

Full-type change for expansion of use

- Use of new type cushion valves
- Use of floating seal in cushion block
- Use of large-size oil-impregnated sintered copper alloy bearings
- Use of rods having diameters generally used in Japan
- Use of rod seals and piston seals conforming to JPAS



Cylinder Specifications/Standard

Series variations		Double acting single rod		Double acting double rod	
Type		Standard type	VAL Set	Standard type	VAL Set
Series		10A-6	10A-6V	10A-6D	10A-6VD
Cylinder bore (mm)		φ 32 · φ 40 · φ 50 · φ 63 φ 80 · φ 100 · φ 125	φ 40 · φ 50 · φ 63 · φ 80 φ 100	φ 32 · φ 40 · φ 50 · φ 63 φ 80 · φ 100 · φ 125	φ 40 · φ 50 · φ 63 · φ 80 φ 100
Working fluid		Air			
Lubrication		Unnecessary			
Working pressure range		0.05 to 1 MPa	0.17 to 0.7 MPa	0.1 to 1 MPa	0.17 to 0.7 MPa
Proof test pressure		1.5 MPa	1.05 MPa	1.5 MPa	1.05 MPa
Note 1) Working speed range		φ 32 : 30 to 800mm/s φ 40 to φ 125: 30 to 700mm/s		φ 32 : 50 to 800mm/s φ 40 to φ 125: 50 to 700mm/s	
Working temperature range		−10 to +70℃ (No freezing)	+5 to +50℃	−10 to +70℃ (No freezing)	+5 to +50℃
Structure of cushioning		With cushions on both ends (with stoppers)			
Cushion stroke (cushion ring parallel part length)		φ 32 · φ 40: 16mm φ 50 · φ 63: 20mm φ 80 · φ 100 · φ 125: 25mm			
Tolerance for thread		JIS 6g/6H			
Tolerance of stroke		0 to 250 mm: $\begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$ 251 to 1000 mm: $\begin{smallmatrix} +1.5 \\ 0 \end{smallmatrix}$ 1001 mm or more: $\begin{smallmatrix} +2.0 \\ 0 \end{smallmatrix}$			
Mounting style		SD · LA · LB · FA · FB CA · CC · CB · TC		SD · LA · LB · FA · TC	

Accessories	Note 2) Boots	Standard: Nylon tarpaulin Semi-standard: Chloroprene, Conex			
	Rod end attachments	Rod eye with spherical bearing (S-end), rod eye (T-end), rod clevis (Y-end) with pin, floating joint (F-end)			
	Others	CB bracket, TC bracket		TC bracket	

Notes) 1. When a sensor is mounted in an intermediate position, set the cylinder maximum speed to 300 mm/s or less for reasons of the load relay response speed, etc.
2. Conex, material of the boots, is the registered trademark of Teijin Limited.

⚠CAUTION

Note that the accessories for previous 10A-5 Series cannot be attached to 10A-6 Series.

Cylinder Specifications/Non-rotating type

Series variations		Double acting single rod		Double acting double rod	
Type		Standard type	VAL Set	Standard type	VAL Set
Series		10A-6G	10A-6VG	10A-6GD	10A-6VGD
Cylinder bore (mm)		φ 40 · φ 50 · φ 63 · φ 80 · φ 100			
Working fluid		Air			
Lubrication		Unnecessary			
Working pressure range		0.1 to 1 MPa	0.17 to 0.7 MPa	0.15 to 1 MPa	0.17 to 0.7 MPa
Proof test pressure		1.5 MPa	1.05 MPa	1.5 MPa	1.05 MPa
Note 1) Working speed range		50 to 500mm/s			
Working temperature range		−10 to +70℃ (No freezing)	+5 to +50℃	−10 to +70℃ (No freezing)	+5 to +50℃
Structure of cushioning		With cushions on both ends (with stoppers)			
Cushion stroke (cushion ring parallel part length)		φ 40: 16mm φ 50·φ 63: 20mm φ 80·φ 100: 25mm			
Note 3) Allowable rotating angle		φ 40: ±1°	φ 50 · φ 63: ±0.8°	φ 80 · φ 100: ±0.5°	
Allowable torque		φ 40: 1N·m	φ 50 · φ 63: 3.4N·m	φ 80 · φ 100: 10N·m	
Tolerance for thread		JIS 6g/6H			
Tolerance of stroke		0 to 250 mm: $\begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$ 251 to 1000 mm: $\begin{smallmatrix} +1.5 \\ 0 \end{smallmatrix}$ 1001 mm or more: $\begin{smallmatrix} +2.0 \\ 0 \end{smallmatrix}$			
Mounting style		SD · LA · LB · FA · FB CA · CC · CB · TC		SD · LA · LB · FA · TC	

Accessories	Note 2) Boots	Standard: Nylon tarpaulin Semi-standard: Chloroprene, Conex			
	Rod end attachments	Rod eye (T-end), rod clevis (Y-end) with pin			
	Others	CB bracket, TC bracket		TC bracket	

Notes) 1. When a sensor is mounted in an intermediate position, set the cylinder maximum speed to 300 mm/s or less for reasons of the load relay response speed, etc.
2. Conex, material of the boots, is the registered trademark of Teijin Limited.
3. The allowable rotation angle refers to the clearance in the piston rod rotating direction at the stroke end.
4. When using it together with another guide, use a round rod.

Specifications for Valves for VAL Set

Rated voltage		100 V AC		200 V AC		24 V DC	
Working voltage range (V)		90 to 132		180 to 264		21.6 to 26.4	
Current value (when rated voltage is applied)	Frequency (Hz)	50	60	50	60	—	
	Starting mA (r.m.s)	34	32	17	16	—	
	Exciting mA (r.m.s)	22	20	11	10	75 (1.8W)	
Allowable circuit leakage current (mA)		4		2		4	
Type of insulation		Class B					
Insulation resistance (MΩ)		100 or more					
Protective circuit		—			Flywheel diode		
DIN terminal type	Indicator lamp	Yellow		Green		Red	
	Terminal No.	No.1, No.2			No.1 (—), No.2 (+)		
Lead wire type	Color of lead wire	Yellow		White		Black (—), Red (+)	

Product Lineup

Unit: mm

Series Variations		Type	φ32	φ40	φ50	φ63	φ80	φ100	φ125
Standard	Double acting single rod	Standard type Switch Set 10A-6	●	●	●	●	●	●	●
		VAL Set SV Set 10A-6V		●	●	●	●	●	
	Double acting double rod	Standard type Switch Set 10A-6D	●	●	●	●	●	●	●
		VAL Set SV Set 10A-6VD		●	●	●	●	●	
	With adjustable retracted stroke	Standard type Switch Set 10A-6A2	●	●	●	●	●	●	●
		VAL Set SV Set 10A-6VA2		●	●	●	●	●	
	With adjustable extended stroke	Standard type Switch Set 10A-6A1	●	●	●	●	●	●	●
		VAL Set SV Set 10A-6VA1		●	●	●	●	●	
	Dual stroke (order made)	Single rod 10A-6Q1		●	●	●	●	●	
		Double rod 10A-6Q2	●	●	●	●	●	●	●
Non-rotating	Double acting single rod	Standard type Switch Set 10A-6G		●	●	●	●	●	
		VAL Set SV Set 10A-6VG		●	●	●	●	●	
	Double acting double rod	Standard type Switch Set 10A-6GD		●	●	●	●	●	
		VAL Set SV Set 10A-6VGD		●	●	●	●	●	
	With adjustable retracted stroke	Standard type Switch Set 10A-6GA2		●	●	●	●	●	
		VAL Set SV Set 10A-6VGA2		●	●	●	●	●	
	With adjustable extended stroke	Standard type Switch Set 10A-6GA1		●	●	●	●	●	
		VAL Set SV Set 10A-6VGA1		●	●	●	●	●	

- Order made
- Non-standard rod end screw

● Heat proof type (120℃ or less)

● Non-standard cushion valve position

● Non-copper ion type

● Dual stroke type

● Low hydraulic pressure type

● Iron tube type

● Stainless steel rod type

Weight Table

Unit: kg

Bore mm	Double acting single rod						Double acting double rod					
	Standard			Non-rotating			Standard			Non-rotating		
	Basic weight		Additional weight per mm of stroke	Basic weight		Additional weight per mm of stroke	Basic weight		Additional weight per mm of stroke	Basic weight		Additional weight per mm of stroke
	Standard type	VAL Set		Standard type	VAL Set		Standard type	VAL Set		Standard type	VAL Set	
φ32	0.57	—	0.00218	—	—	—	0.68	—	0.00306	—	—	—
φ40	0.65	0.89	0.00300	0.65	0.89	0.00276	0.84	1.08	0.00457	0.84	1.08	0.00433
φ50	1.02	1.26	0.00428	1.02	1.26	0.00425	1.35	1.59	0.00673	1.35	1.59	0.00670
φ63	1.36	1.61	0.00515	1.36	1.61	0.00512	1.86	2.11	0.00760	1.86	2.11	0.00757
φ80	2.32	2.15	0.00834	2.32	2.15	0.00810	3.16	3.41	0.01217	3.16	3.41	0.01193
φ100	2.94	3.22	0.01061	2.94	3.22	0.00869	4.22	4.50	0.01612	4.22	4.50	0.01420
φ125	4.43	—	0.01490	—	—	—	9.48	—	0.02240	—	—	—

Additional Weight Table

Unit: kg

Bore mm	Mounting accessory weight							Bracket weight		Rod end attachment weight			Valve additional weight		
	LA	LB	FA FB	CA	CC	CB	TC	For CB	For TC	Rod eye (S-end)	Rod eye (T-end)	Rod clevis (Y-end)	Energized extending type Energized retracting type	Self- retaining type	3-position closed center type 3-position exhaust center type
φ32	0.14	0.11	0.20	0.12	—	0.19	0.30	0.46	0.44	0.08	0.16	0.22	—	—	—
φ40	0.20	0.13	0.37	0.18	0.38	0.27	0.48	0.70	1.00	0.11	0.16	0.27	0.51	0.59	0.63
φ50	0.32	0.17	0.39	0.26	0.50	0.39	0.55	0.70	1.00	0.20	0.21	0.34			
φ63	0.52	0.23	0.53	0.42	0.67	0.48	0.70	0.70	1.00	0.20	0.21	0.34	0.52	0.60	0.64
φ80	0.85	0.38	1.60	1.08	1.76	0.92	1.16	0.72	1.44	0.36	0.62	0.87			
φ100	1.28	0.47	2.22	1.39	2.04	1.24	1.53	0.72	1.44	0.36	0.62	0.87	0.55	0.63	0.67
φ125	1.38	0.47	2.87	2.45	—	1.97	3.41	2.81	3.10	—	1.24	1.47	—	—	—

Note) For VAL Set, add the valve additional weight according to the operating method.

Sensor Additional Weight Table

Unit: kg

Bore	Sensor	AX type			SR type
		Cord length 1.5 m	Cord length 5 m	Connector type	Cord length 5 m
φ32	Standard double acting type	0.05	0.13	0.04	0.22
φ40					
φ50					
φ63					
φ80					
φ100					
φ125		0.07	0.14	0.06	

- Calculation formula) Cylinder weight (kg)=basic weight+(additional weight per mm of stroke×cylinder stroke (mm))
+(sensor additional weight×sensor quantity)+mounting accessory weight+valve additional weight
- Calculation example) Standard double acting type
VAL Set, bore φ80, cylinder stroke 200 mm, 2 pcs of AX215 (cord length 5 m), LB, energized retracting type
2.15+(0.00834×200)+(0.13×2)+0.38+0.52=4.978kg

How to order

Standard

The item enclosed by broken line needs not to be entered, if unnecessary. Semi-standard specification

● Standard type

10A-6

● Switch Set

10A-6

Standard type/Switch Set

10A-6 : Double acting single rod
10A-6D: Double acting double rod

With adjustable stroke/Switch Set

10A-6A1: Adjustable extended stroke
10A-6A2: Adjustable retracted stroke

Mounting style

LB

Cylinder bore (mm)

φ32·φ40·φ50·φ63·φ80·φ100·φ125

With cushions on both ends
No cushion

Cushioning

B

Stroke

100

Sensor symbol

—

Sensor quantity

2

Sensor symbol

T

With bracket
Applicable mounting styles: CB and TC

Sensor quantity(1,2 to n)

2

Sensor symbol

T

Note on ordering Switch Set

● Sensors are not mounted on cylinders at delivery.

Bracket

B

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Boots

J

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Boots

J

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Non-rotating

● Standard type

10A-6G

Standard type/Switch Set

10A-6G : Double acting single rod
10A-6GD: Double acting double rod

With adjustable stroke/Switch Set

10A-6GA1: Adjustable extended stroke
10A-6GA2: Adjustable retracted stroke

Cylinder bore (mm)

φ40 · φ50 · φ63 · φ80 · φ100

Mounting style

LB

Cylinder bore (mm)

φ40 · φ50 · φ63 · φ80 · φ100

Stroke

100

Sensor symbol

—

Sensor quantity

2

Sensor symbol

T

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Bracket

B

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Boots

J

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Mounting style

SD Basic style

LA Side lugs

LB End angles

FA Rod flange

FB Cap flange

CA Cap eye

CC Cap eye
Bore φ 40 to φ 100

CB Cap clevis with pin

TC Intermediate trunnion

How to order

Standard

The item enclosed by broken line needs not to be entered, if unnecessary.

● VAL Set

10A-6V

● SV Set

10A-6V

VAL Set/SV Set

10A-6V : Double acting single rod
10A-6VD: Double acting double rod

VAL Set/SV Set with adjustable stroke

10A-6VA1: Adjustable extended stroke
10A-6VA2: Adjustable retracted stroke

Mounting style

LB

Cylinder bore (mm)

φ40·φ50·φ63·φ80·φ100

Cushioning

B

Stroke

200

Valve assembly

A

Valve

1

Sensor symbol

—

Sensor quantity

2

Sensor symbol

T

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Bracket

B

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Boots

J

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Non-rotating

● VAL Set

10A-6VG

VAL Set/SV Set

10A-6VG : Double acting single rod
10A-6VGD: Double acting double rod

VAL Set/SV Set with adjustable stroke

10A-6VGA1: Adjustable extended stroke
10A-6VGA2: Adjustable retracted stroke

Cylinder bore (mm)

φ40 · φ50 · φ63 · φ80 · φ100

Mounting style

LB

Cylinder bore (mm)

φ40 · φ50 · φ63 · φ80 · φ100

Stroke

100

Sensor symbol

—

Sensor quantity

2

Sensor symbol

T

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Bracket

B

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Boots

J

With bracket
Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

Applicable mounting styles: CB and TC

How to order valve for VAL Set

How to order valve assembly

VS552—

R

MM

Voltage

Wiring method

Bore

R Energized extending type (return type)

D Detent type

C Closed center type

E Exhaust center type

1 100 V AC

2 200 V AC

8 24 V DC

R Lead wire type (for AC)

RK Lead wire type/with protective circuit (for DC)

DL DIN terminal type/with lamp (for AC)

DW DIN terminal type/with lamp and protective circuit (for DC)

Note) The valve assembly includes valve, speed controller muffler, piping block, joint and tube (1 m). The assembly is supplied without the valve and piping block mounted. Note that the energized extending/retracting type is changed according to the valve mounting direction.

How to order only valve

VS552—

R

MM

Voltage

Wiring method

R Energized extending type (return type)

D Detent type

C Closed center type

E Exhaust center type

1 100 V AC

2 200 V AC

8 24 V DC

R Lead wire type (for AC)

RK Lead wire type/with protective circuit (for DC)

DL DIN terminal type/with lamp (for AC)

DW DIN terminal type/with lamp and protective circuit (for DC)

Note) When only a valve is ordered, the valve will come with a mounting bolt and a gasket.

Sensor List ■ Semi-standard specification

Type	Sensor symbol	Load voltage range	Load current range	Max. switching capacity	Protective circuit	Indicating lamp	Wiring method	Cord length	Applicable load	
Reed sensor	AF AX101CE	DC: 5 to 30V AC: 5 to 120V	DC: 5 to 40mA AC: 5 to 20mA	DC: 1.5W AC: 2VA	None	LED (Lights in red when sensing)	0.3 mm ² , 2-core, outer dia. φ4 mm, rear wiring	1.5m	Small relay, programmable controller	
	AG AX105CE				5m					
	AH AX111CE				1.5m					
	AJ AX115CE				5m					
	AE AX125CE	DC: 30V or less AC: 120V or less	DC: 40mA or less AC: 20mA or less	None	None	5m				
	AK AX11ACE	AC: 5 to 120V	5 to 20mA	1.5W	Provided	LED (Lights in red when sensing)	4-pin connector type, rear wiring	0.5m		
	AL AX11BCE	DC: 5 to 30V	5 to 40mA				0.5m			
	AM AX135CE	AC: 90 to 240V DC: 90 to 240V	5 to 300mA	B contact output	Provided	LED (Lights in red when not sensing)	0.3 mm ² , 2-core, outer dia. φ4 mm, rear wiring	5m		
	S SR405	AC: 80 to 220V	2 to 300mA	30VA	Provided	Neon lamp (Lights in red when not sensing)	0.5 mm ² , 2-core, outer dia. φ6 mm, rear wiring	5m		Small relay, programmable controller, small solenoid, pilot lamp
	Solid state sensor	BE AX201CE-1	DC: 5 to 30V	5 to 40mA	—	Provided	LED (Lights in red when sensing)	0.3 mm ² , 2-core, outer dia. φ4 mm, rear wiring		1.5m
BF AX205CE-1		5m								
CE AX211CE-1		LED (2-LED type in red/green)					1.5m			
CF AX215CE-1		5m								
CT AX211CE-1		LED (2-LED type in red/green)					0.3 mm ² , 2-core, outer dia. φ4 mm, rear wiring	1.5m		
CU AX215CE-1							4-pin connector type, rear wiring	5m		
CV AX218CE-1							4-pin connector type, rear wiring	0.5m		
CW AZ211CE-1							0.3 mm ² , 2-core, outer dia. φ4 mm, upper wiring	1.5m		
CX AZ215CE-1							0.3 mm ² , 2-core, outer dia. φ4 mm, upper wiring	5m		
CY AZ218CE-1							4-pin connector type, upper wiring	0.5m		

Notes) ● For the sensors without a protective circuit, be sure to provide a protective circuit (SK-100) with the load when using any induction load (relay, etc.).
● The output logic of AX135CE is a B contact. When the piston is detected, the sensor contact turns off (the lamp turns on).
● For the detailed specifications and handling of sensors, see the sensor specifications at the end of this catalog.
● The AX type sensors can be mounted on any type in addition to the above types. See the sensor specifications at the end of this catalog.
● We recommend AND Unit (AU series) for multiple sensors connected in series.
For details, refer to AND Unit at the end of this catalog.

●AX type sensor

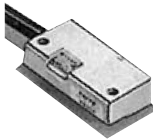
Cord type



Connector type

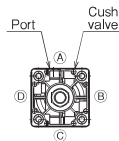


●SR type sensor



Ordering procedures

★ Standard specifications



- With cushions on both ends
- Port position (A) and cushion valve position (B)
- Notes) ● When specifying port and cushion valve positions other than (A), consult us.
- In the case of VAL Set, the cushion valve on the cap side is positioned on (B).

★ Semi-standard range

- Double rod cylinders, cylinders with boots, and cylinders without cushions
- Change of piston rod end (dimensional symbol: WF, A, KK)
- Change of TC accessory position (dimensional symbol: PH)
- Note) ● Contact us for specifications not stated above.

Stroke Limit

Unit: mm

Bore	Double acting single rod		Double acting double rod	
	Round rod (standard)	Non-rotating	Round rod (standard)	Non-rotating
ϕ32	700	—	500	—
ϕ40	1000	500	800	500
ϕ50	1500		1000	
ϕ63				
ϕ80				
ϕ100			—	
ϕ125			—	

Sensor Mountable Minimum Stroke

Unit: mm

Type	AX type		SR type	
	Switch Set	SV Set	Switch Set	SV Set
With 1 sensor	25	50	15 (25)	50
2 pcs. on one surface	25	50	Note 3 15 (25)	50
2 pcs. on opposite surfaces	25	50	15 (25)	50
Trunnion (TC style)	120	120	90 (130)	125

Notes) 1. The minimum stroke for the trunnion (TC) is the value obtained when the trunnion is located in the center.
2. The parenthesized values are the minimum strokes of cylinders with bores from 80 to 125 mm.
3. The minimum stroke of the 32 mm bore SR type cylinder is 50.

Readily Available Cylinder Size

Unit: mm

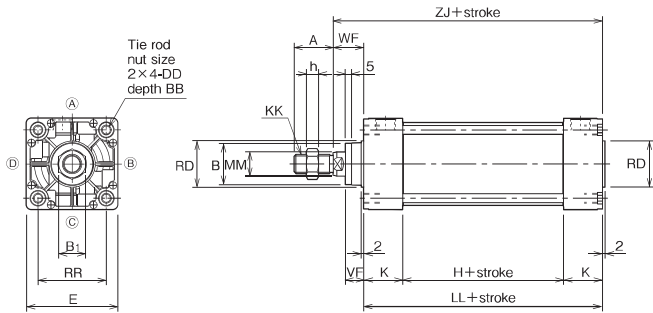
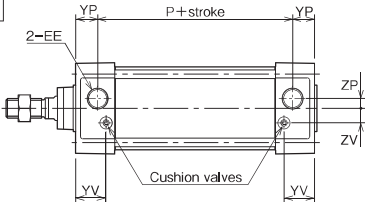
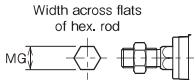
Bore	Stroke	Stroke of readily available cylinder											
		50	75	100	125	150	200	250	300	350	400	450	500
ϕ 32		○	○	○	○	○	○	○	○	○	○	○	○
ϕ 40		○	○	○	○	○	○	○	○	○	○	○	○
ϕ 50		○	○	○	○	○	○	○	○	○	○	○	○
ϕ 63		○	○	○	○	○	○	○	○	○	○	○	○
ϕ 80		○	○	○	○	○	○	○	○	○	○	○	○
ϕ 100		○	○	○	○	○	○	○	○	○	○	○	○

Note) The cylinders shown in the above table are double acting single rod cylinders except the TC style.

SD

Double acting single rod **Standard** 10A-6 SD **Bore** **B** **Stroke**
Non-rotating 10A-6G SD **Bore** **B** **Stroke**

- Standard ϕ 32 to ϕ 125
- Non-rotating ϕ 40 to ϕ 100



- For dimensions not shown here, refer to the SD style (basic style).
- The non-rotating cylinders have the same dimensions as the standard cylinders except dimensions of the rod end.
- For dimensional drawings of rod end attachments, refer to the accessories.
- For the mounting of sensors, see the dimensional drawings of Switch Set.
- For the mounting of valves, see the dimensional drawings of VAL Set.

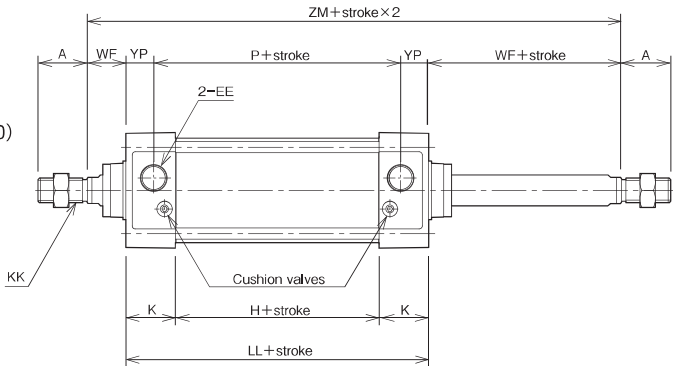
Double acting double rod **Standard** 10A-6D SD **Bore** **B** **Stroke**
Non-rotating 10A-6GD SD **Bore** **B** **Stroke**

10A-6/TA6 **Bore** **B**

- Non-rotating(ϕ 40 to ϕ 100)



Note) Hex. rod on one side, and round rod on one side



- For dimensions not shown here, refer to the double acting single rod cylinder.

Dimensional Table

Symbol	A	B	B ₁	BB	D	DD	E	EE	H	K	KK	LL	MG
Bore													
ϕ 32	22(19)	ϕ 24	17	14	10	M6×1	$\square$ 44	Rc1/8	31	31	M10×1.25	93	—
ϕ 40	24(21)	ϕ 30	19	14	14	M6×1	$\square$ 50	Rc1/4	31	31	M12×1.25	93	14
ϕ 50	32(29)	ϕ 34	22	14	17	M6×1	$\square$ 62	Rc1/4	31	31	M16×1.5	93	19
ϕ 63	32(29)	ϕ 34	22	14	17	M8×1.25	$\square$ 75	Rc3/8	32	32	M16×1.5	96	19
ϕ 80	40(37)	ϕ 39	27	15	21	M10×1.5	$\square$ 94	Rc3/8	36	36	M20×1.5	108	23
ϕ 100	40(37)	ϕ 46	27	15	26	M10×1.5	$\square$ 112	Rc1/2	36	36	M20×1.5	108	23
ϕ 125	54(50)	ϕ 55	36	15	32	M12×1.75	$\square$ 136	Rc1/2	42	36	M27×2	114	—

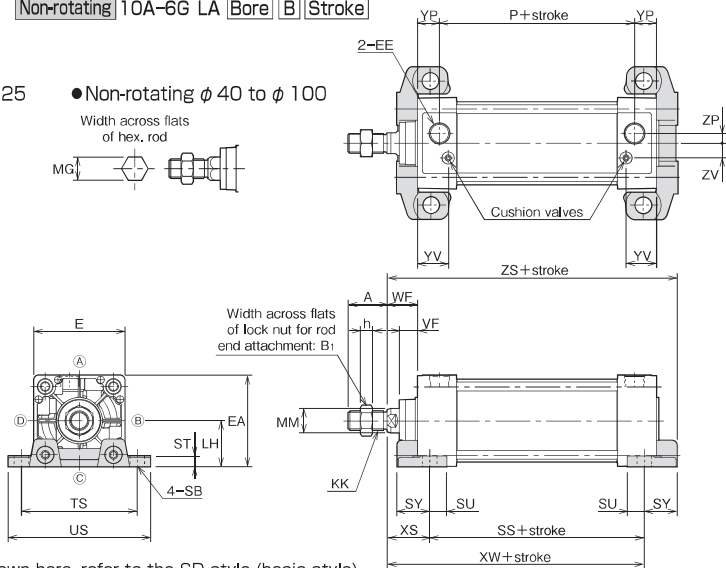
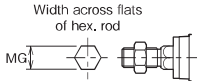
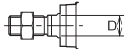
Symbol	MM	P	RD	RR	VF	WF	YP	YV	ZJ	ZM	ZP	ZV	h
Bore													
ϕ 32	ϕ 12	61	ϕ 26	$\square$ 33	15	25	16	25.5	118	143	3	7	6
ϕ 40	ϕ 16	57	ϕ 32	$\square$ 37	15	25	18	25.5	118	143	4	10	7
ϕ 50	ϕ 20	57	ϕ 38	$\square$ 47	15	25	18	24	118	143	7	12	10
ϕ 63	ϕ 20	60	ϕ 38	$\square$ 56	15	25	18	25	121	146	8	12	10
ϕ 80	ϕ 25	68	ϕ 44	$\square$ 70	21	35	20	29	143	178	11	16	12
ϕ 100	ϕ 30	68	ϕ 50	$\square$ 84	21	35	20	29	143	178	12	18	12
ϕ 125	ϕ 35	74	ϕ 60	$\square$ 104	21	35	20	29	149	184	14	20	16

* The parenthesized values of dimension A indicate the screw length.

LA

Double acting single rod **Standard** 10A-6 LA **Bore** B **Stroke** Stroke
Non-rotating 10A-6G LA **Bore** B **Stroke** Stroke

- Standard ϕ 32 to ϕ 125
- Non-rotating ϕ 40 to ϕ 100



- For dimensions not shown here, refer to the SD style (basic style).
- The non-rotating cylinders have the same dimensions as the standard cylinders except dimensions of the rod end.
- For dimensional drawings of rod end attachments, refer to the accessories.
- For the mounting of sensors, see the dimensional drawings of Switch Set.
- For the mounting of valves, see the dimensional drawings of VAL Set.

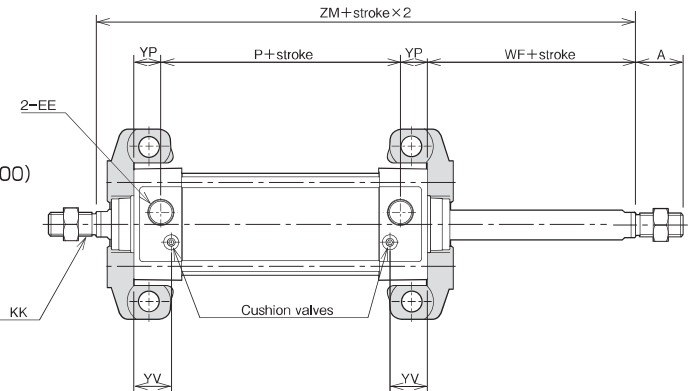
Double acting double rod **Standard** 10A-6D LA **Bore** B **Stroke** Stroke
Non-rotating 10A-6GD LA **Bore** B **Stroke** Stroke

10A-6/TA6 **Bore** B

- Non-rotating(ϕ 40 to ϕ 100)



Note) Hex. rod on one side, and round rod on one side



- For dimensions not shown here, refer to the double acting single rod cylinder.

Dimensional Table

Symbol	A	B ₁	D	E	EA	EE	KK	LH	MG	MM	P	SB	SS	ST
Bore														
ϕ 32	22 (19)	17	10	$\square$ 44	44	Rc1/8	M10×1.25	22	—	ϕ 12	61	ϕ 9	73	8
ϕ 40	24 (21)	19	14	$\square$ 50	50	Rc1/4	M12×1.25	25	14	ϕ 16	57	ϕ 12	73	8
ϕ 50	32 (29)	22	17	$\square$ 62	62	Rc1/4	M16×1.5	31	19	ϕ 20	57	ϕ 12	73	9
ϕ 63	32 (29)	22	17	$\square$ 75	75.5	Rc3/8	M16×1.5	38	19	ϕ 20	60	ϕ 12	76	9
ϕ 80	40 (37)	27	21	$\square$ 94	94	Rc3/8	M20×1.5	47	23	ϕ 25	68	ϕ 14	82	13
ϕ 100	40 (37)	27	26	$\square$ 112	113	Rc1/2	M20×1.5	57	23	ϕ 30	68	ϕ 14	82	14
ϕ 125	54 (50)	36	32	$\square$ 136	137	Rc1/2	M27×2	69	—	ϕ 35	74	ϕ 18	80	18

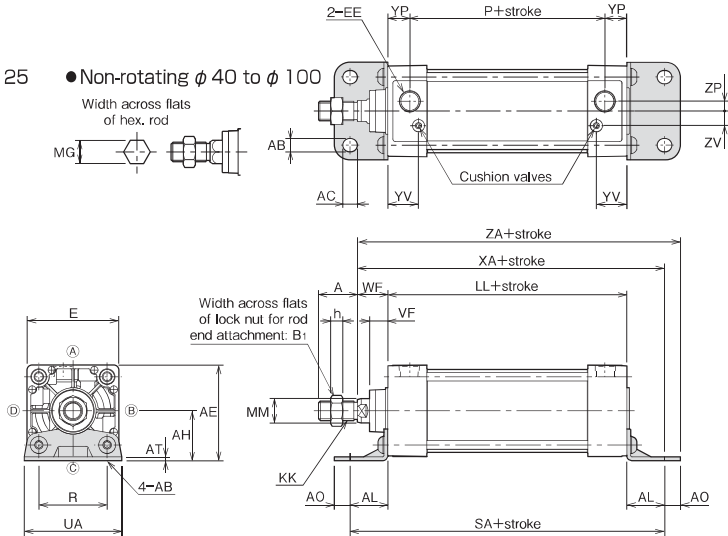
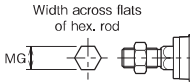
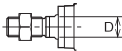
Symbol	SU	SY	TS	US	VF	WF	XS	XW	YP	YV	ZM	ZP	ZS	ZV	h
Bore															
ϕ 32	14	23	63	81	15	25	35	108	16	25.5	143	3	131	7	6
ϕ 40	14	23	70	92	15	25	35	108	18	25.5	143	4	131	10	7
ϕ 50	14	25	83	105	15	25	35	108	18	24	143	7	133	12	10
ϕ 63	14	27	95	117	15	25	35	111	18	25	146	8	138	12	10
ϕ 80	18	34	121	147	21	35	48	130	20	29	178	11	164	16	12
ϕ 100	18	38	140	168	21	35	48	130	20	29	178	12	168	18	12
ϕ 125	21	46	175	213	21	35	52	132	20	29	184	14	178	20	16

* The parenthesized values of dimension A indicate the screw length.

LB

Double acting single rod **Standard** 10A-6 LB **Bore** **B** **Stroke**
 Non-rotating 10A-6G LB **Bore** **B** **Stroke**

- Standard ϕ 32 to ϕ 125
- Non-rotating ϕ 40 to ϕ 100



- For dimensions not shown here, refer to the SD style (basic style).
- The non-rotating cylinders have the same dimensions as the standard cylinders except dimensions of the rod end.
- For dimensional drawings of rod end attachments, refer to the accessories.
- For the mounting of sensors, see the dimensional drawings of Switch Set.
- For the mounting of valves, see the dimensional drawings of VAL Set.

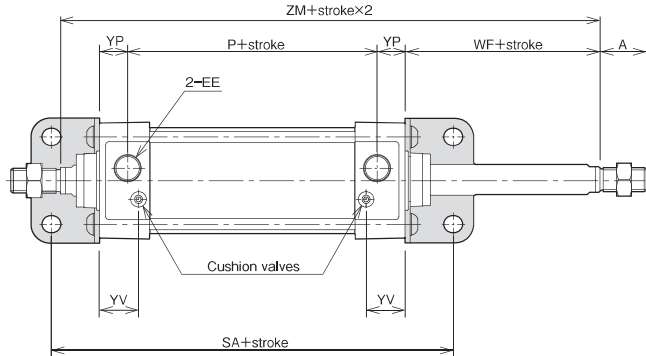
Double acting double rod **Standard** 10A-6D LB **Bore** **B** **Stroke**
 Non-rotating 10A-6GD LB **Bore** **B** **Stroke**

10A-6/TA6 **Bore** **B** **Stroke**

- Non-rotating(ϕ 40 to ϕ 100)



Note) Hex. rod on one side, and round rod on one side



- For dimensions not shown here, refer to the double acting single rod cylinder.

Dimensional Table

Symbol	A	AB	AC	AE	AH	AL	AO	AT	B ₁	D	E	EE	H	K	KK
Bore															
ϕ 32	22(19)	9	11	50	28	20.5	9.5	3.2	17	10	□44	Rc1/8	31	31	M10×1.25
ϕ 40	24(21)	11	13	55	30	23.5	12.5	3.2	19	14	□50	Rc1/4	31	31	M12×1.25
ϕ 50	32(29)	11	13	67.5	36.5	28	12	3.2	22	17	□62	Rc1/4	31	31	M16×1.5
ϕ 63	32(29)	11	13	78.5	41	31	13	3.2	22	17	□75	Rc3/8	32	32	M16×1.5
ϕ 80	40(37)	14	16	96	49	30	16	4	27	21	□94	Rc3/8	36	36	M20×1.5
ϕ 100	40(37)	14	16	113	57	30	16	4	27	26	□112	Rc1/2	36	36	M20×1.5
ϕ 125	54(50)	18	20	138	70	35	18	6	36	32	□136	Rc1/2	42	36	M27×2

Symbol	LL	MG	MM	P	R	SA	UA	VF	WF	XA	YP	YV	ZA	ZM	ZP	ZV	h
Bore																	
ϕ 32	93	—	ϕ 12	61	33	134	50	15	25	138.5	16	25.5	148	143	3	7	6
ϕ 40	93	14	ϕ 16	57	36	140	57	15	25	141.5	18	25.5	154	143	4	10	7
ϕ 50	93	19	ϕ 20	57	47	149	68	15	25	146	18	24	158	143	7	12	10
ϕ 63	96	19	ϕ 20	60	56	158	80	15	25	152	18	25	165	146	8	12	10
ϕ 80	108	23	ϕ 25	68	70	168	97	21	35	173	20	29	189	178	11	16	12
ϕ 100	108	23	ϕ 30	68	84	168	112	21	35	173	20	29	189	178	12	18	12
ϕ 125	114	—	ϕ 35	74	104	184	136	21	35	184	20	29	202	184	14	20	16

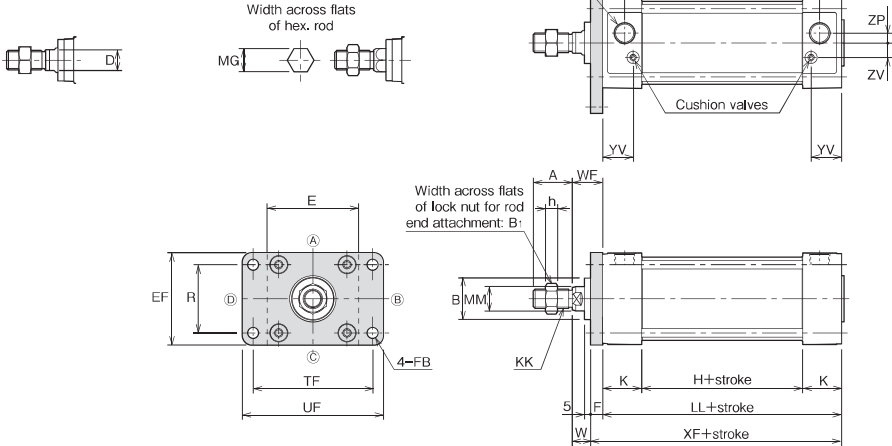
* The parenthesized values of dimension A indicate the screw length.

CAD/DATA
10A-6/TA6 BoreA is available.

FA

Double acting single rod Standard 10A-6 FA BoreB Stroke
Non-rotating 10A-6G FA BoreB Stroke

- Standard ϕ 32 to ϕ 125
- Non-rotating ϕ 40 to ϕ 100

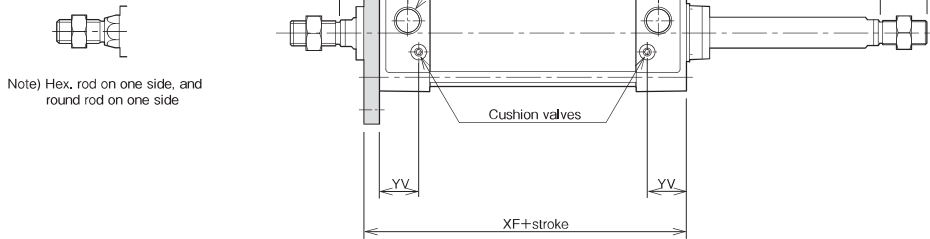


- For dimensions not shown here, refer to the SD style (basic style).
- The non-rotating cylinders have the same dimensions as the standard cylinders except dimensions of the rod end.
- For dimensional drawings of rod end attachments, refer to the accessories.
- For the mounting of sensors, see the dimensional drawings of Switch Set.
- For the mounting of valves, see the dimensional drawings of VAL Set.

Double acting double rod Standard 10A-6D FA BoreB Stroke
Non-rotating 10A-6GD FA BoreB Stroke

10A-6/TA6 BoreB

- Non-rotating (ϕ 40 to ϕ 100)



- For dimensions not shown here, refer to the double acting single rod cylinder.

Dimensional Table

Symbol	A	B	B ₁	D	E	EE	EF	F	FB	H	K	KK	LL
Bore													
ϕ 32	22 (19)	ϕ 24	17	10	$\square$ 44	Rc1/8	47	10	ϕ 7	31	31	M10 $\times$ 1.25	93
ϕ 40	24 (21)	ϕ 30	19	14	$\square$ 50	Rc1/4	52	10	ϕ 7	31	31	M12 $\times$ 1.25	93
ϕ 50	32 (29)	ϕ 34	22	17	$\square$ 62	Rc1/4	65	10	ϕ 9	31	31	M16 $\times$ 1.5	93
ϕ 63	32 (29)	ϕ 34	22	17	$\square$ 75	Rc3/8	76	10	ϕ 9	32	32	M16 $\times$ 1.5	96
ϕ 80	40 (37)	ϕ 39	27	21	$\square$ 94	Rc3/8	95	16	ϕ 12	36	36	M20 $\times$ 1.5	108
ϕ 100	40 (37)	ϕ 46	27	26	$\square$ 112	Rc1/2	115	16	ϕ 12	36	36	M20 $\times$ 1.5	108
ϕ 125	54 (50)	ϕ 55	36	32	$\square$ 136	Rc1/2	138	16	ϕ 14	42	36	M27 $\times$ 2	114

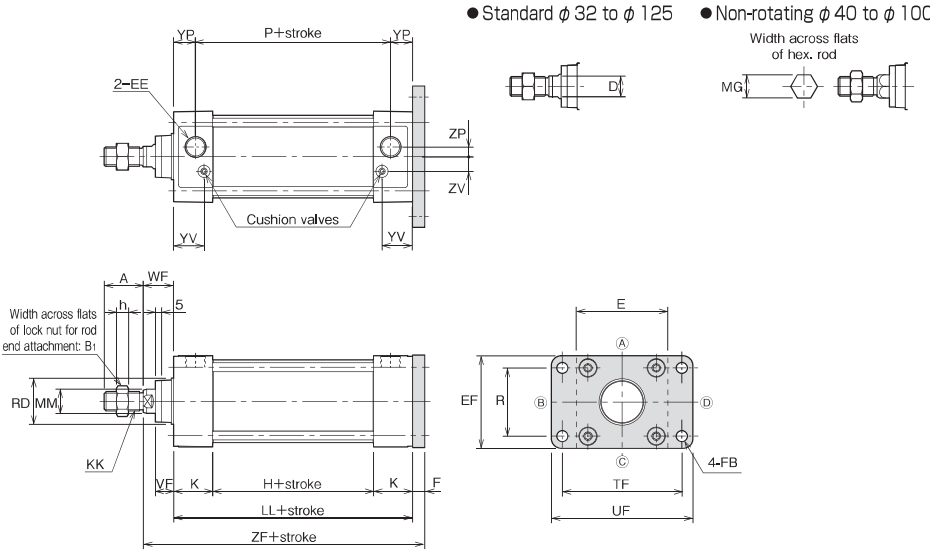
Symbol	MG	MM	P	R	TF	UF	W	WF	XF	YP	YV	ZM	ZP	ZV	h
Bore															
ϕ 32	—	ϕ 12	61	33	58	72	15	25	103	16	25.5	143	3	7	6
ϕ 40	14	ϕ 16	57	36	70	84	15	25	103	18	25.5	143	4	10	7
ϕ 50	19	ϕ 20	57	47	86	104	15	25	103	18	24	143	7	12	10
ϕ 63	19	ϕ 20	60	56	98	116	15	25	106	18	25	146	8	12	10
ϕ 80	23	ϕ 25	68	70	119	143	19	35	124	20	29	178	11	16	12
ϕ 100	23	ϕ 30	68	84	138	162	19	35	124	20	29	178	12	18	12
ϕ 125	—	ϕ 35	74	104	168	196	19	35	130	20	29	184	14	20	16

* The parenthesized values of dimension A indicate the screw length.

CAD/DATA
10A-6/TA6 Bore A is available.

FB

Double acting single rod Standard 10A-6 FB Bore B Stroke
Non-rotating 10A-6G FB Bore B Stroke



- For dimensions not shown here, refer to the SD style (basic style).
- The non-rotating cylinders have the same dimensions as the standard cylinders except dimensions of the rod end.
- For dimensional drawings of rod end attachments, refer to the accessories.
- For the mounting of sensors, see the dimensional drawings of Switch Set.
- For the mounting of valves, see the dimensional drawings of VAL Set.

Dimensional Table

Symbol Bore	A	B ₁	D	E	EE	EF	F	FB	H	K	KK	LL	MG
$\phi 32$	22 (19)	17	10	$\square 44$	Rc1/8	47	10	$\phi 7$	31	31	M10X1.25	93	—
$\phi 40$	24 (21)	19	14	$\square 50$	Rc1/4	52	10	$\phi 7$	31	31	M12X1.25	93	14
$\phi 50$	32 (29)	22	17	$\square 62$	Rc1/4	65	10	$\phi 9$	31	31	M16X1.5	93	19
$\phi 63$	32 (29)	22	17	$\square 75$	Rc3/8	76	10	$\phi 9$	32	32	M16X1.5	96	19
$\phi 80$	40 (37)	27	21	$\square 94$	Rc3/8	95	16	$\phi 12$	36	36	M20X1.5	108	23
$\phi 100$	40 (37)	27	26	$\square 112$	Rc1/2	115	16	$\phi 12$	36	36	M20X1.5	108	23
$\phi 125$	54 (50)	36	32	$\square 136$	Rc1/2	138	16	$\phi 14$	42	36	M27X2	114	—

Symbol Bore	MM	P	R	RD	TF	UF	VF	WF	YP	YV	ZF	ZP	ZV	h
$\phi 32$	$\phi 12$	61	33	$\phi 26$	58	72	15	25	16	25.5	128	3	7	6
$\phi 40$	$\phi 16$	57	36	$\phi 32$	70	84	15	25	18	25.5	128	4	10	7
$\phi 50$	$\phi 20$	57	47	$\phi 38$	86	104	15	25	18	24	128	7	12	10
$\phi 63$	$\phi 20$	60	56	$\phi 38$	98	116	15	25	18	25	131	8	12	10
$\phi 80$	$\phi 25$	68	70	$\phi 44$	119	143	21	35	20	29	159	11	16	12
$\phi 100$	$\phi 30$	68	84	$\phi 50$	138	162	21	35	20	29	159	12	18	12
$\phi 125$	$\phi 35$	74	104	$\phi 60$	168	196	21	35	20	29	165	14	20	16

* The parenthesized values of dimension A indicate the screw length.

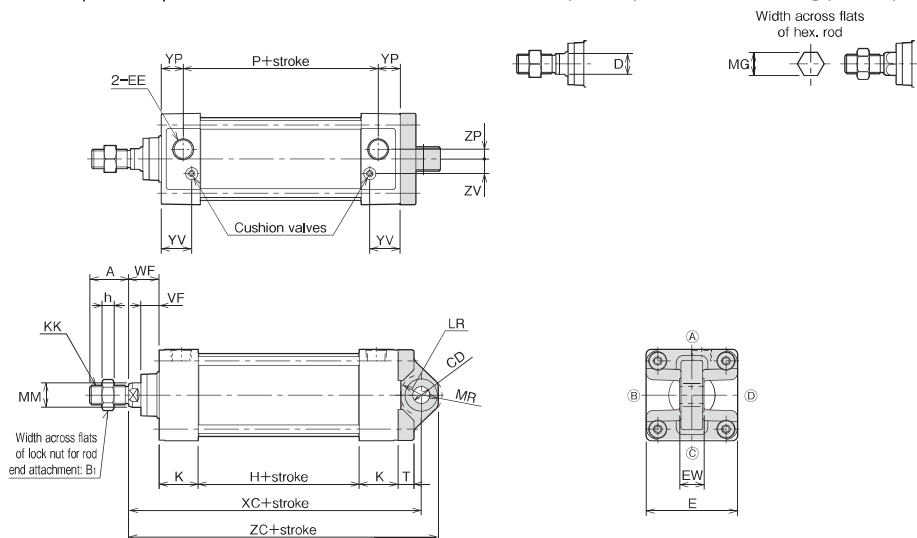
CA

Double acting single rod	Standard	10A-6	CA	Bore	B	Stroke
	Non-rotating	10A-6G	CA	Bore	B	Stroke

- Bore ϕ 32 to ϕ 125

● Standard ϕ 32 to ϕ 125

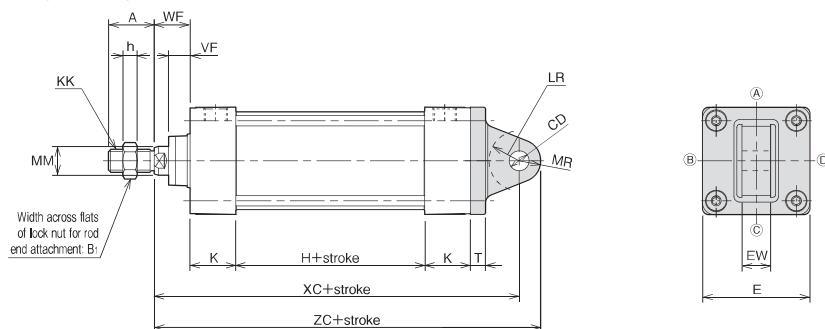
- Non-rotating ϕ 40 to ϕ 100



CC

Double acting single rod	Standard	10A-6	CC	Bore	B	Stroke
	Non-rotating	10A-6G	CC	Bore	B	Stroke

- Bore ϕ 40 to ϕ 100



- For dimensions not shown here, refer to the SD style (basic style).
- The non-rotating cylinders have the same dimensions as the standard cylinders except dimensions of the rod end.
- For dimensional drawings of rod end attachments, refer to the accessories.
- For the mounting of sensors, see the dimensional drawings of Switch Set.
- For the mounting of valves, see the dimensional drawings of VAL Set.

Dimensional Table

Symbol Bore	A	B ₁	CD		D	E	EE	EW		H	K	KK	LR		MC
	CA style	CC style	CA style	CC style				CA style	CC style				CA style	CC style	
φ32	22(19)	17	φ12H9	—	10	 44	Rc1/8	16 ⁰ _{-0.070}	—	31	31	M10×1.25	R16	—	—
φ40	24(21)	19	φ14H9	φ14H9	14	 50	Rc1/4	20 ⁰ _{-0.084}	20 ⁰ _{-0.3}	31	31	M12×1.25	R17	R21	14
φ50	32(29)	22	φ14H9	φ14H9	17	 62	Rc1/4	20 ⁰ _{-0.084}	20 ⁰ _{-0.3}	31	31	M16×1.5	R17	R21	19
φ63	32(29)	22	φ14H9	φ14H9	17	 75	Rc3/8	20 ⁰ _{-0.084}	20 ⁰ _{-0.3}	32	32	M16×1.5	R17	R21	19
φ80	40(37)	27	φ20H9	φ20H9	21	 94	Rc3/8	32 ⁰ _{-0.100}	32 ⁰ _{-0.3}	36	36	M20×1.5	R25	R25	23
φ100	40(37)	27	φ20H9	φ20H9	26	 112	Rc1/2	32 ⁰ _{-0.100}	32 ⁰ _{-0.3}	36	36	M20×1.5	R26	R25	23
φ125	54(50)	36	φ20H9	—	32	 136	Rc1/2	32 ⁰ _{-0.100}	—	42	36	M27×2	R30	—	—

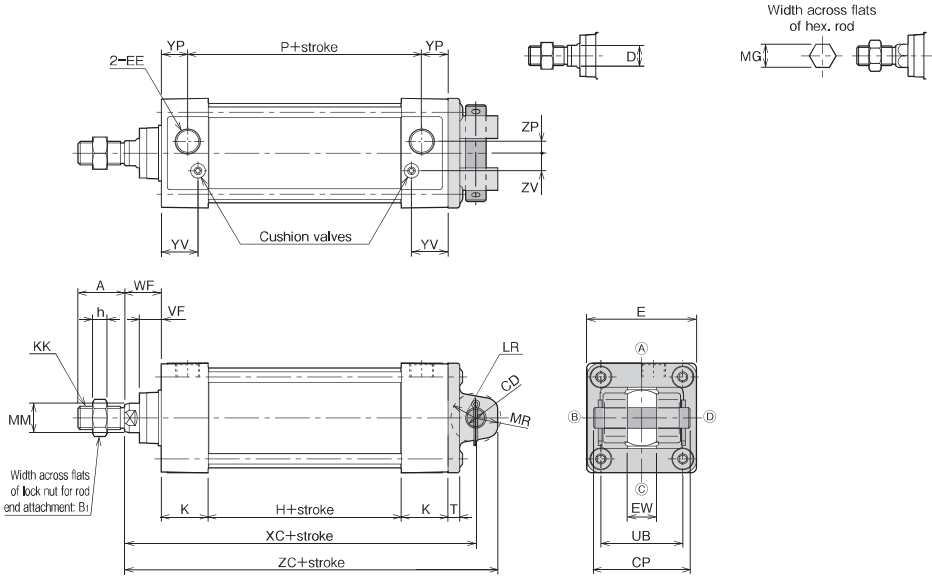
Symbol Bore	MM	MR		P	T		VF	WF	XC		YP	YV	ZC		ZP	ZV	h
		CA style	CC style		CA style	CC style			CA style	CC style			CA style	CC style			
φ32	φ12	R16	—	61	8	—	15	25	137	—	16	25.5	150	—	3	7	6
φ40	φ16	R17	R14	57	8	11	15	25	137	152	18	25.5	151	166	4	10	7
φ50	φ20	R17	R15	57	10	11	15	25	137	152	18	24	151	167	7	12	10
φ63	φ20	R17	R15	60	13	11	15	25	140	155	18	25	154	170	8	12	10
φ80	φ25	R24	R20	68	18	15	21	35	175	191	20	29	196	211	11	16	12
φ100	φ30	R24	R20	68	18	15	21	35	175	191	20	29	195	211	12	18	12
φ125	φ35	R25	—	74	21	—	21	35	181	—	20	29	201	—	14	20	16

* The parenthesized values of dimension A indicate the screw length.

CB

Double acting single rod **Standard** 10A-6 CB **Bore** **B** **Stroke**
 Non-rotating 10A-6G CB **Bore** **B** **Stroke**

● Standard ϕ 32 to ϕ 125 ● Non-rotating ϕ 40 to ϕ 100



- For dimensions not shown here, refer to the SD style (basic style).
- The non-rotating cylinders have the same dimensions as the standard cylinders except dimensions of the rod end.
- For dimensional drawings of rod end attachments, refer to the accessories.
- For the mounting of sensors, see the dimensional drawings of Switch Set.
- For the mounting of valves, see the dimensional drawings of VAL Set.

CAD/DATA
10A-6/TA6 **Bore** **A** is available.

Dimensional Table

Symbol Bore	A	B ₁	CD	CP	D	E	EE	EW	H	K	KK	LR	MG
ϕ 32	22 (19)	17	ϕ 12 $\frac{H_9}{f_8}$	46	10	$\square$ 44	Rc1/8	16 $\frac{+0.7}{+0.5}$	31	31	M10×1.25	R17	—
ϕ 40	24 (21)	19	ϕ 14 $\frac{H_9}{f_8}$	58	14	$\square$ 50	Rc1/4	20 $\frac{+0.7}{+0.5}$	31	31	M12×1.25	R17	14
ϕ 50	32 (29)	22	ϕ 14 $\frac{H_9}{f_8}$	66	17	$\square$ 62	Rc1/4	20 $\frac{+0.7}{+0.5}$	31	31	M16×1.5	R17	19
ϕ 63	32 (29)	22	ϕ 14 $\frac{H_9}{f_8}$	66	17	$\square$ 75	Rc3/8	20 $\frac{+0.7}{+0.5}$	32	32	M16×1.5	R17	19
ϕ 80	40 (37)	27	ϕ 20 $\frac{H_9}{f_8}$	78	21	$\square$ 94	Rc3/8	32 $\frac{+0.7}{+0.5}$	36	36	M20×1.5	R30	23
ϕ 100	40 (37)	27	ϕ 20 $\frac{H_9}{f_8}$	78	26	$\square$ 112	Rc1/2	32 $\frac{+0.7}{+0.5}$	36	36	M20×1.5	R30	23
ϕ 125	54 (50)	36	ϕ 20 $\frac{H_9}{f_8}$	78	32	$\square$ 136	Rc1/2	32 $\frac{+0.7}{+0.5}$	42	36	M27×2	R30	—

Symbol Bore	MM	MR	P	T	UB	VF	WF	XC	YP	YV	ZC	ZP	ZV	h
ϕ 32	ϕ 12	R15	61	8	33	15	25	137	16	25.5	150	3	7	6
ϕ 40	ϕ 16	R15	57	8	45	15	25	137	18	25.5	150	4	10	7
ϕ 50	ϕ 20	R17	57	8	53	15	25	137	18	24	152	7	12	10
ϕ 63	ϕ 20	R17	60	8	53	15	25	140	18	25	155	8	12	10
ϕ 80	ϕ 25	R24	68	11	67	21	35	175	20	29	196	11	16	12
ϕ 100	ϕ 30	R24	68	11	67	21	35	175	20	29	196	12	18	12
ϕ 125	ϕ 35	R22	74	14	65	21	35	181	20	29	197	14	20	16

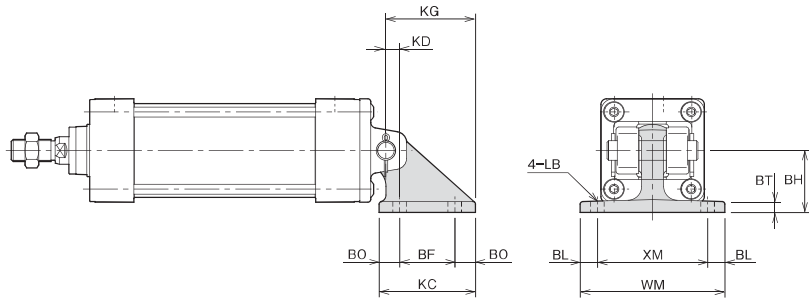
* The parenthesized values of dimension A indicate the screw length.

Bracket for CB

10A-6/TA6 **Bore** **K**

Dimensional Table

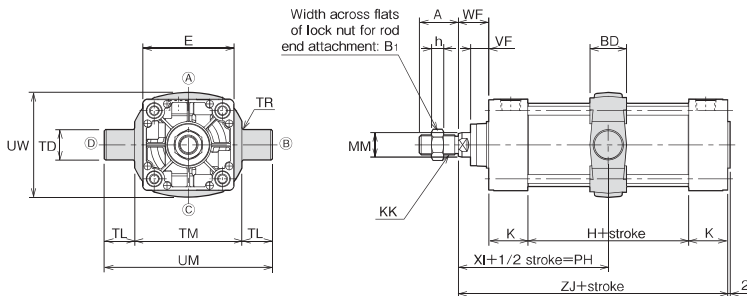
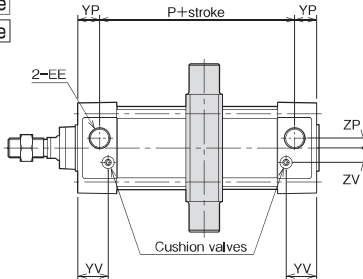
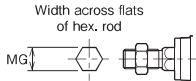
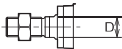
Symbol Bore	Part number	BF	BH	BL	BO	BT	KC	KD	KG	LB	WM	XM
ϕ 32	BCA-12-A	40	35	10	11.5	8	63	5	56.5	ϕ 9	85	65
ϕ 40	BCA-14-A	40	45	12.5	16.5	8	73	10	66.5	ϕ 11	105	80
ϕ 50												
ϕ 63												
ϕ 80	BCA-20-A	65	60	15	16.5	12	98	5	86.5	ϕ 14	135	105
ϕ 100												
ϕ 125												
ϕ 125	BCA-20-1-A	77	75	17.5	20	15	117	17.5	114.5	ϕ 18	145	110



TC

Double acting single rod **Standard** 10A-6 TC **Bore** **B** **Stroke**
Non-rotating 10A-6G TC **Bore** **B** **Stroke**

- Standard ϕ 32 to ϕ 125
- Non-rotating ϕ 40 to ϕ 100

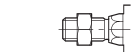


- For dimensions not shown here, refer to the SD style (basic style).
- The non-rotating cylinders have the same dimensions as the standard cylinders except dimensions of the rod end.
- For dimensional drawings of rod end attachments, refer to the accessories.
- For the mounting of sensors, see the dimensional drawings of Switch Set.
- For the mounting of valves, see the dimensional drawings of VAL Set.

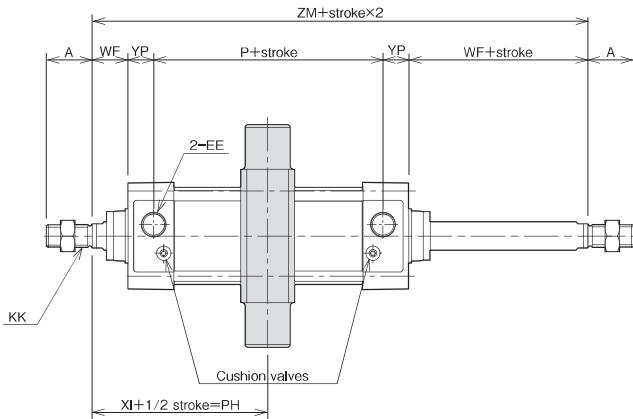
Double acting double rod **Standard** 10A-6D TC **Bore** **B** **Stroke**
Non-rotating 10A-6GD TC **Bore** **B** **Stroke**

10A-6/TA6 **Bore** **B** **?**

- Non-rotating (ϕ 40 to ϕ 100)



Note) Hex. rod on one side, and round rod on one side



- For dimensions not shown here, refer to the double acting single rod cylinder.

CAD/DATA
10A-6/TA6 **Bore** **A** is available. **?**

Dimensional Table

Symbol	A	B ₁	BD	D	E	EE	H	K	KK	MG	MM	P	Min. PH	TD
Bore														
ϕ 32	22 (19)	17	30	10	$\square$ 44	Rc1/8	31	31	M10×1.25	—	ϕ 12	61	71	ϕ 16e9
ϕ 40	24 (21)	19	30	14	$\square$ 50	Rc1/4	31	31	M12×1.25	14	ϕ 16	57	71	ϕ 25e9
ϕ 50	32 (29)	22	30	17	$\square$ 62	Rc1/4	31	31	M16×1.5	19	ϕ 20	57	71	ϕ 25e9
ϕ 63	32 (29)	22	30	17	$\square$ 75	Rc3/8	32	32	M16×1.5	19	ϕ 20	60	72	ϕ 25e9
ϕ 80	40 (37)	27	35	21	$\square$ 94	Rc3/8	36	36	M20×1.5	23	ϕ 25	68	88.5	ϕ 25e9
ϕ 100	40 (37)	27	40	26	$\square$ 112	Rc1/2	36	36	M20×1.5	23	ϕ 30	68	91	ϕ 25e9
ϕ 125	54 (50)	36	43	32	$\square$ 136	Rc1/2	42	36	M27×2	—	ϕ 35	74	92.5	ϕ 25e9

Symbol	TL	TM	TR	UM	UW	VF	WF	XI	YP	YV	ZJ	ZM	ZP	ZV	h
Bore															
ϕ 32	16	55	R1	87	53	15	25	71.5	16	25.5	118	143	3	7	6
ϕ 40	25	63	R1.6	113	60	15	25	71.5	18	25.5	118	143	4	10	7
ϕ 50	25	76	R1.6	126	72	15	25	71.5	18	24	118	143	7	12	10
ϕ 63	25	88	R1.6	138	87	15	25	73	18	25	121	146	8	12	10
ϕ 80	25	114	R1.6	164	105	21	35	89	20	29	143	178	11	16	12
ϕ 100	25	132	R2	182	129	21	35	89	20	29	143	178	12	18	12
ϕ 125	25	158	R2	208	159	21	35	92	20	29	149	184	14	20	16

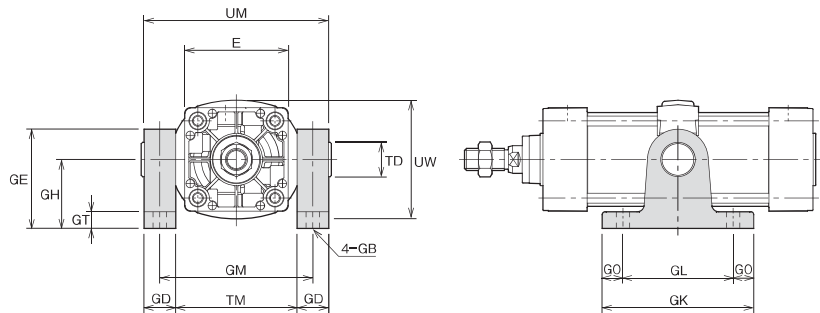
* The parenthesized values of dimension A indicate the screw length.

Bracket for TC

10A-6/TA6 **Bore** **K** **?**

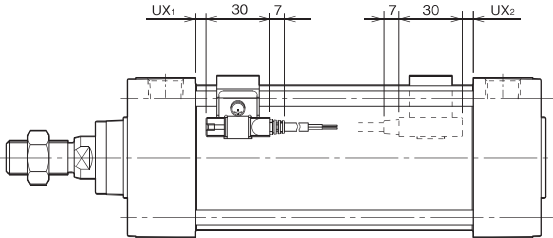
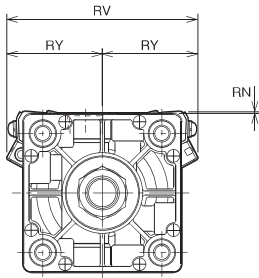
Dimensional Table

Symbol	Part number	E	GB	GD	GE	GH	GK	GL	GM	GO	GT	TD	TM	UM	UW
Bore															
ϕ 32	BTA-16-A	$\square$ 44	ϕ 9	15	56	40	81	60	70	10.5	12	ϕ 16	55	87	53
ϕ 40		$\square$ 50	ϕ 12	23	74	50	111	80	86	15.5	14	ϕ 25	63	113	60
ϕ 50	BTA-25-A	$\square$ 62	ϕ 12	23	74	50	111	80	99	15.5	14	ϕ 25	76	126	72
ϕ 63		$\square$ 75	ϕ 12	23	74	50	111	80	111	15.5	14	ϕ 25	88	138	87
ϕ 80	BTA-25-1-A	$\square$ 94	ϕ 14	23	92	70	121	85	137	18	14	ϕ 25	114	164	105
ϕ 100		$\square$ 112	ϕ 14	23	92	70	121	85	155	18	14	ϕ 25	132	182	129
ϕ 125	BTA-25-2-A	$\square$ 136	ϕ 18	25	116	85	145	105	183	20	27	ϕ 25	158	208	159

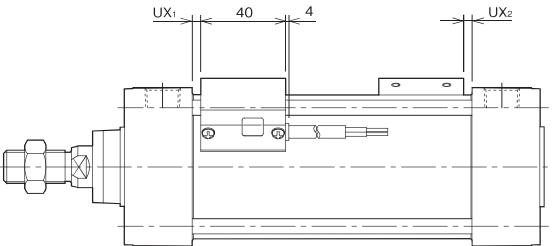
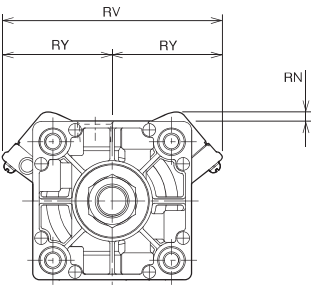


Switch Set

- AX type sensor



- SR type sensor



Dimensional Table

Symbol Bore	RY		RV		RN		UX ₁		UX ₂	
	AX type	SR type	AX type	SR type	AX type	SR type	AX type	SR type	AX type	SR type
φ32	32	38	64	76	4	5	8	2	4	0
φ40	36	40	72	80	3	4	8	2	4	0
φ50	40	45	80	90	2	3	9	2	5	0
φ63	47	52	94	104	2	5	9	2	5	0
φ80	52	60	104	120	0	2	11	4	6	0
φ100	60	67	120	134	0	0	11	4	6	0
φ125	72	76	144	152	0	0	13	4	9	3

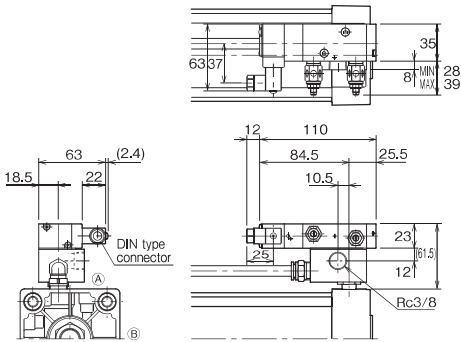
Note) Dimension UX indicates the optimum sensor mounting position for detection of stroke end.

Operating Range and Hysteresis

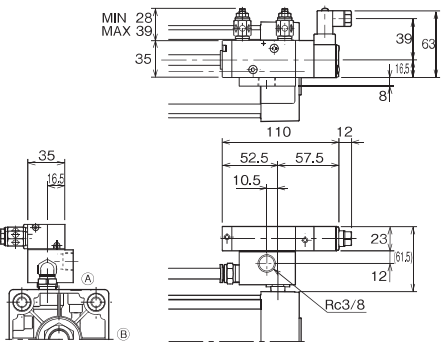
Bore	Reed sensor				Solid state sensor								
	AX1** type		SR type		AX2** type								
	Operating range	Hysteresis	Operating range	Hysteresis	Operating range	Hysteresis							
ϕ32	5 to 10	1 or less	8 to 12	2 or less	3 to 6	1 or less							
ϕ40			9 to 13		4 to 8								
ϕ50	6 to 12												
ϕ63													
ϕ80													
ϕ100	8 to 14												
ϕ125													

VAL Set

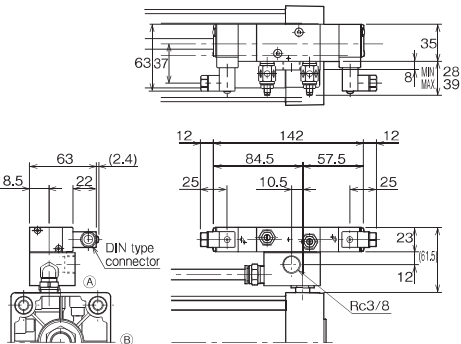
Energized advancing type



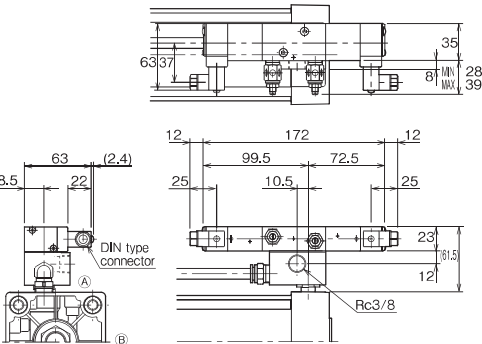
Energized retracting type



Detent type



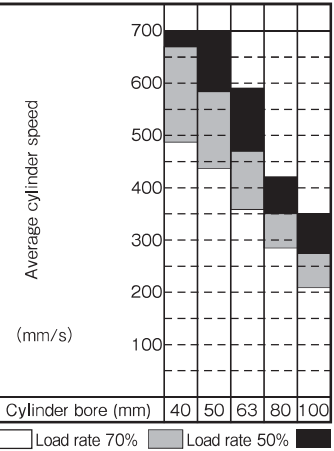
3-position closed center type
3-position exhaust center type



- The cushion valve position is (A) on the rod side and (B) on the cap side.
- For dimensions of the cylinder body, see the dimensional drawings of each mounting style.

Information

Average Speed of VAL Set Cylinders



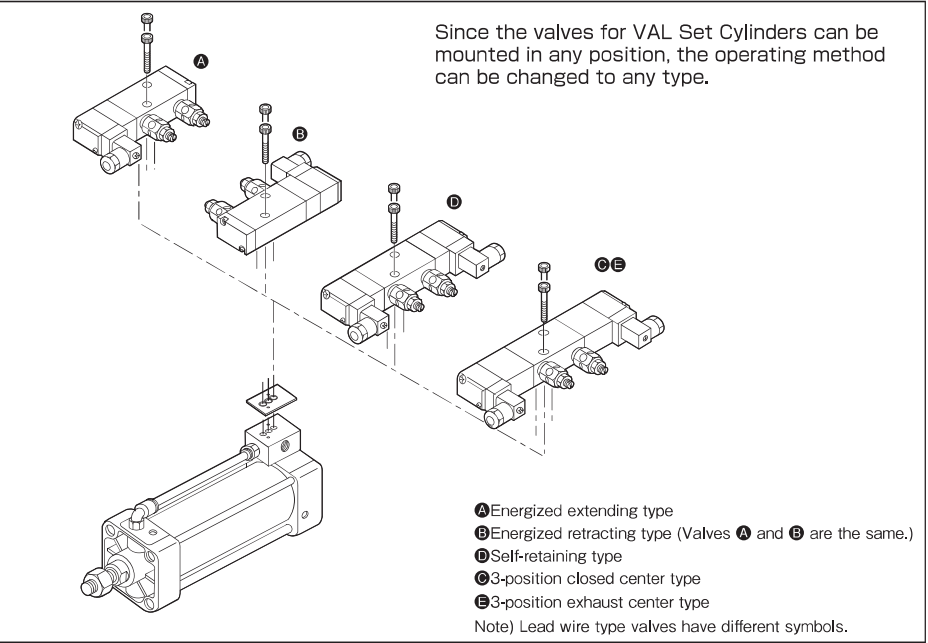
Setting conditions

- Air pressure: 0.5 MPa
- Driving direction: Vertically upward
- Cylinder stroke: 250 mm
- Average speed: Average speed after the cylinder starts moving until it reaches the stroke end

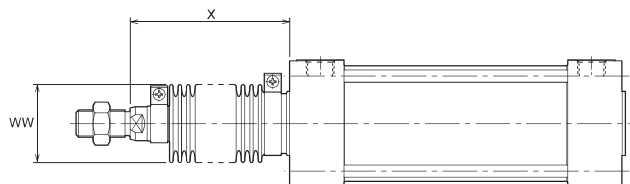
CAUTION Use the table shown left to find an approximate cylinder speed. The actual speed varies depending on the working conditions. Use the cylinder within the working speed range.

Handling procedures

Valve repositioning procedures



With Boots



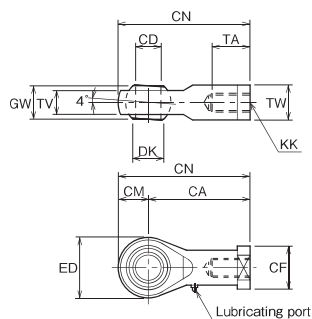
	Standard	Semi-standard	
Material	Nylon tarpaulin	Chloroprene	Conex
Heat proof	80°C	100°C	200°C

(Notes) ● Conex is the registered trademark of Teijin Limited.

- Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
- The boots have been mounted at our factory prior to delivery.

Rod End Attachment

- Rod eye with spherical bearing (S-end)



Dimensional Table/With boots (nylon tarpaulin/chloroprene)

Symbol	WW	X (standard strokes)												X (other than standard strokes)
		50	75	100	125	150	200	250	300	350	400	450	500	
φ32	φ36	62	70	79	87	95	112	129	145	162	179	195	212	$\frac{1}{3}$ stroke+45
φ40	φ41	62	70	79	87	95	112	129	145	162	179	195	212	
φ50	φ47	67	75	84	92	100	117	134	150	167	184	200	217	$\frac{1}{3}$ stroke+50
φ63	φ47	67	75	84	92	100	117	134	150	167	184	200	217	
φ80	φ56	68	74	80	87	93	105	118	130	143	155	168	180	$\frac{1}{4}$ stroke+55
φ100	φ61	68	74	80	87	93	105	118	130	143	155	168	180	
φ125	φ71	68	74	80	87	93	105	118	130	143	155	168	180	

Note) If the calculated value has a fractional part, round it up.

Dimensional Table/With boots (Conex)

Symbol	WW	X (standard strokes)												X (other than standard strokes)
Bore		50	75	100	125	150	200	250	300	350	400	450	500	Conex
φ32	φ61	70	83	95	108	120	145	170	195	220	245	270	295	$\frac{1}{2}$ stroke+45
φ40	φ61	70	83	95	108	120	145	170	195	220	245	270	295	
φ50	φ61	75	88	100	113	125	150	175	200	225	250	275	300	$\frac{1}{2}$ stroke+50
φ63	φ61	75	88	100	113	125	150	175	200	225	250	275	300	
φ80	φ61	75	85	95	105	115	135	155	175	195	215	235	255	$\frac{2}{5}$ stroke+55
φ100	φ61	75	85	95	105	115	135	155	175	195	215	235	255	
φ125	φ71	75	85	95	105	115	135	155	175	195	215	235	255	

Note) If the calculated value has a fractional part, round it up.

Dimensional Table/Rod eye with spherical bearing (S-end)

[illegible]

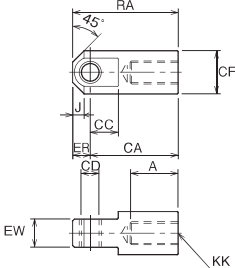
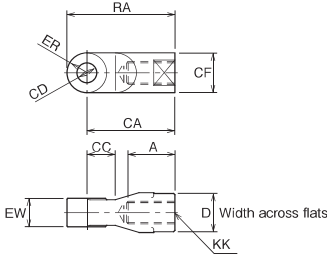
CAD/DATA
10A-6/TA6[Bore]K is available.

Rod End Attachment

- Rod eye(T-end)

φ32 to φ100

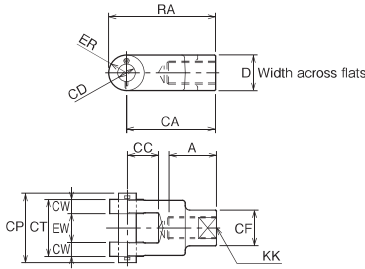
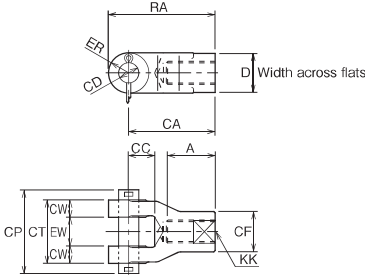
φ 125



- Rod clevis(Y-end)with pin

φ32 to φ100

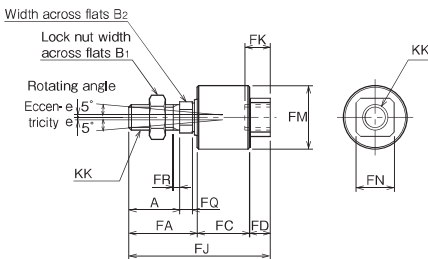
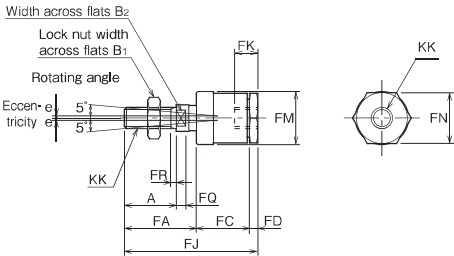
φ 125



- Floating joint(F-end)

φ 32

φ40 to φ125



Note) The insertion of the floating joint into the socket shall not equal or exceed the dimension of screw diameter.
(Return the joint one or two turns after it gets into contact with the socket bottom, and fix it with a lock nut.)
Excessive insertion can cause operation failure.
● DO NOT use together with CA, CB, CC, and TC accessories.

Dimensional Table/Rod eye (T-end)

Symbol	Part number	A	CA	CC	CD	CF	D	ER	EW	J	KK	RA
Bore												
φ32	RTA-10-A	23	55	20	φ12H9	φ24	24	R12	16 ⁰ _{-0.1}	—	M10×1.25	67
φ40	RTA-12-A	25	60	20	φ14H9	φ24	24	R12	20 ⁰ _{-0.1}	—	M12×1.25	72
φ50	RTA-16-A	33	60	20	φ14H9	φ28	27	R14	20 ⁰ _{-0.1}	—	M16×1.5	74
φ63										—		
φ80	RTA-20-A	41	85	30	φ20H9	φ36	36	R19	32 ⁰ _{-0.1}	—	M20×1.5	104
φ100										—		
φ125	RTA-27-A	56	100	32	φ20H9	φ49	—	20	32 ⁰ _{-0.1}	13	M27×2	120

Dimensional Table/Rod clevis (Y-end) with pin

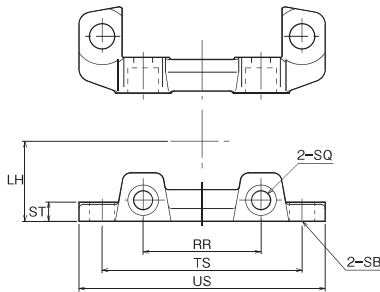
Symbol	Part number	A	CA	CC	CD	CF	CP	CT	CW	D	ER	EW	KK	RA
Bore														
φ32	RYA-10-1-A	23	55	20	φ12 ^{H9} ₁₈	φ24	46	32	8	24	R12	16 ^{+1.5} _{+0.5}	M10×1.25	67
φ40	RYA-12-1-A	25	60	20	φ14 ^{H9} ₁₈	φ24	58	44	12	24	R12	20 ^{+1.5} _{+0.5}	M12×1.25	71
φ50	RYA-16-A	33	60	18	φ14 ^{H9} ₁₈	φ28	58	44	12	27	R14	20 ^{+1.5} _{+0.5}	M16×1.5	74
φ63														
φ80	RYA-20-A	41	85	28	φ20 ^{H9} ₁₈	φ36	78	64	16	36	R19	32 ^{+1.5} _{+0.5}	M20×1.5	104
φ100														
φ125	RYA-27-A	56	100	35	φ20 ^{H9} ₁₈	φ40	78	64	16	40	R20	32 ^{+1.5} _{+0.5}	M27×2	120

Dimensional Table/Floating joint (F-end)

Symbol	Part number	A	B ₁	B ₂	e	FA	FC	FD	FJ	FK	FM	FN	FQ	FR	KK
Bore															
φ32	RFS-10T	24.5	17	10	1	31	28	4	63	11	φ25	24	4.5	2.5	M10×1.25
φ40	RFS-12T	24	19	13	1	33	25.5	11	69.5	13.5	φ32	□19	7	3.5	M12×1.25
φ50·φ63	RFS-16T	32	22	17	1.5	43	33	13	89	16	φ40	□24	8	4	M16×1.5
φ80	RFS-20T080	40	27	22	2	53	42	15	110	22	φ50	□30	9	5	M20×1.5
φ100	RFS-20T100	40	27	24	2.5	56	49	18	123	24	φ64	□36	12	6	M20×1.5
φ125	RFS-27T	54	36	32	2.5	74	62	21	157	30	φ76	□46	14	7	M27×2

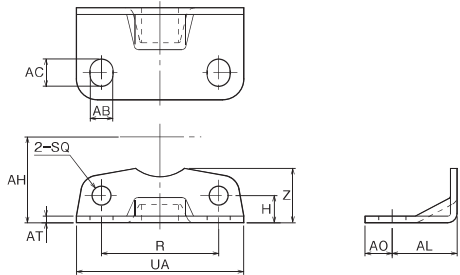
Mounting Accessory

- LA(side lugs)



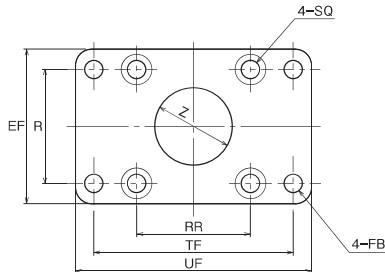
● With mounting bolts for cylinder body
(A set includes 2 accessories.)

- LB(end angles)



● With mounting bolts for cylinder body
(A set includes 2 accessories.)

- FA(rod flange) and FB(cap flange)



● With mounting bolts for cylinder body

Dimensional Table/LA (side lugs)

Symbol Bore	Part number	H	LH	RR	SB	SQ	ST	SU	SY	SZ	TS	US	Z
φ32	MAA6-LA032	5.5	22	□33	φ9	φ7	8	14	23	10	63	81	14
φ40	MAA6-LA040	6.5	25	□37	φ12	φ7	8	14	23	10	70	92	16
φ50	MAA6-LA050	7.5	31	□47	φ12	φ7	9	14	25	10	83	105	17
φ63	MAA6-LA063	10	38	□56	φ12	φ9	9	14	27	10	95	117	22
φ80	MAA6-LA080	12	47	□70	φ14	φ11	13	18	34	13	121	147	28
φ100	MAA6-LA100	15	57	□84	φ14	φ11	14	18	38	13	140	168	30
φ125	MAA6-LA125	17	69	□104	φ18	φ13	18	21	46	17	175	213	35

Dimensional Table/LB (end angles)

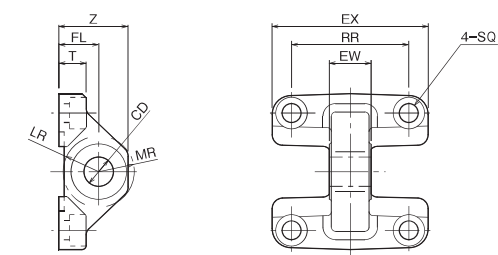
Symbol Bore	Part number	AB	AC	AH	AL	AO	AT	H	R	UA	SQ	Z
φ32	MAA6-LB032	9	11	28	20.5	9.5	3.2	11.5	33	50	φ7	20
φ40	MAA6-LB040	11	13	30	23.5	12.5	3.2	11.5	36	57	φ7	21
φ50	MAA6-LB050	11	13	36.5	28	12	3.2	13	47	68	φ7	23
φ63	MAA6-LB063	11	13	41	31	13	3.2	13	56	80	φ9	26
φ80	MAA6-LB080	14	16	49	30	16	4	14	70	97	φ11	30
φ100	MAA6-LB100	14	16	57	30	16	4	15	84	112	φ11	35
φ125	MAA6-LB125	18	20	70	35	18	6	18	104	136	φ13	45

Dimensional Table/FA (rod flange) and FB (cap flange)

Symbol Bore	Part number	EF	F	FB	R	RR	SQ	TF	UF	Z
φ32	MAA6-FA032	47	10	φ7	33	□33	φ6.6	58	72	φ26
φ40	MAA6-FA040	52	10	φ7	36	□37	φ6.6	70	84	φ32
φ50	MAA6-FA050	65	10	φ9	47	□47	φ6.6	86	104	φ38
φ63	MAA6-FA063	76	10	φ9	56	□56	φ9	98	116	φ38
φ80	MAA6-FA080	95	16	φ12	70	□70	φ11	119	143	φ44
φ100	MAA6-FA100	115	16	φ12	84	□84	φ11	138	162	φ50
φ125	MAA6-FA125	138	16	φ14	104	□104	φ13	168	196	φ60

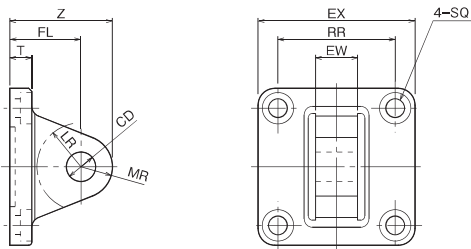
Mounting Accessory

- CA (cap eye)



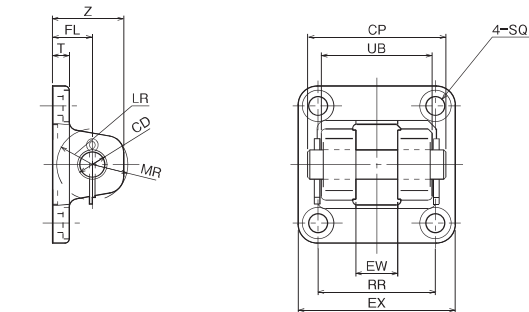
● With mounting bolts for cylinder body

- CC (cap eye)



● With mounting bolts for cylinder body

- CB (cap clevis)



● With mounting bolts for cylinder body

Dimensional Table/CA (cap eye)

Symbol	Part number	CD	EW	EX	FL	LR	MR	RR	SQ	T	Z
Bore											
φ32	MAA6-CA032	φ12H9	16 ⁰ _{-0.070}	□44	19	R16	R16	□33	φ6.6	8	32
φ40	MAA6-CA040	φ14H9	20 ⁰ _{-0.084}	□50	19	R17	R17	□37	φ6.6	8	33
φ50	MAA6-CA050	φ14H9	20 ⁰ _{-0.084}	□60	19	R17	R17	□47	φ6.6	10	33
φ63	MAA6-CA063	φ14H9	20 ⁰ _{-0.084}	□75	19	R17	R17	□56	φ9	13	33
φ80	MAA6-CA080	φ20H9	32 ⁰ _{-0.100}	□94	32	R25	R24	□70	φ11	18	53
φ100	MAA6-CA100	φ20H9	32 ⁰ _{-0.100}	□111	32	R26	R24	□84	φ11	18	52
φ125	MAA6-CA125	φ20H9	32 ⁰ _{-0.100}	□135	32	R30	R25	□104	φ13	21	52

Dimensional Table/CC (cap eye)

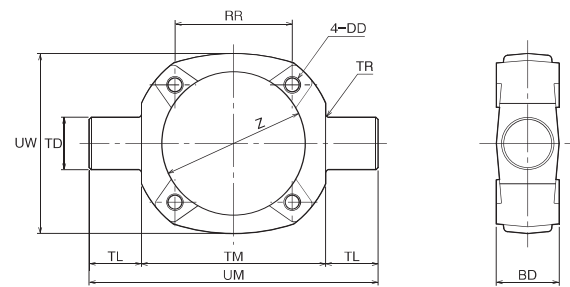
Symbol	Part number	CD	EW	EX	FL	LR	MR	RR	SQ	T	Z
Bore											
φ40	MAA6-CC040	φ14H9	20 ⁰ _{-0.3}	□50	34	R21	R14	□37	φ6.6	11	48
φ50	MAA6-CC050	φ14H9	20 ⁰ _{-0.3}	□62	34	R21	R15	□47	φ6.6	11	49
φ63	MAA6-CC063	φ14H9	20 ⁰ _{-0.3}	□75	34	R21	R15	□56	φ9	11	49
φ80	MAA6-CC080	φ20H9	32 ⁰ _{-0.3}	□94	48	R25	R20	□70	φ11	15	68
φ100	MAA6-CC100	φ20H9	32 ⁰ _{-0.3}	□112	48	R25	R20	□84	φ11	15	68

Dimensional Table/CB (cap clevis)

Symbol	Part number	CD	CP	EW	EX	FL	LR	MR	T	SQ	RR	UB	Z
Bore													
φ32	MAA6-CB032	φ12 ^{H9} _{T8}	46	16 ^{+0.7} _{+0.5}	□44	19	R17	R15	8	φ6.6	□33	33	32
φ40	MAA6-CB040	φ14 ^{H9} _{T8}	58	20 ^{+0.7} _{+0.5}	□50	19	R17	R15	8	φ6.6	□37	45	32
φ50	MAA6-CB050	φ14 ^{H9} _{T8}	66	20 ^{+0.7} _{+0.5}	□60	19	R17	R17	8	φ6.6	□47	53	34
φ63	MAA6-CB063	φ14 ^{H9} _{T8}	66	20 ^{+0.7} _{+0.5}	□75	19	R17	R17	8	φ9	□56	53	34
φ80	MAA6-CB080	φ20 ^{H9} _{T8}	78	32 ^{+0.7} _{+0.5}	□94	32	R30	R24	11	φ11	□70	67	53
φ100	MAA6-CB100	φ20 ^{H9} _{T8}	78	32 ^{+0.7} _{+0.5}	□111	32	R30	R24	11	φ11	□84	67	53
φ125	MAA6-CB125	φ20 ^{H9} _{T8}	78	32 ^{+0.7} _{+0.5}	□136	32	R30	R22	14	φ13	□104	65	48

Mounting Accessory

- TC(intermediate trunnion)



Dimensional Table/TC (intermediate trunnion)

Symbol Bore	Part number	BD	DD	RR	TD	TL	TM	TR	UM	UW	Z
φ32	MAA6-TC032	30	M6×1	□33	φ16e9	16	55	R1	87	53	φ36.5
φ40	MAA6-TC040	30	M6×1	□37	φ25e9	25	63	R1.6	113	60	φ44.5
φ50	MAA6-TC050	30	M6×1	□47	φ25e9	25	76	R1.6	126	72	φ55.5
φ63	MAA6-TC063	30	M8×1.25	□56	φ25e9	25	88	R1.6	138	87	φ68.5
φ80	MAA6-TC080	35	M10×1.5	□70	φ25e9	25	114	R1.6	164	105	φ87.5
φ100	MAA6-TC100	40	M10×1.5	□84	φ25e9	25	132	R2	182	129	φ107.5
φ125	MAA6-TC125	43	M12×1.75	□104	φ25e9	25	158	R2	208	159	φ133.5

Specifications for Adjustable Stroke Cylinders

Series variations	With adjustable extended stroke		With adjustable retracted stroke	
	Standard type	VAL Set	Standard type	VAL Set
Series	10A-6A1	10A-6VA1	10A-6A2	10A-6VA2
Cylinder bore (mm)	φ32·φ40·φ50·φ63 φ80·φ100·φ125	φ40·φ50·φ63 φ80·φ100	φ32·φ40·φ50·φ63 φ80·φ100·φ125	φ40·φ50·φ63 φ80·φ100
Working fluid	Air			
Lubrication	Unnecessary			
Working pressure range	0.1 to 1 MPa	0.17 to 0.7 MPa	0.05 to 1 MPa	0.17 to 0.7 MPa
Working speed range	50 to 700mm/s		30 to 700mm/s	
Proof test pressure	1.5 MPa		1.5 MPa	
Working temperature range	−10 to +70°C (No freezing)	+5 to +50°C	−10 to +70°C (No freezing)	+5 to +50°C
Structure of cushioning	With cushions on both ends (cushion pad at rod extending end for adjustment)		With cushions on both ends (none at rod retracting end for adjustment)	
Cushion stroke (cushion ring parallel part length)	φ32·φ40: 16mm φ50·φ63: 20mm φ80·φ100·φ125: 25mm			
Stroke adjusting method	Stopper adjustment		Adjuster screw adjustment	
Stroke adjusting range	0 to 50mm		φ32·φ40: 0 to 57mm φ50·φ63·φ80·φ100·φ125: 0 to 60mm	
Tolerance for thread	JIS 6H/6g			
Mounting style	SD · LA · LB · FA · TC · TC/B		SD · LA · LB · FA · TC · TC/B	

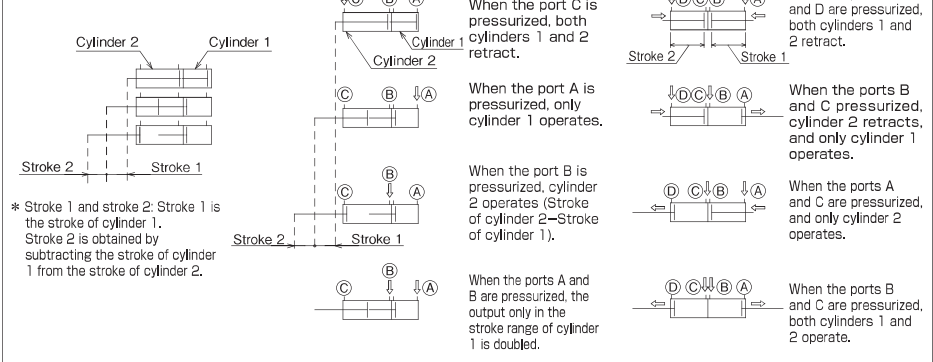
Note) For the working speed range, see the selection materials to check the relationship between the speed and the cushion mechanism.

Order Made Specifications
Specifications for Dual Stroke Cylinders

Series variations	Single rod		Double rod	
	Standard type		Standard type	
Series	10A-6Q1		10A-6Q2	
Cylinder bore (mm)	φ 40 · φ 50 · φ 63 · φ 80 · φ 100		φ 32 · φ 40 · φ 50 · φ 63 · φ 80 · φ 100 · φ 125	
Working fluid	Air			
Lubrication	Unnecessary			
Working pressure range	0.1 to 0.7 MPa		0.05 to 0.7 MPa	
Working speed range	50 to 700mm/s			
Proof test pressure	1.05 MPa			
Working temperature range	-10 to +70°C (No freezing)			
Structure of cushioning	With cushions on both ends			
Cushion stroke (cushion ring parallel part length)	φ 32 · φ 40: 16mm		φ 50 · φ 63: 20mm φ 80 · φ 100 · φ 125: 25mm	
Tolerance for thread	JIS 6H/6g			
Mounting style	SD · LA · LB · FA · FB CA · CC · CB · CB w/ bracket · TC · TC w/ bracket		SD · LA · LB · FA · TC · TC w/ bracket	

Note) For the working speed range, see the selection materials to check the relationship between the speed and the cushion mechanism.

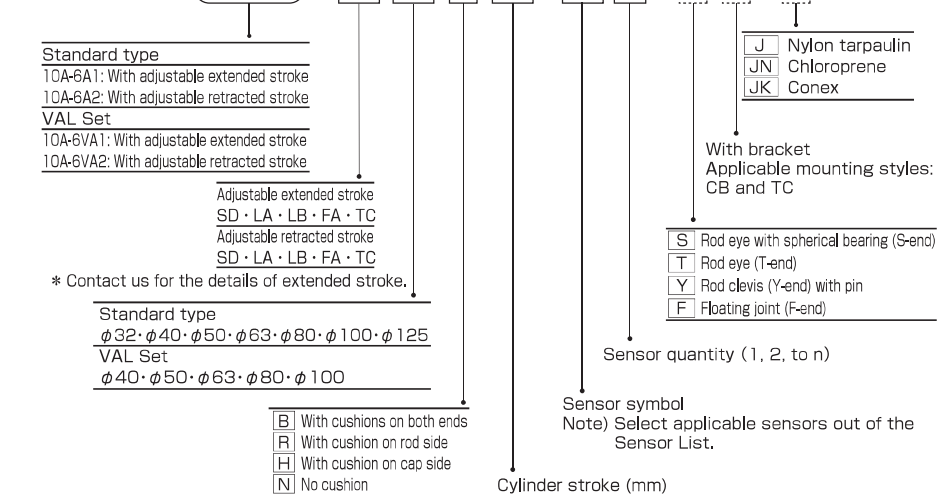
Principle of operation



How to order

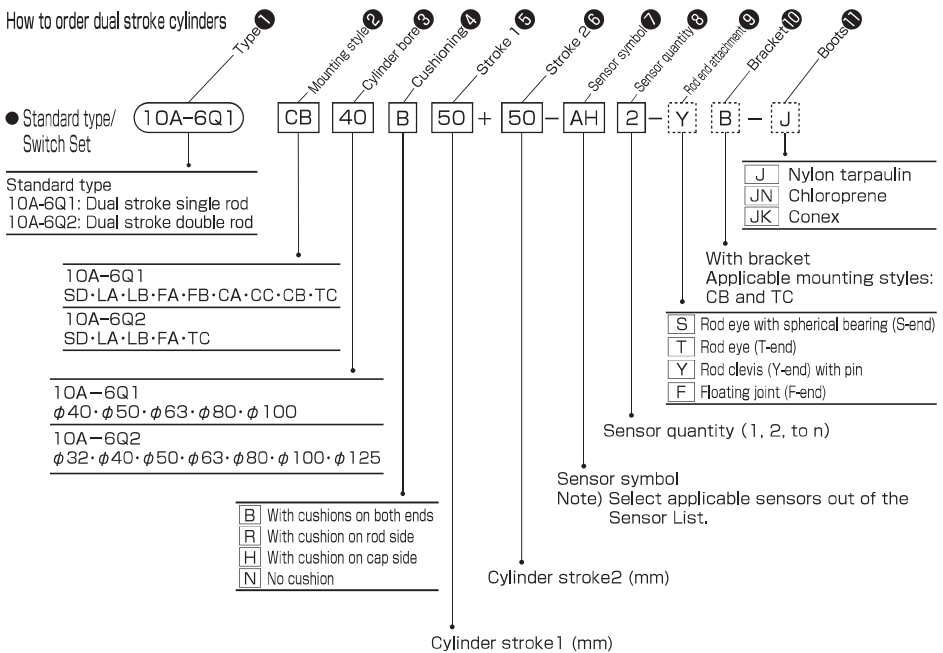
Adjustable stroke cylinders

● Standard type/Switch Set



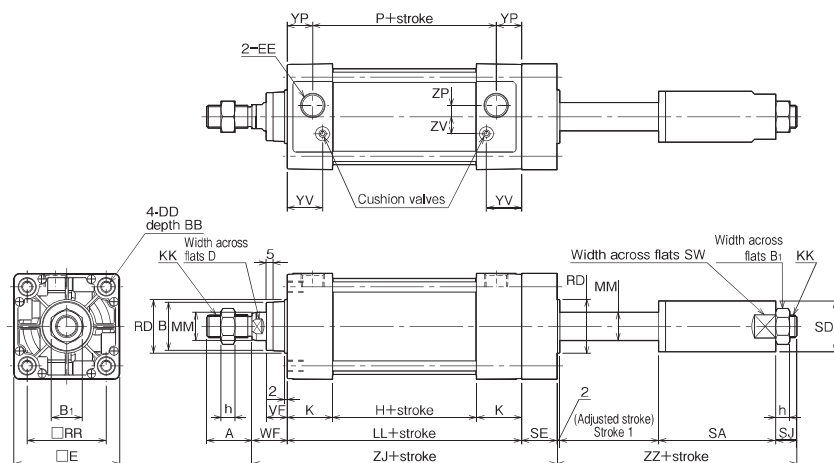
How to order dual stroke cylinders

● Standard type/
Switch Set

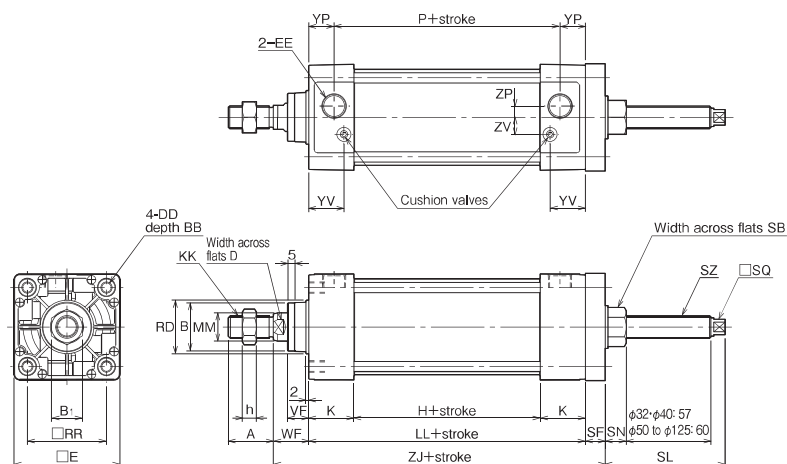


* For details, please contact us.

Stroke Adjustment

Adjustable extended stroke 10A-6A1 

- Stroke adjusting range: 0 to 50 mm
- Mounting style: SD, LA, LB, FA, TC
- For details, please contact us.

Adjustable retracted stroke 10A-6A2 

- Stroke adjusting range $\phi 32 \cdot \phi 40$: 0 to 57mm
 $\phi 50$ to $\phi 125$: 0 to 60mm
- Mounting style: SD, LA, LB, FA, TC
- For details, please contact us.

Dimensional Table/Adjustable extended stroke

Symbol Bore	A	B	B ₁	BB	D	DD	E	EE	H	K	KK	LL	MM	P
φ32	22(19)	φ24	17	14	10	M6×1	44	Rc1/8	31	31	M10×1.25	93	φ12	61
φ40	24(21)	φ30	19	14	14	M6×1	50	Rc1/4	31	31	M12×1.25	93	φ16	57
φ50	32(29)	φ34	22	14	17	M6×1	62	Rc1/4	31	31	M16×1.5	93	φ20	57
φ63	32(29)	φ34	22	14	17	M8×1.25	75	Rc3/8	32	32	M16×1.5	96	φ20	60
φ80	40(37)	φ39	27	15	21	M10×1.5	94	Rc3/8	36	36	M20×1.5	108	φ25	68
φ100	40(37)	φ46	27	15	26	M10×1.5	112	Rc1/2	36	36	M20×1.5	108	φ30	68
φ125	54(50)	φ55	36	15	32	M12×1.75	136	Rc1/2	42	36	M27×2	114	φ35	74

Symbol Bore	RD	RR	SA	SD	SE	SJ	SW	VF	WF	YP	YV	ZJ	ZP	ZV	ZZ	h
φ32	φ26	33	69	φ25	25	10	22	15	25	16	25.5	143	3	7	81	6
φ40	φ32	37	74	φ30	25	11	27	15	25	18	25.5	143	4	10	87	7
φ50	φ38	47	83	φ36	25	14	32	15	25	18	24	143	7	12	99	10
φ63	φ38	56	83	φ36	25	14	32	15	25	18	25	146	8	12	99	10
φ80	φ44	70	84	φ45	35	17	41	21	35	20	29	178	11	16	103	12
φ100	φ50	84	84	φ50	35	17	46	21	35	20	29	178	12	18	103	12
φ125	φ60	104	89	φ55	40	21	50	21	35	20	29	189	14	20	112	16

* The parenthesized values of dimension A indicate the screw length.

Dimensional Table/Adjustable retracted stroke

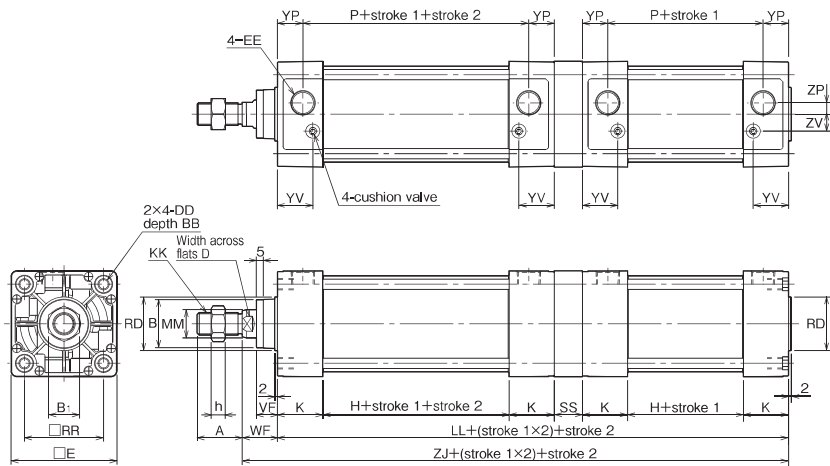
Symbol Bore	A	B	B ₁	BB	D	DD	E	EE	H	K	KK	LL	MM	P
φ32	22(19)	φ24	17	14	10	M6×1	44	Rc1/8	31	31	M10×1.25	93	φ12	61
φ40	24(21)	φ30	19	14	14	M6×1	50	Rc1/4	31	31	M12×1.25	93	φ16	57
φ50	32(29)	φ34	22	14	17	M6×1	62	Rc1/4	31	31	M16×1.5	93	φ20	57
φ63	32(29)	φ34	22	14	17	M8×1.25	75	Rc3/8	32	32	M16×1.5	96	φ20	60
φ80	40(37)	φ39	27	15	21	M10×1.5	94	Rc3/8	36	36	M20×1.5	108	φ25	68
φ100	40(37)	φ46	27	15	26	M10×1.5	112	Rc1/2	36	36	M20×1.5	108	φ30	68
φ125	54(50)	φ55	36	15	32	M12×1.75	136	Rc1/2	42	36	M27×2	114	φ35	74

Symbol Bore	RD	RR	SB	SF	SL	SN	SQ	SZ	VF	WF	YP	YV	ZJ	ZP	ZV	h
φ32	φ26	33	19	14	79	12	8	M12×1.25	15	25	16	25.5	132	3	7	6
φ40	φ32	37	19	14	79	12	8	M12×1.25	15	25	18	25.5	132	4	10	7
φ50	φ38	47	24	14	85	15	11	M16×1.5	15	25	18	24	132	7	12	10
φ63	φ38	56	24	14	85	15	11	M16×1.5	15	25	18	25	135	8	12	10
φ80	φ44	70	30	22	91	19	14	M20×1.5	21	35	20	29	165	11	16	12
φ100	φ50	84	30	22	91	19	14	M20×1.5	21	35	20	29	165	12	18	12
φ125	φ60	104	36	23	96	22	17	M24×1.5	21	35	20	29	172	14	20	16

* The parenthesized values of dimension A indicate the screw length.

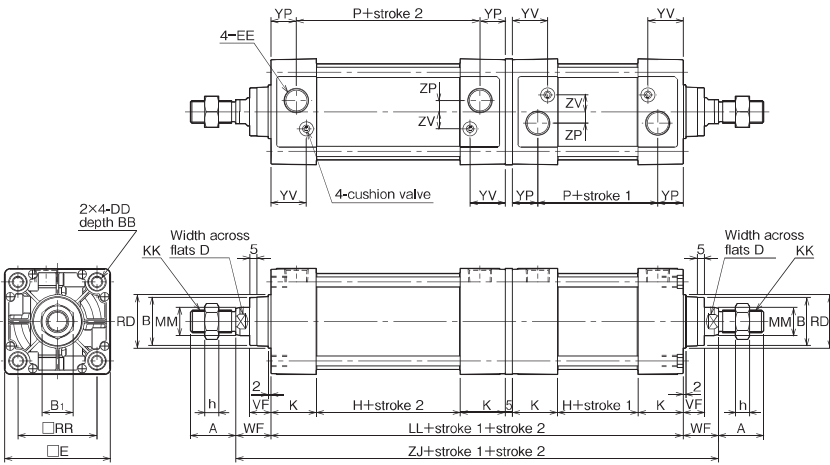
Dual stroke Order made

Dual stroke single rod 10A-6Q1 SD Bore B Stroke1 + Stroke2



- Mounting style: SD, LA, LB, FA, FB, CA, CC, CB, TC
- For details, please contact us.

Dual stroke double rod 10A-6Q2 SD Bore B Stroke1 + Stroke2



- Mounting style: SD, LA, LB, FA, TC
- For details, please contact us.

Dimensional Table/Dual stroke single rod

Symbol	A	B	B ₁	BB	D	DD	E	EE	H	K	KK	LL
Bore												
φ40	24(21)	φ30	19	14	14	M6×1	50	Rc1/4	31	31	M12×1.25	206
φ50	32(29)	φ34	22	14	17	M6×1	62	Rc1/4	31	31	M16×1.5	206
φ63	32(29)	φ34	22	14	17	M8×1.25	75	Rc3/8	32	32	M16×1.5	212
φ80	40(37)	φ39	27	15	21	M10×1.5	94	Rc3/8	36	36	M20×1.5	241
φ100	40(37)	φ46	27	15	26	M10×1.5	112	Rc1/2	36	36	M20×1.5	241

Symbol	MM	P	RD	RR	SS	VF	WF	YP	YV	ZJ	ZP	ZV	h
Bore													
φ40	φ16	57	φ32	37	20	15	25	18	25.5	231	4	10	7
φ50	φ20	57	φ38	47	20	15	25	18	24	231	7	12	10
φ63	φ20	60	φ38	56	20	15	25	18	25	237	8	12	10
φ80	φ25	68	φ44	70	25	21	35	20	29	276	11	16	12
φ100	φ30	68	φ50	84	25	21	35	20	29	276	12	18	12

Note) Dual stroke single rod cylinders with bores of 32 and 125 mm are not available.
* The parenthesized values of dimension A indicate the screw length.

Dimensional Table/Dual stroke double rod

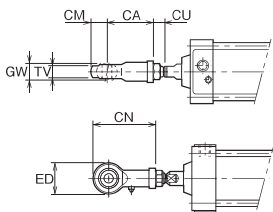
Symbol	A	B	B ₁	BB	D	DD	E	EE	H	K	KK
Bore											
φ32	22(19)	φ24	17	14	10	M6×1	44	Rc1/8	31	31	M10×1.25
φ40	24(21)	φ30	19	14	14	M6×1	50	Rc1/4	31	31	M12×1.25
φ50	32(29)	φ34	22	14	17	M6×1	62	Rc1/4	31	31	M16×1.5
φ63	32(29)	φ34	22	14	17	M8×1.25	75	Rc3/8	32	32	M16×1.5
φ80	40(37)	φ39	27	15	21	M10×1.5	94	Rc3/8	36	36	M20×1.5
φ100	40(37)	φ46	27	15	26	M10×1.5	112	Rc1/2	36	36	M20×1.5
φ125	54(50)	φ55	36	15	32	M12×1.75	136	Rc1/2	42	36	M27×2

Symbol	LL	MM	P	RD	RR	VF	WF	YP	YV	ZJ	ZP	ZV	h
Bore													
φ32	191	φ12	61	φ26	33	15	25	16	25.5	241	3	7	6
φ40	191	φ16	57	φ32	37	15	25	18	25.5	241	4	10	7
φ50	191	φ20	57	φ38	47	15	25	18	24	241	7	12	10
φ63	197	φ20	60	φ38	56	15	25	18	25	247	8	12	10
φ80	221	φ25	68	φ44	70	21	35	20	29	291	11	16	12
φ100	221	φ30	68	φ50	84	21	35	20	29	291	12	18	12
φ125	233	φ35	74	φ60	104	21	35	20	29	303	14	20	16

* The parenthesized values of dimension A indicate the screw length.

Combination of rod end attachments

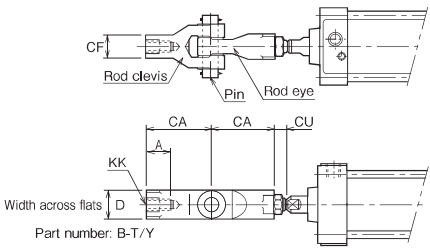
Rod eye with spherical bearing (S-end)



Dimensional Table

Symbol	CA	CM	CN	CU		ED	GW	TV
				Min.	Max.			
Bore								
φ32	43	13	56	6	12	26	14 ⁰ _{-0.1}	10.5±0.1
φ40	50	15	65	7	13	30	16 ⁰ _{-0.1}	12±0.1
φ50	64	19	83	10	17	38	21 ⁰ _{-0.1}	15±0.1
φ63	64	19	83	10	17	38	21 ⁰ _{-0.1}	15±0.1
φ80	77	23	100	12	21	46	25 ⁰ _{-0.1}	18±0.1
φ100	77	23	100	12	21	46	25 ⁰ _{-0.1}	18±0.1

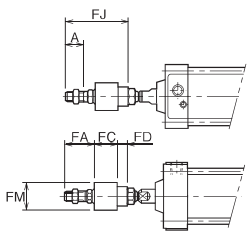
Rod eye—rod clevis



Dimensional Table

Symbol	A	CA	CF	CU		D	KK
				Min.	Max.		
Bore							
φ32	23	55	φ24	6	12	24	M10×1.25
φ40	25	60	φ24	7	13	24	M12×1.25
φ50	33	60	φ28	10	17	27	M16×1.5
φ63	33	60	φ28	10	17	27	M16×1.5
φ80	41	85	φ36	12	21	36	M20×1.5
φ100	41	85	φ36	12	21	36	M20×1.5
φ125	56	100	φ40	16	30	40	M27×2

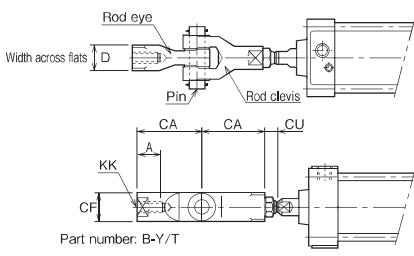
With floating joint



Dimensional Table

Symbol	A	FA	FC	FD	FJ	FM
Bore						
φ32	24.5	31	28	4	63	φ25
φ40	24	33	25.5	11	69.5	φ32
φ50	32	43	33	13	89	φ40
φ63	32	43	33	13	89	φ40
φ80	40	53	42	15	110	φ50
φ100	40	56	49	18	123	φ64
φ125	54	74	62	21	157	φ76

Rod clevis—rod eye

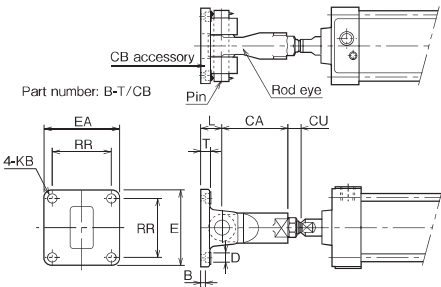


Dimensional Table

Symbol	A	CA	CF	CU		D	KK
				Min.	Max.		
Bore							
φ32	23	55	φ24	6	12	24	M10×1.25
φ40	25	60	φ24	7	13	24	M12×1.25
φ50	33	60	φ28	10	17	27	M16×1.5
φ63	33	60	φ28	10	17	27	M16×1.5
φ80	41	85	φ36	12	21	36	M20×1.5
φ100	41	85	φ36	12	21	36	M20×1.5
φ125	56	100	φ49	16	30	—	M27×2

Combination of rod end attachments

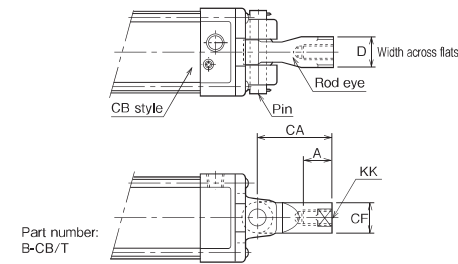
Rod eye—CB accessory



Dimensional Table

Symbol	B	CA	CU		D	E	EA	KB	L	RR	T
			Min.	Max.							
Bore											
φ32	6	55	6	12	φ11	43	43	φ6.6	19	33	8
φ40	6	60	7	13	φ11	49	49	φ6.6	19	37	8
φ50	6	60	10	17	φ11	60	60	φ6.6	19	47	8
φ63	6	60	10	17	φ15	74	74	φ9	19	56	8
φ80	9	85	12	21	φ20	93	93	φ11	32	70	11
φ100	9	85	12	21	φ20	110	110	φ11	32	84	11
φ125	10	100	16	30	φ22	134	134	φ13	32	104	14

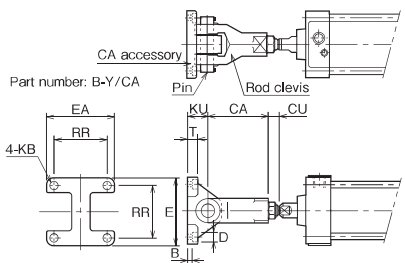
CB style—rod eye



Dimensional Table

Symbol	A	CA	CF	D	KK
Bore					
φ32	23	55	φ24	24	M10×1.25
φ40	25	60	φ24	24	M12×1.25
φ50	33	60	φ28	27	M16×1.5
φ63	33	60	φ28	27	M16×1.5
φ80	41	85	φ36	36	M20×1.5
φ100	41	85	φ36	36	M20×1.5
φ125	56	100	φ49	—	M27×2

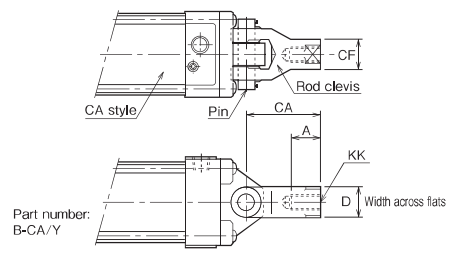
Rod clevis—CA accessory



Dimensional Table

Symbol	B	CA	CU		D	E	EA	KB	KU	RR	T
			Min.	Max.							
Bore											
φ32	6	55	6	12	φ14	43	43	φ6.6	19	33	8
φ40	6	60	7	13	φ14	49	49	φ6.6	19	37	8
φ50	7	60	10	17	φ14	60	60	φ6.6	19	47	10
φ63	10	60	10	17	φ15	74	74	φ9	19	56	13
φ80	14	85	12	21	φ20	93	93	φ11	32	70	18
φ100	14	85	12	21	φ20	110	110	φ11	32	84	18
φ125	14	100	16	30	φ22	134	134	φ13	32	104	18

CA style—rod clevis

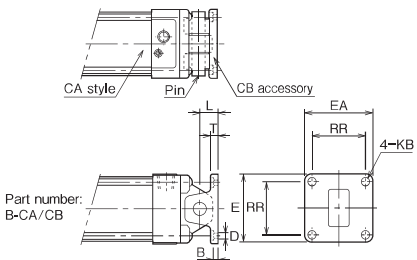


Dimensional Table

Symbol	A	CA	CF	D	KK
Bore					
φ32	23	55	φ24	24	M10×1.25
φ40	25	60	φ24	24	M12×1.25
φ50	33	60	φ28	27	M16×1.5
φ63	33	60	φ28	27	M16×1.5
φ80	41	85	φ36	36	M20×1.5
φ100	41	85	φ36	36	M20×1.5
φ125	56	100	φ40	40	M27×2

Combination of rod end attachments

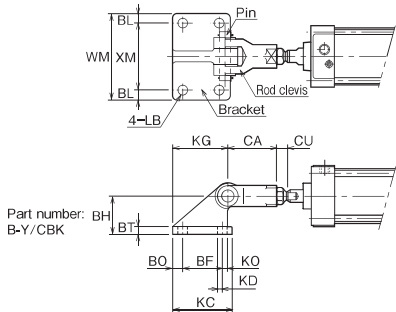
CA style—CB accessory



Dimensional Table

Symbol	B	D	E	EA	KB	L	RR	T
Bore								
φ32	6	φ11	43	43	φ6.6	19	33	8
φ40	6	φ11	49	49	φ6.6	19	37	8
φ50	6	φ11	60	60	φ6.6	19	47	8
φ63	6	φ15	74	74	φ9	19	56	8
φ80	9	φ20	93	93	φ11	32	70	11
φ100	9	φ20	110	110	φ11	32	84	11
φ125	10	φ22	134	134	φ13	32	104	14

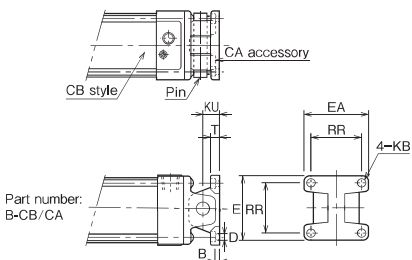
Rod clevis—CB bracket



Dimensional Table

Symbol	BF	BH	BL	BO	BT	CA	CU	KC	KD	KG	KO	LB	WM	XM
Bore							Min, Max							
φ32	40	35	10	10	8	55	6 12	60	5	55	5	φ9	85	65
φ40							7 13							
φ50	40	45	12.5	15	8	60	10 13	70	10	65	5	φ11	105	80
φ63							10 17							
φ80							12 21							
φ100	65	60	15	15	12	85	12 21	95	5	85	10	φ14	135	105
φ125	77	75	17.5	17.5	14	100	16 30	112	17.5	—	—	φ18	145	110

CB style—CA accessory



Dimensional Table

Symbol	B	D	E	EA	KB	KU	RR	T
Bore								
φ32	6	φ14	43	43	φ6.6	19	33	8
φ40	6	φ14	49	49	φ6.6	19	37	8
φ50	7	φ14	60	60	φ6.6	19	47	10
φ63	10	φ15	74	74	φ9	19	56	13
φ80	14	φ20	93	93	φ11	32	70	18
φ100	14	φ20	110	110	φ11	32	84	18
φ125	14	φ22	134	134	φ13	32	104	18

Special rod end shape type(standard/round rod)

A10

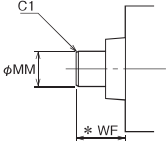


Table of Basic Dimensions

Bore	φ32	φ40	φ50	φ63	φ80	φ100	φ125
Symbol							
MM	φ12	φ16	φ20	φ25	φ30	φ35	
WF		25			35		

A12

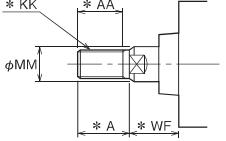


Table of Basic Dimensions

Bore	φ32	φ40	φ50	φ63	φ80	φ100	φ125
Symbol							
A	22	24	32		40	54	
AA	19.5	21.5	29		37	50	
KK	M10×1.25	M12×1.25	M16×1.5		M20×1.5	M27×2	
MM	φ12	φ16	φ20	φ25	φ30	φ35	
WF		25			35		

A14

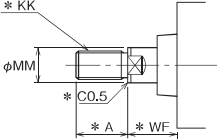


Table of Basic Dimensions

Bore	φ32	φ40	φ50	φ63	φ80	φ100	φ125
Symbol							
A	22	24	32		40	54	
KK	M10×1.25	M12×1.25	M16×1.5		M20×1.5	M27×2	
MM	φ12	φ16	φ20	φ25	φ30	φ35	
WF		25			35		

A16

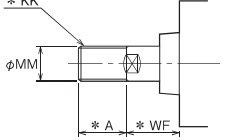


Table of Basic Dimensions

Bore	φ32	φ40	φ50	φ63	φ80	φ100	φ125
Symbol							
A	22	24	32		40	54	
KK	M12×1.25	M16×1.5	M20×1.5	M25×1.5	M30×2	M35×1.5	
MM	φ12	φ16	φ20	φ25	φ30	φ35	
WF		25			35		

A20

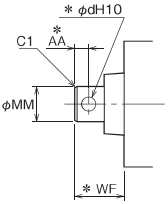


Table of Basic Dimensions

Bore	φ32	φ40	φ50	φ63	φ80	φ100	φ125
Symbol							
AA	7	8	12		14	18	
d	φ6	φ8	φ10		φ12	φ14	
MM	φ12	φ16	φ20	φ25	φ30	φ35	
WF	33	39	45		57	66	

A27

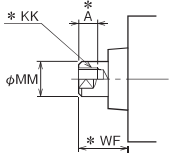


Table of Basic Dimensions

Bore	φ32	φ40	φ50	φ63	φ80	φ100	φ125
Symbol							
A	9	12	18		20	25	
KK	M6×1	M8×1.25	M10×1.5		M16×2	M20×2.5	
MM	φ12	φ16	φ20	φ25	φ30	φ35	
WF	33	35			45		

Special rod end shape type(standard/round rod)

A29

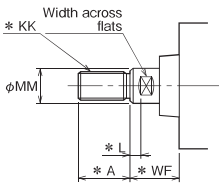


Table of Basic Dimensions

Bore Symbol	φ32	φ40	φ50	φ63	φ80	φ100	φ125
A	22 (19)	24 (21)	32 (29)		40 (37)	54 (50)	
KK	M10×1.25	M12×1.25	M16×1.5		M20×1.5	M27×2	
L	8			10			
MM	φ12	φ16	φ20		φ25	φ30	φ35
WF	33		35			45	

* The parenthesized values of dimension A indicate the screw length.

A30

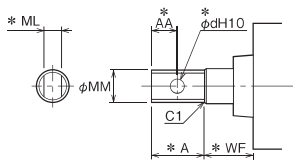


Table of Basic Dimensions

Bore Symbol	φ32	φ40	φ50	φ63	φ80	φ100	φ125
A	18	24	30		36	45	
AA	7	8	12		14	18	
d	φ6	φ8	φ10		φ12	φ14	
ML	7 ⁰ _{-0.1}	10 ⁰ _{-0.1}	12 ⁰ _{-0.1}		14 ⁰ _{-0.1}	20 ⁰ _{-0.1}	
MM	φ12	φ16	φ20		φ25	φ30	φ35
WF		20			26		

A37

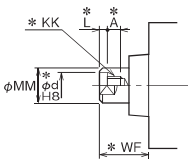


Table of Basic Dimensions

Bore Symbol	φ32	φ40	φ50	φ63	φ80	φ100	φ125
A	9	12	18		20	25	
KK	M6×1	M8×1.25	M10×1.5		M16×2	M20×2.5	
d	φ8	φ10	φ12		φ18	φ22	
L	5	7		10			
MM	φ12	φ16	φ20		φ25	φ30	φ35
WF	33		35			45	

Special rod end shape type (non-rotating/hex. rod)

G12

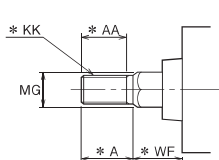


Table of Basic Dimensions

Bore Symbol	φ40	φ50	φ63	φ80	φ100
A	24	32		40	
AA	21.5	29		37	
KK	M12×1.25	M16×1.5		M20×1.5	
MG	14	19		23	
WF		25		35	

G14

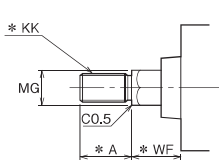


Table of Basic Dimensions

Bore Symbol	φ40	φ50	φ63	φ80	φ100
A	24 (21)	32 (29)		40 (37)	
KK	M12×1.25	M16×1.5		M20×1.5	
MG	14	19		23	
WF		25		35	

* The parenthesized values of dimension A indicate the screw length.

G27

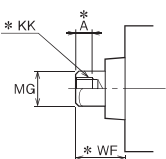


Table of Basic Dimensions

Bore Symbol	φ40	φ50	φ63	φ80	φ100
A	12	18		20	
KK	M8×1.25	M10×1.5		M16×2	
MG	14	19		23	
WF	33	35		45	

G37

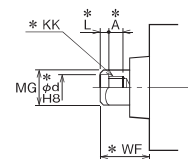


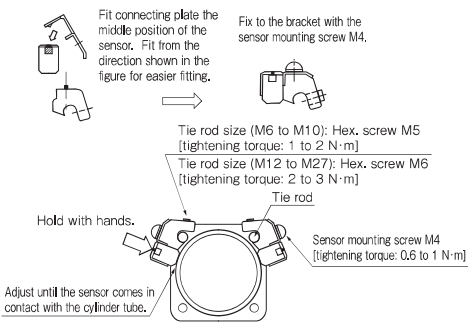
Table of Basic Dimensions

Bore Symbol	φ40	φ50	φ63	φ80	φ100
A	12	18		20	
KK	M8×1.25	M10×1.5		M16×2	
d	φ10	φ12		φ18	
L	7		10		
MG	14	19		23	
WF	33	35		45	

- For the detailed specifications, dimensions and leadtime of cylinders with special rod ends, contact us.
- If any of the *-marked dimensions must be changed to a non-standard value, consult us.

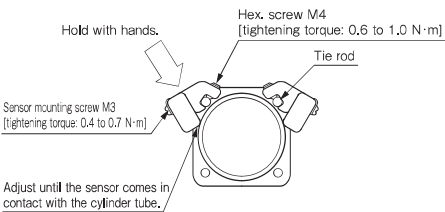
Setting method of sensor detecting position

AX type



1. Loosen the two hex. screws with a hex. wrench, and move them along the tie rod.
2. Adjust the detecting position (for the 2-LED type, the position where the green lamp lights up) 2 to 5 mm (about half of the operating range is appropriate) before the required position where the sensor indicator lamp starts to light up (ON). Then, gently hold the top of the sensor so that the cylinder tube contacts the detecting face of the sensor, and clamp the hex. screw to an appropriate tightening torque.
(Note) Inappropriate tightening torque may cause the off-center of the sensor position.
3. The indicating lamp lights up when the sensor is set to the ON position.
4. Sensors can be mounted to any of four tie rods and on the most suitable position depending on the mounting space of the cylinder and wiring method.
5. Mount a sensor to the most suitable position to detect the stroke end with the "sensor mounting dimension" (dimension UX).

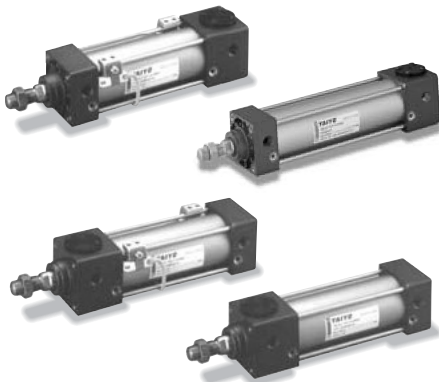
SR type



1. Loosen the two hex. screws with a hex. wrench, and move them along the tie rod.
2. Adjust the detecting position 2 to 5 mm (about half of the operating range is appropriate) before the required position where the sensor indicator lamp starts to light up (ON). Then, gently hold the top of the sensor so that the cylinder tube contacts the detecting face of the sensor, and clamp the hex. screw to an appropriate tightening torque.
(Note) Inappropriate tightening torque may cause the off-center of the sensor position.
3. The indicating lamp goes out when the sensor is set to the ON position.
4. Sensors can be mounted to any of four tie rods and on the most suitable position depending on the mounting space of the cylinder and wiring method.
5. Mount a sensor to the most suitable position to detect the stroke end with the "sensor mounting dimension" (dimension UX).

The safety lock mechanism reliably locks the piston rod even in an emergency.

- Dropping and trouble upon occurrence of power interruption are prevented to ensure the safety of workers and equipment.
- The safety lock mechanisms for rod and cap sides are available. One of the two types can be selected according to the purpose of use.
- The lock can be released easily by manual operation.



Cylinder Specifications

Type	Standard type/Switch Set	
	With lock on rod side	With lock on cap side
Series	10A-6L1	10A-6L2
Cylinder bore (mm)	φ 40 · φ 50 · φ 63 · φ 80 · φ 100	
Working fluid	Air	
Lubrication	Unnecessary	
Working pressure range	0.15 to 1 MPa	
Proof test pressure	1.5 MPa	
Working speed range	30 to 700 mm/s	
Working temperature range	-10 to +70°C (No freezing)	
Structure of cushioning	With cushions on both ends (with needle removal preventing mechanism)	
Mounting style	SD·LA·LB·FA·FB·CA·CB·CC·TC	
Accessories	Boots	Standard: Nylon tarpaulin Semi-standard: Chloroprene, Conex
	Rod end attachments	Rod eye (T-end), rod eye with spherical bearing (S-end), rod clevis (Y-end) with pin, floating joint (F-end)
	Others	TC bracket, CB bracket
Lock mechanism	Holding force	φ40: 880N · φ50: 1374N φ63: 2182N · φ80: 3519N φ100: 5498N
	Backlash	1 mm or less (when locking)

- Notes)
- When a sensor is mounted in an intermediate position, set the cylinder maximum speed to 300 mm/s or less for reasons of the load relay response speed, etc.
 - Conex, material of the boots, is the registered trademark of Teijin Limited.

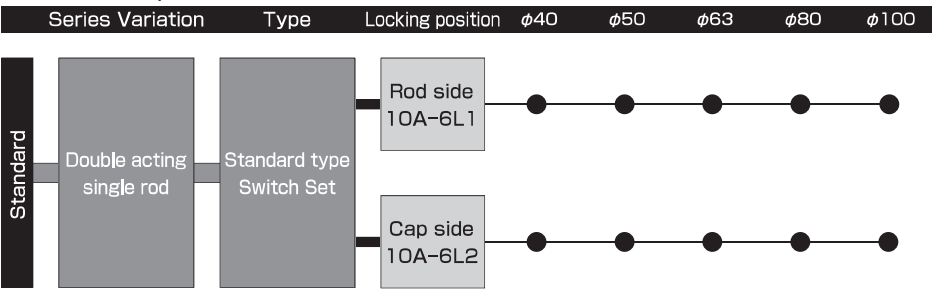
Stroke Range

Unit: mm

Bore	Stroke range
φ40	to 1000
φ50 to φ100	to 1500

Product Lineup

Unit: mm



Weight Table

Unit: kg

Bore mm	Basic weight			Mounting accessory weight							Bracket weight		Rod end attachment weight			
	With lock on rod side 10A-6L1	With lock on cap side 10A-6L2	Additional weight per mm of stroke	LA	LB	FA FB	CA	CB	CC	TC	For CB	For TC	Rod eye (S-end)	Rod eye (T-end)	Rod clevis (Y-end)	Floating joint (F-end)
φ40	0.94	0.98	0.00300	0.20	0.13	0.37	0.18	0.27	0.38	0.48	0.70	1.00	0.11	0.16	0.27	0.19
φ50	1.49	1.55	0.00428	0.32	0.17	0.39	0.26	0.39	0.50	0.55	0.70	1.00	0.20	0.21	0.34	0.38
φ63	2.00	2.06	0.00515	0.52	0.23	0.53	0.42	0.48	0.67	0.70	0.70	1.00	0.20	0.21	0.34	0.38
φ80	3.58	3.69	0.00834	0.85	0.38	1.60	1.08	0.92	1.76	1.16	0.72	1.44	0.36	0.62	0.87	0.75
φ100	4.67	4.83	0.01061	1.28	0.47	2.22	1.39	1.24	2.04	1.53	0.72	1.44	0.36	0.62	0.87	1.35

Sensor Additional Weight

Unit: kg

Sensor	AX type			SR type
	Cord length 1.5 m	Cord length 5 m	Connector type	Cord length 5 m
Bore				
φ40	0.05	0.13	0.04	0.22
φ50				
φ63				
φ80				
φ100				

- Calculation formula) Cylinder weight (kg)=basic weight+(additional weight per mm of stroke×cylinder stroke (mm))+ mounting accessory weight+(sensor additional weight×sensor quantity)
- Calculation example) Lock provided on rod side, bore φ50 mm, cylinder stroke 200 mm, mounting style FA, rod clevis (Y-end), 2 pcs of AX215 (cord length 5 m)
1.49+(0.00428×200)+0.39+0.34+(0.13×2)=3.336kg

- Note)
- When a stroke out of the stroke range is required, consult us,

How to order

Standard

The item enclosed by broken line needs not to be entered, if unnecessary. ■ Semi-standard specification

● With lock on rod side

● With lock on cap side

10A-6L1

10A-6L2

LA

LA

50

50

B

B

200

200

AH

AH

2

2

T

T

B

B

J

J

Mounting style

Cylinder bore (mm)

Cylinder stroke (mm)

Sensor symbol

Sensor quantity

Rod end attachment

Bracket

Boots

With cushions on both ends

No cushion

Nylon tarpaulin

Chloroprene

Conex

With bracket

Applicable mounting styles: CB and TC

Rod eye (T-end)

Rod clevis (Y-end) with pin

Rod eye with spherical bearing (S-end)

Floating joint (F-end)

Note on ordering Switch Set

Sensors are not mounted on cylinders at delivery.

Sensor quantity (1, 2 to n)

Type

Mounting style

Bore

Cushioning

Stroke

Sensor symbol

Sensor quantity

Rod end attachment

Bracket

Boots

Mounting style

SD Basic style

FA Rod flange

CC Cap eye

LA Side lugs

FB Cap flange

CB Cap clevis with pin

LB End angles

CA Cap eye

TC Intermediate trunnion

10A-6L

AB 213

Safety Lock Cylinder

Sensor List

■ Semi-standard specification

Type	Sensor symbol	Load voltage range	Load current range	Max. switching capacity	Protective circuit	Indicating lamp	Wiring method	Cord length	Applicable load		
Reed sensor	AF AX101CE	DC:5 to 30V AC:5 to 120V	DC:5 to 40mA AC:5 to 20mA	DC:1.5W AC:2VA	None	LED (Lights in red when sensing)	0.3 mm ² , 2-core, outer dia. ϕ 4 mm, rear wiring	1.5m	Small relay, programmable controller		
	AG AX105CE				Provided			5m			
	AH AX111CE							1.5m			
	AJ AX115CE				None			5m			
	AE AX125CE	DC:30V or less AC:120V or less	DC:40mA or less AC:20mA or less		None	None		5m			
	AK AX11ACE	AC:5 to 120V	5 to 20mA	2VA	Provided	LED (Lights in red when sensing)	4-pin connector type, rear wiring	0.5m			
	AL AX11BCE	DC:5 to 30V	5 to 40mA	1.5W		LED (Lights in red when not sensing)	0.3 mm ² , 2-core, outer dia. ϕ 4 mm, rear wiring	0.5m			
	AM AX135CE	AC:90 to 240V DC:90 to 240V	5 to 300mA	B contact output	Provided	LED (Lights in red when not sensing)	0.3 mm ² , 2-core, outer dia. ϕ 6 mm, rear wiring	5m			
	S SR405	AC:80 to 220V	2 to 300mA	30VA	Provided	Neon lamp (Lights in red when not sensing)	0.5 mm ² , 2-core, outer dia. ϕ 6 mm, rear wiring	5m			
Solid state sensor	BE AX201CE-1	DC:5 to 30V	5 to 40mA	—	Provided	LED (Lights in red when sensing)	0.3 mm ² , 2-core, outer dia. ϕ 4 mm, rear wiring	1.5m	Small relay, programmable controller		
	BF AX205CE-1					5m					
	CE AX211CE-1					LED (2-LED type in red/green)		1.5m			
	CF AX215CE-1					5m					
	CT AX211CE-1					LED (2-LED type in red/green)	0.3 mm ² , 2-core, outer dia. ϕ 4 mm, rear wiring	1.5m			
	CU AX215CE-1						0.3 mm ² , 2-core, outer dia. ϕ 4 mm, rear wiring	5m			
	CV AX218CE-1						4-pin connector type, rear wiring	0.5m			
	CW AZ211CE-1						0.3 mm ² , 2-core, outer dia. ϕ 4 mm, upper wiring	1.5m			
	CX AZ215CE-1						0.3 mm ² , 2-core, outer dia. ϕ 4 mm, upper wiring	5m			
	CY AZ218CE-1						4-pin connector type, upper wiring	0.5m			

(Notes) ● For the sensors without a protective circuit, be sure to provide a protective circuit (SK-100) with the load when using any induction load (relay, etc.).
● The output logic of AX135CE is a B contact. When the piston is detected, the sensor contact turns off (the lamp turns on).
● For the detailed specifications and handling of sensors, see the sensor specifications at the end of this catalog.
● The AX type sensors can be mounted on any type in addition to the above types. See the sensor specifications at the end of this catalog.
● We recommend AND Unit (AU series) for multiple sensors connected in series. For details, refer to AND Unit at the end of this catalog.

AX type sensor SR type sensor

Cord type

Connector type

Ordering procedures

★ Standard specifications

● With cushions on both ends

● Port position (A) and cushion valve position (A)

Notes

● When specifying port and cushion valve positions other than (A), consult us.

● In the case of the mounting style LA (only ϕ 40 and ϕ 50), the port, cushion valve, and lock mechanism are positioned on (B), (B), and (A), respectively.

★ Semi-standard range

● With boots, without cushions

● Change of piston rod end (dimensional symbol: WF, A, KK)

● Change of TC accessory position (dimensional symbol PH)

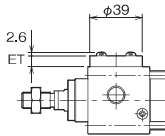
Notes

● Contact us for specifications not stated above.

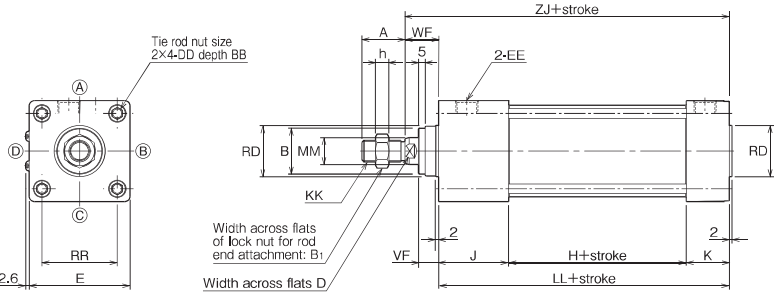
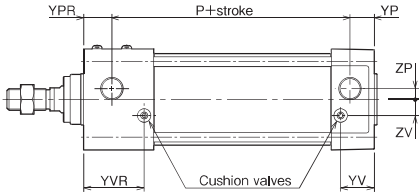
SD

With lock on rod side 10A-6L1 SD Bore B Stroke

Symbol	ET
Bore	
φ40	8
φ50	4



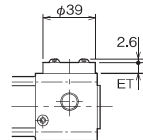
● Bore φ 40 · φ 50



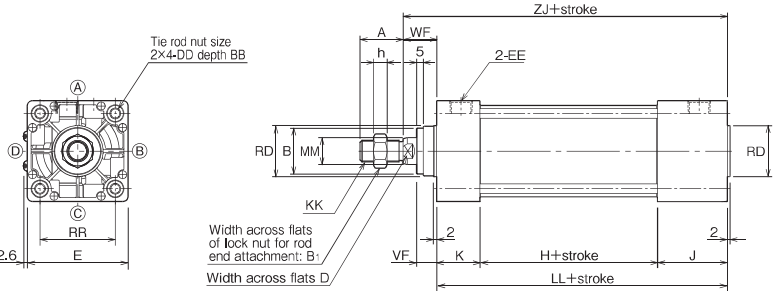
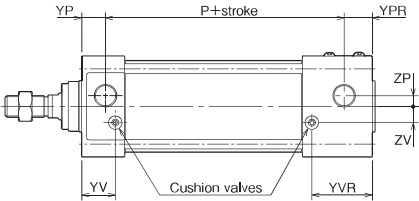
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

With lock on cap side 10A-6L2 SD Bore B Stroke

Symbol	ET
Bore	
φ40	8
φ50	4



● Bore φ 40 · φ 50



- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

Dimensional Table

Symbol	A	B	B ₁	BB	D	DD	E	EE	H	J	K	KK
Bore												
φ40	24 (21)	φ30	19	14	14	M6×1	□50	Rc1/4	31	46	31	M12×1.25
φ50	32 (29)	φ34	22	14	17	M6×1	□62	Rc1/4	31	51	31	M16×1.5
φ63	32 (29)	φ34	22	14	17	M8×1.25	□75	Rc3/8	32	52	32	M16×1.5
φ80	40 (37)	φ39	27	15	21	M10×1.5	□94	Rc3/8	36	61	36	M20×1.5
φ100	40 (37)	φ46	27	15	26	M10×1.5	□112	Rc1/2	36	61	36	M20×1.5

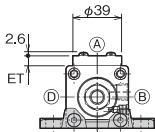
Symbol	LL	MM	P	RD	RR	VF	WF	YP	YPR	YV	YVR	ZJ	ZP	ZV	h
Bore															
φ40	108	φ16	69	φ32	□37	15	25	18	21	25.5	40.5	133	4	10	7
φ50	113	φ20	74	φ38	□47	15	25	18	21	24	44	138	7	12	10
φ63	116	φ20	77	φ38	□56	15	25	18	21	25	45	141	8	12	10
φ80	133	φ25	89	φ44	□70	21	35	20	24	29	54	168	11	16	12
φ100	133	φ30	89	φ50	□84	21	35	20	24	29	54	168	12	18	12

* The parenthesized values of dimension A indicate the screw length.

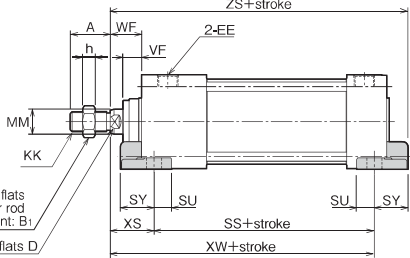
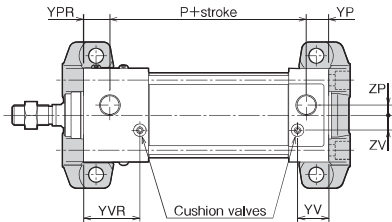
LA

With lock on rod side 10A-6L1 LA Bore B Stroke

Symbol	ET
Bore	
φ40	8
φ50	4



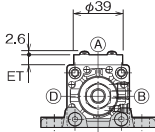
● Bore φ40 · φ50



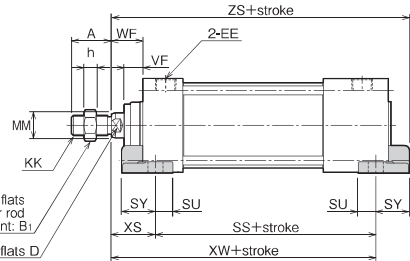
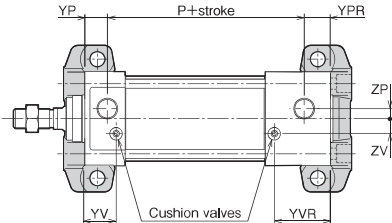
- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.
- The standard positions of the port and cushion valve on the 40 and 50 mm bore cylinders are (B). (The port and cushion valve cannot be provided on (A).)

With lock on cap side 10A-6L2 LA Bore B Stroke

Symbol	ET
Bore	
φ40	8
φ50	4



● Bore φ40 · φ50



- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.
- The standard positions of the port and cushion valve on the 40 and 50 mm bore cylinders are (B). (The port and cushion valve cannot be provided on (A).)

Dimensional Table

Symbol	A	B ₁	D	E	EA	EE	KK	LH	MM	P	SB	SS
Bore												
φ40	24 (21)	19	14	□50	50	Rc1/4	M12×1.25	25	φ16	69	φ12	88
φ50	32 (29)	22	17	□62	62	Rc1/4	M16×1.5	31	φ20	74	φ12	93
φ63	32 (29)	22	17	□75	75.5	Rc3/8	M16×1.5	38	φ20	77	φ12	96
φ80	40 (37)	27	21	□94	94	Rc3/8	M20×1.5	47	φ25	89	φ14	107
φ100	40 (37)	27	26	□112	113	Rc1/2	M20×1.5	57	φ30	89	φ14	107

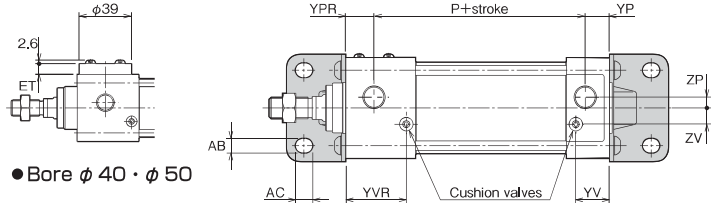
Symbol	ST	SU	SY	TS	US	VF	WF	XS	XW	YP	YPR	YV	YVR	ZP	ZS	ZV	h
Bore																	
φ40	8	14	23	70	92	15	25	35	123	18	21	25.5	40.5	4	146	10	7
φ50	9	14	25	83	105	15	25	35	128	18	21	24	44	7	153	12	10
φ63	9	14	27	95	117	15	25	35	131	18	21	25	45	8	158	12	10
φ80	13	18	34	121	147	21	35	48	155	20	24	29	54	11	189	16	12
φ100	14	18	38	140	168	21	35	48	155	20	24	29	54	12	193	18	12

* The parenthesized values of dimension A indicate the screw length.

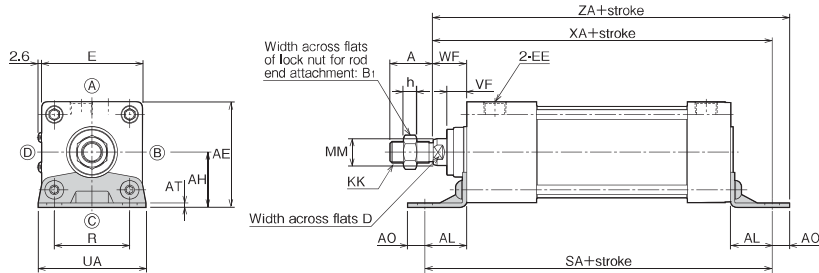
LB

With lock on rod side 10A-6L1 LB Bore B Stroke

Symbol	ET
Bore	
φ40	8
φ50	4



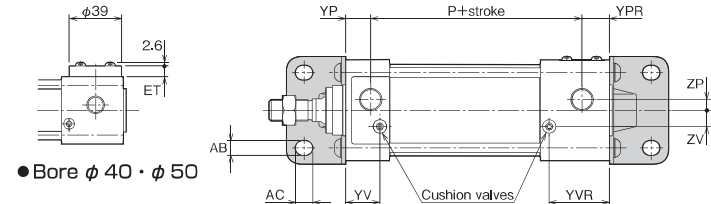
● Bore φ 40 · φ 50



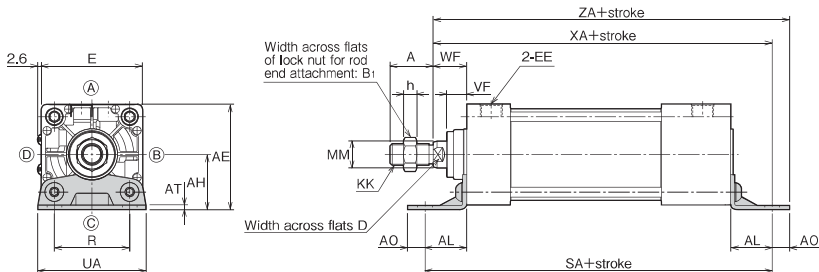
- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

With lock on cap side 10A-6L2 LB Bore B Stroke

Symbol	ET
Bore	
φ40	8
φ50	4



● Bore φ 40 · φ 50



- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

Dimensional Table

Symbol	A	AB	AC	AE	AH	AL	AO	AT	B _i	D	E	EE	KK
Bore													
φ40	24 (21)	11	13	55	30	23.5	12.5	3.2	19	14	□50	Rc1/4	M12×1.25
φ50	32 (29)	11	13	67.5	36.5	28	12	3.2	22	17	□62	Rc1/4	M16×1.5
φ63	32 (29)	11	13	78.5	41	31	13	3.2	22	17	□75	Rc3/8	M16×1.5
φ80	40 (37)	14	16	96	49	30	16	4	27	21	□94	Rc3/8	M20×1.5
φ100	40 (37)	14	16	113	57	30	16	4	27	26	□112	Rc1/2	M20×1.5

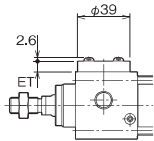
Symbol	MM	P	R	SA	UA	VF	WF	XA	YP	YPR	YV	YVR	ZA	ZP	ZV	h
Bore																
φ40	φ16	69	36	155	57	15	25	156.5	18	21	25.5	40.5	169	4	10	7
φ50	φ20	74	47	169	68	15	25	166	18	21	24	44	178	7	12	10
φ63	φ20	77	56	178	80	15	25	172	18	21	25	45	185	8	12	10
φ80	φ25	89	70	193	97	21	35	198	20	24	29	54	214	11	16	12
φ100	φ30	89	84	193	112	21	35	198	20	24	29	54	214	12	18	12

* The parenthesized values of dimension A indicate the screw length.

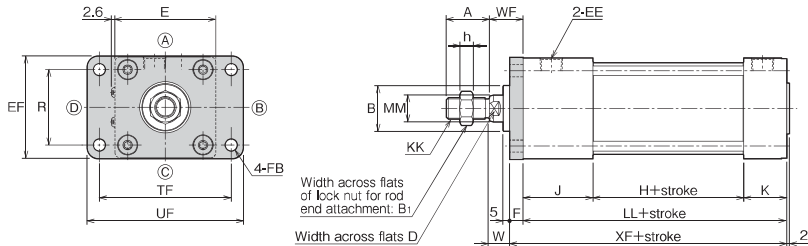
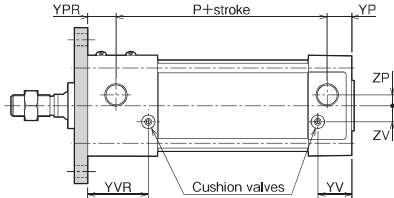
FA

With lock on rod side 10A-6L1 FA Bore B Stroke

Symbol	ET
Bore	
φ40	8
φ50	4



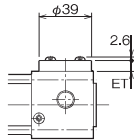
● Bore φ 40 · φ 50



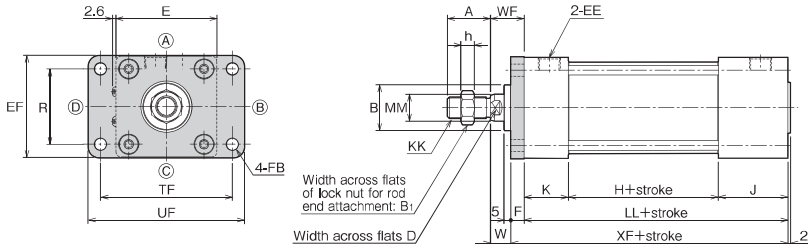
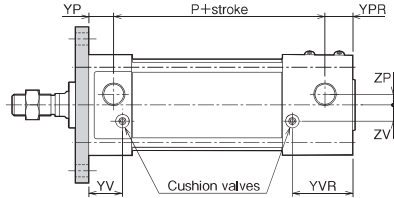
- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

With lock on cap side 10A-6L2 FA Bore B Stroke

Symbol	ET
Bore	
φ40	8
φ50	4



● Bore φ 40 · φ 50



- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

Dimensional Table

Symbol	A	B	B ₁	D	E	EE	EF	F	FB	H	J	K	KK
Bore													
φ40	24 (21)	φ30	19	14	□50	Rc1/4	52	10	φ7	31	46	31	M12×1.25
φ50	32 (29)	φ34	22	17	□62	Rc1/4	65	10	φ9	31	51	31	M16×1.5
φ63	32 (29)	φ34	22	17	□75	Rc3/8	76	10	φ9	32	52	32	M16×1.5
φ80	40 (37)	φ39	27	21	□94	Rc3/8	95	16	φ12	36	61	36	M20×1.5
φ100	40 (37)	φ46	27	26	□112	Rc1/2	115	16	φ12	36	61	36	M20×1.5

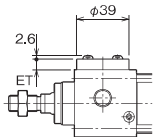
Symbol	LL	MM	P	R	TF	UF	W	WF	XF	YP	YPR	YV	YVR	ZP	ZV	h
Bore																
φ40	108	φ16	69	36	70	84	15	25	118	18	21	25.5	40.5	4	10	7
φ50	113	φ20	74	47	86	104	15	25	123	18	21	24	44	7	12	10
φ63	116	φ20	77	56	98	116	15	25	126	18	21	25	45	8	12	10
φ80	133	φ25	89	70	119	143	19	35	149	20	24	29	54	11	16	12
φ100	133	φ30	89	84	138	162	19	35	149	20	24	29	54	12	18	12

* The parenthesized values of dimension A indicate the screw length.

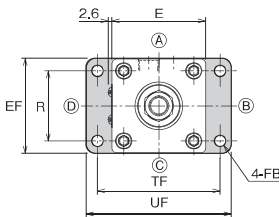
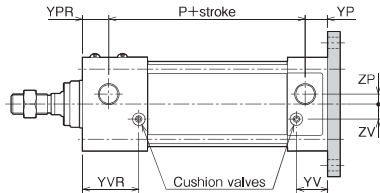
FB

With lock on rod side 10A-6L1 FB Bore B Stroke

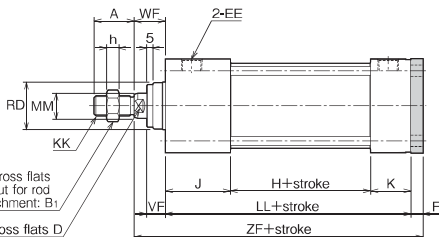
Symbol	ET
Bore	
φ40	8
φ50	4



●Bore φ 40 · φ 50



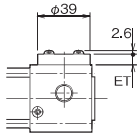
Width across flats of lock nut for rod end attachment: B₁
Width across flats D



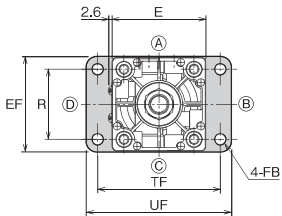
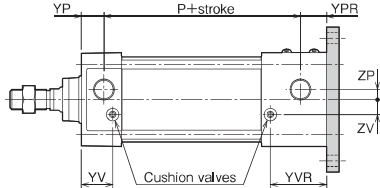
- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

With lock on cap side 10A-6L2 FB Bore B Stroke

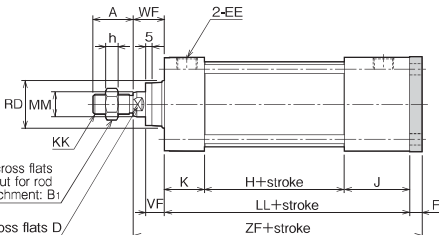
Symbol	ET
Bore	
φ40	8
φ50	4



●Bore φ 40 · φ 50



Width across flats of lock nut for rod end attachment: B₁
Width across flats D



- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

Dimensional Table

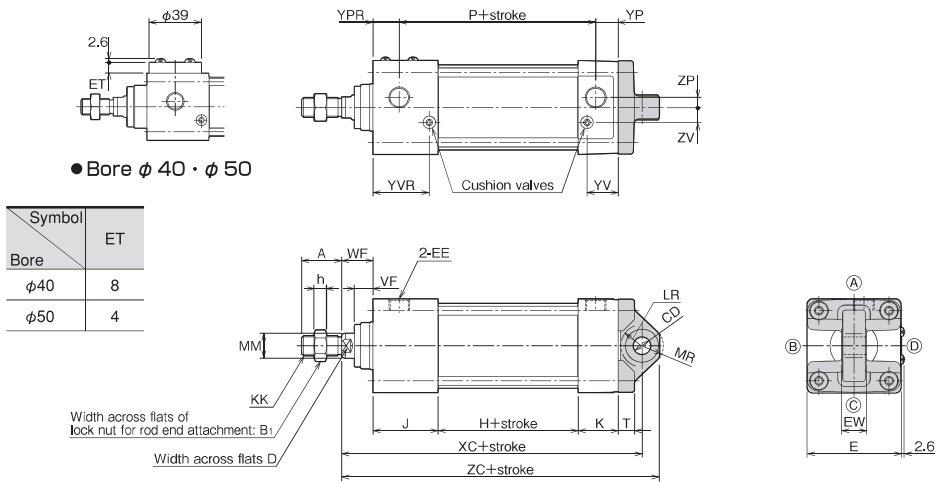
Symbol	A	B ₁	D	E	EE	EF	F	FB	H	J	K	KK	LL
Bore													
φ40	24 (21)	19	14	□50	Rc1/4	52	10	φ7	31	46	31	M12×1.25	108
φ50	32 (29)	22	17	□62	Rc1/4	65	10	φ9	31	51	31	M16×1.5	113
φ63	32 (29)	22	17	□75	Rc3/8	76	10	φ9	32	52	32	M16×1.5	116
φ80	40 (37)	27	21	□94	Rc3/8	95	16	φ12	36	61	36	M20×1.5	133
φ100	40 (37)	27	26	□112	Rc1/2	115	16	φ12	36	61	36	M20×1.5	133

Symbol	MM	P	R	RD	TF	UF	VF	WF	YP	YPR	YV	YVR	ZF	ZP	ZV	h
Bore																
φ40	φ16	69	36	φ32	70	84	15	25	18	21	25.5	40.5	143	4	10	7
φ50	φ20	74	47	φ38	86	104	15	25	18	21	24	44	148	7	12	10
φ63	φ20	77	56	φ38	98	116	15	25	18	21	25	45	151	8	12	10
φ80	φ25	89	70	φ44	119	143	21	35	20	24	29	54	184	11	16	12
φ100	φ30	89	84	φ50	138	162	21	35	20	24	29	54	184	12	18	12

* The parenthesized values of dimension A indicate the screw length.

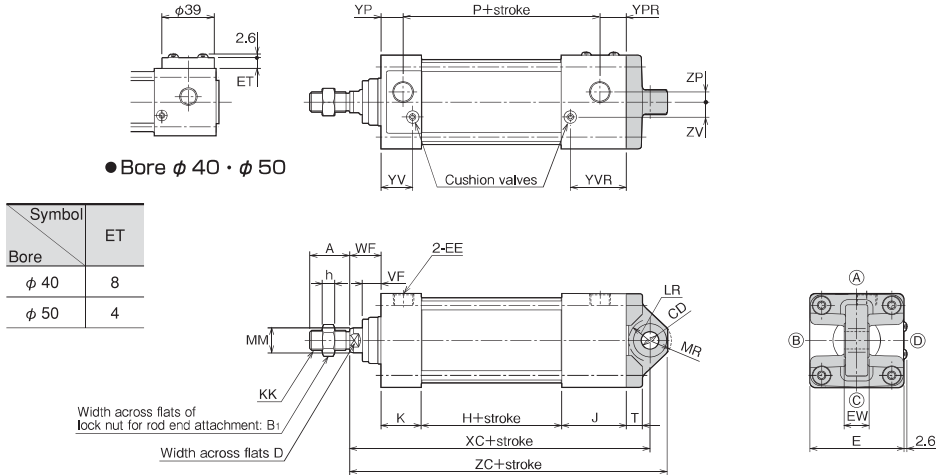
CA

With lock on rod side 10A-6L1 CA Bore B Stroke



- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

With lock on cap side 10A-6L2 CA Bore B Stroke



- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

CAD/DATA
is available.



Dimensional Table

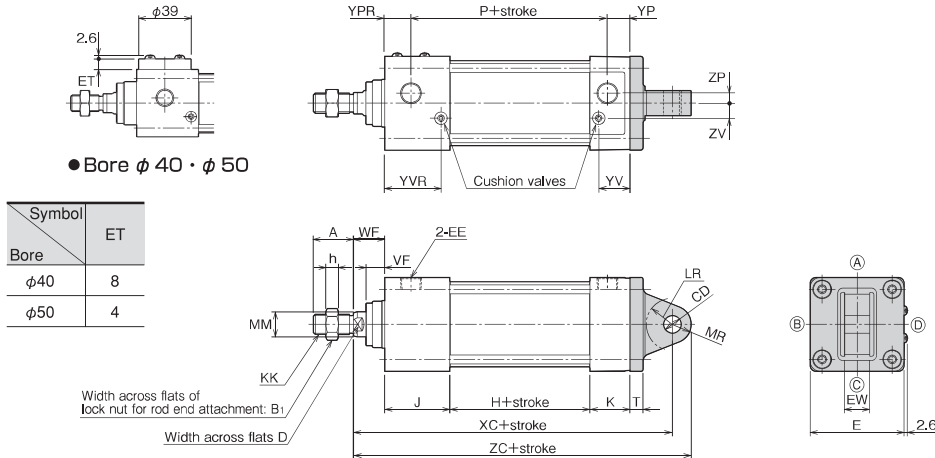
Symbol Bore	A	B ₁	CD	D	E	EE	EW	H	J	K	KK
φ40	24 (21)	19	φ14H9	14	□50	Rc1/4	20 ^{-0.084} ₀	31	46	31	M12×1.25
φ50	32 (29)	22	φ14H9	17	□62	Rc1/4	20 ^{-0.084} ₀	31	51	31	M16×1.5
φ63	32 (29)	22	φ14H9	17	□75	Rc3/8	20 ^{-0.084} ₀	32	52	32	M16×1.5
φ80	40 (37)	27	φ20H9	21	□94	Rc3/8	32 ^{-0.100} ₀	36	61	36	M20×1.5
φ100	40 (37)	27	φ20H9	26	□112	Rc1/2	32 ^{-0.100} ₀	36	61	36	M20×1.5

Symbol Bore	LR	MM	MR	P	T	VF	WF	XC	YP	YPR	YV	YVR	ZC	ZP	ZV	h
φ40	R17	φ16	R17	69	8	15	25	152	18	21	25.5	40.5	166	4	10	7
φ50	R17	φ20	R17	74	10	15	25	157	18	21	24	44	171	7	12	10
φ63	R17	φ20	R17	77	13	15	25	160	18	21	25	45	174	8	12	10
φ80	R25	φ25	R24	89	18	21	35	200	20	24	29	54	221	11	16	12
φ100	R26	φ30	R24	89	18	21	35	200	20	24	29	54	220	12	18	12

* The parenthesized values of dimension A indicate the screw length.

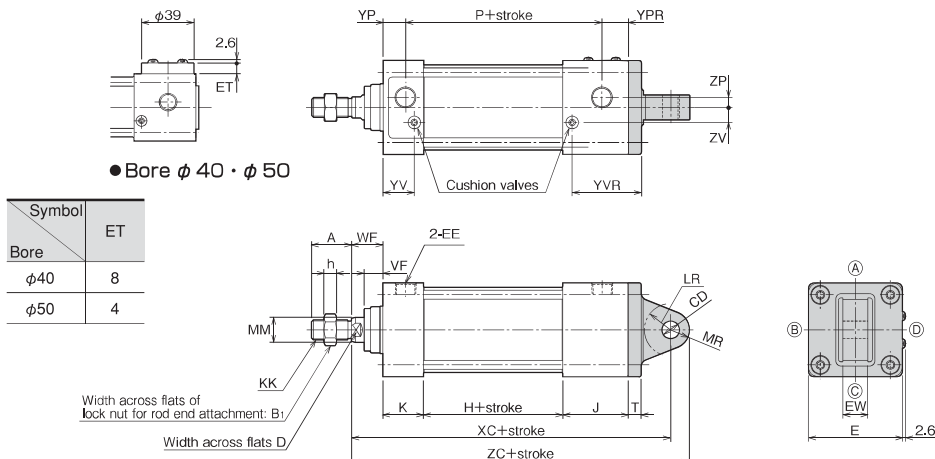
CC

With lock on rod side 10A-6L1 CC Bore B Stroke



- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

With lock on cap side 10A-6L2 CC Bore B Stroke



- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

CAD/DATA is available.

10A-6L/TA6L2 Bore

Dimensional Table

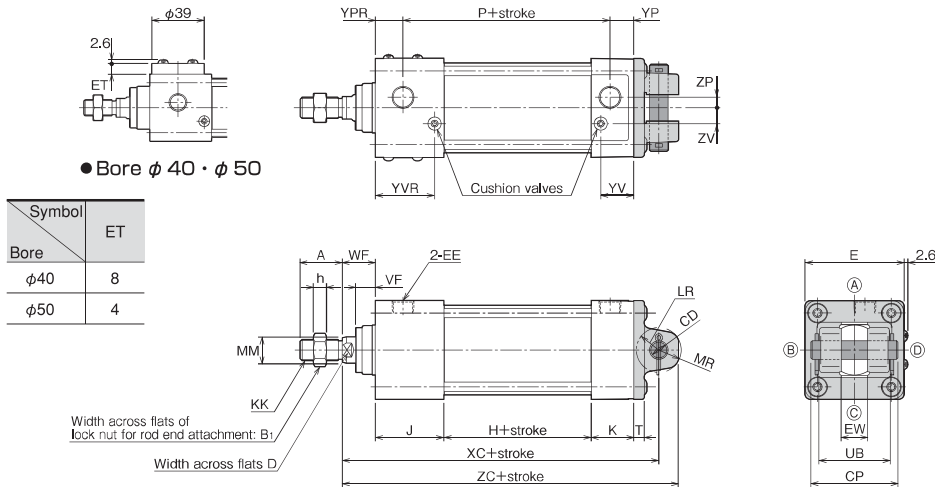
Symbol Bore	A	B ₁	CD	D	E	EE	EW	H	J	K	KK
$\phi 40$	24 (21)	19	$\phi 14H9$	14	$\square 50$	Rc1/4	$20_{-0.3}^0$	31	46	31	M12×1.25
$\phi 50$	32 (29)	22	$\phi 14H9$	17	$\square 62$	Rc1/4	$20_{-0.3}^0$	31	51	31	M16×1.5
$\phi 63$	32 (29)	22	$\phi 14H9$	17	$\square 75$	Rc3/8	$20_{-0.3}^0$	32	52	32	M16×1.5
$\phi 80$	40 (37)	27	$\phi 20H9$	21	$\square 94$	Rc3/8	$32_{-0.3}^0$	36	61	36	M20×1.5
$\phi 100$	40 (37)	27	$\phi 20H9$	26	$\square 112$	Rc1/2	$32_{-0.3}^0$	36	61	36	M20×1.5

Symbol Bore	LR	MM	MR	P	T	VF	WF	XC	YP	YPR	YV	YVR	ZC	ZP	ZV	h
$\phi 40$	R21	$\phi 16$	R14	69	11	15	25	167	18	21	25.5	40.5	181	4	10	7
$\phi 50$	R21	$\phi 20$	R15	74	11	15	25	172	18	21	24	44	187	7	12	10
$\phi 63$	R21	$\phi 20$	R15	77	11	15	25	175	18	21	25	45	190	8	12	10
$\phi 80$	R25	$\phi 25$	R20	89	15	21	35	216	20	24	29	54	236	11	16	12
$\phi 100$	R25	$\phi 30$	R20	89	15	21	35	216	20	24	29	54	236	12	18	12

* The parenthesized values of dimension A indicate the screw length.

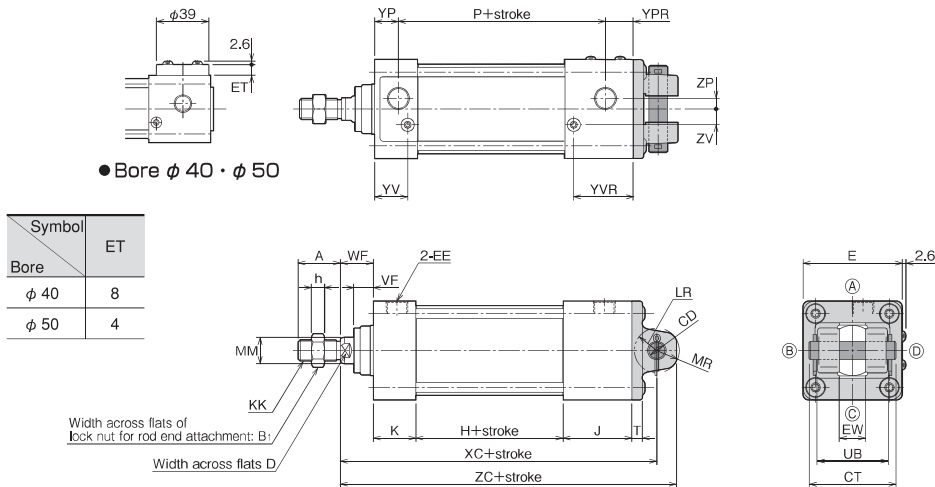
CB

With lock on rod side 10A-6L1 CB Bore B Stroke



- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

With lock on cap side 10A-6L2 CB Bore B Stroke



- For dimensions not shown here, refer to the SD style (basic style).
- For Switch Set Cylinders, see the dimensional drawings of Switch Set.
- For dimensional drawings of rod end attachments, refer to the accessories.

10A-6L/TA6L1 Bore CAD/DATA is available.

Dimensional Table

Symbol	A	B ₁	CD	CP	D	E	EE	EW	H	J	K	KK
Bore												
$\phi 40$	24(21)	19	$\phi 14H9/f8$	58	14	$\square 50$	Rc1/4	$20^{+0.7}_{-0.5}$	31	46	31	M12×1.25
$\phi 50$	32(29)	22	$\phi 14H9/f8$	66	17	$\square 62$	Rc1/4	$20^{+0.7}_{-0.5}$	31	51	31	M16×1.5
$\phi 63$	32(29)	22	$\phi 14H9/f8$	66	17	$\square 75$	Rc3/8	$20^{+0.7}_{-0.5}$	32	52	32	M16×1.5
$\phi 80$	40(37)	27	$\phi 20H9/f8$	78	21	$\square 94$	Rc3/8	$32^{+0.7}_{-0.5}$	36	61	36	M20×1.5
$\phi 100$	40(37)	27	$\phi 20H9/f8$	78	26	$\square 112$	Rc1/2	$32^{+0.7}_{-0.5}$	36	61	36	M20×1.5

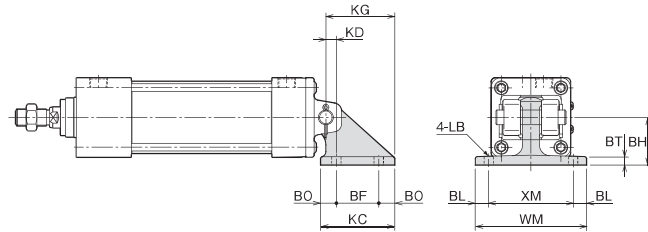
Symbol	LR	MM	MR	P	T	UB	VF	WF	XC	YP	YPR	YV	YVR	ZC	ZP	ZV	h
Bore																	
$\phi 40$	R17	$\phi 16$	R15	69	8	45	15	25	152	18	21	25.5	40.5	165	4	10	7
$\phi 50$	R17	$\phi 20$	R17	74	8	53	15	25	157	18	21	24	44	172	7	12	10
$\phi 63$	R17	$\phi 20$	R17	77	8	53	15	25	160	18	21	25	45	175	8	12	10
$\phi 80$	R30	$\phi 25$	R24	89	11	67	21	35	200	20	24	29	54	221	11	16	12
$\phi 100$	R30	$\phi 30$	R24	89	11	67	21	35	200	20	24	29	54	221	12	18	12

* The parenthesized values of dimension A indicate the screw length.

Bracket for CB

Dimensional Table

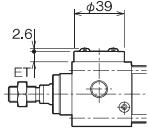
Symbol	Part number	BF	BH	BL	BO	BT	KC	KD	KG	LB	WM	XM
Bore												
$\phi 40$	BCA-14-A	40	45	12.5	16.5	8	73	10	66.5	$\phi 11$	105	80
$\phi 50$												
$\phi 63$												
$\phi 80$	BCA-20-A	65	60	15	16.5	12	98	5	86.5	$\phi 14$	135	105
$\phi 100$												



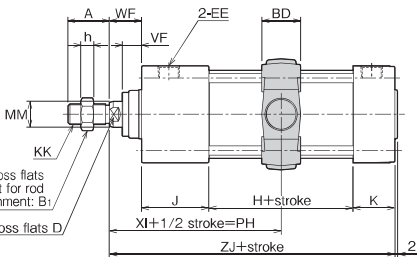
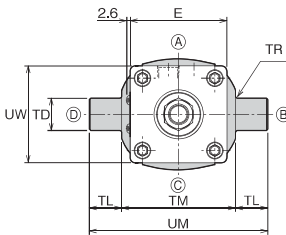
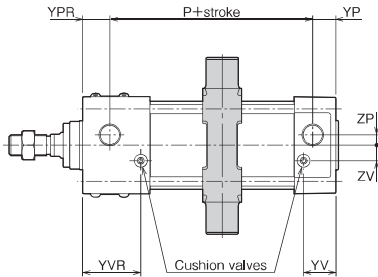
TC

With lock on rod side 10A-6L1 TC Bore B Stroke

Symbol	ET
Bore	
φ40	8
φ50	4



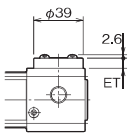
● Bore φ 40 · φ 50



- For dimensions not shown here, refer to the SD style (basic style).
 - For Switch Set Cylinders, see the dimensional drawings of Switch Set.
 - For dimensional drawings of rod end attachments, refer to the accessories.
- Note) In the case of the 40 mm bore small-stroke cylinder, locate the port and cushion on ⑥ to avoid interference with the lock cover.

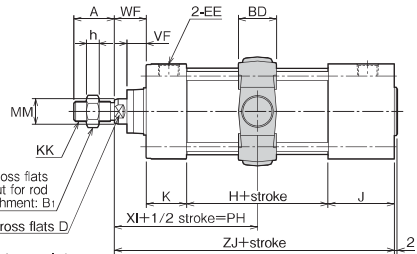
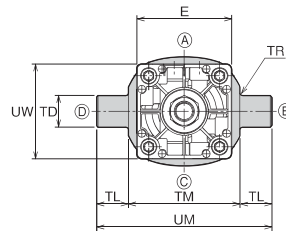
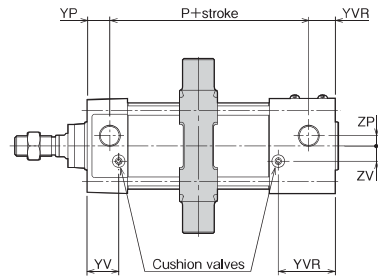
With lock on cap side 10A-6L2 TC Bore B Stroke

Symbol	ET
Bore	
φ40	8
φ50	4



● Bore φ 40 · φ 50

10A-6L/TA6L2 Bore



- For dimensions not shown here, refer to the SD style (basic style).
 - For Switch Set Cylinders, see the dimensional drawings of Switch Set.
 - For dimensional drawings of rod end attachments, refer to the accessories.
- Note) In the case of the 40 mm bore small-stroke cylinder, locate the port and cushion on ⑥ to avoid interference with the lock cover.

Dimensional Table

Symbol	A	B ₁	BD	D	E	EE	H	J	K	KK	MM	P	Min. PH	
													10A-6L1	10A-6L2
Bore														
φ40	24(21)	19	30	14	□50	Rc1/4	31	46	31	M12×1.25	φ16	69	86	71
φ50	32(29)	22	30	17	□62	Rc1/4	31	51	31	M16×1.5	φ20	74	91	71
φ63	32(29)	22	30	17	□75	Rc3/8	32	52	32	M16×1.5	φ20	77	92	72
φ80	40(37)	27	35	21	□94	Rc3/8	36	61	36	M20×1.5	φ25	89	113.5	88.5
φ100	40(37)	27	40	26	□112	Rc1/2	36	61	36	M20×1.5	φ30	89	116	91

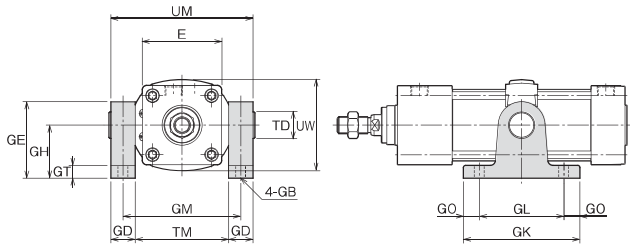
Symbol	TD	TL	TM	TR	UM	UW	VF	WF	XI		YP	YPR	YV	YVR	ZJ	ZP	ZV	h
									10A-6L1	10A-6L2								
Bore																		
φ40	φ25e9	25	63	R1.6	113	60	15	25	86.5	71.5	18	21	25.5	40.5	133	4	10	7
φ50	φ25e9	25	76	R1.6	126	72	15	25	91.5	71.5	18	21	24	44	138	7	12	10
φ63	φ25e9	25	88	R1.6	138	87	15	25	93	73	18	21	25	45	141	8	12	10
φ80	φ25e9	25	114	R1.6	164	105	21	35	114	89	20	24	29	54	168	11	16	12
φ100	φ25e9	25	132	R2	182	129	21	35	114	89	20	24	29	54	168	12	18	12

* The parenthesized values of dimension A indicate the screw length.

Bracket for TC

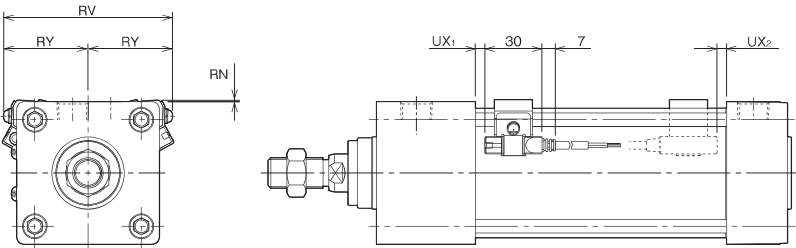
Dimensional Table

Symbol	Part number	E	GB	GD	GE	GH	GK	GL	GM	GO	GT	TD	TM	UM	UW
Bore															
φ40	BTA-25-A	□50	φ12	23	74	50	111	80	86	15.5	14	φ25	63	113	60
φ50		□62	φ12	23	74	50	111	80	99	15.5	14	φ25	76	126	72
φ63		□75	φ12	23	74	50	111	80	111	15.5	14	φ25	88	138	87
φ80	BTA-25-1-A	□94	φ14	23	92	70	121	85	137	18	14	φ25	114	164	105
φ100		□112	φ14	23	92	70	121	85	155	18	14	φ25	132	182	129

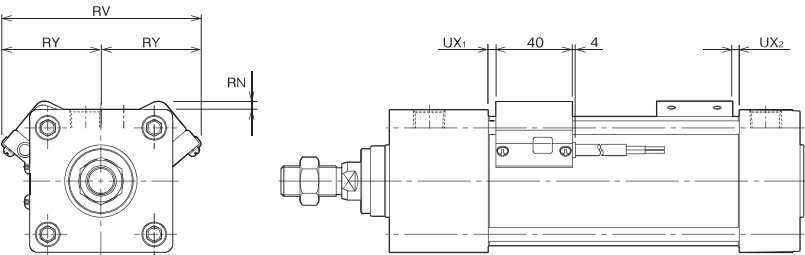


Switch Set

- AX type sensor



- SR type sensor



Dimensional Table

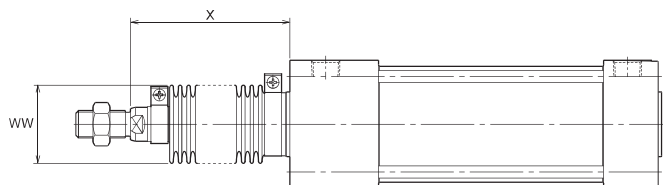
Symbol Bore	RY		RV		RN		UX ₁		UX ₂	
	AX type	SR type	AX type	SR type	AX type	SR type	AX形	SR形	AX形	SR形
φ40	36	40	72	80	3	4	8	2	4	0
φ50	40	45	80	90	2	3	9	2	5	0
φ63	47	52	94	104	2	5	9	2	5	0
φ80	52	60	104	120	0	2	11	4	6	0
φ100	60	67	120	134	0	0	11	4	6	0

Note) Dimension UX indicates the optimum sensor mounting position for detection of stroke end.

Operating Range and Hysteresis

Bore mm	Reed sensor				Solid state sensor	
	AX1 ** type		SR type		AX2 ** type	
	Operating range	Hysteresis	Operating range	Hysteresis	Operating range	Hysteresis
φ40	5 to 10	1 or less	8 to 12	2 or less	3 to 6	1 or less
φ50	6 to 12		9 to 13		4 to 8	
φ63						
φ80						
φ100						

With Boots

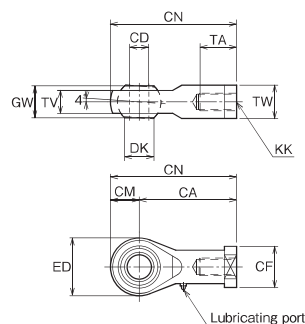


	Standard	Semi-standard	
Material	Nylon tarpaulin	Chloroprene	Conex
Heat proof	80°C	100°C	200°C

(Notes) ● Conex is the registered trademark of Teijin Limited.
● Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
● The boots have been mounted at our factory prior to delivery.

Rod End Attachment

- Rod eye with spherical bearing (S-end)



Dimensional Table/With boots (nylon tarpaulin/chloroprene)

Symbol Bore	WW	X (standard strokes)												X (other than standard strokes)
		50	75	100	125	150	200	250	300	350	400	450	500	
φ40	φ41	62	70	79	87	95	112	129	145	162	179	195	212	$\frac{1}{3}$ stroke+45
φ50	φ47	67	75	84	92	100	117	134	150	167	184	200	217	
φ63	φ47	67	75	84	92	100	117	134	150	167	184	200	217	$\frac{1}{3}$ stroke+50
φ80	φ56	68	74	80	87	93	105	118	130	143	155	168	180	
φ100	φ61	68	74	80	87	93	105	118	130	143	155	168	180	$\frac{1}{4}$ stroke+55

Note) If the calculated value has a fractional part, round it up.

Dimensional Table/With boots (Conex)

Symbol Bore	WW	X (standard strokes)												X (other than standard strokes)
		50	75	100	125	150	200	250	300	350	400	450	500	
φ40	φ61	70	83	95	108	120	145	170	195	220	245	270	295	$\frac{1}{2}$ stroke+45
φ50	φ61	75	88	100	113	125	150	175	200	225	250	275	300	
φ63	φ61	75	88	100	113	125	150	175	200	225	250	275	300	$\frac{1}{2}$ stroke+50
φ80	φ61	75	85	95	105	115	135	155	175	195	215	235	255	
φ100	φ61	75	85	95	105	115	135	155	175	195	215	235	255	$\frac{2}{5}$ stroke+55

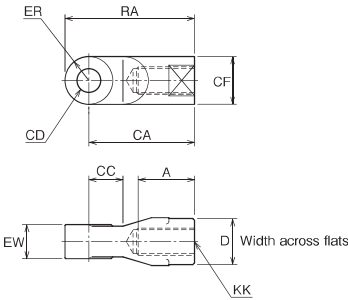
Note) If the calculated value has a fractional part, round it up.

Dimensional Table/Rod eye with spherical bearing (S-end)

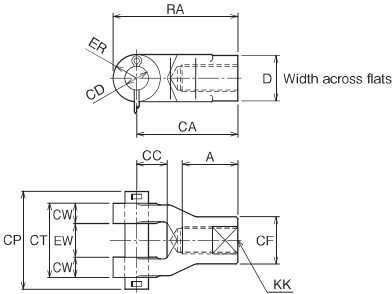
[illegible]

Rod End Attachment

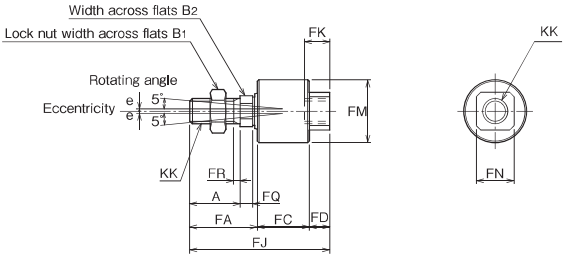
- Rod eye (T-end)



- Rod clevis (Y-end) with pin



- Floating joint (F-end)



- The insertion of the floating joint into the socket shall not equal or exceed the dimension of screw diameter, (Return the joint one or two turns after it gets into contact with the socket bottom, and fix it with a lock nut.) Excessive insertion can cause operation failure.
- Do NOT use together with CA, CB, CC, and TC accessories.

Dimensional Table/Rod eye (T-end)

Symbol Bore	Part number	A	CA	CC	CD	CF	D	ER	EW	KK	RA
φ40	RTA-12-A	25	60	20	φ14H9	φ24	24	R12	20 ^{-0.1} ₀	M12×1.25	72
φ50	RTA-16-A	33	60	20	φ14H9	φ28	27	R14	20 ^{-0.1} ₀	M16×1.5	74
φ63											
φ80	RTA-20-A	41	85	30	φ20H9	φ36	36	R19	32 ^{-0.1} ₀	M20×1.5	104
φ100											

Dimensional Table/Rod clevis (Y-end) with pin

Symbol Bore	Part number	A	CA	CC	CD	CF	CP	CT	CW	D	ER	EW	KK	RA
φ40	RYA-12-1-A	25	60	20	φ14 ^{H9} ₁₈	φ24	58	44	12	24	R12	20 ^{+1.5} _{+0.5}	M12×1.25	71
φ50	RYA-16-A	33	60	18	φ14 ^{H9} ₁₈	φ28	58	44	12	27	R14	20 ^{+1.5} _{+0.5}	M16×1.5	74
φ63														
φ80	RYA-20-A	41	85	28	φ20 ^{H9} ₁₈	φ36	78	64	16	36	R19	32 ^{+1.5} _{+0.5}	M20×1.5	104
φ100														

Dimensional Table/Floating joint (F-end)

Symbol Bore	Part number	A	B ₁	B ₂	e	FA	FC	FD	FJ	FK	FM	FN	FQ	FR	KK
φ40	RFS-12T	24	19	13	1	33	25.5	11	69.5	13.5	φ32	□19	7	3.5	M12×1.25
φ50 φ63	RFS-16T	32	22	17	1.5	43	33	13	89	16	φ40	□24	8	4	M16×1.5
φ80	RFS-20T080	40	27	22	2	53	42	15	110	22	φ50	□30	9	5	M20×1.5
φ100	RFS-20T100	40	27	24	2.5	56	49	18	123	24	φ64	□36	12	6	M20×1.5

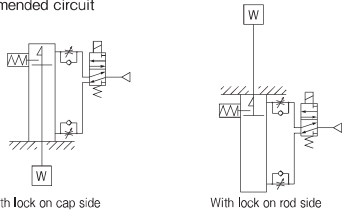
Handling procedures

Pneumatic circuit

⚠ WARNING

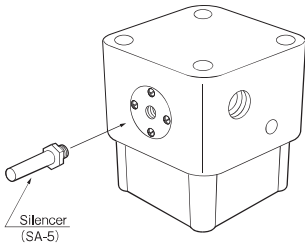
- When starting (unlocking), once apply pressure to the port without the lock mechanism.
If the lock is released with load on the lock mechanism (lock piston), the mechanism may malfunction or be damaged, or the piston may suddenly move, thereby causing a hazardous situation.
Avoid using an exhaust center 3-position valve from which air is discharged through both ports. It is recommended to use a 2-position 4- or 5-port valve in which one side is constantly pressurized.
- Select a valve through which the pressure on the lock side can be completely discharged. If a 3-position closed center or 3-position pressure center valve through which pressure cannot be discharged is used, the piston rod cannot be locked.
- If exhaust pressure is applied to the port on the lock side while the lock is on, the lock may be released. Design the pneumatic circuit so that exhaust pressure is not applied to the port. Care should be taken when a manifold type valve is used and the valve exhaust side is connected to centralized piping.

Recommended circuit



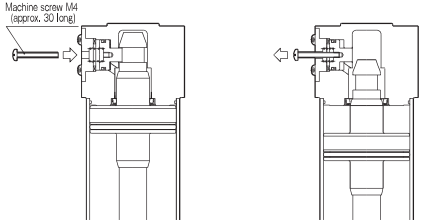
⚠ CAUTION

- Control the speed based on meter-out control. In the case of meter-in control, the lock mechanism may not be released.
- Adjust the cushion appropriately. If the cushion valve is fully closed or almost fully closed, the piston rod may not reach the stroke end, and the rod may not be locked. Even if it is locked, it may not be unlocked correctly.
- If water, oil or particles may enter the manual operation port, attach the silencer (SA-5) supplied with the product. If water, oil or particles enter the manual operation port, malfunctions, such as locking failure, may be caused.

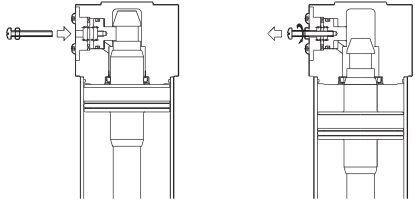


Manual unlocking procedures

- To manually unlock, insert an M4 bolt (about 30 mm long) from the manual release port, screw the bolt into the internal lock piston, and pull the bolt. Then, the lock will be released.



- To keep the lock mechanism in the released state, fit a nut to the manual unlocking bolt in advance. The nut which is tightened on the cover side with the bolt in the pulled state can prevent the bolt returning.



Backlash at stroke end on lock side

The lock is designed so that a backlash of up to 1 mm is kept when the rod is locked at the stroke end.
When air pressure is discharged from port A, the load will drop for the backlash. Fit the screw carefully.

