C	CD	CE	CI	CV	CW	D	E	F	G	K	SD	Wt (kg)
S1-B2-40	40	9	12	12	18	36	18	14	32	10	6.5	57	40.5	0.36
S1-B2-50	50	9	12	12	18	36	18	14	32	10	6.5	66	48	0.41
S1-B2-63	63	9	14	16	24	40	20	14	37	10	6.5	80	59	0.62
S1-B2-80	80	14	20	20	30	56	28	20	52	14	10.5	98	74	1.48
S1-B2-100	100	14	20	20	30	56	28	20	52	16	10.5	118	90	1.82

Note: A pin and a snap ring are attached.

Eye bracket (B3)



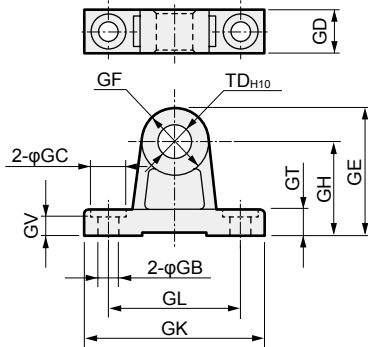
Material: Cast iron
Painting

Model No.	Applicable bore size (mm)	C	CD	CF	CQ	D	F	G	K	KA	KB	MR	SD	SE	Weight (kg)
S1-B3-40	$\phi 40/\phi 50$	9	12	40	18	14	8	6.5	85	57	17.5	12	65	35	0.44
S1-B3-63	$\phi 63$	11	14	50	20	17	10	8	105	67	20	16	80	40	0.77
S1-B3-80	$\phi 80/\phi 100$	14	20	65	28	20	12	10	130	93	30	20	100	60	1.64

JSC3 Series common accessory dimensions (No. 2 bracket/pin/bellows/indicator) $\phi 40$ to $\phi 100$

● Trunnion No. 2 bracket dimensions

Material: Cast iron
Painting



Code Model No.	GB	GC	GD	GE	GF	GH	GK	GL	GT	GV	TD	Weight (kg)
S1-B4-40	9	17	19	61	32	45	80	60	12	11	16	0.25
S1-B4-50	9	17	19	63	36	45	85	65	12	11	18	0.28
S1-B4-63	11	22	24	80	40	60	100	75	14	13	20	0.52
S1-B4-80	14	24	26	85	50	60	115	85	14	13	25	0.70
S1-B4-100	14	24	35	107	64	75	130	100	17	16	35	1.48

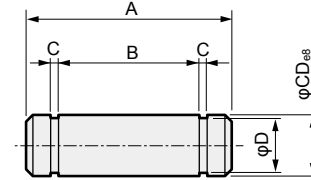
Note: The bracket is provided as 2 pcs./set.

● Pin dimensions

Pin (P)

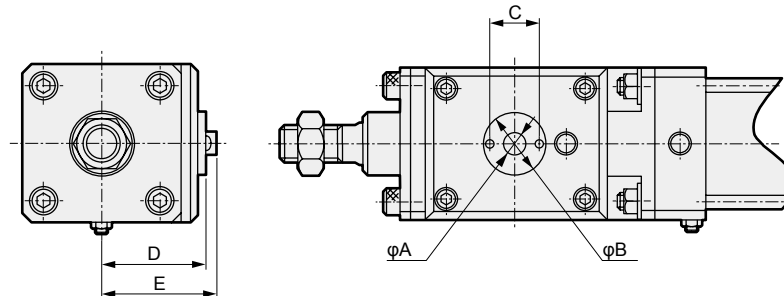


Material: Carbon steel
Zinc chromate treatment



Model No.	Applicable bore size (mm)	A	B	C	D	CD	Applicable snap ring	Weight (kg)
S1-P-40	40, 50	43.5	36.2	1.15	11.5	12	C type for shaft 12	0.04
S1-P-63	63	47.5	40.2	1.15	13.4	14	C type for shaft 14	0.06
S1-P-80	80, 100	64	56.2	1.35	19	20	C type for shaft 20	0.16

● Indicator



Code Bore size (mm)	A	B	C	D	E
$\phi 40$	8	25	18	51	51 to 59
$\phi 50$	8	25	18	55.5	55.5 to 63.5
$\phi 63$	10	32	24	59	59 to 68
$\phi 80$	12	32	24	69	69 to 80
$\phi 100$	14	32	24	78	78 to 90

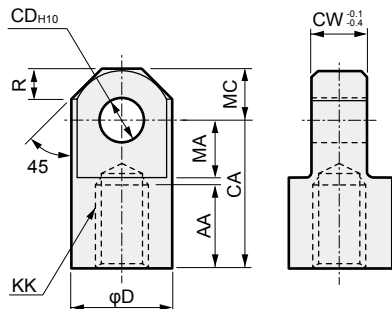
- The operational status of the brake is easily detectable from outside.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

JSC4 Series common accessory dimensions (rod eye, bracket, pin) $\phi 125$ to $\phi 180$

● Rod eye for JSC4 (I)

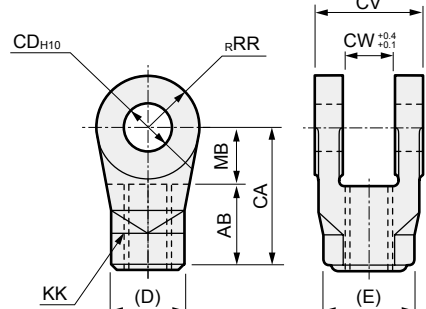
Material: Cast iron
Painting



Code	AA	CA	CD	CW	D	KK	MA	MC	R	Weight (kg)
Model No.										
SCS2-125-I	50	85	25	32	55	M30×1.5	32	27.5	15.5	1.25
SCS2-140-I	50	90	28	36	60	M30×1.5	35	30	18	1.65
SCS2-160-I	60	105	32	40	70	M36×1.5	40	35	21	2.55
SCS2-180-I	65	115	40	50	85	M40×1.5	47.5	42.5	29	4.20

● Rod clevis for JSC4 (Y)

Material: Cast iron
Painting

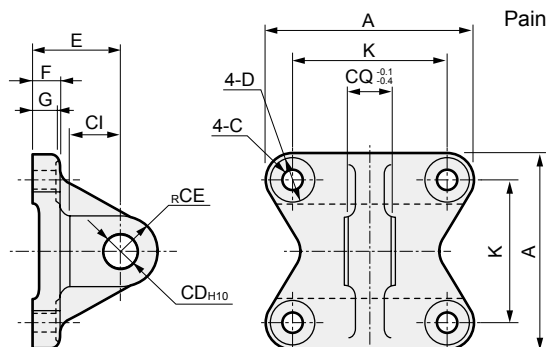


Code	AB	CA	CD	CV	CW	D	E	KK	MB	RR	Weight (kg)
Model No.											
SCS2-125-Y	50	85	25	64	32	46	53.1	M30×1.5	35	27.5	1.30
SCS2-140-Y	50	90	28	72	36	46	53.1	M30×1.5	40	30	1.65
SCS2-160-Y	60	105	32	80	40	55	63.5	M36×1.5	45	35	2.55
SCS2-180-Y	65	115	40	100	50	60	69.3	M40×1.5	50	42.5	4.40

Note: A pin and a snap ring are attached.

● Eye bracket for JSC4 (B1)

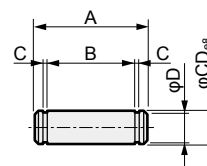
Material: Cast iron
Painting



Code	A	C	CD	CE	CI	CQ	D	E	F	G	K	Weight (kg)
Model No.												
SCS2-125-B1	140	16	25	25	35	32	23	63	20	18	110	2.35
SCS2-140-B1	154	16	28	28	40	36	23	75	22	20	124	3.30
SCS2-160-B1	174	18	32	32	40	40	26	75	24	22	142	4.65
SCS2-180-B1	196	20	40	40	55	50	29	90	25	23	160	6.75

● Pin (P)

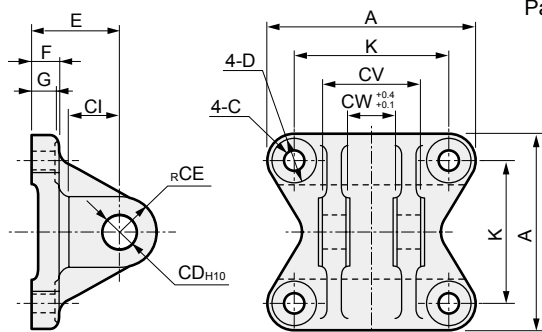
Material: Carbon steel
Zinc chromate treatment



Code	A	B	C	CD	D	Applicable snap ring	Weight (kg)	Compatibility
Model No.								
SCS2-125-P	75	66.3	1.35	25	23.9	C for shaft 25	0.25	JSC3-125
SCS2-140-P	84	74.7	1.65	28	26.6	C for shaft 28	0.40	JSC3-140
SCS2-160-P	92	82.7	1.65	32	30.3	C for shaft 32	0.50	JSC3-160
SCS2-180-P	115	103.2	1.9	40	38	C for shaft 40	1.15	JSC3-180

● Clevis bracket for JSC4 (B2)

Material: Cast iron
Painting



Code	A	C	CD	CE	CI	CV	CW	D	E	F	G	K	Weight (kg)
Model No.													
SCS2-125-B2	140	16	25	25	35	64	32	23	63	20	18	110	2.65
SCS2-140-B2	154	16	28	28	40	72	36	23	75	22	20	124	3.85
SCS2-160-B2	174	18	32	32	40	80	40	26	75	24	22	142	5.45
SCS2-180-B2	196	20	40	40	55	100	50	29	90	25	23	160	8.70

Note: A pin and a snap ring are attached.

MEMO

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
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HR
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ShkAbs
FJ
FK
SpdContr
Ending

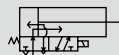


Brake cylinder Double acting/with valve for brake

JSC3-V Series

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

JIS symbol



Specifications

Descriptions		JSC3-V (with switch)					JSC3-SV (with switch)				
Bore size	mm	φ40	φ50	φ63	φ80	φ100	φ40	φ50	φ63	φ80	φ100
Actuation		Double acting/with valve for brake					Double acting/low pressure release/with valve for brake				
Working fluid		Compressed air									
Max. working pressure MPa		0.7 (≈100 psi, 7 bar)									
Min. working pressure MPa	Brake section	0.3 (≈44 psi, 3 bar)					0.25 (≈36 psi, 2.5 bar)				
	Cylinder	0.1 (≈15 psi, 1 bar)									
Proof pressure MPa		1.6 (≈230 psi, 16 bar)									
Ambient temperature °C		-5 (23°F) to 50 (122°F) (no freezing)									
Port size	Brake section	Rc1/8		Rc1/4		Rc3/8	Rc1/8		Rc1/4		Rc3/8
	Cylinder	Rc1/4	Rc3/8		Rc1/2		Rc1/4	Rc3/8		Rc1/2	
Stroke tolerance mm		$\begin{matrix} +0.9 \\ 0 \end{matrix}$ (to 360), $\begin{matrix} +1.4 \\ 0 \end{matrix}$ (to 1000)									
Working piston speed mm/s		50 to 1000 (Operate within the allowable absorbed energy.)									
Cushion		Air cushion									
Effective air cushion length mm		14.6	16.6	16.6	20.6	23.6	14.6	16.6	16.6	20.6	23.6
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)									
Holding force N		980	1569	2451	3922	6178	784	1255	1961	3138	4941
Allowable absorbed energy J	Cushioned	4.29	8.37	15.8	27.9	49.8	4.29	8.37	15.8	27.9	49.8
	Without cushion	0.067	0.079	0.079	0.201	0.301	0.067	0.079	0.079	0.201	0.301
		Note: Without any cushion, this product cannot absorb large energy generated by an external load. We recommend using an external shock absorber.									

Note: The valve specifications are the same as those of the standard model "4KB2". For details, refer to "Pneumatic Valves (CB-23SA)".

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Available stroke length (mm)	Min. stroke length (mm)
φ40	50, 75, 100, 150, 200, 250 300, 350, 400, 450, 500	600	1000	1
φ50			2000	
φ63		700	2500	
φ80				
φ100				

*1 : The min. stroke length varies depending on switch mounting method. Refer to the following table.

The custom stroke length is available in 1 mm increments.

*2 : The max. stroke length available for $\phi 63$ to $\phi 100$ bore size models with bellows is 2000 mm.

Min. stroke length with switch (T switch)

● Min. stroke length with T0/T5 switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting No position detection at rod side stroke end.	Head side trunnion mounting No position detection at head side stroke end
	1	2	3	4	1	2	3	4	1	2	3	4	1	1
Bore size														
$\phi 40$	20(10)	20(20)	40(40)	60(60)	20(10)	60(45)	105(75)	150(105)	110(110)	110(110)	175(145)	175(145)	50(50)	50(50)
$\phi 50$	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)
$\phi 63$	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)
$\phi 80$	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)
$\phi 100$	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)

*1 : The values in () are of T*V (radial lead wire).

*2 : When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

Min. stroke length with switch (T switch)

● Min. stroke length with T8 switch

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting No position detection at rod side stroke end.	Head side trunnion mounting No position detection 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)

*1: The values in () are of T*V (radial lead wire).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

● Min. stroke length with T2/T3 switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting No position detection at rod side stroke end.	Head side trunnion mounting No position detection 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)

*1: The values in () are of T*V (radial lead wire).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

● Min. stroke length with T1/T2Y/T3Y/T2YD switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting No position detection at rod side stroke end.	Head side trunnion mounting No position detection 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)	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)

*1: The values in () are of T*V (radial lead wire). T2YD does not have a radial lead wire (V).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

● Min. stroke length with T2W/T3W switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting No position detection at rod side stroke end.	Head side trunnion mounting No position detection at head side stroke end.
Bore size	1	2	3	4	1	2	3	4	1	2	3	4	1	1
φ40	20(5)	20(10)	20(15)	25(25)	20(5)	65(50)	110(80)	155(110)	110(80)	110(80)	170(140)	170(140)	50(35)	50(35)
φ50	20(5)	20(10)	20(15)	20(20)	20(5)	20(10)	65(40)	65(40)	110(80)	110(80)	110(60)	110(60)	50(35)	50(35)
φ63	20(5)	20(10)	20(15)	25(25)	20(5)	20(10)	65(40)	65(40)	115(85)	115(85)	115(65)	115(65)	55(40)	55(40)
φ80	15(5)	15(10)	15(15)	25(25)	15(5)	15(10)	60(40)	60(40)	120(90)	120(90)	120(70)	120(70)	55(40)	55(40)
φ100	10(5)	10(10)	20(20)	25(25)	10(5)	10(10)	60(40)	60(40)	130(100)	130(100)	130(85)	130(85)	60(45)	60(45)

*1: The values in () are of T*V (radial lead wire).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Switch specifications (T type switch)

● 1-color/2-color display/for AC magnetic field proof

	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire (*4)							Proximity 2-wire
Descriptions	T1H/ T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/T3PV (custom)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V	T8H/T8V			T2YD T2YDPT		
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay	For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller	
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*2)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	≤50 mA	≤20 mA	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Without indicator lamp	LED (Lit when ON)			Red/green LED (Lit when ON)		
Leakage current	≤ 1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33	1 m:18	1 m:33	1 m:18	1 m:18		1 m:33	1 m:18	1 m:18			1 m:33			1 m:61	
	3 m:87	3 m:49	3 m:87	3 m:49	3 m:49		3 m:87	3 m:49	3 m:49			3 m:87			3 m:166	
	5 m:142	5 m:80	5 m:142	5 m:80	5 m:80		5 m:142	5 m:80	5 m:80			5 m:142			5 m:272	

*1 : Refer to Ending Page 1 for other switch specifications.
*2 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C.
(5 to 10 mA at 60°C)
*3 : Switch for AC magnetic field (T2YD) cannot be used in DC magnetic field.
*4 : The T0/T5 switch can also be used with 220 VAC. Contact CKD about working conditions.
*5 : Dimensions depend on switch model No. Refer to Ending Page 18 for details.

Switch specifications (H type switch)

● Reed switch

Descriptions	Reed 2-wire		
	H0	H0Y (2-color display)	
Applications	For relay, programmable controller	Dedicated for programmable controller	
Load voltage/ current	12/24 VDC 5 to 50 mA	110 VAC 7 to 20 mA	24 VDC, 5 to 20 mA (*2)
Indicator lamp	Green LED (Lit when ON)		Red/green LED (Lit when ON)
Leakage current	10 µA or less		
Weight g	1 m:76	3 m:181	5 m:289

*1 : Refer to Ending Page 1 for other switch specifications.
*2 : Max. load current is applied at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C.
(5 to 10 mA at 60°C)

Electrical specification for brake valve

Descriptions	4KB2		
Rated voltage (V)	100 AC(50/60 Hz)	200 AC(50/60 Hz)	24 DC
Starting current (A)	0.056/0.044	0.028/0.022	0.075
Holding current (A)	0.028/0.022	0.014/0.011	0.075
Power consumption (W)	1.8/1.4		1.8
Thermal class	Class B (molded coil)		

*1 : 100/200 VAC coil is available for 110/220 VAC (60 Hz).

*2 : The valve specifications are the same as those of the standard model 4KB2. For details, refer to "Pneumatic Valves (CB-23SA)".

Cylinder weight

[Unit: kg]

Item/mounting	Product weight when stroke length (S) = 0 mm						Switch weight	Mounting bracket weight		Additional weight per S = 100 mm	Valve weight
Bore size (mm)	Basic (00)	Foot (LB)	Flange (FA, FB)	Eye bracket (CA)	Clevis bracket (CB)	Trunnion (TC)		T type	H type		
φ40	2.48	2.66	2.91	2.83	2.83	2.86	Refer to the weight in the switch specifications.	0.024	0.028	0.39	0.32
φ50	3.47	3.67	3.97	3.87	3.87	3.97		0.022	0.026	0.46	
φ63	5.09	5.49	6.19	5.79	5.79	5.89		0.020	0.024	0.50	0.35
φ80	8.15	8.85	9.95	9.65	9.65	9.45		0.026	0.029	0.90	
φ100	14.70	15.70	17.40	16.90	16.90	17.30		0.024	0.028	1.12	0.49
(Example) Product weight of JSC3-V-LB-50B-200-T0H-D											
Product weight for stroke length 0 mm ...								3.67 kg			
Additional weight for stroke length 200 mm ...								$0.46 \times \frac{200}{100} = 0.92$ kg			
Weight of 2 TOH switches								0.018×2=0.036 kg			
Weight of 2 mounting brackets								0.022×2=0.044 kg			
Valve weight								0.32 kg			
Product weight								3.67+0.92+0.036+0.044+0.32=4.990 kg			

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
φ40	Push	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
φ50	Push	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
φ63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
φ80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
φ100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

JSC3-V Series

How to order

Without switch (built-in magnet for switch)

JSC3-V-LB-40-B-50-1-S-I

With switch (built-in magnet for switch)

JSC3-V-LB-40-B-50-1-T0H-R-S-I

With strong magnetic field proof (for H0, H0Y switches) switch (built-in magnet for switch)

JSC3-VL2-LB-40-B-50-1-H0-R-S-I

A Brake release pressure
B Mounting *1
Model No.

C Bore size

D Port thread

E Cushion

F Stroke length
*2 *3 *4

G Valve voltage

H Switch model No. *5
* indicates the lead wire length.

I Switch quantity
*6

J Option
*7

K Accessory
*8

⚠ Precautions for model selection

- *1 : Mounting bracket will be shipped assembled with the product.
(Head side special flange is attached separately)
- *2 : If the stroke exceeds the max. stroke length, refer to Ending Page 69.
- *3 : The max. stroke length available for φ63 to φ100 bore size models with bellows is 2000 mm.
- *4 : Refer to pages 800 to 801 for the min. stroke length with switch.
- *5 : T2YD, T2YDT, H0, and H0Y are strong magnetic field proof switches.
- *6 : When selecting TA or TB as mounting, the switch quantity is limited to "H" (1 on head side) for TA, and "R" (1 on rod side) for TB.
- *7 : For S, T, and G position indications, check the respective dimensions.
- *8 : "I" and "Y" cannot be selected together.
- *9 : Refer to Ending Page 85 for custom specifications of rod end form.

[Example of model No.]

JSC3-V-LB-40B-50-1-T0H-R-S-I

Model: Brake cylinder Double acting/with valve for brake

- A** Brake release pressure: Standard 0.3 MPa
- B** Mounting : Axial foot
- C** Bore size : φ40 mm
- D** Port thread : Rc thread
- E** Cushion : Both sides cushioned
- F** Stroke length : 50 mm
- G** Valve voltage : 100 VAC
- H** Switch model No. : Proximity switch T0H, lead wire 1 m
- I** Switch quantity : 1 on rod side
- J** Option : Cushion needle position S
- K** Accessory : Rod eye

Code	Content		
A Brake release pressure			
Blank	Standard (0.3 MPa)		
S	Low pressure release (0.25 MPa)		
B Mounting			
00	Basic		
LB	Axial foot		
FA	Rod side flange		
FB	Head side flange		
FC	Head side special flange		
CA	Eye bracket		
CB	Clevis bracket (pin and snap ring attached)		
TC	Intermediate trunnion		
TA	Rod side trunnion		
TB	Head side trunnion		
C Bore size (mm)			
40	φ40		
50	φ50		
63	φ63		
80	φ80		
100	φ100		
D Port thread			
Blank	Rc thread		
N	NPT thread (custom order product)		
G	G thread (custom order product)		
E Cushion			
B	Both sides cushioned		
R	Rod side cushioned		
H	Head side cushioned		
N	Without cushion		
F Stroke length (mm)			
Bore size	Stroke length *4	Available stroke length	Custom stroke length
φ40	1 to 600	1000	In 1 mm increments
φ50	1 to 600	2000	
φ63	1 to 600	2500	
φ80	1 to 700	2500	
φ100	1 to 800	2500	
G Valve voltage			
1	100 VAC		
2	200 VAC		
3	24 VDC		
4	12 VDC		
H Switch model No.			
Refer to the switch model numbers on the following page.			
* Lead wire length			
Blank	1 m (standard)		
3	3 m (option)		
5	5 m (option)		
I Switch quantity			
R	1 on rod side		
H	1 on head side		
D	2		
T	3		
4	4 (when there are more than 4 switches, indicate switch quantity.)		
J Option			
		Max. ambient temperature	instantaneous max. temp
J	Bellows	100°C	200°C
L	Bellows	250°C	400°C
M	Piston rod material (stainless steel)		
Blank	Cushion needle position R (standard)		
S	Cushion needle position S		
T	Cushion needle position T		
G	With indicator		
K Accessory			
I	Rod eye		
Y	Rod clevis (pin and snap ring attached)		
B1	Eye bracket		
B2	Clevis bracket (pin and snap ring attached)		
B3	Eye bracket		
B4	Trunnion No. 2 bracket (2 pcs./set)		

[H] Switch model No.

T type switch						
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire
			AC	DC		
TOH*	TOV*	Reed	●	●	1-color display	2-wire
T5H*	T5V*		●	●	Without indicator lamp	
T8H*	T8V*		●	●	1-color display	
T1H*	T1V*	Proximity	●		1-color display	2-wire
T2H*	T2V*			●		3-wire
T3H*	T3V*			●		
T2WH*	T2WV*			●	2-color display	2-wire
T2YH*	T2YV*			●		
T3WH*	T3WV*			●		3-wire
T3YH*	T3YV*			●		
T3PH*	T3PV*			●	1-color display (custom order)	3-wire
T2YD*	-			●	2-color display	2-wire
T2YDT*	-			●	AC magnetic field	
T2JH*	T2JV*			●	1-color display off-delay	2-wire
H type switch						
HO*	-	Reed	●	●	Strong magnetic field proof	2-wire
HOY*	-			●	Strong magnetic field 2-color display	

How to order brake unit

JSC3 - 40 - BRAKE-UNIT

Bore size (Item © on the previous page)

● Mounting FA

JSC3 - FA - 40 - BRAKE-UNIT

Bore size (Item © on the previous page)

How to order T type switch

● Switch body + mounting bracket set

JSC3 - T0H - 40

Switch model No.
(Item ①)

Bore size
(Item © on the previous page)

● Switch body only

SW - T0H

Switch model No.
(Item ①)

● Mounting bracket set

JSC3 - TS - 40

Mounting
bracket

Bore size
(Item © on the previous page)

How to order H type switch

● Switch body + mounting bracket set

JSC3-L2 - H0* - 40

Switch model No.
(Item ①)

Bore size
(Item © on the previous page)

● Switch body only

SW - H0*

Switch model No.
(Item ①)

● Mounting bracket set

JSC3-L2 - H - 40

Mounting
bracket

Bore size
(Item © on the previous page)

How to order T2YD type switch

● Switch body + mounting bracket set

JSC3 - T2YD* - 40

Switch model No.
(Item ①)

Bore size
(Item © on the previous page)

● Switch body only

SW - T2YD*

Switch model No.
(Item ①)

● Mounting bracket set

JSC3 - T - 40

Mounting
bracket

Bore size
(Item © on the previous page)

How to order mounting bracket

Bore size (mm)	φ40	φ50	φ63	φ80	φ100
Mounting bracket					
Foot (LB) *1	JSC3-40-LB	JSC3-50-LB	JSC3-63-LB	JSC3-80-LB	JSC3-100-LB
Flange (FB)	JSC3-40-FB	JSC3-50-FB	JSC3-63-FB	JSC3-80-FB	JSC3-100-FB
Eye bracket (CA)	S1-CA-40	S1-CA-50	S1-CA-63	S1-CA-80	S1-CA-100
Clevis bracket (CB) *2	S1-CB-40	S1-CB-50	S1-CB-63	S1-CB-80	S1-CB-100

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

*2: A pin and a snap ring are attached.

*3: All mounting brackets have mounting bolts attached.

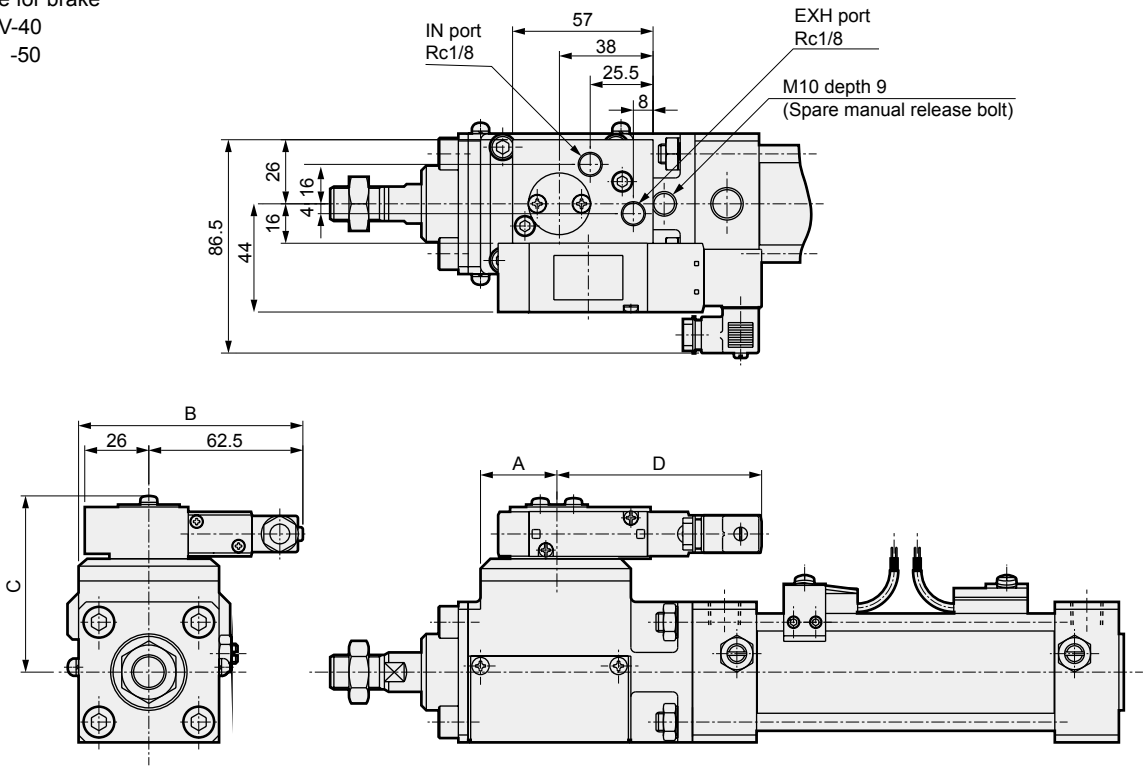
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

JSC3-V Series

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions (φ40 to φ63)

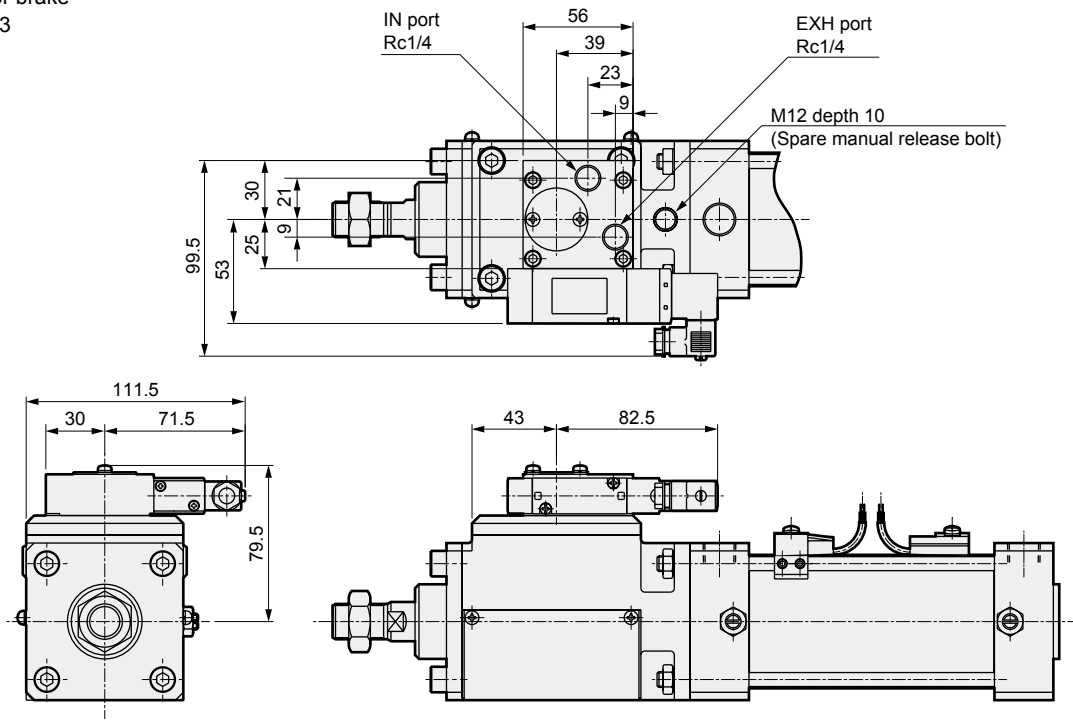
With valve for brake
● JSC3-V-40
-50



Code	A	B	C	D
Bore size (mm)				
φ40	31	91	71.5	83.5
φ50	36	96.5	76	86.5

● Note: This model is the same as the standard, except for the dimensions above. Refer to page 774.

With valve for brake
● JSC3-V-63

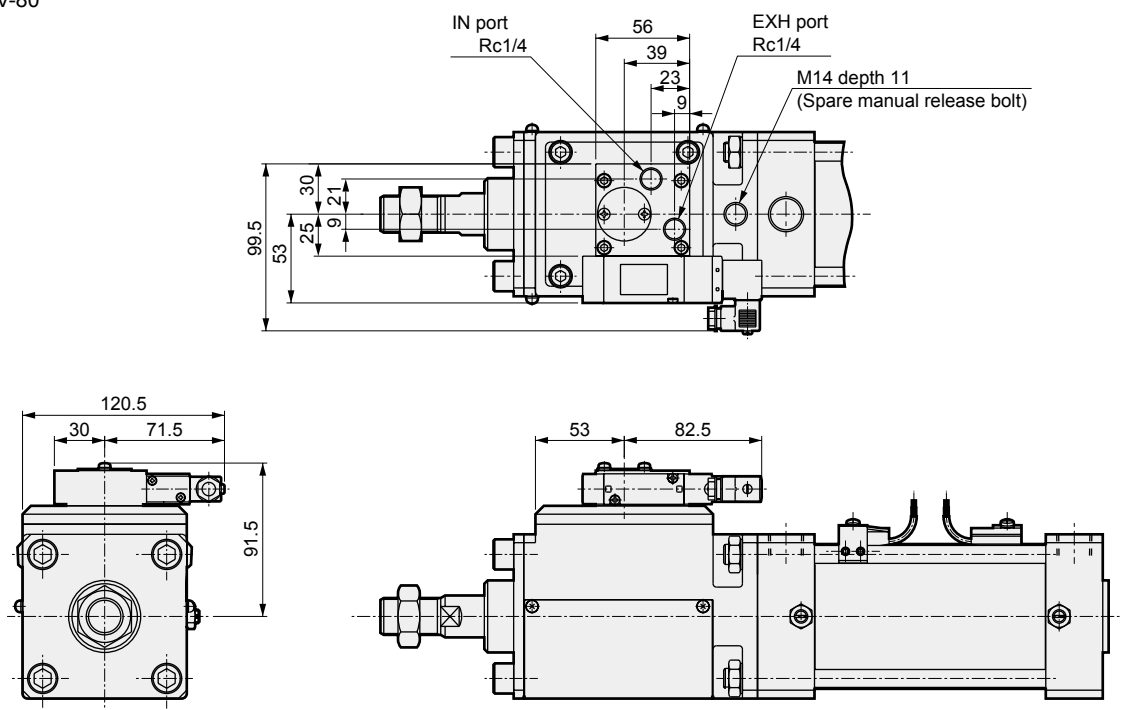


● Note: This model is the same as the standard, except for the dimensions above. Refer to page 774.

Dimensions (φ80, φ100)

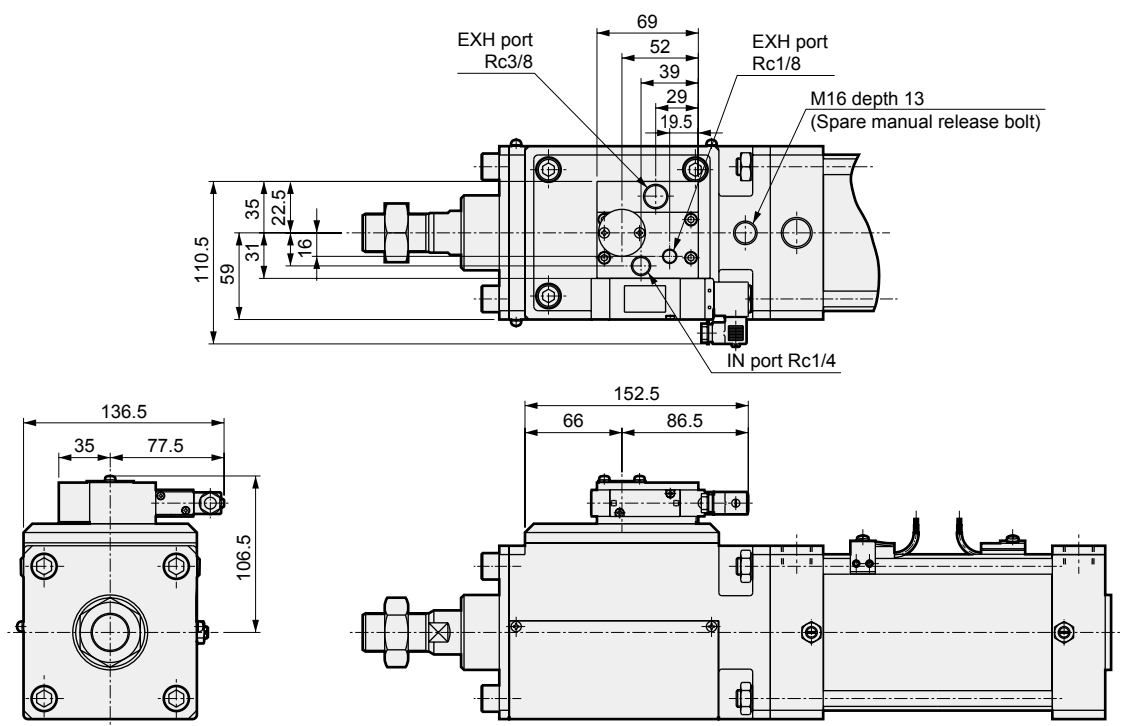
With valve for brake

● JSC3-V-80



● Note: This model is the same as the standard, except for the dimensions above. Refer to page 774.

● JSC3-V-100



● Note: This model is the same as the standard, except for the dimensions above. Refer to page 774.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Brake cylinder Double acting/low hydraulic

JSC3-H/JSC4-H Series

- Bore size:
JSC3: $\phi 40/\phi 50/\phi 63/\phi 80/\phi 100$
JSC4: $\phi 125/\phi 140/\phi 160/\phi 180$



Specifications

Descriptions		JSC3-H (with switch)					JSC3-SH (with switch)					JSC4-H				
Bore size mm		φ40	φ50	φ63	φ80	φ100	φ40	φ50	φ63	φ80	φ100	φ125	φ140	φ160	φ180	
Actuation		Double acting/low hydraulic					Double acting/low pressure release/low hydraulic					Double acting/low hydraulic				
Working fluid		Hydraulic fluid (compressed air for brake section)														
Max. working pressure MPa		1.0 (≈150 psi, 10 bar)														
Min. working	Brake section	0.3 (≈44 psi, 3 bar)					0.25 (≈36 psi, 2.5 bar)					0.3 (≈44 psi, 3 bar)				
pressure	MPa	Cylinder	0.2 (≈29 psi, 2 bar)					0.2 (≈29 psi, 2 bar)					0.1 (≈15 psi, 1 bar)			
Proof pressure MPa		1.6 (≈230 psi, 16 bar)														
Ambient temperature °C		5 (41°F) to 50 (122°F)														
Port size	Brake section	Rc1/8		Rc1/4		Rc3/8	Rc1/8		Rc1/4		Rc3/8	Rc1/2				
	Cylinder	Rc1/4		Rc3/8		Rc1/2	Rc1/4		Rc3/8		Rc1/2	Rc1/2		Rc3/4		
Stroke tolerance mm		^{+0.9} ₀ (to 360), ^{+1.4} ₀ (to 1000)					^{+0.9} ₀ (to 360), ^{+1.4} ₀ (to 1000)					^{+1.0} ₀ (to 300), ^{+1.4} ₀ (to 1000), ^{+1.8} ₀ (to 2000)				
Cushion		Air cushion										Cushioned				
Effective air cushion length mm		14.6	16.6		20.6	23.6	14.6	16.6		20.6	23.6	21.6				
Holding force N		980	1569	2451	3922	6178	784	1255	1961	3138	4941	9600	12000	15800	20000	
Allowable absorbed energy	Cushioned	Note: The cushioning of the low hydraulic cylinder cannot absorb large energy. We recommend using an external shock absorber.														
		Note: Without any cushion, this product cannot absorb large energy generated by an external load. We recommend using an external shock absorber.														
	J cushion															

Note: Brake section is air operated.

Stroke length

Bore size (mm)		Standard stroke length (mm)	Max. stroke length (mm)	Available stroke length (mm)	Min. stroke length (mm)
JSC3	φ40	50, 75, 100, 150, 200, 250 , 300, 350, 400, 450, 500	600	1600	1
	φ50			2000	
	φ63		700	2500	
	φ80				
	φ100				
JSC4	φ125	800	2000		
	φ140				
	φ160	900			
	φ180				

*1 : If max. stroke length is exceeded, product specifications may not be met, depending on conditions. Refer to Ending Page 69.

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

*3 : The max. stroke length available for $\phi 63$ to $\phi 100$ bore size models with bellows is 2000 mm.

Min. stroke length with JSC3 switch (T switch)

● Min. stroke length with T0/T5 switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting No position detection at rod side stroke end.	Head side trunnion mounting No position detection at head side stroke end.
	1	2	3	4	1	2	3	4	1	2	3	4	1	1
Bore size														
$\phi 40$	20(10)	20(20)	40(40)	60(60)	20(10)	60(45)	105(75)	150(105)	110(110)	110(110)	175(145)	175(145)	50(50)	50(50)
$\phi 50$	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)
$\phi 63$	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)
$\phi 80$	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)
$\phi 100$	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)

*1 : The values in () are of T*V (radial lead wire).

*2 : When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

JSC3-H/JSC4-H Series

Specifications

Min. stroke length with JSC3 switch (T switch)

- Min. stroke length with T8 switch

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting No position detection at rod side stroke end.	Head side trunnion mounting No position detection at head side stroke end.
	1	2	3	4	1	2	3	4	1	2	3	4	1	1
Bore size														
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)

*1: The values in () are of T*V (radial lead wire).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

- Min. stroke length with T2/T3 switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting No position detection at rod side stroke end.	Head side trunnion mounting No position detection at head side stroke end.
	1	2	3	4	1	2	3	4	1	2	3	4	1	1
Bore size														
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)

*1: The values in () are of T*V (radial lead wire).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

- Min. stroke length with T1/T2Y/T3Y/T2W/T3W/T2YD switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting No position detection at rod side stroke end.	Head side trunnion mounting No position detection at head side stroke end.
	1	2	3	4	1	2	3	4	1	2	3	4	1	1
Bore size														
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)

*1: The values in () are of T*V (radial lead wire). T2YD does not have a radial lead wire (V).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

- Min. stroke length with T2W/T3W switches

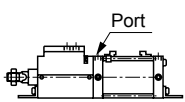
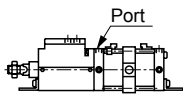
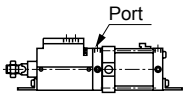
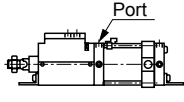
Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting No position detection at rod side stroke end.	Head side trunnion mounting No position detection at head side stroke end.
	1	2	3	4	1	2	3	4	1	2	3	4	1	1
Bore size														
φ40	20(5)	20(10)	20(15)	25(25)	20(5)	65(50)	110(80)	155(110)	110(80)	110(80)	170(140)	170(140)	50(35)	50(35)
φ50	20(5)	20(10)	20(15)	20(20)	20(5)	20(10)	65(40)	65(40)	110(80)	110(80)	110(60)	110(60)	50(35)	50(35)
φ63	20(5)	20(10)	20(15)	25(25)	20(5)	20(10)	65(40)	65(40)	115(85)	115(85)	115(65)	115(65)	55(40)	55(40)
φ80	15(5)	15(10)	15(15)	25(25)	15(5)	15(10)	60(40)	60(40)	120(90)	120(90)	120(70)	120(70)	55(40)	55(40)
φ100	10(5)	10(10)	20(20)	25(25)	10(5)	10(10)	60(40)	60(40)	130(100)	130(100)	130(85)	130(85)	60(45)	60(45)

*1: The values in () are of T*V (radial lead wire).

*2: When the stroke length is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

Min. stroke length with JSC4 switch (T switch)

- φ125 to 180

Descriptions	Stroke length when mounted on the same surface	Center trunnion mounting stroke	Rod side trunnion mounting stroke	Head side trunnion mounting stroke
Bore size (mm)				
				
φ125	20 or more	120 or more	70 or more	
φ140		125 or more	75 or more	
φ160		130 or more	80 or more	
φ180		135 or more	85 or more	

JSC3-H/JSC4-H Series

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Switch specifications (T type switch)

● 1-color/2-color display/for AC magnetic field proof

Descriptions	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire (*4)							Proximity 2-wire
	T1H/ T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/T3PV (custom)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V	T8H/T8V			T2YD T2YDPT		
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay	For programmable controller, relay, IC circuit (no indicator lamp), serial connection			For programmable controller, relay		For programmable controller	
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*2)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	≤50 mA	≤20 mA	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Without indicator lamp	LED (Lit when ON)			Red/green LED (Lit when ON)		
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA							1 mA or less
Weight g	1 m:33	1 m:18	1 m:33	1 m:18	1 m:18		1 m:33	1 m:18	1 m:18			1 m:33			1 m:61	
	3 m:87	3 m:49	3 m:87	3 m:49	3 m:49		3 m:87	3 m:49	3 m:49			3 m:87			3 m:166	
	5 m:142	5 m:80	5 m:142	5 m:80	5 m:80		5 m:142	5 m:80	5 m:80			5 m:142			5 m:272	

*1 : Refer to Ending Page 1 for other switch specifications.

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

*3 : Switch for AC magnetic field (T2YD) cannot be used in DC magnetic field.

*4 : The T0/T5 switch can also be used with 220 VAC. Contact CKD about working conditions.

*5 : Dimensions depend on switch model No. Refer to Ending Page 18.

JSC3-H/JSC4-H Series

Specifications

Cylinder weight

● JSC3(φ40 to φ100)

[Unit: kg]

Item/ mounting	Product weight when stroke length (S) = 0 mm						Switch weight	Mounting bracket weight		Additional weight per S = 100 mm
	Bore size (mm)	Basic (00)	Foot (LB)	Flange (FA, FB)	Eye bracket (CA)	Clevis bracket (CB)	Trunnion (TC)	T type	H type	
φ40		2.48	2.66	2.91	2.83	2.83	2.86	0.024	0.028	0.39
φ50		3.47	3.67	3.97	3.87	3.87	3.97	0.022	0.026	0.46
φ63		5.09	5.49	6.19	5.79	5.79	5.89	0.020	0.024	0.50
φ80		8.15	8.85	9.95	9.65	9.65	9.45	0.026	0.029	0.90
φ100		14.70	15.70	17.40	16.90	16.90	17.30	0.024	0.028	1.12

Product weight for stroke length 0 mm ... 3.67 kg

Additional weight for stroke length 200mm ... $0.46 \times \frac{200}{100} = 0.92$ kg

(Example) Product weight of JSC3-H-LB-50B-200-T0H-D

Weight of 2 TOH switches $0.018 \times 2 = 0.036$ kg

Weight of 2 mounting brackets $0.022 \times 2 = 0.044$ kg

Product weight $3.67 + 0.92 + 0.036 + 0.044 = 4.670$ kg

● JSC4(φ125 to φ180)

[Unit: kg]

Item/mounting	Product weight when stroke length (S) = 0 mm					Switch weight		Additional weight per S = 100 mm
	Bore size (mm)	Axial foot (LB)	Flange (FA/FB)	Eye bracket (CA)	Clevis bracket (CB)	Trunnion (TA/TB/TC)	Switch	Mounting bracket
φ125		25.72	27.52	27.22	27.32	27.62	Refer to the weight in the switch specifications.	0.028
φ140		32.95	36.35	34.75	34.95	34.15		0.030
φ160		42.85	46.65	44.75	45.05	46.15		0.034
φ180		61.55	69.05	64.45	64.95	65.15		0.038

Product weight when S = 0 mm 25.72 kg

Additional weight when S = 300 mm $1.54 \times \frac{300}{100} = 4.62$ kg

(Example) Product weight of JSC4-H-LB-125B-300-T0H-D

Weight of 2 switches (T0H-D) $0.018 \times 2 = 0.036$ kg

Weight of 2 switch brackets $0.028 \times 2 = 0.056$ kg

Product weight $25.72 + 4.62 + 0.036 + 0.056 = 30.432$ kg

Theoretical thrust table

[Unit: N]

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
JSC3	φ40	Push	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3
		Pull	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2
	φ50	Push	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3
		Pull	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3
	φ63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3
		Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3
	φ80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3
		Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3
	φ100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3
		Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3
JSC4	φ125	Push	1.23×10^3	1.84×10^3	2.45×10^3	3.68×10^3	4.91×10^3	6.14×10^3	7.36×10^3	8.59×10^3	9.82×10^3	1.10×10^4
		Pull	1.13×10^3	1.70×10^3	2.26×10^3	3.39×10^3	4.52×10^3	5.65×10^3	6.79×10^3	7.92×10^3	9.05×10^3	1.02×10^4
	φ140	Push	1.54×10^3	2.31×10^3	3.08×10^3	4.62×10^3	6.16×10^3	7.70×10^3	9.24×10^3	1.08×10^4	1.23×10^4	1.39×10^4
		Pull	1.44×10^3	2.16×10^3	2.89×10^3	4.33×10^3	5.77×10^3	7.22×10^3	8.66×10^3	1.01×10^4	1.15×10^4	1.30×10^4
	φ160	Push	2.01×10^3	3.02×10^3	4.02×10^3	6.03×10^3	8.04×10^3	1.01×10^4	1.21×10^4	1.41×10^4	1.61×10^4	1.81×10^4
		Pull	1.88×10^3	2.83×10^3	3.77×10^3	5.65×10^3	7.54×10^3	9.42×10^3	1.13×10^4	1.32×10^4	1.51×10^4	1.70×10^4
	φ180	Push	2.54×10^3	3.82×10^3	5.09×10^3	7.03×10^3	1.02×10^4	1.27×10^4	1.53×10^4	1.78×10^4	2.04×10^4	2.29×10^4
		Pull	2.39×10^3	3.58×10^3	4.77×10^3	7.16×10^3	9.54×10^3	1.19×10^4	1.43×10^4	1.67×10^4	1.91×10^4	2.15×10^4

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

JSC3-H Series

How to order (φ40 to φ100)

Without switch (built-in magnet for switch)

JSC3 - **H** - **LB** - **40** - **B** - **50** - **S** - **I**

With switch (built-in magnet for switch)

JSC3 - **H** - **LB** - **40** - **B** - **50** - **TOH** - **R** - **S** - **I**

With strong magnetic field proof (for H0, H0Y switches) switch (built-in magnet for switch)

JSC3 - **H** - **L2** - **LB** - **40** - **B** - **50** - **H0** - **R** - **S** - **I**

Model No.

A Brake release pressure

B Mounting
*1

C Bore size

D Port thread

E Cushion

F Stroke length
*2
*3

G Switch model No.
*5
* indicates the lead wire length.

H Switch quantity
*6

I Option
*7

J Accessory
*8

⚠ Precautions for model selection

- *1 : Mounting bracket will be shipped assembled with the product.
(Head side special flange is attached separately)
- *2 : If the stroke exceeds the max. stroke length, refer to Ending Page 69.
- *3 : The max. stroke length available for φ63 to φ100 bore size models with bellows is 2000 mm.
- *4 : Refer to pages 808 to 809 for the min. stroke length with switch.
- *5 : T2YD, T2YDT, H0, and H0Y are strong magnetic field proof switches.
- *6 : When selecting TA or TB as mounting, the switch quantity is limited to "H" (1 on head side) for TA, and "R" (1 on rod side) for TB.
- *7 : For S, T, and G position indications, check the respective dimensions.
- *8 : "I" and "Y" cannot be selected together.
- *9 : Refer to Ending Page 85 for custom specifications of rod end form.

[Example of model No.]

JSC3-H-LB-40B-50-TOH-R-S-I

Model: Brake cylinder Double acting/low hydraulic

- A** Brake release pressure: Standard 0.3 MPa
- B** Mounting : Axial foot
- C** Bore size : φ40 mm
- D** Port thread : Rc thread
- E** Cushion : Both sides cushioned
- F** Stroke length : 50 mm
- G** Switch model No. : Reed switch TOH, lead wire 1 m
- H** Switch quantity : 1 on rod side
- I** Option : Cushion needle position S
- J** Accessory : Rod eye

Code	Content		
A Brake release pressure			
Blank	Standard (0.3 MPa)		
S	Low pressure release (0.25 MPa)		
B Mounting			
00	Basic		
LB	Axial foot		
FA	Rod side flange		
FB	Head side flange		
FC	Head side special flange		
CA	Eye bracket		
CB	Clevis bracket (pin and snap ring attached)		
TC	Intermediate trunnion		
TA	Rod side trunnion		
TB	Head side trunnion		
C Bore size (mm)			
40	φ40		
50	φ50		
63	φ63		
80	φ80		
100	φ100		
D Port thread			
Blank	Rc thread		
N	NPT thread (custom order product)		
G	G thread (custom order product)		
E Cushion			
B	Both sides cushioned		
R	Rod side cushioned		
H	Head side cushioned		
N	Without cushion		
F Stroke length (mm)			
Bore size	Stroke length *4	Available stroke length	Custom stroke length
φ40	1 to 600	1600	In 1 mm increments
φ50	1 to 600	2000	
φ63	1 to 600	2500	
φ80	1 to 700	2500	
φ100	1 to 800	2500	
G Switch model No.		Refer to the switch model numbers on the next page.	
* Lead wire length			
Blank	1 m (standard)		
3	3 m (option)		
5	5 m (option)		
H Switch quantity			
R	1 on rod side		
H	1 on head side		
D	2		
T	3		
4	4 (when there are more than 4 switches, indicate switch quantity.)		
I Option			
		Max. ambient temperature : instantaneous max. temp	
J	Bellows	100°C	200°C
L	Bellows	250°C	400°C
M	Piston rod material (stainless steel)		
Blank	Cushion needle position R (standard)		
S	Cushion needle position S		
T	Cushion needle position T		
G	With indicator		
J Accessory			
I	Rod eye		
Y	Rod clevis (pin and snap ring attached)		
B1	Eye bracket		
B2	Clevis bracket (pin and snap ring attached)		
B3	Eye bracket		
B4	Trunnion No. 2 bracket (2 pcs./set)		

[G] Switch model No.

T type switch						
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire
			AC	DC		
TOH*	TOV*	Reed	●	●	1-color display	2-wire
T5H*	T5V*		●	●	Without indicator lamp	
T8H*	T8V*		●	●	1-color display	
T1H*	T1V*		●		1-color display	
T2H*	T2V*		●	3-wire		
T3H*	T3V*		●			
T2WH*	T2WV*		●	2-color display		2-wire
T2YH*	T2YV*		●			
T3WH*	T3WV*	Proximity	●		3-wire	
T3YH*	T3YV*				●	
T3PH*	T3PV*			●	1-color display (custom order)	3-wire
T2YD*	-			●	2-color display	2-wire
T2YDT*	-		●	for AC magnetic field		
T2JH*	T2JV*		●	1-color display off-delay	2-wire	
H type switch						
HO*	-	Reed	●	●	Strong magnetic field proof	2-wire
HOY*	-			●	Strong magnetic field 2-color display	

How to order brake unit

JSC3 - 40 - BRAKE-UNIT

Bore size (Item © on the previous page)

● Mounting FA

JSC3 - FA - 40 - BRAKE-UNIT

Bore size (Item © on the previous page)

How to order T type switch

● Switch body + mounting bracket set

JSC3 - T0H - 40

Switch model No.
(Item ©)

Bore size
(Item © on the previous page)

● Switch body only

SW - T0H

Switch model No.
(Item ©)

● Mounting bracket set

JSC3 - TS - 40

Mounting bracket

Bore size
(Item © on the previous page)

How to order T2YD type switch

● Switch body + mounting bracket set
φ40 to φ100

JSC3 - T2YD - 40

Switch model No.
(Item ©)

Bore size
(Item © on the previous page)

● Switch body only
φ40 to φ100

SW - T2YD

Switch model No.
(Item ©)

● Mounting bracket set

JSC3 - T - 40

Mounting bracket

Bore size
(Item © on the previous page)

How to order H type switch

● Switch body + mounting bracket set

JSC3-L2 - H0 - 40

Switch model No.
(Item ©)

Bore size
(Item © on the previous page)

● Switch body only

SW - H0

Switch model No.
(Item ©)

● Mounting bracket set

JSC3-L2 - H - 40

Mounting bracket

Bore size
(Item © on the previous page)

How to order mounting bracket

● φ40 to φ100

Bore size (mm)	φ40	φ50	φ63	φ80	φ100
Mounting bracket					
Foot (LB) *1	JSC3-40-LB	JSC3-50-LB	JSC3-63-LB	JSC3-80-LB	JSC3-100-LB
Flange (FB)	JSC3-40-FB	JSC3-50-FB	JSC3-63-FB	JSC3-80-FB	JSC3-100-FB
Eye bracket (CA)	S1-CA-40	S1-CA-50	S1-CA-63	S1-CA-80	S1-CA-100
Clevis bracket (CB) *2	S1-CB-40	S1-CB-50	S1-CB-63	S1-CB-80	S1-CB-100

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

*2: A pin and a snap ring are attached.

*3: All mounting brackets have mounting bolts attached.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

JSC4-H Series

How to order (φ125 to 180)

Without switch (without magnet for switch)

JSC4-H - **LB** - **125** - **B** - **50** - **S** **I**

With switch (built-in magnet for switch)

JSC4-LH - **LB** - **125** - **B** - **50** - **T0H** - **R** - **S** **I**

A Mounting
*1

B Bore size

C Port thread

D Cushion

E Stroke length
*2

F Switch model No.
* indicates the lead wire length.

G Switch quantity
*3

H Option

⚠ Precautions for model No. selection

- *1 : Mounting bracket will be shipped assembled with the product.
- *2 : Refer to page 809 for the min. stroke length with switch.
- *3 : When selecting TA or TB as mounting, the switch quantity is limited to "H" (1 on head side) for TA, and R (1 on rod side) for TB.
- *4 : Refer to page 815 for the cushion needle position indication.
- *5 : "I" and "Y" cannot be selected together.
- *6 : Refer to page 819 for details.

[Example of model No.]

JSC4-LH-LB-125B-50-T0H-R-SI

Model: Brake cylinder Double acting/low hydraulic

- A** Mounting : Axial foot
- B** Bore size : φ125 mm
- C** Port thread : Rc thread
- D** Cushion : Both sides cushioned
- E** Stroke length : 50mm
- F** Switch model No. : Reed switch T0H, lead wire 1 m
- G** Switch quantity : 1 on rod side
- H** Option : Cushion needle position S
- I** Accessory : Rod eye

Code	Content					
A Mounting						
LB	Axial foot					
FA	Rod side flange					
FB	Head side flange					
CA	Eye bracket					
CB	Clevis bracket (pin and snap ring attached)					
TC	Intermediate trunnion					
TA	Rod side trunnion					
TB	Head side trunnion					
B Bore size (mm)						
125	φ125					
140	φ140					
160	φ160					
180	φ180					
C Port thread						
Blank	Rc thread					
N	NPT thread (custom order product)					
G	G thread (custom order product)					
D Cushion						
B	Both sides cushioned					
R	Rod side cushioned					
H	Head side cushioned					
N	Without cushion					
E Stroke length (mm)						
Bore size	Stroke length	Available stroke	Custom stroke length			
φ125	1 to 800	2000	In 1 mm increments			
φ140	1 to 800	2000				
φ160	1 to 800	2000				
φ180	1 to 900	2000				
F Switch model No.						
Axial lead wire	Radial lead wire	Contact	Voltage AC DC	Indicator	Lead wire	
T0H*	T0V*	Reed	● ●	1-color display	2-wire	
T5H*	T5V*		● ●	Without indicator lamp		
T8H*	T8V*		● ●	1-color display	2-wire	
T1H*	T1V*		●	1-color display		
T2H*	T2V*	●	display		3-wire	
T3H*	T3V*	●	1-color display (PNP output) (custom)	3-wire		
T3PH*	T3PV*	●				
T2WH*	T2WV*	Proximity	●	2-color display	2-wire	
T2YH*	T2YV*		●			
T3WH*	T3WV*		●	3-wire		
T3YH*	T3YV*		●			
T2JH*	T2JV*		●	1-color display off-delay	2-wire	
T2YD*	-		●			
T2YDT*	-		●	2-color display	2-wire	
			●			for AC magnetic field
* Lead wire length						
Blank	1 m (standard)					
3	3 m (option)					
5	5 m (option)					
G Switch quantity						
R	1 on rod side					
H	1 on head side					
D	2					
T	3					
4	4					
H Option						
		Max. ambient temp.		instantaneous max. temp.		
J	Bellows	60°C		100°C		
K	Bellows	100°C		200°C		
L	Bellows	250°C		400°C		
M	Piston rod material (stainless steel)					
Blank	Cushion needle position (standard)					
R	Cushion needle position R					
S	Cushion needle position S					
T	Cushion needle position T					
C2		With cushion section check valve				
I Accessory						
I	Rod eye					
Y	Rod clevis (pin and snap ring attached)					
B1	Eye bracket					
B2	Clevis bracket					
Custom order product code				*6		
-S092	JSC3-LH Compatible mounting dimensions					

How to order brake unit

JSC4 - 125 - BRAKE-UNIT

Bore size (Item ⑧ on the previous page)

How to order T type switch

- Switch body + mounting bracket set

JSC4-LN - T0H - 125

Switch model No.
(Item ⑤ on the previous page)

Bore size
(Item ⑧ on the previous page)

- Switch body only

SW - T0H

Switch model No.
(Item ⑤ on the previous page)

- Mounting bracket set

JSC4-LN - TS - 125

Bore size
(Item ⑧ on the previous page)

How to order T2YD type switch

- Switch body + mounting bracket set

JSC4-LN - T2YD - 125

Switch model No.
(Item ⑤ on the previous page)

Bore size
(Item ⑧ on the previous page)

- Switch body only

SW - T2YD

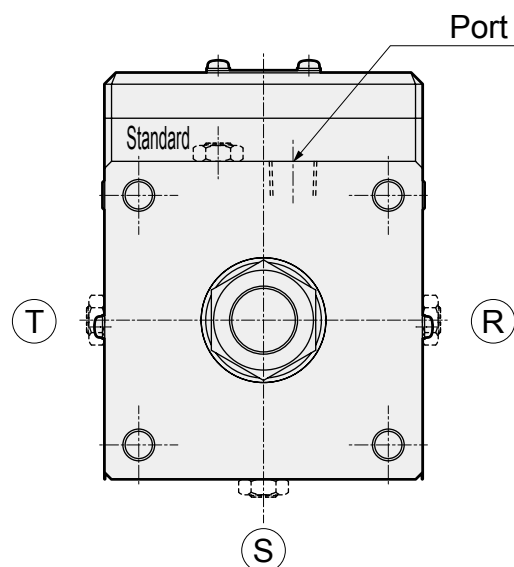
Switch model No.
(Item ⑤ on the previous page)

- Mounting bracket set

JSC4-LN - T - 125

Bore size
(Item ⑧ on the previous page)

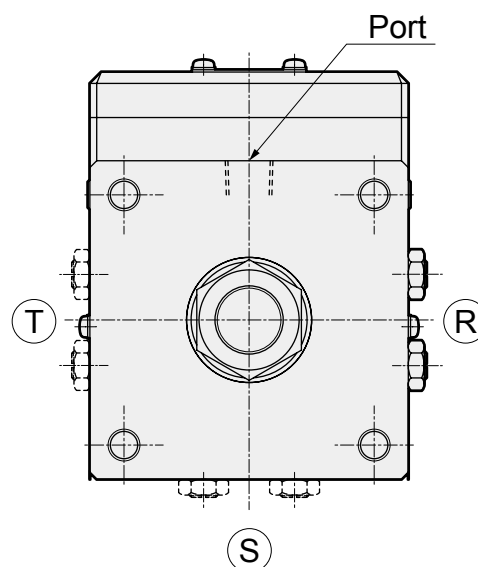
Cushion needle position (needle position from rod direction with the port on the top side)



When selecting option R, S, or T for a certified class 2 pressure vessel, the port position should be in the center as shown in the figure to the right, and the needle position should be in the offset position.

Certified class 2 pressure vessel stroke length

Bore size	Stroke length
φ160	1948 or more
φ180	1526 or more

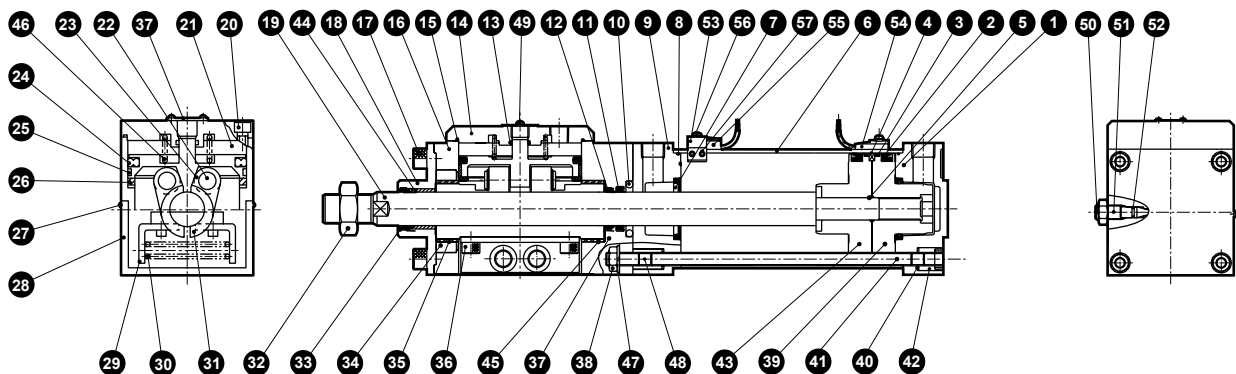


Class 2 pressure vessel certification
Option R, S, or T

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

JSC3-H Series

Internal structure and parts list (φ40 to φ100)



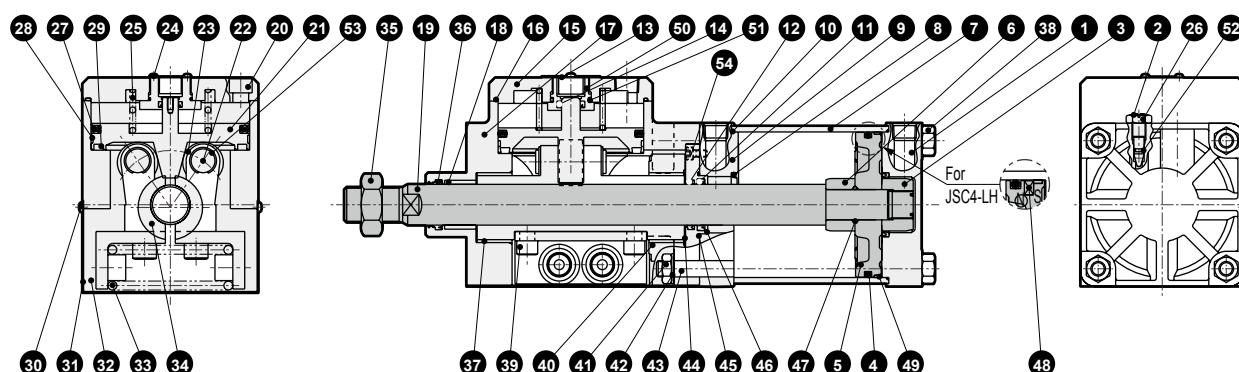
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Head cover	Aluminum alloy die-casting	Paint	28	Cover	Steel	Paint
2	Piston packing	Nitrile rubber		29	Spring holder	Steel	Zinc chromate
3	Wear ring	Polyacetal resin		30	Spring	Steel	
4	Magnet	Plastic		31	Brake shoe metal	Cast iron	Nickeling
5	Piston gasket	Nitrile rubber		32	Rod nut	Steel	Zinc chromate
6	Cylinder tube	Aluminum alloy	Hard alumite	33	Dust wiper	Nitrile rubber	
7	Cushion packing	Nitrile rubber, steel		34	DU ring	Steel	Black finish
8	Cylinder gasket	Nitrile rubber		35	Bush	Oil impregnated bearing alloy	
9	Rod cover	Aluminum alloy die-casting	Paint	36	Hexagon socket head cap screw	Alloy steel	Black finish
10	Metal seal	Nitrile rubber		37	Dust cover	Aluminum alloy	Paint
11	Rod packing	Nitrile rubber		38	Hexagon nut	Steel	Black finish
12	Dust wiper	Nitrile rubber		39	Piston H	Aluminum alloy die-casting	
13	Cap gasket A	Nitrile rubber		40	Tie rod	Steel	Zinc chromate
14	Body cap	Cast iron	Nitriding	41	Conical spring washer	Steel	Black finish
15	Cap gasket B	Nitrile rubber		42	Round nut	Steel	Zinc chromate
16	Brake body	Aluminum alloy casting	Alumite	43	Piston R	Aluminum alloy die-casting	
17	Hexagon socket head cap screw	Alloy steel	Black finish	44	Bush B	Oil impregnated bearing alloy	
18	Rod metal	Steel	Manganese phosphate	45	Thrust washer		
19	Piston rod	Steel	Industrial chrome plating	46	Spring	Steel	Paint
20	Hexagon socket head cap screw	Alloy steel	Black finish	47	Toothed washer	Steel	Black finish
21	Brake piston	Cast iron	Manganese phosphate	48	Hexagon socket set screw	Steel	Black finish
22	Parallel pin	Steel		49	Phillips pan head machine screw/captive washer	Steel	Zinc chromate
23	Bearing			50	Cushion needle	Copper alloy	Nickeling
24	Piston packing B	Nitrile rubber		51	Needle nut	Copper alloy	Nickeling
25	Wear ring	Polyacetal resin		52	Needle gasket	Nitrile rubber	
26	Cushion rubber	Urethane rubber		With switch			
27	Phillips pan head machine screw	Steel	Zinc chromate	53	Switch mounting base	Aluminum alloy	
Note: Never disassemble the brake section, as the powerful spring installed can be dangerous.				54	Switch holder	Aluminum alloy	
				55	Cylinder switch		
				56	Phillips pan head machine screw	Steel	Zinc chromate
				57	Hexagon socket set screw	Alloy steel	Black finish

Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
φ40	JSC3-H- 40K	
φ50	JSC3-H- 50K	2 3 7 8
φ63	JSC3-H- 63K	10 11 12 33 52
φ80	JSC3-H- 80K	
φ100	JSC3-H-100K	

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

Internal structure and parts list (φ125 to φ180)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Head cover	Aluminum alloy casting	Chromate	28	Wear ring	Polyacetal resin	
2	Cushion needle	Copper alloy		29	Cushion rubber	Urethane rubber	
3	Cushion ring A	Steel	Zinc chromate	30	Cross-recessed pan head machine screw	Steel	Zinc chromate
4	Piston packing	Nitrile rubber		31	Cover	Steel	Paint
5	Piston	Aluminum alloy casting		32	Spring holder	Steel	Manganese phosphate
6	Cushion ring B	Steel	Zinc chromate	33	Spring	Steel	Black finish
7	Cylinder tube	Aluminum alloy	Hard alumite	34	Brake shoe metal	Cast iron	Nickeling
8	Cushion packing	Nitrile rubber/steel		35	Rod nut	Steel	Zinc chromate
9	Rod cover	Aluminum alloy casting	Chromate	36	Dust wiper	Nitrile rubber	
10	Cylinder gasket	Nitrile rubber		37	Bush A	Oiles drymet	
11	Rod packing	Nitrile rubber		38	Hexagon nut	Steel	Zinc chromate
12	Dust wiper	Nitrile rubber		39	Hexagon socket head cap screw	Alloy steel	Black finish
13	Dust cover	Aluminum alloy	Alumite	40	Ring	Steel	Black finish
14	Rod packing	Nitrile rubber		41	Hexagon nut	Steel	Zinc chromate
15	Body cap	Aluminum alloy casting	Black alumite	42	Toothed washer	Steel	Zinc chromate
16	Cap gasket	Nitrile rubber		43	Tie rod	Steel	Zinc chromate
17	Brake body	Aluminum cast iron	Alumite	44	Thrust washer	Steel	
18	Bush B	Oil impregnated bearing alloy		45	Metal gasket	Nitrile rubber	
19	Piston rod	Steel	Industrial chrome plating	46	Rod metal	Cast iron	Zinc chromate
20	Hexagon socket head cap screw	Alloy steel	Black finish	47	Piston gasket	Nitrile rubber	
21	Brake piston	Cast iron	Manganese phosphate	48	Magnet	Rubber	JSC4-LN only
22	Bearing pin	Steel		49	Wear ring	Polyacetal resin	
23	Bearing	-		50	Body cap	Cast iron	Manganese phosphate
24	Phillips pan head machine screw/captive washer	Steel	Zinc chromate	51	O-ring	Nitrile rubber	
25	Spring	Steel	Paint	52	Needle gasket	Nitrile rubber	
26	Needle nut	Steel	Zinc chromate	53	E type snap ring	Steel	Zinc chromate
27	Piston packing B	Nitrile rubber		54	Hexagon socket head cap screw	Steel	Black finish

Repair parts list

Bore size	Kit No.	Repair parts No.
φ125	JSC4-H-125K	4 8 10 11 12 36 45 49 52
φ140	JSC4-H-140K	
φ160	JSC4-H-160K	
φ180	JSC4-H-180K	

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

JSC3-H/JSC4-H Series

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions

- $\phi 40$ to $\phi 100$
Same as JSC3 (double acting/single rod). Refer to pages 774 to 783.
- $\phi 125$ to $\phi 180$
Same as JSC4-N (double acting/no-lubrication). Refer to pages 786 to 793.

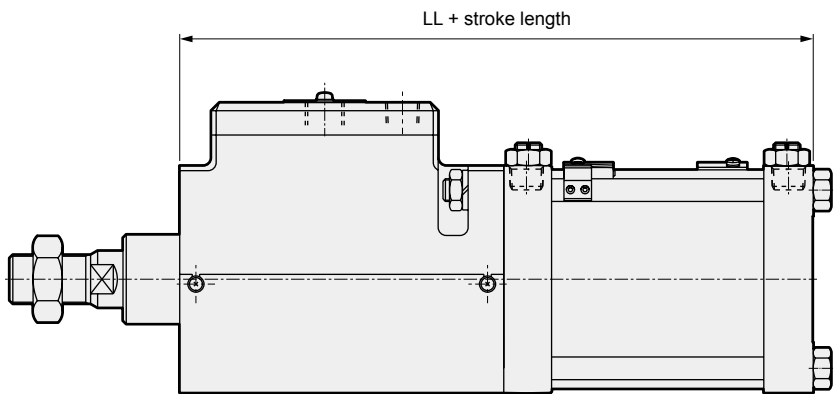
Introduction of custom order products

JSC3-LH compatible mounting dimensions

How to order

When making an order, add "-S092" at the end of the model No.

Dimensions

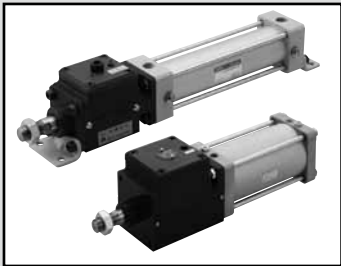


Note: LL dimensions on pages 786 to 793 are as follows.

Code	Dimensions table
Bore size (mm)	LL
φ125	311
φ140	338
φ160	367
φ180	388

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
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Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
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Chuk
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ShkAbs
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FK
SpdContr
Ending



Brake cylinder Double acting/heat resistance

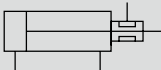
JSC3-T/JSC4-T Series

● Bore size:

JSC3: φ40/φ50/φ63/φ80/φ100/φ125

JSC4: φ140/φ160/φ180

JIS symbol



Specifications

Descriptions		JSC3-T					JSC3-ST					JSC4-T			
Bore size mm		φ40	φ50	φ63	φ80	φ100	φ40	φ50	φ63	φ80	φ100	φ125	φ140	φ160	φ180
Actuation		Double acting/heat resistant					Double acting/low pressure release/heat resistance					Double acting/heat resistant			
Working fluid		Compressed air													
Max. working pressure MPa		1.0 (≈150 psi, 10 bar)													
Min. working	Brake section	0.3 (≈44 psi, 3 bar)					0.25 (≈36 psi, 2.5 bar)					0.3 (≈44 psi, 3 bar)			
pressure MPa	Cylinder	0.1 (≈15 psi, 1 bar)					0.1 (≈15 psi, 1 bar)					0.05 (≈7.3 psi, 0.5 bar)			
Proof pressure MPa		1.6 (≈230 psi, 16 bar)													
Ambient temperature °C		5 (41°F) to 120 (248°F) (*2)													
Port size	Brake section	Rc1/8		Rc1/4		Rc3/8	Rc1/8		Rc1/4		Rc3/8	Rc1/2			
	Cylinder	Rc1/4	Rc3/8		Rc1/2		Rc1/4	Rc3/8		Rc1/2		Rc1/2	Rc3/4		
Stroke tolerance mm		^{+0.9} ₀ (to 360), ^{+1.4} ₀ (to 1000)					^{+0.9} ₀ (to 360), ^{+1.4} ₀ (to 1000)					^{+1.0} ₀ (to 300), ^{+1.4} ₀ (to 1000), ^{+1.8} ₀ (to 2000)			
Working piston speed mm/s		50 to 1000 (Operate within the allowable absorbed energy.)													
Cushion		Air cushion													
Effective air cushion length mm		14.6	16.6		20.6	23.6	14.6	16.6		20.6	23.6	21.6			
Lubrication ^(*)		Not available													
Holding force N		980	1569	2451	3922	6178	784	1255	1961	3138	4941	9600	12000	15800	20000
Allowable	Cushioned	4.29	8.37	15.8	27.9	49.8	4.29	8.37	15.8	27.9	49.8	63.6	91.5	116	152
absorbed energy	Without	0.067	0.079	0.079	0.201	0.301	0.067	0.079	0.079	0.201	0.301	0.371	0.386	0.386	0.958
J	cushion	Note: Without any cushion, this product cannot absorb large energy generated by an external load. We recommend using an external shock absorber.													

*1 : Periodically apply additional heat-resistant grease.

*2 : The ambient temperature for the following products is 5 to 100°C.

Bore size	Stroke length
φ160	1948 or more
φ180	1526 or more

Custom order of the above is available when using in applications with a temperature range of 5 to 120°C. Contact CKD.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Available stroke length (mm)	Min. stroke length (mm)
φ 40	50, 75, 100, 150, 200, 250, 300, 350, 400, 450, 500	600	1600	1
φ 50			2000	
φ 63			2500	
φ 80				
φ100		800	*2	
φ125	2000			
φ140				
φ160				
φ180	300	900		

*1 : If max. stroke length is exceeded, product specifications may not be met, depending on the conditions. Refer to Ending Page 69.

The custom stroke length is available in 1 mm increments.

*2 : The max. stroke length available for φ63 to φ100 bore size models with bellows is 2000 mm.

JSC3-T/JSC4-T Series

Specifications

Cylinder weight

● JSC3(φ40 to φ100)

[Unit: kg]

Item/mounting	Product weight when stroke length (S) = 0 mm						Additional weight
Bore size (mm)	Basic (00)	Foot (LB)	Flange (FA, FB)	Eye bracket (CA)	Clevis bracket (CB)	Trunnion (TC)	per S = 100 mm
φ40	2.48	2.66	2.91	2.83	2.83	2.86	0.39
φ50	3.47	3.67	3.97	3.87	3.87	3.97	0.46
φ63	5.09	5.49	6.19	5.79	5.79	5.89	0.50
φ80	8.15	8.85	9.95	9.65	9.65	9.45	0.90
φ100	14.70	15.70	17.40	16.90	16.90	17.30	1.12

(Example) Product weight of JSC3-T-LB-50B-200		Product weight for stroke length 0 mm 3.67 kg
		Additional weight for stroke length 200 mm $0.46 \times \frac{200}{100} = 0.92 \text{ kg}$
		Product weight $3.67 \text{ kg} + 0.92 \text{ kg} = 4.59 \text{ kg}$

● JSC4(φ125 to φ180)

(Unit: kg)

Item/mounting	Product weight when stroke length (S) = 0 mm					Additional weight
Bore size (mm)	Axial foot (LB)	Flange (FA/FB)	Eye bracket (CA)	Clevis bracket (CB)	Trunnion (TA/TB/TC)	weight per S = 100 mm
φ125	25.72	27.52	27.22	27.32	27.62	1.54
φ140	32.95	36.35	34.75	34.95	34.15	1.78
φ160	42.85	46.65	44.75	45.05	46.15	2.22
φ180	61.55	69.05	64.45	64.95	65.15	2.96

(Example) Product weight of JSC4-T-LB-125B-300		● Product weight when S = 0 mm 25.72 kg
		● Additional weight when S = 300mm ... $1.54 \times \frac{300}{100} = 4.62 \text{ kg}$
		● Product weight $25.72 + 4.62 = 30.34 \text{ kg}$

Theoretical thrust table

(Unit: N)

Bore size (mm)		Operating direction	Working pressure MPa										
			0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
JSC3	φ40	Push	1.26×10 ²	1.88×10 ²	2.51×10 ²	3.77×10 ²	5.03×10 ²	6.28×10 ²	7.54×10 ²	8.80×10 ²	1.01×10 ³	1.13×10 ³	1.26×10 ³
		Pull	1.06×10 ²	1.58×10 ²	2.11×10 ²	3.17×10 ²	4.22×10 ²	5.28×10 ²	6.33×10 ²	7.39×10 ²	8.44×10 ²	9.50×10 ²	1.06×10 ³
	φ50	Push	1.96×10 ²	2.95×10 ²	3.93×10 ²	5.89×10 ²	7.85×10 ²	9.82×10 ²	1.18×10 ³	1.37×10 ³	1.57×10 ³	1.77×10 ³	1.96×10 ³
		Pull	1.65×10 ²	2.47×10 ²	3.30×10 ²	4.95×10 ²	6.60×10 ²	8.25×10 ²	9.90×10 ²	1.15×10 ³	1.32×10 ³	1.48×10 ³	1.65×10 ³
	φ63	Push	3.12×10 ²	4.68×10 ²	6.23×10 ²	9.35×10 ²	1.25×10 ³	1.56×10 ³	1.87×10 ³	2.18×10 ³	2.49×10 ³	2.81×10 ³	3.12×10 ³
		Pull	2.80×10 ²	4.20×10 ²	5.61×10 ²	8.41×10 ²	1.12×10 ³	1.40×10 ³	1.68×10 ³	1.96×10 ³	2.24×10 ³	2.52×10 ³	2.80×10 ³
	φ80	Push	5.03×10 ²	7.54×10 ²	1.01×10 ³	1.51×10 ³	2.01×10 ³	2.51×10 ³	3.02×10 ³	3.52×10 ³	4.02×10 ³	4.52×10 ³	5.03×10 ³
		Pull	4.54×10 ²	6.80×10 ²	9.07×10 ²	1.36×10 ³	1.81×10 ³	2.27×10 ³	2.72×10 ³	3.17×10 ³	3.63×10 ³	4.08×10 ³	4.54×10 ³
	φ100	Push	7.85×10 ²	1.18×10 ³	1.57×10 ³	2.36×10 ³	3.14×10 ³	3.93×10 ³	4.71×10 ³	5.50×10 ³	6.28×10 ³	7.07×10 ³	7.85×10 ³
		Pull	7.15×10 ²	1.07×10 ³	1.43×10 ³	2.14×10 ³	2.86×10 ³	3.57×10 ³	4.29×10 ³	5.00×10 ³	5.72×10 ³	6.43×10 ³	7.15×10 ³
JSC4	φ125	Push	1.23×10 ³	1.84×10 ³	2.45×10 ³	3.68×10 ³	4.91×10 ³	6.14×10 ³	7.36×10 ³	8.59×10 ³	9.82×10 ³	1.10×10 ⁴	1.23×10 ⁴
		Pull	1.13×10 ³	1.70×10 ³	2.26×10 ³	3.39×10 ³	4.52×10 ³	5.65×10 ³	6.79×10 ³	7.92×10 ³	9.05×10 ³	1.02×10 ⁴	1.13×10 ⁴
	φ140	Push	1.54×10 ³	2.31×10 ³	3.08×10 ³	4.62×10 ³	6.16×10 ³	7.70×10 ³	9.24×10 ³	1.08×10 ⁴	1.23×10 ⁴	1.39×10 ⁴	1.54×10 ⁴
		Pull	1.44×10 ³	2.16×10 ³	2.89×10 ³	4.33×10 ³	5.77×10 ³	7.22×10 ³	8.66×10 ³	1.01×10 ⁴	1.15×10 ⁴	1.30×10 ⁴	1.44×10 ⁴
	φ160	Push	2.01×10 ³	3.02×10 ³	4.02×10 ³	6.03×10 ³	8.04×10 ³	1.01×10 ⁴	1.21×10 ⁴	1.41×10 ⁴	1.61×10 ⁴	1.81×10 ⁴	2.01×10 ⁴
		Pull	1.88×10 ³	2.83×10 ³	3.77×10 ³	5.65×10 ³	7.54×10 ³	9.42×10 ³	1.13×10 ⁴	1.32×10 ⁴	1.51×10 ⁴	1.70×10 ⁴	1.88×10 ⁴
	φ180	Push	2.54×10 ³	3.82×10 ³	5.09×10 ³	7.03×10 ³	1.02×10 ³	1.27×10 ⁴	1.53×10 ⁴	1.78×10 ⁴	2.04×10 ⁴	2.29×10 ⁴	2.54×10 ⁴
		Pull	2.39×10 ³	3.58+10 ³	4.77×10 ³	7.16×10 ³	9.54×10 ³	1.19×10 ⁴	1.43×10 ⁴	1.67×10 ⁴	1.91×10 ⁴	2.15×10 ⁴	2.39×10 ⁴

LCW
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JSC3-T Series

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SpdContr
Ending

How to order (φ40 to φ100)

Without switch

JSC3 - **T** - **LB** - **40** - **B** - **50** - **S** - **I**

Model No.

B Mounting
*1

A Brake release pressure

C Bore size

D Port thread

E Cushion

F Stroke length
*2
*3

G Option
*4

H Accessory
*6

⚠ Precautions for model No. selection

- *1 : Mounting bracket will be shipped assembled with the product.
(Head side special flange is attached separately)
- *2 : If the stroke exceeds the max. stroke length, refer to Ending Page 69.
- *3 : The max. stroke length available for φ63 to φ100 bore size models with bellows is 2000 mm.
- *4 : For S, T, and G position indications, check the respective dimensions.
- *5 : Refer to Ending Page 85 for custom specifications of rod end form.
- *6 : "I" and "Y" cannot be selected together.

[Example of model No.]

JSC3-T-LB-40B-50-S-I

Model: Brake cylinder double acting/heat resistance

- A** Brake release pressure : Standard 0.3 MPa
- B** Mounting : Axial foot
- C** Bore size : φ40 mm
- D** Port thread : Rc thread
- E** Cushion : Both sides cushioned
- F** Stroke length : 50mm
- G** Option : Cushion needle position S
- H** Accessory : Rod eye

Code	Content		
A Brake release pressure			
Blank	Standard (0.3 MPa)		
S	Low pressure release (0.25 MPa)		
B Mounting			
00	Basic		
LB	Axial foot		
FA	Rod side flange		
FB	Head side flange		
FC	Head side special flange		
CA	Eye bracket		
CB	Clevis bracket (pin and snap ring attached)		
TC	Intermediate trunnion		
TA	Rod side trunnion		
TB	Head side trunnion		
C Bore size (mm)			
40	φ40		
50	φ50		
63	φ63		
80	φ80		
100	φ100		
D Port thread			
Blank	Rc thread		
N	NPT thread (custom order product)		
G	G thread (custom order product)		
E Cushion			
B	Both sides cushioned		
R	Rod side cushioned		
H	Head side cushioned		
N	Without cushion		
F Stroke length (mm)			
Bore size	Stroke length	Available stroke length	Custom stroke length
φ40	1 to 600	1600	In 1 mm increments
φ50	1 to 600	2000	
φ63	1 to 600	2500	
φ80	1 to 700	2500	
φ100	1 to 800	2500	
G Option			
		Max. ambient temperature	instantaneous max. temp.
L	Bellows	250°C	400°C
M	Piston rod material (stainless steel)		
Blank	Cushion needle position R (standard)		
S	Cushion needle position S		
T	Cushion needle position T		
G	With indicator		
H Accessory			
I	Rod eye		
Y	Rod clevis (pin and snap ring attached)		
B1	Eye bracket		
B2	Clevis bracket (pin and snap ring attached)		
B3	Eye bracket		
B4	Trunnion No. 2 bracket (2 pcs./set)		

How to order mounting bracket (φ40 to φ100)

Bore size (mm)	φ40	φ50	φ63	φ80	φ100
Mounting bracket					
Foot (LB) *1	JSC3-40-LB	JSC3-50-LB	JSC3-63-LB	JSC3-80-LB	JSC3-100-LB
Flange (FB)	JSC3-40-FB	JSC3-50-FB	JSC3-63-FB	JSC3-80-FB	JSC3-100-FB
Eye bracket (CA)	S1-CA-40	S1-CA-50	S1-CA-63	S1-CA-80	S1-CA-100
Clevis bracket (CB) *2	S1-CB-40	S1-CB-50	S1-CB-63	S1-CB-80	S1-CB-100

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

*2: A pin and a snap ring are attached.

*3: All mounting brackets have mounting bolts attached.

How to order (φ125 to φ180)

JSC4-T - LB - 125 - B - 50 - S

A Mounting
*1

B Bore size

C Port thread

D Cushion

E Stroke length

F Option

G Accessory
*4

⚠ Precautions for model No. selection

- *1 : Mounting bracket will be shipped assembled with the product.
- *2 : When selecting TA or TB as mounting, the switch quantity is limited to "H" (1 on head side) for TA, and "R" (1 on rod side) for TB.
- *3 : Check the figures below for the cushion needle position indication.
- *4 : "I" and "Y" cannot be selected together.

[Example of model No.]

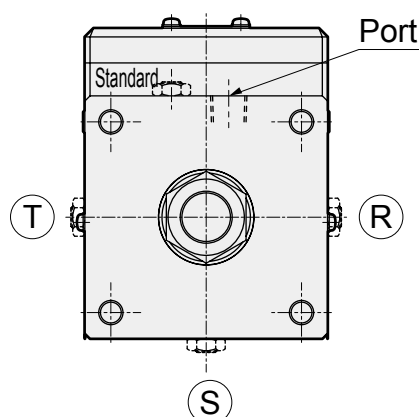
JSC4-T-LB-125B-50-SI

Model: Brake cylinder double acting/heat resistance

- A** Mounting : Axial foot
- B** Bore size : φ125 mm
- C** Port thread : Rc thread
- D** Cushion : Both sides cushioned
- E** Stroke length : 50mm
- F** Option : Cushion needle position S
- G** Accessory : Rod eye

Code	Content		
A Mounting			
LB	Axial foot		
FA	Rod side flange		
FB	Head side flange		
CA	Eye bracket		
CB	Clevis bracket (pin and snap ring attached)		
TC	Intermediate trunnion		
TA	Rod side trunnion		
TB	Head side trunnion		
B Bore size (mm)			
125	φ125		
140	φ140		
160	φ160		
180	φ180		
C Port thread			
Blank	Rc thread		
N	NPT thread (custom order product)		
G	G thread (custom order product)		
D Cushion			
B	Both sides cushioned		
R	Rod side cushioned		
H	Head side cushioned		
N	Without cushion		
E Stroke length (mm)			
Bore size	Stroke length	Available stroke	Custom stroke
φ125	1 to 800	2000	In 1 mm increments
φ140	1 to 800	2000	
φ160	1 to 800	2000	
φ180	1 to 900	2000	
F Option			
		Max. ambient temp.	instantaneous max. temp.
L	Bellows	250°C	400°C
M	Piston rod material (stainless steel)		
Blank	Cushion needle position (standard)		Standard T  S
	Cushion needle position R		
	Cushion needle position S		
	Cushion needle position T		
C2	With cushion section check valve		
G Accessory			
I	Rod eye		
Y	Rod clevis (pin and snap ring attached)		
B1	Eye bracket		
B2	Clevis bracket		

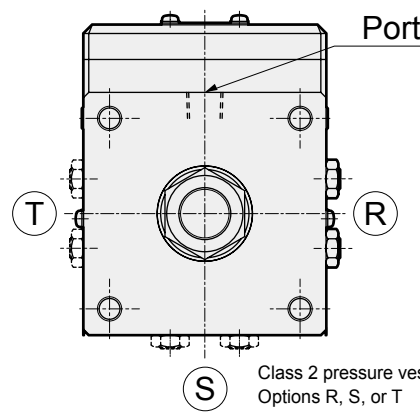
Cushion needle position (needle position from rod direction with the port on the top side)



When selecting option R, S, or T for a certified class 2 pressure vessel, the port position should be in the center as shown in the figure to the right, and the needle position should be in the offset position.

Certified class 2 pressure vessel stroke length

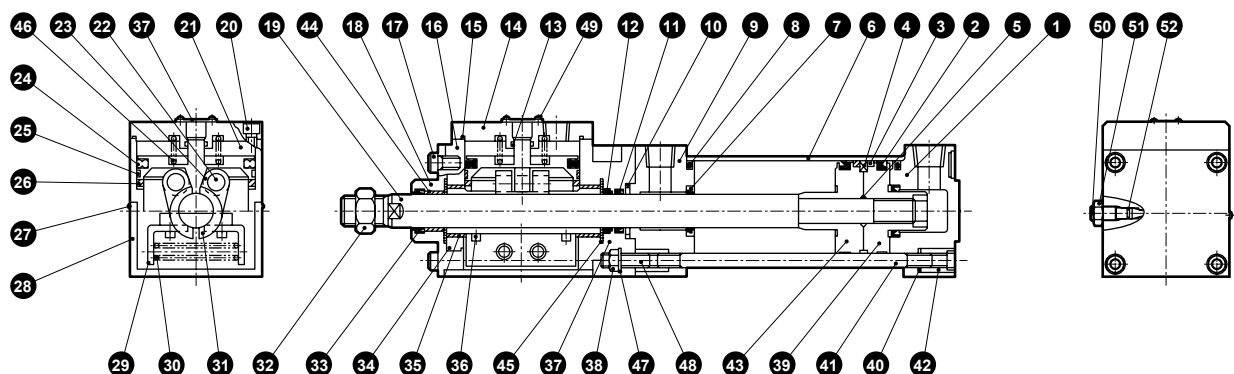
Bore size	Stroke length
φ160	1948 or more
φ180	1526 or more



Class 2 pressure vessel certification
Options R, S, or T

JSC3-T Series

Internal structure and parts list (φ40 to φ100)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Head cover	Aluminum alloy die-casting	Paint	28	Cover	Steel	Paint
2	Piston packing	Fluoro rubber		29	Spring holder	Steel	Zinc chromate
3	Wear ring	Tetrafluoroethylene resin		30	Spring	Steel	
4	Piston ring	Steel		31	Brake shoe metal	Cast iron	Nickeling
5	Piston gasket	Fluoro rubber		32	Rod nut	Steel	Zinc chromate
6	Cylinder tube	Aluminum alloy	Hard alumite	33	Dust wiper	Fluoro rubber	
7	Cushion packing	Fluoro rubber, steel		34	DU ring	Steel	Black finish
8	Cylinder gasket	Fluoro rubber		35	Bush	Oil impregnated bearing alloy	
9	Rod cover	Aluminum alloy die-casting	Paint	36	Hexagon socket head cap screw	Alloy steel	Black finish
10	Metal seal	Fluoro rubber		37	Dust cover	Aluminum alloy	Paint
11	Rod packing	Fluoro rubber		38	Hexagon nut	Steel	Black finish
12	Dust wiper	Fluoro rubber		39	Piston H	Aluminum alloy die-casting	
13	Cap gasket A	Fluoro rubber		40	Tie rod	Steel	Zinc chromate
14	Body cap	Cast iron	Nitriding	41	Conical spring washer	Steel	Black finish
15	Cap gasket B	Fluoro rubber		42	Round nut	Steel	Zinc chromate
16	Brake body	Aluminum alloy casting	Alumite	43	Piston R	Aluminum alloy die-casting	
17	Hexagon socket head cap screw	Alloy steel	Black finish	44	Bush B	Oil impregnated bearing alloy	
18	Rod metal	Steel	Manganese phosphate	45	Thrust washer		
19	Piston rod	Steel	Industrial chrome plating	46	Spring	Steel	Paint
20	Hexagon socket head cap screw	Alloy steel	Black finish	47	Toothed washer	Steel	Black finish
21	Brake piston	Cast iron	Manganese phosphate	48	Hexagon socket set screw	Steel	Black finish
22	Parallel pin	Steel		49	Phillips pan head machine screw/captive washer	Steel	Zinc chromate
23	Bearing			50	Cushion needle	Copper alloy	Nickeling
24	Piston packing B	Fluoro rubber		51	Needle nut	Copper alloy	Nickeling
25	Wear ring	Special resin		52	Needle gasket	Fluoro rubber	
26	Cushion rubber	Fluorosilicone rubber					
27	Phillips pan head machine screw	Steel	Zinc chromate				

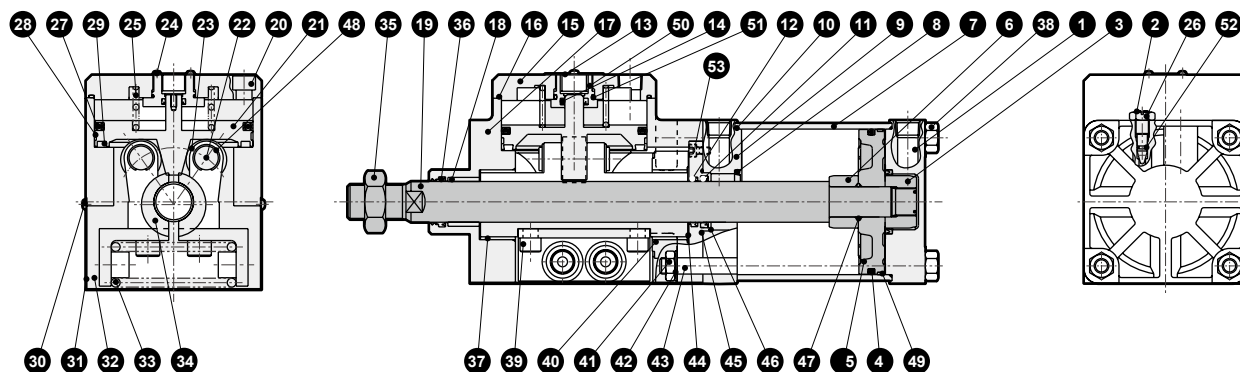
Note: Never disassemble the brake section, as the powerful spring installed can be dangerous.

Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
φ40	JSC3-T-40K	
φ50	JSC3-T-50K	
φ63	JSC3-T-63K	2 3 7 8
φ80	JSC3-T-80K	10 11 12 33 52
φ100	JSC3-T-100K	

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

Internal structure and parts list (φ125 to φ180)



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Head cover	Aluminum alloy casting	Chromate	27	Piston packing B	Fluoro rubber	
2	Cushion needle	Copper alloy		28	Wear ring	Acetal resin	
3	Cushion ring A	Steel	Zinc chromate	29	Cushion rubber	Silicone rubber	
4	Piston packing	Fluoro rubber		30	Cross-recessed pan head machine screw	Steel	Zinc chromate
5	Piston	Aluminum alloy casting		31	Cover	Steel	Paint
6	Cushion ring B	Steel	Zinc chromate	32	Spring holder	Steel	Manganese phosphate
7	Cylinder tube	Aluminum alloy	Hard alumite	33	Spring	Steel	Black finish
8	Cushion packing	Fluoro rubber/steel		34	Brake shoe metal	Cast iron	Nickeling
9	Rod cover	Aluminum alloy casting	Chromate	35	Rod nut	Steel	Zinc chromate
10	Cylinder gasket	Fluoro rubber		36	Dust wiper	Fluoro rubber	
11	Rod packing	Fluoro rubber		37	Bush A	Oiles drymet	
12	Dust wiper	Fluoro rubber		38	Hexagon nut	Steel	Zinc chromate
13	Dust cover	Aluminum alloy	Alumite	39	Hexagon socket head cap screw	Alloy steel	Black finish
14	Rod packing	Fluoro rubber		40	Ring	Steel	Black finish
15	Body cap	Aluminum alloy casting	Black alumite	41	Hexagon nut	Steel	Zinc chromate
16	Cap gasket	Fluoro rubber		42	Toothed washer	Steel	Zinc chromate
17	Brake body	Aluminum cast iron	Alumite	43	Tie rod	Steel	Zinc chromate
18	Bush B	Oil impregnated bearing alloy		44	Thrust washer	Steel	
19	Piston rod	Steel	Industrial chrome plating	45	Metal gasket	Fluoro rubber	
20	Hexagon socket head cap screw	Alloy steel	Black finish	46	Rod metal	Cast iron	Zinc chromate
21	Brake piston	Cast iron	Manganese phosphate	47	Piston gasket	Fluoro rubber	
22	Bearing pin	Steel		48	E type snap ring	Steel	Zinc chromate
23	Bearing	-		49	Wear ring	Fiber-reinforced phenolic resin	
24	Phillips pan head machine screw/captive washer	Steel	Zinc chromate	50	Body cap	Cast iron	Manganese phosphate
25	Spring	Steel	Paint	51	O-ring	Fluoro rubber	
26	Needle nut	Steel	Zinc chromate	52	Needle gasket	Fluoro rubber	
				53	Hexagon socket head cap screw	Steel	Black finish

Repair parts list

Bore size	Kit No.	Repair parts No.
φ125	JSC4-T-125K	4 8 10 11 12 36 45 49 52
φ140	JSC4-T-140K	
φ160	JSC4-T-160K	
φ180	JSC4-T-180K	

Dimensions

- Dimensions of bore sizes φ40 to φ100 are the same as those of JSC3 (double acting/single rod). Refer to pages 774 to 783.
- Dimensions of bore sizes φ125 to φ180 are the same as those of JSC4-N (double acting/no-lubrication). Refer to pages 786 to 793.

JSM2/JSK2/JSC3/JSC4 Series

* Related product selection guide

Overrun distance and stopping accuracy differ depending on the used valve. Use the following related products.

Model	Related products Bore size (mm)	SOL-1	SOL-2	Reverse regulator	Speed controller	Silencer	Piping
JSM2 JSK2	φ20	4GB150R-06	3GA110R	R1100-6-W 2419-1C	SC3W-6-6 SC3R-6 SC1-6	SLW-6A	φ6×φ4 Nylon tube
JSK2	φ25	4GB150R-06	3GA110R	R1100-6-W 2419-1C	SC3W-6-6 SC3R-6 SC1-6	SLW-6A	φ6×φ4 Nylon tube
JSM2	φ30	4GB150R-06 4GA210R-06 4GB250R-06	3GA110R	R1100-6-W 2419-1C	SC3W-6-6 SC3R-3-6 SC1-6	SLW-6A	φ6×φ4 Nylon tube
JSK2	φ32	4GB150R-06 4GA250R-06 4GB250R-06	B5136	R1100-6-W 2419-1C	SC3W-6-6 SC3R-3-6 SC1-6	SLW-6A	φ6×φ4 Nylon tube
JSM2 JSK2	φ40	4GA250R-06 4GB250R-06	4GA110R-06 4GB110R-06	R1100-6-W 2419-1C	SC3W-6-8 SC3R-6 SC1-6	SLW-6A	φ8×φ5.7 Nylon tube
JSC3	φ40	4GB250R-08 4GB350R-08 PV5G-6-FIG-D-1-A02	4GA210R-06 4GB210R-06	R3100-8-W R2100-8-W	SC3W-8-8 SC3R-8 SC1-8	SLW-8A	φ8×φ5.7 Nylon tube
	φ50	4GA350R-08 4GB350R-10 PV5G-6-FIG-D-1-A03	4GA210R-06 4GB210R-08	R3100-10-W R2100-10-W	SC3W-10-10 SC3R-10 SC1-10	SLW-10A	φ10×φ7.2 Nylon tube
	φ63	4GB350R-08 4GB350R-10 PV5G-6-FIG-D-1-A03	4GA210R-06 4GB210R-08	R4100-10-W	SC3W-10 SC3R-10 SC1-10	SLW-10A	φ10×φ7.2 Nylon tube
	φ80	4GB450-15 PV5G-8-FIG-D-1-A04	4GA210R-06 4GB210R-08	R4100-15-W	SC3W-15-12 SC3R-15 SC1-15	SLW-15A	φ12×φ8.9 Nylon tube
	φ100	4GB450-15 PV5G-8-FIG-D-1-A04	4GB310R-10	R4100-15-W	SC3W-15-12 SC3R-15 SC1-15	SLW-15A	φ12×φ8.9 Nylon tube
JSC4	φ125	4GB450-15 PV5G-8-FIG-D-1-A04	4GB310R-10 4F310R-10	R4100-15-W	SC3R-15 SC1-15	SLW-15A	φ12 rubber hose SGP3/8B SGP1/2B
	φ140	4F650-20	4GB310R-10 4F310R-10	R4100-15-W-A20W R6100-20-W	SC-20A	SL-20A	φ19 rubber hose SGP1/2B SGP3/4B
	φ160	4F650-20 4F750-20	4GB310R-10 4F310R-10	R4100-15-W-A20W R6100-20-W	SC-20A	SL-20A	φ19 rubber hose SGP1/2B SGP3/4B
	φ180	4F750-20	4GA410-10 4GB410-10 4F310-10	R4100-15-W-A20W R6100-20-W	SC-20A	SL-20A	φ19 rubber hose SGP1/2B SGP3/4B

● *1: JSC3-V is assembled with a brake release valve (SOL2).