

J

Series

Miniature Pneumatic Cylinder

J Series



J Series

Pneumatic cylinder

Compact and light

Aluminum front and rear cap, as well as piping.

Extreme endurance

Built-in pre-lubricated bearings.

Delicate appearance

Black front and rear cap with slickly integrated aluminum piping.

Rubber magnet provided

Can be used together with sensor switch.

Accessories

[Standard] • Standard nut • Rod end nut

[Optional] • Rod end clevis • Rod end eye

Custom-made Cylinder

Dual stroke cylinder (C. 49)

Stroke-adjustable cylinder (C. 51)

Low speed type cylinder (C. 53)

High-temperature cylinder (C. 54)

Low oil-pressure pneumatic cylinder (C. 55)

Canopy flattened cylinder (C. 56)

		Standard type J Series	Double rod type J□7 Series	With air cushion type J Series	Direct mounting type J□E Series	With lock mechanism type J□L Series
						
Action	Double-acting	○	○	○	○	○
	Single-acting (Spring return)	○				
	Single-acting (Spring extend)	○				
Cushion	Damper cushion	○	○	○	○	○
	Air cushion					
Mounting	Standard type	○	○	○	○	○
	Axial foot	○	○	○		○
	Mounting plate	○	○	○		○
	Eye	○		○		
	Center trunnion	○	○	○		
Sensor switch	M type reed switch	○	○	○	○	○
	M type proximity switch	○	○	○	○	○

C.3

C.17

C.24

C.32

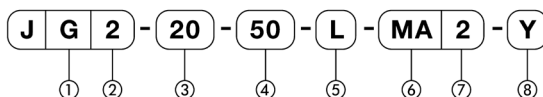
C.38

J Series

Air cylinder/Standard type

Ø20, Ø25, Ø32, Ø40

Ordering Instructions



① Magnet

C: No magnet (without switch available)

G: Cylinder with switch available (with built-in magnet)

② Action

2: Double-acting, single rod

1: Single-acting (Spring return)

0: Single-acting (Spring extend)

③ Bore (mm)

20: Ø20

25: Ø25

32: Ø32

40: Ø40

④ Stroke (mm)

Refer to Standard Stroke table

⑤ Mounting

N: Standard type

L: Axial foot

A: Mounting plate

C: Eye

T: Center trunnion

⑥ Sensor switch type

No symbol	No switch	
MA	MA-1 (AC110V, DC24V)	M type Reed switch
MB	MD-1 (DC24V)	
MC	MD-3 (DC5, 6V)	
MD	MR (AC, DC5~110V)	
ME	MA-2L (AC110V)	
MF	MA-2H (AC220V)	M type Proximity switch
MG	MT-3 (DC5~30V)	
MH	MT-3U (DC5~30V)	
MJ	MT-2 (DC24V)	
MK	MT-2U (DC24V)	

⑦ Number of switches

No symbol: No switch

2: With 2 units

1: With 1 unit

⑧ Accessories

No symbol: Rod end nut

Y: With rod end clevis

I: With rod end eye

(note) Y: Provided with pin

Model No. of Packing

Bore (mm)	Packing
Ø20	J20-PS
Ø25	J25-PS
Ø32	J32-PS
Ø40	J40-PS

Model No. of Sensor Switch Mounting Bracket

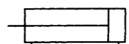
Bore (mm)	M type sensor switch
Ø20	J20-MJ
Ø25	J25-MJ
Ø32	J32-MJ
Ø40	J40-MJ

Model No. of Mounting Bracket

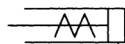
Bore (mm)	Ø20	Ø25	Ø32	Ø40
Axial foot mount bracket	J20-L	J25-L	J32-L	J40-L
Flange mount bracket	J20-A	J25-A	J32-A	J40-A
Eye mount bracket	—	—	J32-C	J40-C
Trunnion mount bracket	J20-T	J25-T	J32-T	J40-T



JIS Label



Double acting

Single acting
(Spring return)Single acting
(Spring extend)

Value shown in this catalog is shown in SI unit.
However, value within this output table is in generic
unit. Use the following formula to convert to SI unit :

$$\text{Pressure } Y (\text{MPa}) = X (\text{kgf/cm}^2) \times 9.80665 \times 10^{-2}$$

$$\text{Force } Y (\text{N}) = X (\text{kgf}) \times 9.80665$$

Specifications

Action	Unit	Double-acting	Single-acting
Fluid		Non-lubricated air/Lubricated air	
Pressure range	MPa(kgf/cm ²)	0.1~0.7(1.0~7.1)	0.2~0.7(2.0~7.1)
Temperature range	°C	5~60	
Piston speed range	mm/s	50~500	
Cushion		Built-in damper	
Piston stroke allowance	mm	+1.0 0	
Mounting		Standard type, Axial foot, Mounting plate, Eye, Center trunnion	

Standard stroke

(Unit : mm)

Action	Bore	Standard stroke	Max. stroke
Double-acting	Ø20	15, 25, 50, 75, 100, 125, 150	500
	Ø25	25, 50, 75, 100, 125, 150	
	Ø32	25, 50, 75, 100, 125, 150, 200, 250, 300	
	Ø40	50, 75, 100, 125, 150, 200, 250, 300	
Single-acting	Ø20	15, 25, 50	150
	Ø25	25, 50	

Spring force

(Unit : kgf)

Bore (mm)	Ø20			Ø25	
stroke (mm)	15	25	50	25	50
stroke 0	1.0	1.0	1.0	1.5	1.5
Max. stroke	3.0	4.4	4.4	4.6	4.6

Theoretical output

(Unit : mm)

Bore (mm)	Mounting	Operating pressure (kgf/cm ²)						
		1	2	3	4	5	6	7
Ø20	Out stroke	3.1	6.2	9.4	12.5	15.7	18.8	21.9
	In stroke	2.3	4.7	7.1	9.4	11.8	14.1	16.5
Ø25	Out stroke	4.9	9.8	14.7	19.6	24.5	29.4	34.3
	In stroke	3.8	7.6	11.3	15.1	18.9	22.7	26.4
Ø32	Out stroke	8.0	16.1	24.1	32.2	40.2	48.3	56.3
	In stroke	6.5	13.0	19.5	26.0	32.5	39.0	45.5
Ø40	Out stroke	12.6	25.1	37.7	50.2	62.8	75.4	87.9
	In stroke	10.6	21.1	31.7	42.2	52.8	63.3	73.9

(Note) Effective output = Theoretical output x 0.85

Accessories

	Name	Standard type	Axial foot	Mounting plate	Eye	Center trunnion
Standard	Standard nut	○	○	○	—	—
	Rod end nut	○	○	○	○	○
Optional	With rod end clevis	○	○	○	○	○
	With rod end eye	○	○	○	○	○

Cylinder mass/Double-acting

(Unit: g)

Mounting	Bore (mm)	Stroke (mm)									
		15	25	50	75	100	125	150	200	250	300
Standard type	∅20	139	155	182	209	236	263	290	—	—	—
	∅25	—	289	326	363	400	437	474	—	—	—
	∅32	—	470	520	570	620	670	720	820	920	1020
	∅40	—	—	840	910	980	1050	1120	1260	1400	1540
Eye	∅20	137	153	180	207	234	261	288	—	—	—
	∅25	—	289	326	363	400	437	474	—	—	—

Cylinder mass/Single-acting (Unit: g)

Mounting	Bore (mm)	Stroke (mm)		
		15	25	50
Standard type	∅20	212	206	286
	∅25	—	366	475
Eye	∅20	210	204	284
	∅25	—	366	475

Accessories mass

(Unit: g)

Mounting	Bore (mm)			
	∅20	∅25	∅32	∅40
Axial foot	112	128	190	270
Mounting plate	50	65	80	170
Eye	—	—	90	160
Center trunnion	75	61	100	160

Model with switch

M type reed switch

Lead with wire



Model No.	Rated voltage (V)	Rated current (mA)	Pilot lamp (Lights up at ON)	Application
MA-1	AC110	5~45	○	Relay PLC
	DC24	5~45		
MD-1	DC24	25~65	○	Relay
MD-3	DC5, 6	Max.50 (Inductive load) Max.300 (Resistive load)	○	IC circuit
MR	AC DC 5~110	Max.50 (Inductive load) Max.300 (Resistive load)	No indicator	Relay PLC
MA-2L	AC110	5~150	○	Relay
MA-2H	AC220	5~150	○	Relay

M type proximity switch

Lead with wire



Model No.	Rated voltage (V)	Rated current range (mA)	Pilot lamp (Lights up at CN)	Application
MT-2 MT-2U	DC24 (DC10~30)	5~100	○	Relay PLC
MT-3 MT-3U	DC5~30	5~200	○	Relay PLC IC circuit

Minimum stroke with M type switch (Unit: mm)

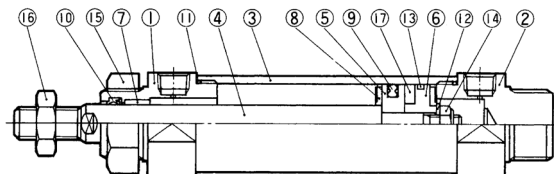
Bore	Number of switches		
	With 2 units (on the same surface)	With 2 units (on the different surfaces)	With 1 unit
∅20	50	15	5
∅25			
∅32			
∅40			

(Note) The MA-2L is the same as the MA-1 except that MA-2L is also equipped with protective circuit SS-2L.

The MA-2H is the same as the MA-1 except that MA-2H is also equipped with protective circuit SS-2H.

Construction

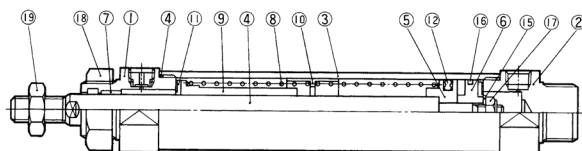
Double-acting



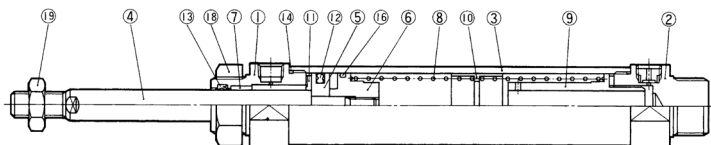
Parts List

No.	Name	No.	Name	No.	Name
1	Front cover	7	Bearing	13	Wear ring
2	End cover	8	Damper	14	U-shaped nut
3	Outer tube	9	Piston packing	15	Standard nut
4	Piston rod	10	Rod packing	16	Rod end nut
5	Piston A	11	O-ring for cover	17	Magnet
6	Piston B	12	End cover gasket		

Single-acting (Spring return)



Single-acting (Spring extend)



Parts List

No.	Name	No.	Name	No.	Name
1	Front cover	8	Resetting spring	15	End cover gasket
2	End cover	9	Stroke braker	16	Wear ring
3	Outer tube	10	Spring connect point	17	U-shaped nut
4	Piston rod	11	Damper	18	Standard nut
5	Piston A	12	Piston packing	19	Rod end nut
6	Piston B	13	Rod packing		
7	Bearing	14	O-ring for cover		

Packing list

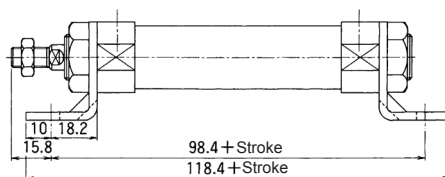
Bore (mm)	9. Piston packing		10. Rod packing		11. O-ring for cover	
	Model No.	Amount	Model No.	Amount	Model No.	Amount
Ø20	PSD-20	1	PDU-10Z	1	SO-015-21	2
Ø25	PSD-25	1	PDU-12Z	1	SO-015-25	2
Ø32	PSD-32	1	PDU-14Z	1	SO-015-29	2
Ø40	PSD-40	1	PDU-16Z	1	SO-015-30	2

(Note) Packing repair and assembly kits are also available for purchase.

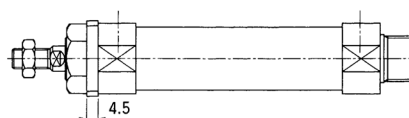
(Unit: mm)

[illegible]

Technical drawing of a mechanical part, likely a valve or fitting. The drawing shows a cross-section of a conical body with a central threaded hole. Dimensions are given in millimeters: total height 25, top section height 14, base thickness 3.2, inner hole diameter 6.8, and base diameters 40 and 60.



Technical drawing of a rectangular plate with a central hexagonal hole and four circular holes. Dimensions: total width 70, total height 30, central hexagon width 50, distance from top edge to hexagon center 15, distance from side edge to circular holes 4, hole diameter $\phi 6.8$.



Technical drawing of a shaft assembly. The drawing shows a shaft with various components and dimensions. Key dimensions include:

- Overall length: $104 + \text{Stroke}$
- Distance from left end to first component: $70 + \text{Stroke}$
- Component dimensions: $M8 \times 1.25$, $\phi 28$, $\phi 19_{-0.1}^0$, $\phi 10$, 14 , 5 , 21 , 13 , 15 , 1.5 , 8 , $2-Rc(PT) \frac{1}{8}$, 15 , 8 , 7 , 8 , 7.5 , $C3$, $\phi 15$, $\phi 5_{-0.02}^{+0.01}$.
- Width across flats: 13
- Thread: $M18 \times 1.5$
- Shaft diameter: $\phi 25$
- End view dimension: 12 ± 0.1

Technical drawing of a mechanical part, showing front and side views with dimensions.

Front View Dimensions:

- Overall width: 66
- Overall height: 14
- Top hole diameter: $\phi 38$
- Top hole position from left edge: 9.5
- Top hole position from right edge: 9.5
- Central hole diameter: $\phi 7.6^{+0.1}_{-0.02}$
- Central hole position from left edge: 47
- Central hole position from right edge: 47
- Bottom hole diameter: $\phi 8^{+0.02}_{-0.06}$
- Bottom hole position from left edge: 9.5
- Bottom hole position from right edge: 9.5
- Bottom hole depth: 0.9
- Bottom hole diameter at base: $\phi 6.4$

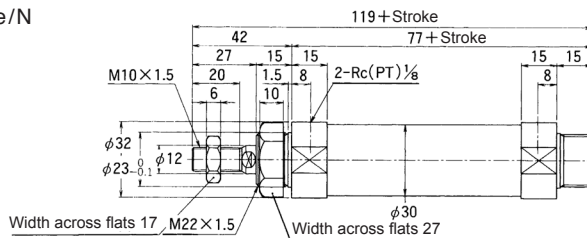
Side View Dimensions:

- Overall length: 29.5
- Distance from left face to first step: 9

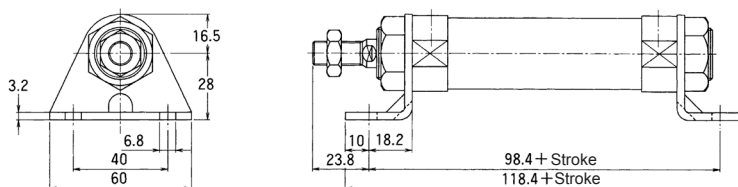
Double-acting $\varnothing 25$ /JG2-25

(Unit: mm)

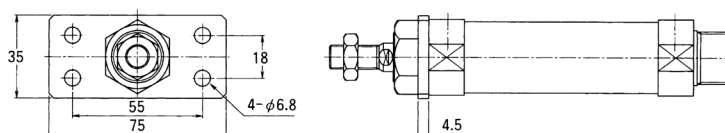
Standard type/N



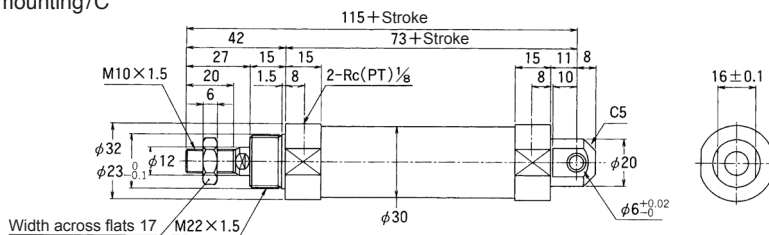
Axial foot mounting/L



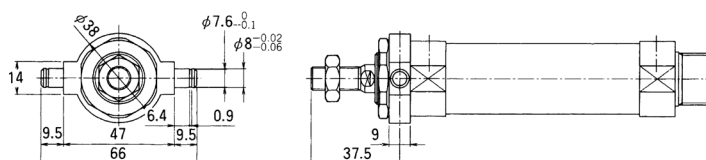
Mounting plate/A



Eye mounting/C



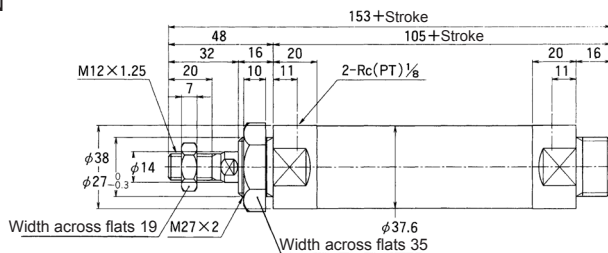
Center trunnion mounting/T



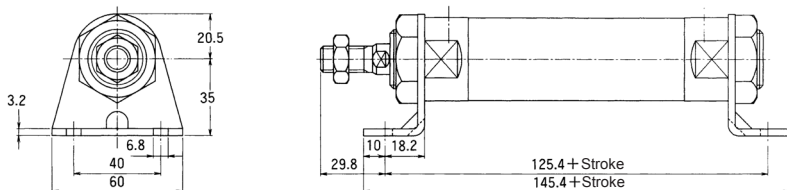
Double-acting $\varnothing 32/JG2-32$

(Unit: mm)

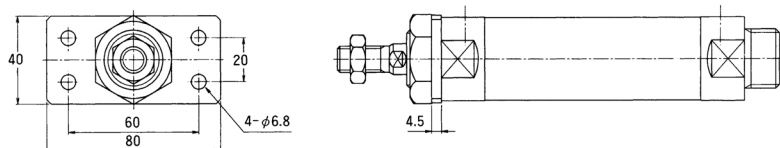
Standard type/N



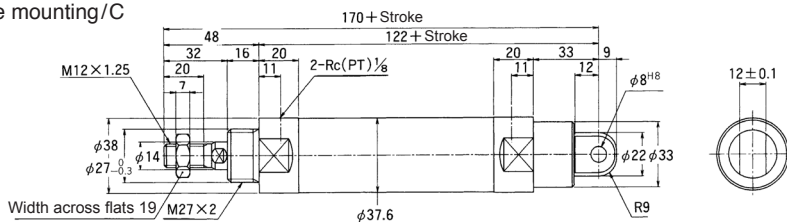
Axial foot mounting/L



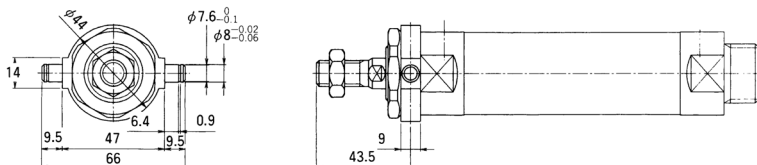
Mounting plate/A



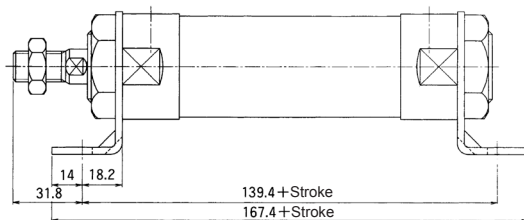
Eye mounting/C



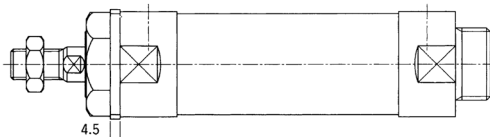
Center trunnion mounting/T



(Unit: mm)

[illegible]

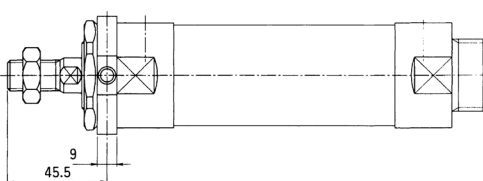
Technical drawing of a hexagonal nut. The drawing shows a top view and a side view. The top view is a hexagon with a central circular hole. The outer diameter of the hexagon is 100, and the inner diameter of the central hole is 80. The side view shows the height of the nut is 50. There are four holes in the hexagonal face, each with a diameter of 9, indicated by the dimension 4-φ9.



Eye mounting / C

Technical drawing of the eye mounting assembly (C). The side view shows a cylindrical component with a central bore and a flange. Dimensions include: overall length 190 + Stroke, mounting flange diameter $\phi 48$, mounting flange thickness 2, mounting flange bore diameter $\phi 16$, mounting flange bore depth 8, mounting flange bore thread M14 x 1.5, mounting flange bore depth 34, mounting flange bore thread 2-Rc (PT) 1/4, mounting flange bore depth 16, mounting flange bore thread M33 x 2, mounting flange bore depth 26, mounting flange bore thread $\phi 10^{H8}$, mounting flange bore depth 13, mounting flange bore thread $\phi 28 \phi 40$, mounting flange bore depth 26, mounting flange bore thread R12, mounting flange bore depth 37, mounting flange bore thread 16 ± 0.1 . The end view shows a circular flange with a central bore and a flange diameter of $\phi 46$. The width across flats is 22.

Technical drawing of a mechanical part, likely a valve or fitting, showing a cross-section. The drawing includes dimensions: outer diameter 54, inner diameter 7.6 (tolerance 0 to -0.1), and a central hole diameter 8 (tolerance -0.02 to -0.06). Other dimensions include 9.5, 51, 70, 6.4, and 0.9.



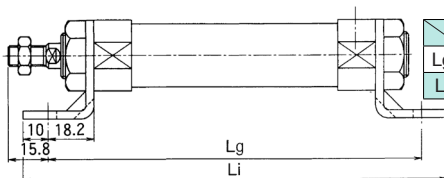
(Unit: mm)

Technical drawing of a shaft with dimensions and labels:

- Overall length: L
- Section 1 (Left):
 - Thread: $M8 \times 1.25$
 - Width across flats: 13
 - Inner diameter: $\phi 10$
 - Outer diameter: $\phi 28$
 - Inner diameter tolerance: $\phi 19_{-0.1}$
 - Width across flats: 13
 - Thread: $M18 \times 1.5$
- Section 2 (Middle):
 - Length: 34
 - Inner diameter: $\phi 25$
 - Width across flats: 24
- Section 3 (Right):
 - Thread: $Rc(PT) \frac{1}{8}$
 - Length: 15
 - Inner diameter: $\phi 25$
 - Width across flats: 24

	15st	25st	50st
L	159	159	209
M	125	125	175

Technical drawing of a mechanical part, likely a valve or fitting. The drawing shows a cross-section of a conical body with a hexagonal nut and bolt assembly on top. Dimensions are given in millimeters: total height 25, nut height 14, base thickness 3.2, base diameter 60, and a small offset dimension 6.8.



	15st	25st	50st
Lg	148.4	148.4	198.4
Li	168.4	168.4	218.4

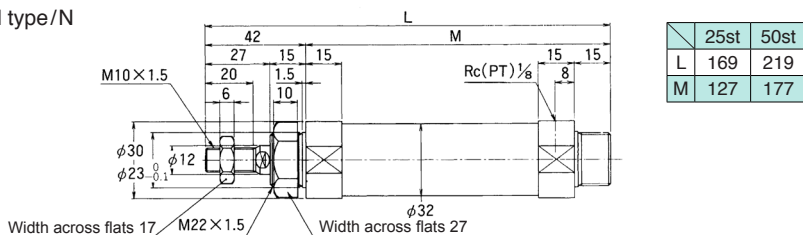
Technical drawing of a shaft with dimensions and labels. The drawing shows a shaft with a total length L and a section length M . The shaft has a diameter of $\phi 25$ in the middle section. The left end features a flange with a width across flats of 13 and a central hole of $\phi 10$. The flange has a thickness of 15 and a mounting hole of $\phi 19$ with a tolerance of $+0.02$. The flange is secured with an $M8 \times 1.25$ screw. The shaft has a shoulder with a radius $R_c(PT) \frac{1}{8}$ and a diameter of $\phi 15$. The shoulder has a width of 8 and a height of 7.5. The shaft is secured with an $M18 \times 1.5$ screw. The right end of the shaft has a diameter of $\phi 15$ and a tolerance of $+0.02$. The shaft is secured with an $M18 \times 1.5$ screw. The shaft has a total length L and a section length M . The shaft has a diameter of $\phi 25$ in the middle section. The shaft has a shoulder with a radius $R_c(PT) \frac{1}{8}$ and a diameter of $\phi 15$. The shoulder has a width of 8 and a height of 7.5. The shaft is secured with an $M18 \times 1.5$ screw. The right end of the shaft has a diameter of $\phi 15$ and a tolerance of $+0.02$. The shaft is secured with an $M18 \times 1.5$ screw. The shaft has a total length L and a section length M . The shaft has a diameter of $\phi 25$ in the middle section. The shaft has a shoulder with a radius $R_c(PT) \frac{1}{8}$ and a diameter of $\phi 15$. The shoulder has a width of 8 and a height of 7.5. The shaft is secured with an $M18 \times 1.5$ screw. The right end of the shaft has a diameter of $\phi 15$ and a tolerance of $+0.02$. The shaft is secured with an $M18 \times 1.5$ screw.

	15st	25st	50st
L	154	154	204
M	120	120	170

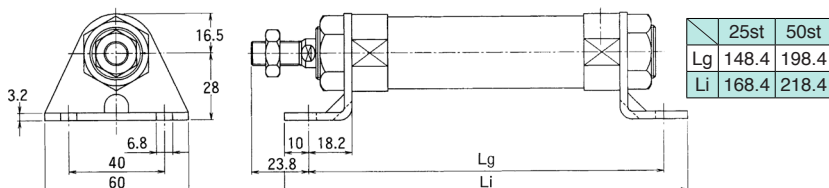
Single-acting (spring return) $\varnothing 25/J\Box 1-25$

(Unit: mm)

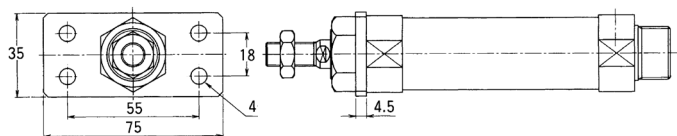
Standard type/N



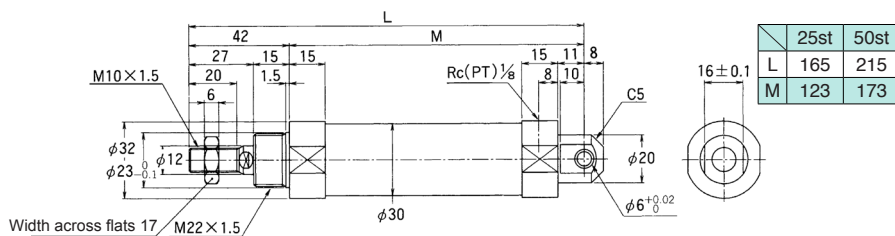
Axial foot mounting/L



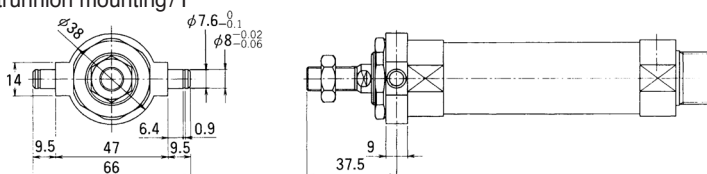
Mounting plate/A



Eye mounting/C



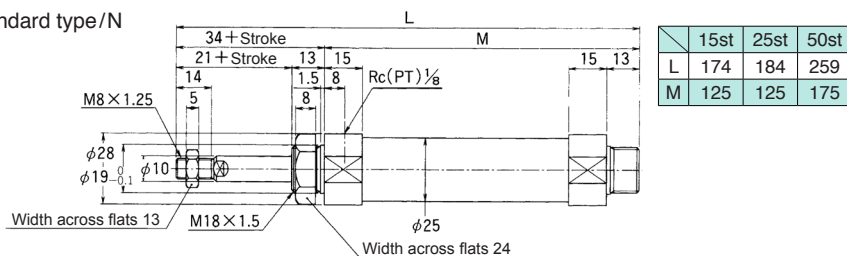
Center trunnion mounting/T



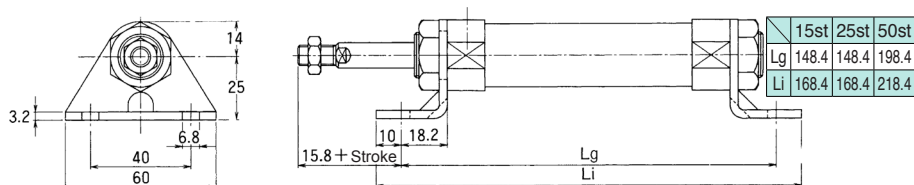
Single-acting (spring extend) $\varnothing 20/J\Box 0-20$

(Unit: mm)

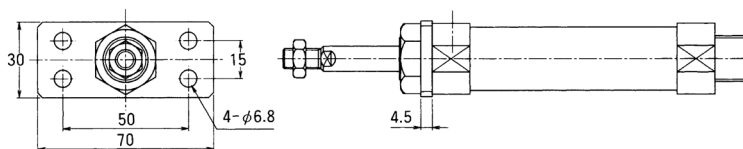
Standard type/N



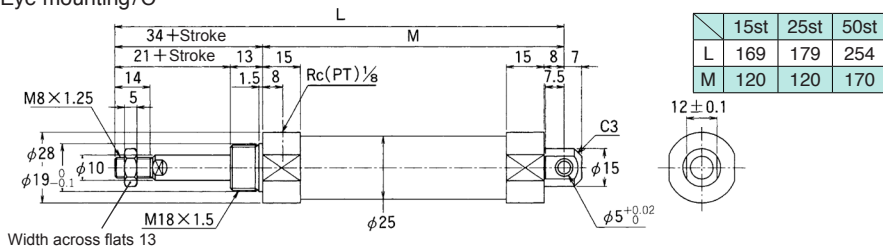
Axial foot mounting/L



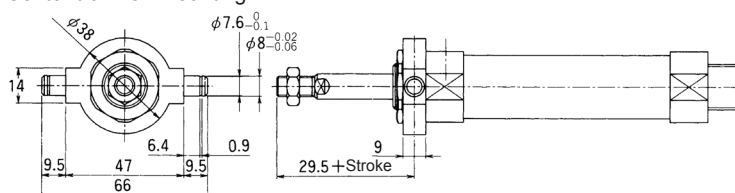
Mounting plate/A



Eye mounting/C



Center trunnion mounting/T



(Unit: mm)

Technical drawing of a shaft assembly. The drawing shows a shaft with various diameters and lengths. Key dimensions and labels include:

- Overall Length:** L
- Section 1 (Left):**
 - Thread: $M10 \times 1.5$
 - Inner diameter: $\phi 12$
 - Outer diameter: $\phi 32$
 - Width across flats: 17
- Section 2 (Middle):**
 - Thread: $M22 \times 1.5$
 - Inner diameter: $\phi 23$
 - Outer diameter: $\phi 30$
 - Width across flats: 27
- Section 3 (Right):**
 - Thread: $Rc(PT) \frac{1}{8}$
 - Outer diameter: 15
- Other Dimensions:**
 - 42 + Stroke
 - 27 + Stroke
 - 20
 - 6
 - 15
 - 15
 - 1.5
 - 8
 - 10
 - 15
 - 15

	25st	50st
L	194	269
M	127	177

	25st	50st
Lg	148.4	198.4
Li	168.4	218.4

	25st	50st
Lg	148.4	198.4
Li	168.4	218.4

[illegible]

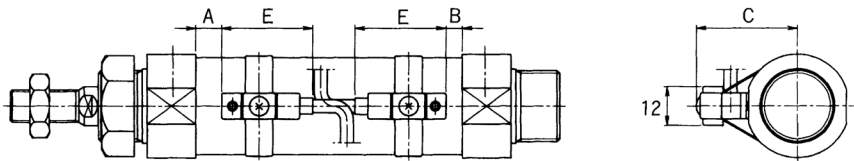
	25st	50st
L	190	265
M	123	173

Technical drawing of the 1000 Series Ball Valve. The drawing includes a front view (left) and a side view (right). The front view shows a circular body with a central bore of diameter $\phi 7.6$ and a bore tolerance of $+0.1$. The body has a total width of 66, with a central section of 47 and end sections of 9.5 each. The end sections have a thickness of 14. The side view shows the valve's length, with a total length of 37.5 plus the stroke, and a section of 9. The side view also shows a bore of diameter $\phi 8$ with a tolerance of $+0.02$ to -0.06 . The drawing is labeled with dimensions and tolerances in millimeters.

Sensor switch mounting position / M type sensor switch

(Unit: mm)

M type sensor switch



Action	Bore & Stroke		M type reed switch		M type proximity switch	
			A	B	A	B
Double -acting	Ø20		8	6	11	10
	Ø25		8	6	12	9
	Ø32		16	15	19	19
	Ø40		17	16	20	20
Single-acting (Spring return)	Ø20	15st	43	6	46	10
		25st	33	6	36	10
		50st	58	6	61	10
	Ø25	25st	33	6	37	9
		50st	58	6	62	9
Single-acting (Spring extend)	Ø20	15st	8	41	11	45
		25st	8	31	11	35
		50st	8	56	11	60
	Ø25	25st	8	31	12	34
		50st	8	56	12	59

Bore	M type sensor switch
	C
Ø20	29
Ø25	31
Ø32	35
Ø40	39

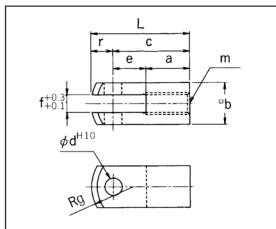
Switch	E
M type reed switch	28
M type proximity switch	26.5(24)

(Note) value within bracket is of the MT-*U type.

Accessories

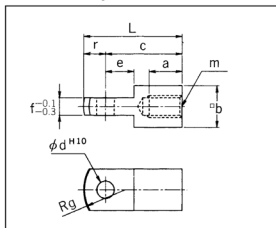
(Unit: mm)

Rod end clevis



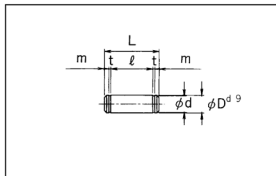
Model No.	Applicable bore	L	a	b	c	d	e	f	g	m	r
J20-Y	Ø20	45	20	19	35	8	15	8	19	M8×1.25	10
J25-Y	Ø25	45	20	19	35	8	15	8	19	M10×1.5	10
J32-Y	Ø32	57	27	22	45	10	18	10	22	M12×1.25	12
J40-Y	Ø40	57	27	22	45	10	18	10	22	M14×1.5	12

Rod end eye



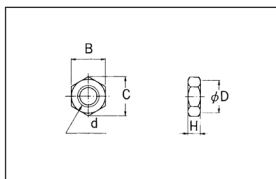
Model No.	Applicable bore	L	a	b	c	d	e	f	g	m	r
J-20-I	Ø20	45	20	19	35	8	13	8	19	M8×1.25	10
J-25-I	Ø25	45	15	19	35	8	13	8	19	M10×1.5	10
J-32-I	Ø32	57	20	22	45	10	15	10	22	M12×1.25	12
J-40-I	Ø40	57	20	22	45	10	15	10	22	M14×1.5	12

Clevis fixed shaft type



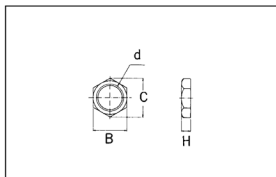
Model No.	Applicable bore	D	L	d	l	m	t	Snap ring
J20-YP	Ø20, Ø25	8	25	7.6	19.2	2	0.9	E7
J32-YP	Ø32, Ø40	10	28	9.6	22.3	1.7	1.15	C10

Rod end nut



Model No.	Applicable bore	d	H	B	C	D
J20-RN	Ø20	M8×1.25	5	13	15	12.5
J25-RN	Ø25	M10×1.5	6	17	19.6	16.5
J32-RN	Ø32	M12×1.25	7	19	21.9	18
J40-RN	Ø40	M14×1.5	8	22	25.4	21

Standard nut



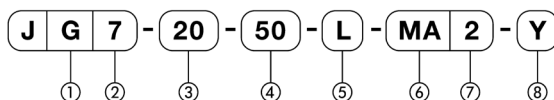
Model No.	Applicable bore	d	H	B	C
J20-NN	Ø20	M8×1.25	8	24	27.7
J25-NN	Ø25	M22×1.5	10	27	31.2
J32-NN	Ø32	M27×2	10	35	40.4
J40-NN	Ø40	M33×2	11	41	47.3

J□7 Series

Air cylinder/Double rod type

∅20, ∅25, ∅32, ∅40

Ordering Instructions



① Magnet

G: Cylinder with switch available (with built-in magnet)

② Action

7: Double-acting, double rod

③ Bore (mm)

20: ∅20

25: ∅25

32: ∅32

40: ∅40

④ Stroke (mm)

Refer to Standard Stroke Table

⑤ Mounting

N: Standard type

L: Axial foot

A: Mounting plate

T: Center trunnion

⑥ Sensor switch type

No symbol	No switch	
MA	MA-1 (AC110V, DC24V)	M type Reed switch
MB	MD-1 (DC24V)	
MC	MD-3 (DC5, 6V)	
MD	MR (AC, DC5 ~ 110V)	
ME	MA-2L (AC110V)	
MF	MA-2H (AC220V)	M type Proximity switch
MG	MT-3 (DC5 ~ 30V)	
MH	MT-3U (DC5 ~ 30V)	
MJ	MT-2 (DC24V)	
MK	MT-2U (DC24V)	

⑦ Number of switches

No symbol: No switch

2 : with 2 units

1 : with 1 unit

⑧ Accessories

No mark: Rod end nut

Y : With rod end clevis

I : With rod end eye

YY : With two rod end clevis

II : With two rod end eye

Model No. of Packing

Bore (mm)	Packing
∅20	J720-PS
∅25	J725-PS
∅32	J732-PS
∅40	J740-PS

Model No. of Sensor Switch Mounting Bracket

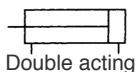
Bore (mm)	M type sensor switch
∅20	J20-MJ
∅25	J25-MJ
∅32	J32-MJ
∅40	J40-MJ

Model No. of Mounting Bracket

Bore (mm)	∅20	∅25	∅32	∅40
Axial foot mounting bracket	J20-L	J25-L	J32-L	J40-L
Flange mounting bracket	J20-A	J25-A	J32-A	J40-A
Trunnion mount bracket	J20-T	J25-T	J32-T	J40-T



JIS Label



Double acting

Value shown in this catalog is shown in SI unit. However, value within this output table is in generic unit. Use the following formula to convert to SI unit :

$$\text{Pressure } Y \text{ (MPa)} = X \text{ (kgf/cm}^2\text{)} \times 9.80665 \times 10^{-2}$$

$$\text{Force } Y \text{ (N)} = X \text{ (kgf)} \times 9.80665$$

Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/Lubricated air
Pressure range	MPa(kgf/cm ²)	0.1~0.7(1.0~7.1)
Temperature range	°C	5~60
Piston speed range	mm/s	50~500
Cushion		Built-in damper
Piston stroke allowance	mm	+1.0 0
Mounting		Standard type, Axial foot, Mounting plate, Center trunnion

Standard stroke

(Unit: mm)

Bore	Standard stroke	Max. stroke
∅20	15, 25, 50, 75, 100, 125, 150	500
∅25	25, 50, 75, 100, 125, 150	
∅32	25, 50, 75, 100, 125, 150, 200, 250, 300	
∅40	50, 75, 100, 125, 150, 200, 250, 300	

Accessories

	Name	Standard type	Axial foot	Mounting plate	Center trunnion
Standard	Standard nut	○	○	○	—
	Rod end nut	○	○	○	○
Optional	With rod end clevis	○	○	○	○
	With rod end eye	○	○	○	○

Model with switch**M type reed switch****Lead with wire**

Model No.	Rated voltage (V)	Rated current (mA)	Pilot lamp (Lights up at ON)	Application
MA-1	AC110	5~45	○	Relay PLC
	DC24	5~45		
MD-1	DC24	25~65	○	Relay
MD-3	DC5, 6	Max.50 (Inductive load) Max.300 (Resistive load)	○	IC circuit
MR	AC DC 5~110	Max.50 (Inductive load) Max.300 (Resistive load)	No indicator	Relay PLC
MA-2L	AC110	5~150	○	Relay
MA-2H	AC220	5~150	○	Relay

M type proximity switch**Lead with wire**

Model No.	Rated voltage (V)	Rated current range (mA)	Pilot lamp (Lights up at CN)	Application
MT-2 MT-2U	DC24 (DC10~30)	5~100	○	Relay PLC
MT-3 MT-3U	DC5~30	5~200	○	Relay PLC IC circuit

Minimum stroke with M type switch (Unit: mm)

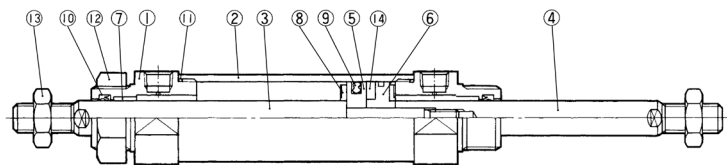
Bore	Number of switches		
	With 2 units (on the same surface)	With 2 units (on the different surfaces)	With 1 unit
∅20	50	15	5
∅25			
∅32			
∅40			

(Note) The MA-2L is the same as the MA-1 except that MA-2L is also equipped with protective circuit SS-2L.

The MA-2H is the same as the MA-1 except that MA-2H is also equipped with protective circuit SS-2H.

Sensor switch fixed position

Sensor switch fixed position is the same as that of J Series Standard Type.

Construction**Parts List**

No.	Name	No.	Name	No.	Name
1	Front cover	6	Piston B	11	O-ring for cover
2	Outer tube	7	Bearing	12	Standard nut
3	Piston rod A	8	Damper	13	Rod end nut
4	Piston rod B	9	Piston packing	14	Magnet
5	Piston A	10	Rod packing		

Packing list

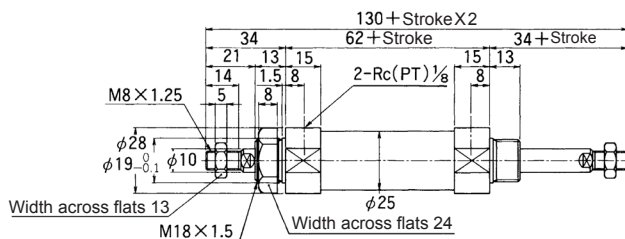
Bore (mm)	9. Piston packing		10. Rod packing		11. O-ring for cover	
	Model No.	Amount	Model No.	Amount	Model No.	Amount
∅20	PSD-20	1	PDU-10Z	1	SO-015-21	2
∅25	PSD-25	1	PDU-12Z	1	SO-015-25	2
∅32	PSD-32	1	PDU-14Z	1	SO-015-29	2
∅40	PSD-40	1	PDU-16Z	1	SO-015-30	2

(Note) Packing repair and assembly kits are also available for purchase.

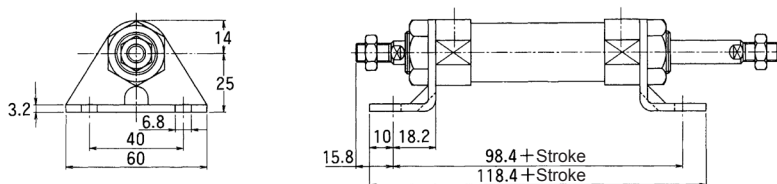
Double-acting $\varnothing 20$ /JG7-20

(Unit: mm)

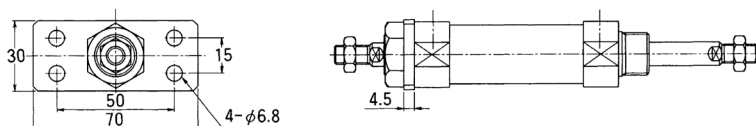
Standard type/N



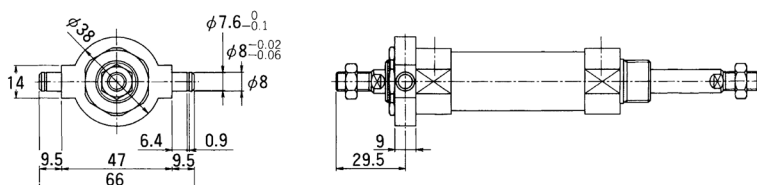
Axial foot mounting/L



Mounting plate/A



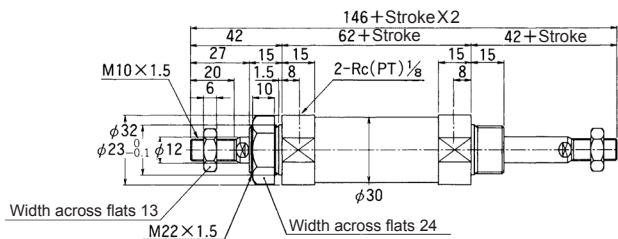
Center trunnion mounting/T



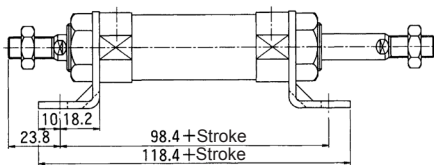
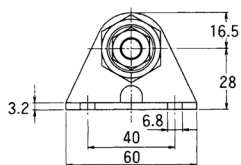
Double-acting Ø25/JG7-25

(Unit: mm)

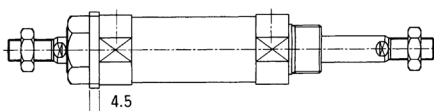
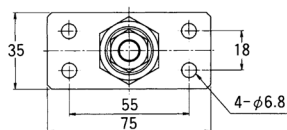
Standard type/N



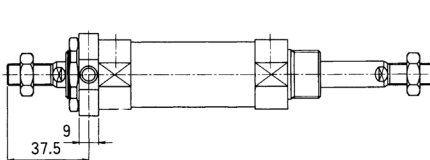
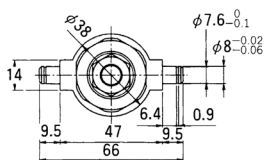
Axial foot mounting/L



Mounting plate/A



Center trunnion mounting/T



(Unit: mm)

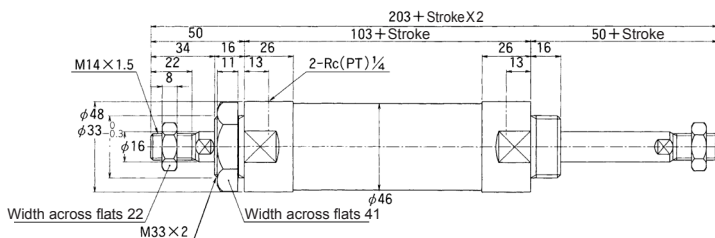
J Series



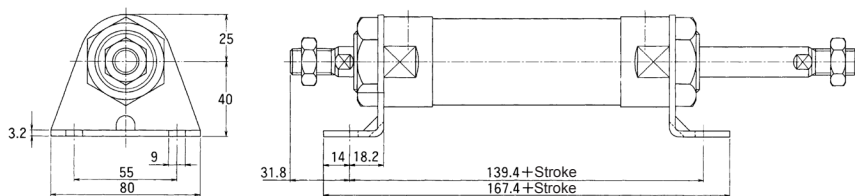
Double-acting Ø40/JG7-40

(Unit: mm)

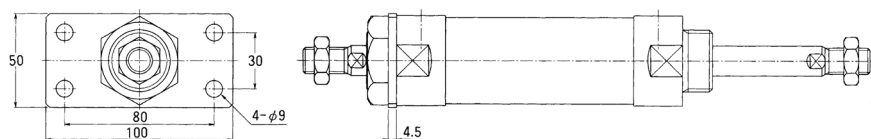
Standard type/N



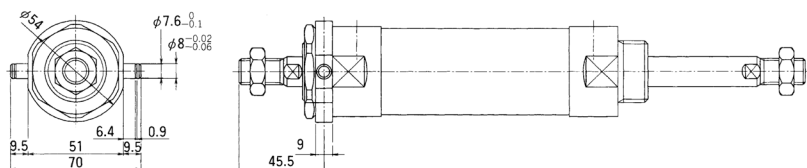
Axial foot mounting/L



Mounting plate/A



Center trunnion mounting/T

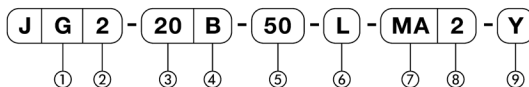


J Series

Air cylinder/Cushion type

Ø20, Ø25, Ø32, Ø40

Ordering Instructions



① Magnet

G : Cylinder with switch available (with built-in magnet)

② Action

2 : Double-acting, single rod

③ Bore (mm)

20 : Ø20

25 : Ø25

32 : Ø32

40 : Ø40

④ Cushion

B : Both-side air cushion

⑤ Stroke (mm)

Refer to Standard Stroke Table

⑥ Mounting

N : Standard type

L : Axial foot

A : Mounting plate

C : Eye

T : Center trunnion

Model No. of Packing

Bore (mm)	Packing
Ø20	JB20-PS
Ø25	JB25-PS
Ø32	JB32-PS
Ø40	JB40-PS

Model No. of Mounting Bracket

Bore (mm)	Ø20	Ø25	Ø32	Ø40
Axial foot mounting bracket	J20-L	J25-L	J32-L	J40-L
Flange mounting bracket	J20-A	J25-A	J32-A	J40-A
Eye mounting bracket	—	—	J32-C	J40-C
Trunnion mounting bracket	J20-T	J25-T	J32-T	J40-T

⑦ Sensor switch type

No symbol	No switch	
MA	MA-1 (AC110V, DC24V)	M type Reed switch
MB	MD-1 (DC24V)	
MC	MD-3 (DC5, 6V)	
MD	MR (AC, DC5 ~ 110V)	
ME	MA-2L (AC110V)	
MF	MA-2H (AC220V)	M type Proximity switch
MG	MT-3 (DC5 ~ 30V)	
MH	MT-3U (DC5 ~ 30V)	
MJ	MT-2 (DC24V)	
MK	MT-2U (DC24V)	

⑧ Number of switches

No symbol : No switch

2 : With 2 units

1 : With 1 unit

⑨ Accessories

No symbol : Rod end nut

Y : With rod end clevis

I : With rod end eye

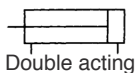
(note) Y : Provided with pin

Model No. of Sensor Switch Mounting Bracket

Bore (mm)	M type sensor switch
Ø20	J20-MJ
Ø25	J25-MJ
Ø32	J32-MJ
Ø40	J40-MJ



JIS Label



Value shown in this catalog is shown in SI unit. However, value within this output table is in generic unit. Use the following formula to convert to SI unit :

$$\text{Pressure } Y \text{ (MPa)} = X \text{ (kgf/cm}^2\text{)} \times 9.80665 \times 10^{-2}$$

$$\text{Force } Y \text{ (N)} = X \text{ (kgf)} \times 9.80665$$

Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/Lubricated air
Pressure range	MPa(kgf/cm ²)	0.1~0.7(1.0~7.1)
Temperature range	°C	5~60
Piston speed range	mm/s	50~500
Cushion		Air cushion
Piston stroke allowance	mm	+1.0 0
Mounting		Standard type, Axial foot, Mounting plate, eye, Center trunnion

Standard stroke

(Unit: mm)

Bore	Standard stroke	Max. stroke
∅20	15, 25, 50, 75, 100, 125, 150	500
∅25	25, 50, 75, 100, 125, 150	
∅32	25, 50, 75, 100, 125, 150, 200, 250, 300	
∅40	50, 75, 100, 125, 150, 200, 250, 300	

Accessories

	Name	Standard type	Axial foot	Mounting plate	Eye	Center trunnion
Standard	Standard nut	○	○	○	—	—
	Rod end nut	○	○	○	○	○
Optional	With rod end clevis	○	○	○	○	○
	With rod end eye	○	○	○	○	○

Model with switch

M type reed switch

Lead with wire



Model No.	Rated voltage (V)	Rated current (mA)	Pilot lamp (Lights up at ON)	Application
MA-1	AC110	5~45	○	Relay PLC
	DC24	5~45		
MD-1	DC24	25~65	○	Relay
MD-3	DC5, 6	Max.50 (Inductive load) Max.300 (Resistive load)	○	IC circuit
MR	AC 5~110 DC	Max.50 (Inductive load) Max.300 (Resistive load)	No indicator	Relay PLC
MA-2L	AC110	5~150	○	Relay
MA-2H	AC220	5~150	○	Relay

(Note) The MA-2L is the same as the MA-1 except that MA-2L is also equipped with protective circuit SS-2L.

The MA-2H is the same as the MA-1 except that MA-2H is also equipped with protective circuit SS-2H.

M type proximity switch

Lead with wire



Model No.	Rated voltage (V)	Rated current range (mA)	Pilot lamp (Lights up at CN)	Application
MT-2 MT-2U	DC24 (DC10~30)	5~100	○	Relay PLC
MT-3 MT-3U	DC5~30	5~200	○	Relay PLC IC circuit

Minimum stroke with M type switch (Unit: mm)

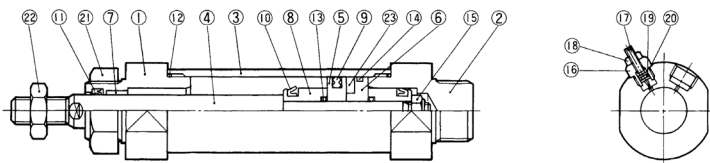
Bore	Number of switches		
	With 2 units (on the same surface)	With 2 units (on the different surfaces)	With 1 unit
Ø20	50	15	5
Ø25			
Ø32			
Ø40			

Sensor switch fixed position

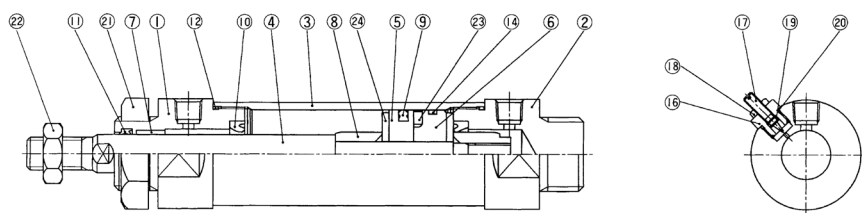
Sensor switch fixed position is the same as that of J Series Standard Type.

Construction

Ø20, Ø25



Ø32, Ø40



Parts List

No.	Name	No.	Name	No.	Name
1	Front cover	9	Piston packing	17	Cushion ejector pin
2	End cover	10	Cushion packing	18	Cushion locking nut
3	Outer tube	11	Rod packing	19	Cushion ejector pin packing
4	Piston rod	12	O-ring for cover	20	Cushion gasket
5	Piston A	13	Sleeve gasket	21	Standard nut
6	Piston B	14	Wear ring	22	Rod end nut
7	Bearing	15	U-shaped nut	23	Magnet
8	Buffering sleeve	16	Cushion cover	24	Demarcation strip

Packing list

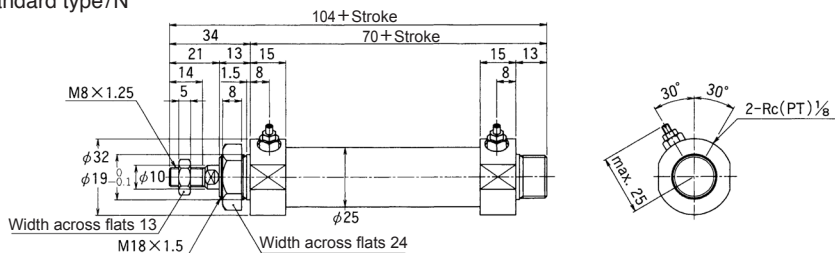
Bore (mm)	9. Piston packing		10. Cushion packing		11. Rod packing		12. O-ring for cover	
	Model No.	Amount	Model No.	Amount	Model No.	Amount	Model No.	Amount
Ø20	PSD-20	1	GYH-13×7×3.8	2	PDU-10Z	1	SO-015-21	2
Ø25	PSD-25	1	GYH-17×11×3.8	2	PDU-12Z	1	SO-015-25	2
Ø32	PSD-32	1	CP-16	2	PDU-14Z	1	SO-015-29	2
Ø40	PSD-40	1	CP-18	2	PDU-16Z	1	SO-015-30	2

(Note) Packing repair and assembly kits are also available for purchase.

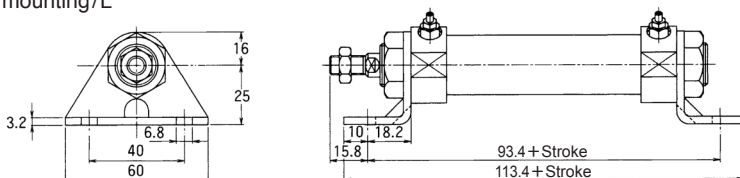
Double-acting $\varnothing 20$ /JG2-20B

(Unit: mm)

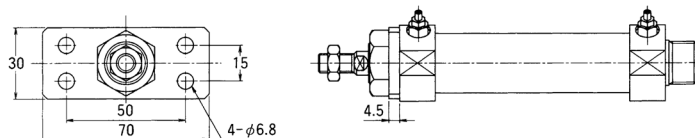
Standard type/N



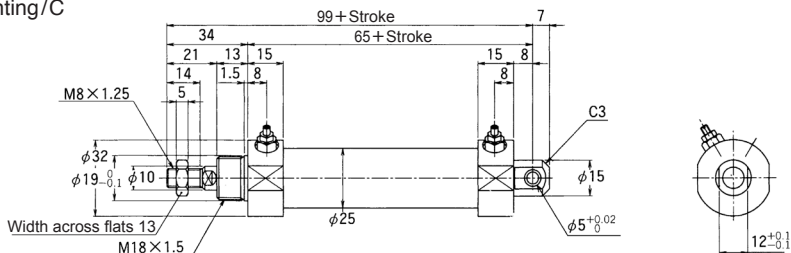
Axial foot mounting/L



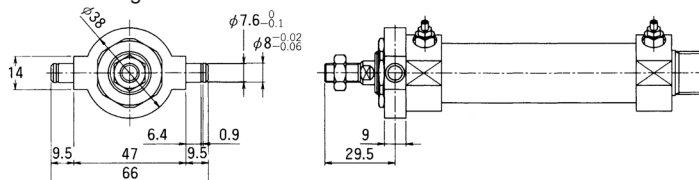
Mounting plate/A



Eye mounting/C



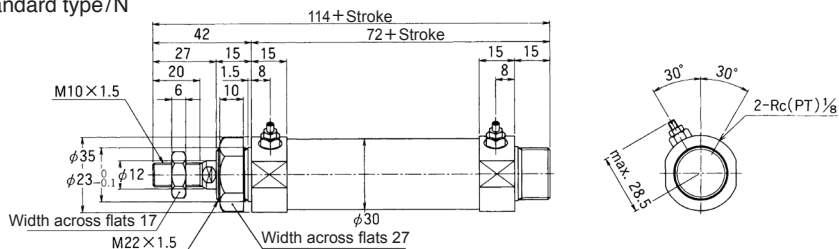
Center trunnion mounting/T



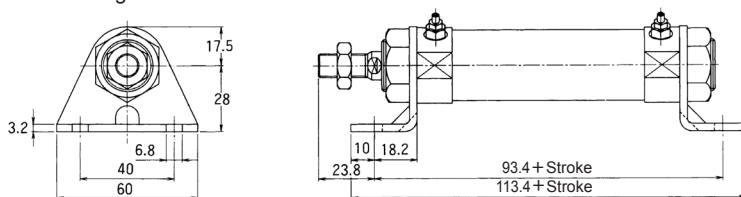
Double-acting $\varnothing 25/JG2-25B$

(Unit: mm)

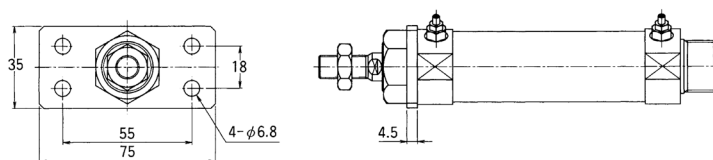
Standard type/N



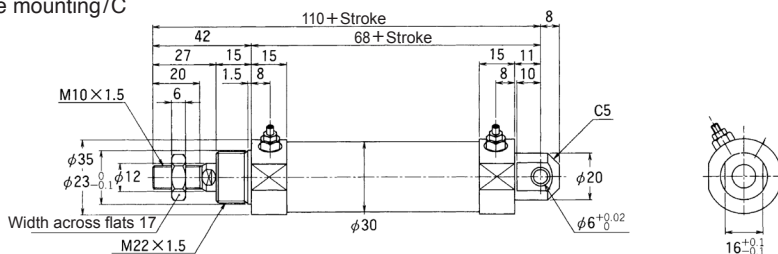
Axial foot mounting/L



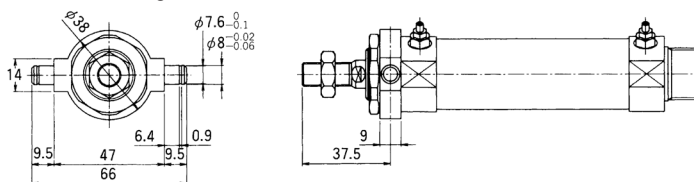
Mounting plate/A



Eye mounting/C



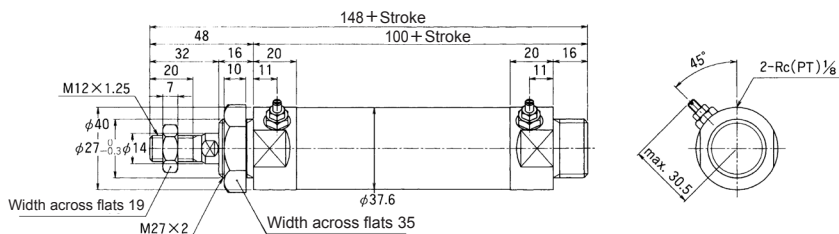
Center trunnion mounting/T



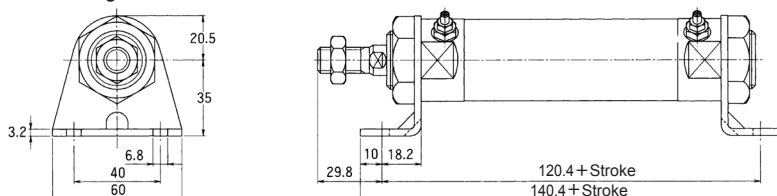
Double-acting Ø32/JG2-32B

(Unit: mm)

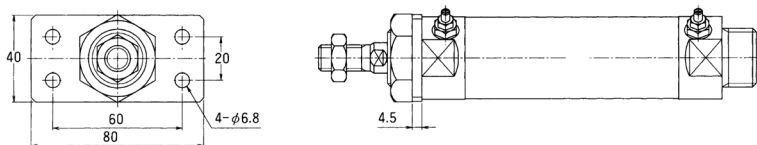
Standard type/N



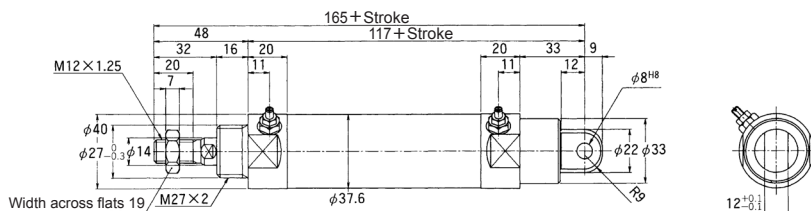
Axial foot mounting/L



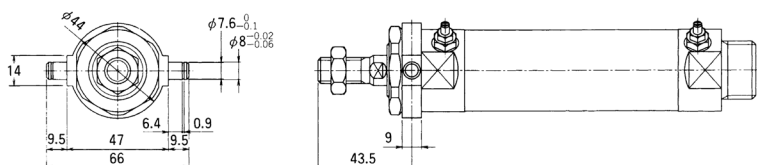
Mounting plate/A



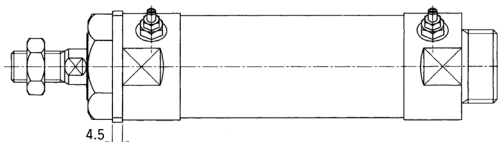
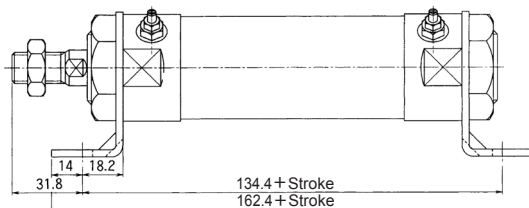
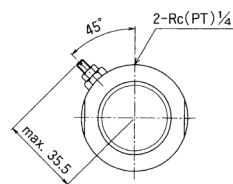
Eye mounting/C



Center trunnion mounting/T

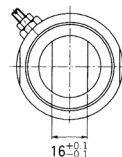
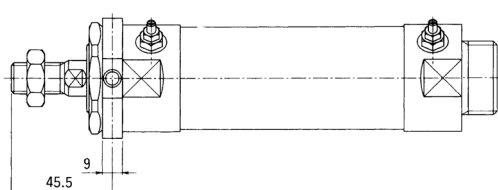


(Unit: mm)

[illegible]

Technical drawing of a shaft assembly. The drawing shows a shaft with various components and dimensions. Key dimensions include:

- Overall length: $185 + \text{Stroke}$
- Distance from left end to first component: 34
- Distance between first and second components: 16
- Distance between second and third components: 26
- Distance from right end to third component: 12
- Distance from right end to second component: 37
- Distance from right end to first component: 26
- Distance from left end to second component: 50
- Distance from left end to third component: $135 + \text{Stroke}$
- Left end dimensions: $M14 \times 1.5$, $\phi 48$, $\phi 33_{-0.3}^0$, $\phi 16$, 22 , 8 , 16 , 13 , 26 , 34 , 50 , $185 + \text{Stroke}$, $135 + \text{Stroke}$, 26 , 37 , 12 , $\phi 10^{H8}$, $\phi 28$, $\phi 40$, $R12$, $\phi 46$, $M33 \times 2$, $Width\ across\ flats\ 22$

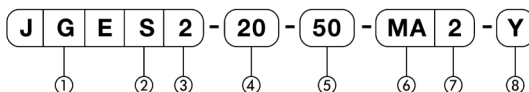
[illegible]

J□E Series

Air cylinder/Front cover mounted type

∅20, ∅25, ∅32, ∅40

Ordering Instructions



① Magnet

G : Cylinder with switch available (with built-in magnet)

② Mounting

S: Bottom

F: Front

③ Action

2: Double-acting, single rod

④ Bore (mm)

20: ∅20

25: ∅25

32: ∅32

40: ∅40

⑤ Stroke (mm)

Refer to Standard Stroke Table

⑥ Sensor switch type

No symbol	No switch	
MA	MA-1 (AC110V, DC24V)	M type Reed switch
MB	MD-1 (DC24V)	
MC	MD-3 (DC5, 6V)	
MD	MR (AC, DC5 ~ 110V)	
ME	MA-2L (AC110V)	
MF	MA-2H (AC220V)	M type Proximity switch
MG	MT-3 (DC5 ~ 30V)	
MH	MT-3U (DC5 ~ 30V)	
MJ	MT-2 (DC24V)	
MK	MT-2U (DC24V)	

⑦ Number of switches

No symbol: No switch

2 : With 2 units

1 : With 1 unit

⑧ Accessories

No symbol : Rod end nut

Y : With rod end clevis

I : With rod end eye

(note) Y : Provided with pin

Model No. of Packing

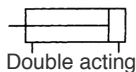
Bore (mm)	Packing
∅20	J20-PS
∅25	J25-PS
∅32	J32-PS
∅40	J40-PS

Model No. of Sensor Switch Mounting Bracket

Bore (mm)	M type sensor switch
∅20	J20-MJ
∅25	J25-MJ
∅32	J32-MJ
∅40	J40-MJ



JIS Label



Double acting

The square front cap of the cylinder can be directly mounted in an ideal position. Using this cylinder can save much space and increase mounting strength and precision.

Value shown in this catalog is shown in SI unit. However, value within this output table is in generic unit. Use the following formula to convert to SI unit :

$$\text{Pressure } Y \text{ (MPa)} = X \text{ (kgf/cm}^2\text{)} \times 9.80665 \times 10^{-2}$$

$$\text{Force } Y \text{ (N)} = X \text{ (kgf)} \times 9.80665$$

Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/Lubricated air
Pressure range	MPa(kgf/cm ²)	0.1~0.7(1.0~7.1)
Temperature range	°C	5~60
Piston speed range	mm/s	50~500
Cushion		Built-in damper
Piston stroke allowance	mm	+1.0 0
Mounting		Bottom, Front

Standard stroke

(Unit: mm)

Bore	Standard stroke	Max. stroke
Ø20	15, 25, 50, 75, 100, 125, 150	500
Ø25	25, 50, 75, 100, 125, 150	
Ø32	25, 50, 75, 100, 125, 150, 200, 250, 300	
Ø40	50, 75, 100, 125, 150, 200, 250, 300	

Accessories

	Name	Bottom	Front
Standard	Standard nut	○	○
Optional	With rod end clevis	○	○
	With rod end eye	○	○

Model with switch**M type reed switch****Lead with wire**

Model No.	Rated voltage (V)	Rated current (mA)	Pilot lamp (Lights up at ON)	Application
MA-1	AC110	5~45	○	Relay PLC
	DC24	5~45		
MD-1	DC24	25~65	○	Relay
MD-3	DC5, 6	Max.50 (Inductive load) Max.300 (Resistive load)	○	IC circuit
MR	AC 5~110 DC	Max.50 (Inductive load) Max.300 (Resistive load)	No indicator	Relay PLC
MA-2L	AC110	5~150	○	Relay
MA-2H	AC220	5~150	○	Relay

M type proximity switch**Lead with wire**

Model No.	Rated voltage (V)	Rated current range (mA)	Pilot lamp (Lights up at CN)	Application
MT-2 MT-2U	DC24 (DC10~30)	5~100	○	Relay PLC
MT-3 MT-3U	DC5~30	5~200	○	Relay PLC IC circuit

Minimum stroke with M type switch (Unit: mm)

Bore	Number of switches		
	With 2 units (on the same surface)	With 2 units (on the different surfaces)	With 1 unit
Ø20	50	15	5
Ø25			
Ø32			
Ø40			

(Note) The MA-2L is the same as the MA-1 except that MA-2L is also equipped with protective circuit SS-2L.

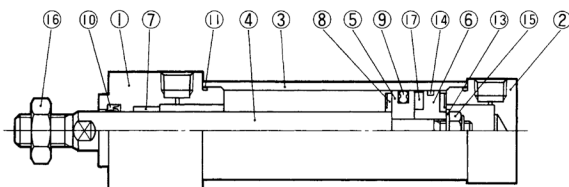
The MA-2H is the same as the MA-1 except that MA-2H is also equipped with protective circuit SS-2H.

Sensor switch fixed position

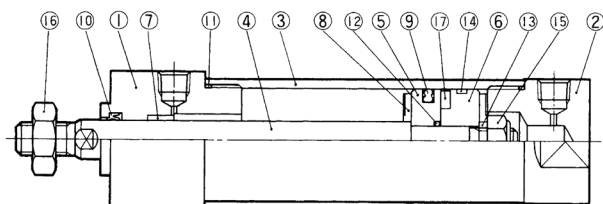
Sensor switch fixed position is the same as that of J Series Standard Type.

Construction

Ø20, Ø25



Ø32, Ø40



Parts List

No.	Name	No.	Name	No.	Name
1	Front cover	7	Bearing	13	Return spring
2	End cover	8	Damper	14	Wear ring
3	Outer tube	9	Piston packing	15	Standard nut
4	Piston rod	10	Rod packing	16	Rod end nut
5	Piston A	11	O-ring for cover	17	Magnet
6	Piston B	12	End cover gasket		

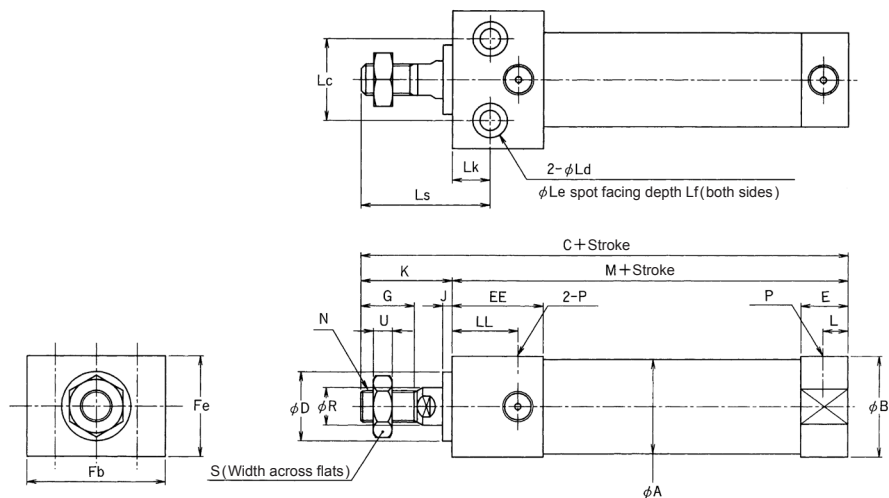
Packing list

Bore (mm)	9. Piston packing		10. Rod packing		11. O-ring for cover	
	Model No.	Amount	Model No.	Amount	Model No.	Amount
Ø20	PSD-20	1	PDU-10Z	1	SO-015-21	2
Ø25	PSD-25	1	PDU-12Z	1	SO-015-25	2
Ø32	PSD-32	1	PDU-14Z	1	SO-015-29	2
Ø40	PSD-40	1	PDU-16Z	1	SO-015-30	2

(Note) Packing repair and assembly kits are also available for purchase.

Subface mounted (S)/JGES2

(Unit: mm)

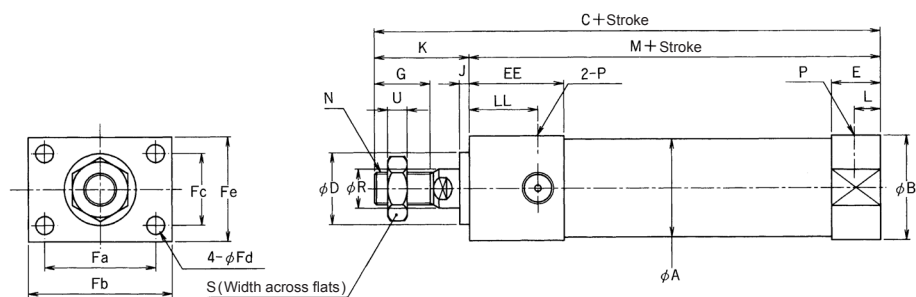


Bore	A	B	C	D	E	EE	G	J	K	L	LL	M	N	P	R	S	U
Ø20	25	28	98	20	15	25	12.5	3	26	8	18	72	M8×1.25	Rc½	10	13	5
Ø25	30	32	105	22	15	29	15.5	3	29	8	21	76	M10×1.25	Rc½	12	17	6
Ø32	37.6	38	127	22	20	29	15.5	3	29	11	21	98	M10×1.25	Rc¾	12	17	6
Ø40	46	48	149	30	26	37	21	3	35	13	24	114	M14×1.5	Rc¾	16	22	8

Bore	Fb	Fe	Lc	Ld	Le	Lf	Lk	Ls
Ø20	40	30	22	6.5	11	7.5	9	35
Ø25	44	32	26	6.5	11	7.5	12	41
Ø32	56	38	34	8.5	14	10	12	41
Ø40	70	48	46	11	17.5	12.5	15	50

Front mounted (S)/JGEF2

(Unit: mm)



Bore	A	B	C	D	E	EE	G	J	K	L	LL	M	N	P	R	S	U
Ø20	25	28	98	20	15	25	12.5	3	26	8	18	72	M8×1.25	Rc $\frac{1}{8}$	10	13	5
Ø25	30	32	105	22	15	29	15.5	3	29	8	21	76	M10×1.25	Rc $\frac{1}{8}$	12	17	6
Ø32	37.6	38	127	22	20	29	15.5	3	29	11	21	98	M10×1.25	Rc $\frac{1}{8}$	12	17	6
Ø40	46	48	149	30	26	37	21	3	35	13	24	114	M14×1.5	Rc $\frac{1}{4}$	16	22	8

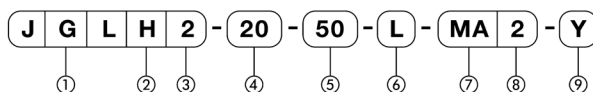
Bore	Fa	Fb	Fc	Fd	Fe
Ø20	30	40	20	5.5	30
Ø25	34	44	22	5.5	32
Ø32	44	56	26	6.5	38
Ø40	54	70	32	9	48

J□L Series

Air cylinder/With fall prevention device

∅20, ∅25, ∅32, ∅40

Ordering Instructions



① Magnet

G : Cylinder with switch available (with built-in magnet)

② Lock Position

H : Rod side lock

R : Head side lock

③ Action

2 : Double-acting, single rod

④ Bore (mm)

20 : ∅20

25 : ∅25

32 : ∅32

40 : ∅40

⑤ Stroke (mm)

Refer to Standard Stroke Table

⑥ Mounting

N : Standard type

L : Axial foot

A : Mounting plate

C : Eye

T : Center trunnion

⑦ Sensor switch type

No symbol	No switch	
MA	MA-1 (AC110V, DC24V)	M type Reed switch
MB	MD-1 (DC24V)	
MC	MD-3 (DC5, 6V)	
MD	MR (AC, DC5 ~ 110V)	
ME	MA-2L (AC110V)	
MF	MA-2H (AC220V)	M type Proximity switch
MG	MT-3 (DC5 ~ 30V)	
MH	MT-3U (DC5 ~ 30V)	
MJ	MT-2 (DC24V)	
MK	MT-2U (DC24V)	

⑧ Number of switches

No symbol : No switch

2 : With 2 units

1 : With 1 unit

⑨ Accessories

No symbol : Rod end nut

Y : With rod end clevis

I : With rod end eye

(note) Y : Provided with pin

Model No. of Packing

Bore (mm)	Packing
∅20	JL20-PS
∅25	JL25-PS
∅32	JL32-PS
∅40	JL40-PS

Model No. of Sensor Switch Mounting Bracket

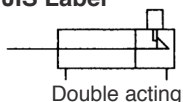
Bore (mm)	M type serson switch
∅20	J20-MJ
∅25	J25-MJ
∅32	J32-MJ
∅40	J40-MJ

Model No. of Mounting Bracket

Bore(mm)	∅20	∅25	∅32	∅40
Axial foot mounting bracket	J20-L	J25-L	J32-L	J40-L
Flange mounting bracket	J20-A	J25-A	J32-A	J40-A
Eye mounting bracket	—	—	J32-C	J40-C
Trunnion mounting bracket	J20-T	J25-T	J32-T	J40-T

The built-in magnet is provided by default. Cylinders of J Series provide a locking device (so-called fall prevention device). When a starting point or an end point of the stroke is reached, air supply will be terminated and the locking device will thus be activated. This device helps prevent cylinder from falling and related hazards from occurring.

JIS Label



Value shown in this catalog is shown in SI unit. However, value within this output table is in generic unit. Use the following formula to convert to SI unit :

$$\text{Pressure } Y \text{ (MPa)} = X \text{ (kgf/cm}^2\text{)} \times 9.80665 \times 10^{-2}$$

$$\text{Force } Y \text{ (N)} = X \text{ (kgf)} \times 9.80665$$

Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/Lubricated air
Pressure range	MPa(kgf/cm ²)	0.15~0.7(1.5~7.1)
Temperature range	°C	5~60
Piston speed range	mm/s	50~500
Cushion		Built-in damper
Piston stroke allowance	mm	+1.0 0
Mounting		Standard, Axial foot, Mounting plate, Eye, Center trunnion
Lock position		Back end, Rod end
Piston travel when locked	mm	∅20, ∅25 : 2 ∅32, ∅40 : 3
Manual unlock		With unlock screw

Standard stroke

(Unit : mm)

Bore	Standard stroke	Max. stroke
∅20	15, 25, 50, 75, 100, 125, 150	500
∅25	25, 50, 75, 100, 125, 150	
∅32	25, 50, 75, 100, 125, 150, 200, 250, 300	
∅40	50, 75, 100, 125, 150, 200, 250, 300	

Accessories

	Name	Standard type	Axial foot	Mounting plate	Eye	Center trunnion
Standard	Standard nut	○	○	○	—	—
	Rod end nut	○	○	○	○	○
Optional	With rod end clevis	○	○	○	○	○
	With rod end eye	○	○	○	○	○

Maximum load weight

(Unit : kg)

Bore (mm)	Maximum
∅20	22
∅25	34
∅32	56
∅40	88

Model with switch

M type reed switch

Lead with wire



Model No.	Rated voltage (V)	Rated current (mA)	Pilot lamp (Lights up at ON)	Application
MA-1	AC110	5~45	○	Relay PLC
	DC24	5~45		
MD-1	DC24	25~65	○	Relay
MD-3	DC5, 6	Max.50 (Inductive load) Max.300 (Resistive load)	○	IC circuit
MR	AC 5~110 DC	Max.50 (Inductive load) Max.300 (Resistive load)	No indicator	Relay PLC
MA-2L	AC110	5~150	○	Relay
MA-2H	AC220	5~150	○	Relay

M type proximity switch

Lead with wire



Model No.	Rated voltage (V)	Rated current range (mA)	Pilot lamp (Lights up at CN)	Application
MT-2 MT-2U	DC24 (DC10~30)	5~100	○	Relay PLC
MT-3 MT-3U	DC5~30	5~200	○	Relay PLC IC circuit

Minimum stroke with M type switch (Unit: mm)

Bore	Number of switches		
	With 2 units (on the same surface)	With 2 units (on the different surfaces)	With 1 unit
Ø20	50	15	5
Ø25			
Ø32			
Ø40			

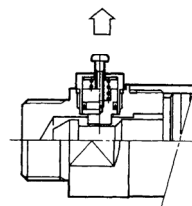
(Note) The MA-2L is the same as the MA-1 except that MA-2L is also equipped with protective circuit SS-2L.

The MA-2H is the same as the MA-1 except that MA-2H is also equipped with protective circuit SS-2H.

Manual Unlock

When unlocking, first insert the screw to the hole on the top of locking cover. Fasten the locking piston, then pull the screw upward to complete unlocking. The piston will automatically lock up after resetting.

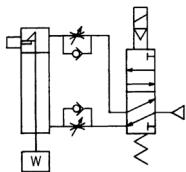
The above-mentioned screw (M3X12) comes with the cylinder set. However, during regular operation, please take out the screw to avoid problems.



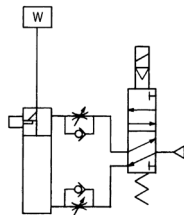
Operational Prevention Measure

Pneumatic circuit recommended

Fall prevention device
set at the rod end



Fall prevention device
set at the head center

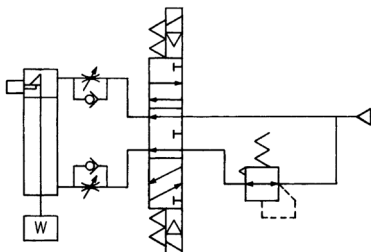


Precautions with regard to control circuit selection

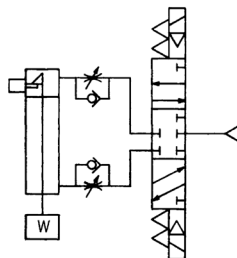
Do not operate the control circuit of a pneumatic cylinder as the graph shown below. If a three-position solenoid is used, it cannot be locked. Because there is residual pressure at the port of locking device. In addition, air leakage from the solenoid will enter into a pneumatic cylinder, locking will be removed as time goes by.

This circuit may not be used.

Connect ABR port, P port closed type.



All ports closed type.



Before operation, check whether air for the control circuit is prioritized to supply ports without locking devices. (Please refer to the above circuit recommended).

Operating pressure

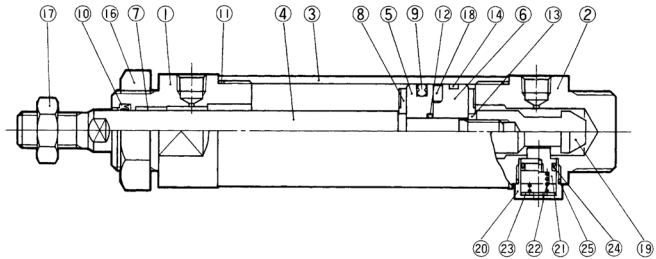
Please operate at the port with a locking device under pneumatic pressure over 0.15MPa{1.5kgf/cm²}. If the pneumatic pressure falls below above-mentioned pressure, it will not be unlocked.

Unlocking

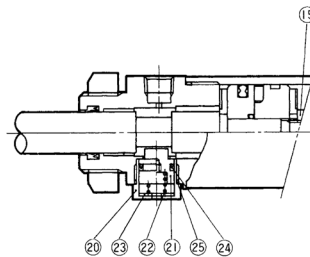
When unlocking is needed, first check that air supply is provided to the port of the non-locking side to avoid loading on the locking device. If unlocking is conducted simultaneously with air discharge to the port of the non-locking side, excessive force may cause damages to locking devices or sudden movement.

Construction

Back end locking



Axial locking



Parts List

No.	Name	No.	Name	No.	Name
1	Front cover	10	Rod packing	19	Locking bush
2	End cover	11	O-ring for cover	20	Locking cover
3	Outer tube	12	End cover gasket	21	Locking piston
4	Piston rod	13	Return spring	22	Locking spring
5	Piston A	14	Wear ring	23	Locking gasket
6	Piston B	15	U-shaped nut	24	Locking packing
7	Bearing	16	Standard nut	25	Locking gasket
8	Damper	17	Rod end nut		
9	Piston packing	18	Magnet		

Packing list

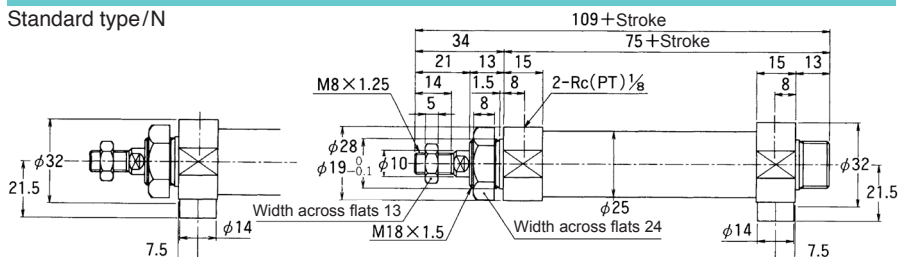
Bore (mm)	9. Piston packing		10. Rod packing		11. O-ring for cover		24. Locking packing		25. Locking gasket	
	Model No.	Amount	Model No.	Amount	Model No.	Amount	Model No.	Amount	Model No.	Amount
Ø20	PSD-20	1	PDU-10Z	1	SO-015-21	2	MYN-7	1	SO-010-28	1
Ø25	PSD-25	1	PDU-12Z	1	SO-015-25	2	MYN-7	1	SO-010-28	1
Ø32	PSD-32	1	PDU-14Z	1	SO-015-29	2	MYN-9	1	SO-010-29A	1
Ø40	PSD-40	1	PDU-16Z	1	SO-015-20	2	MYN-9	1	SO-010-29A	1

(Note) Packing repair and assembly kits are also available for purchase.

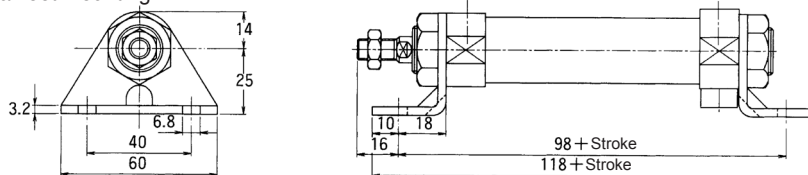
Double-acting $\varnothing 20/JGL\Box 2-20$

(Unit: mm)

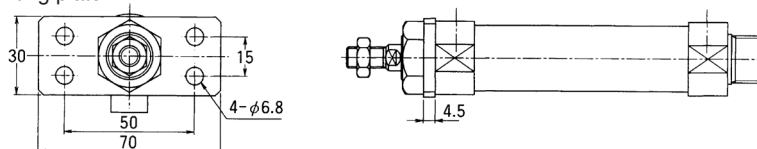
Standard type/N



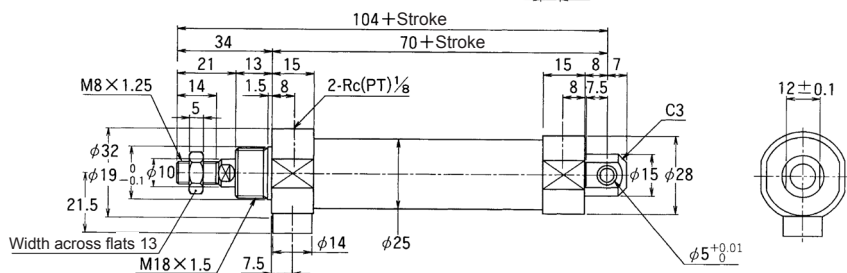
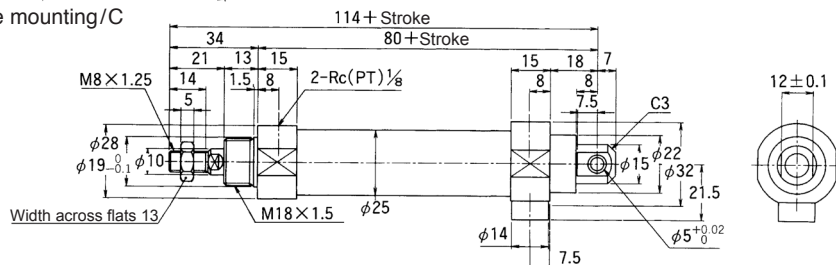
Axial foot mounting/L



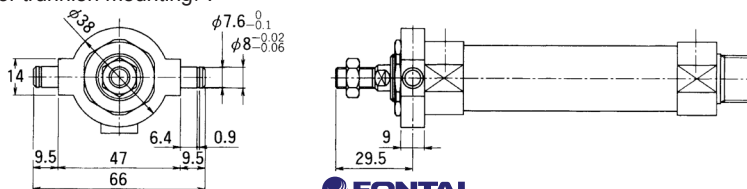
Mounting plate/A



Eye mounting/C



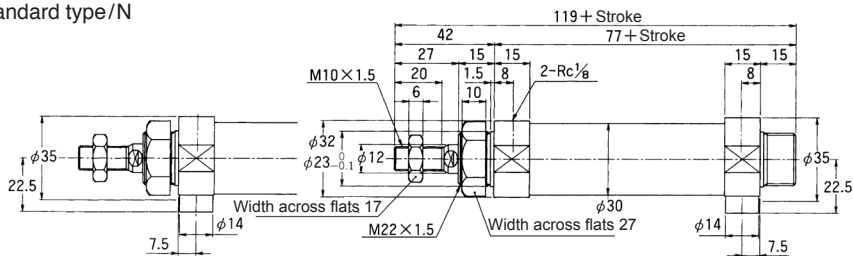
Center trunnion mounting/T



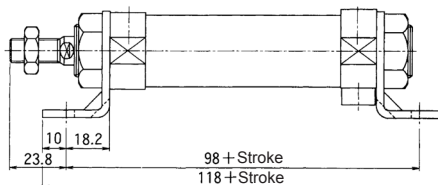
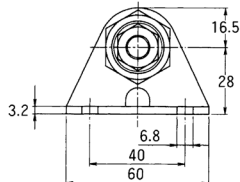
Double-acting $\varnothing 25/JGL\Box 2-25$

(Unit: mm)

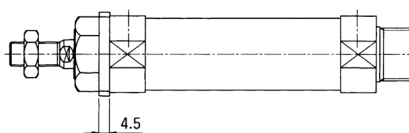
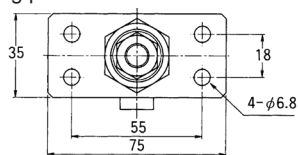
Standard type/N



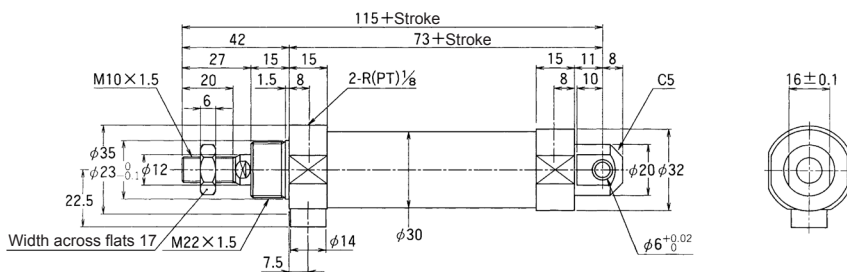
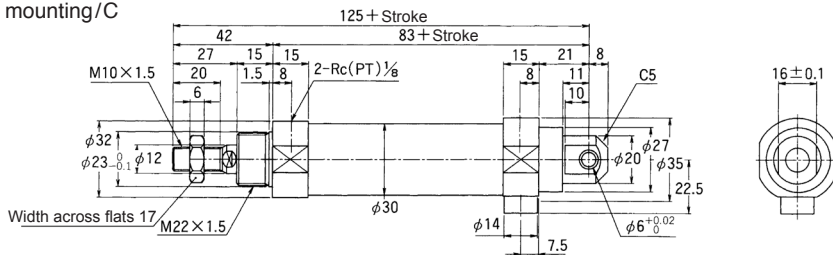
Axial foot mounting/L



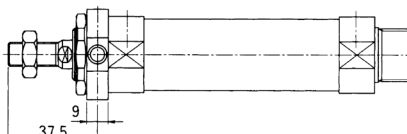
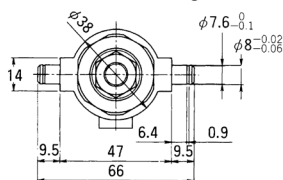
Mounting plate/A



Eye mounting/C



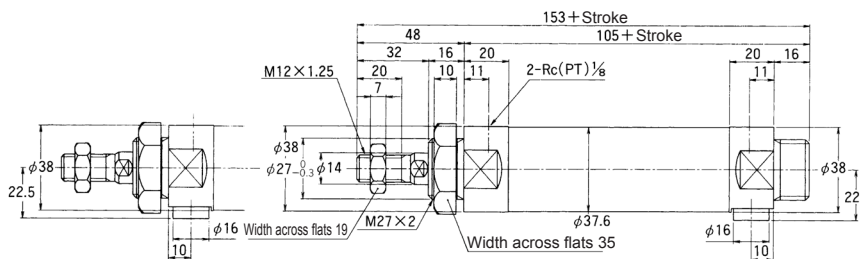
Center trunnion mounting/T



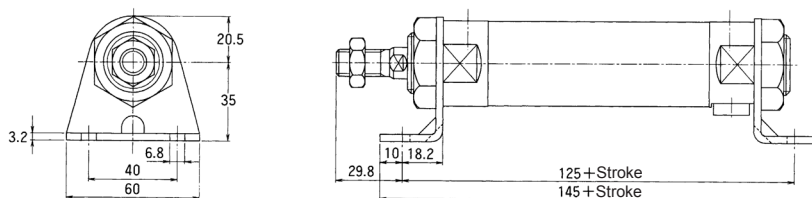
Double-acting Ø32/JGL□2-32

(Unit: mm)

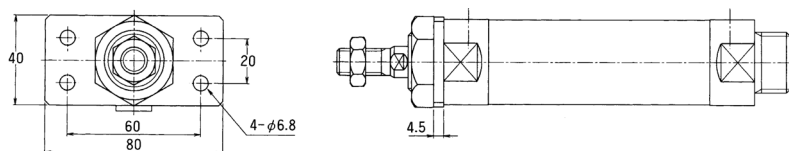
Standard type/N



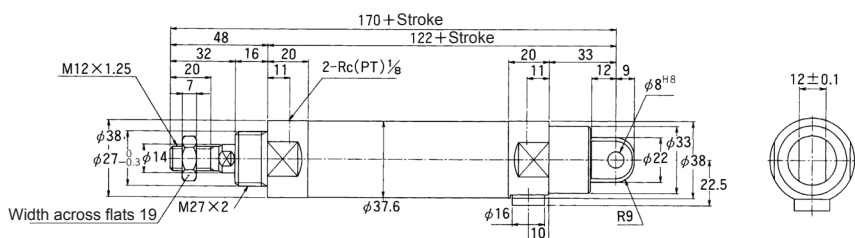
Axial foot mounting/L



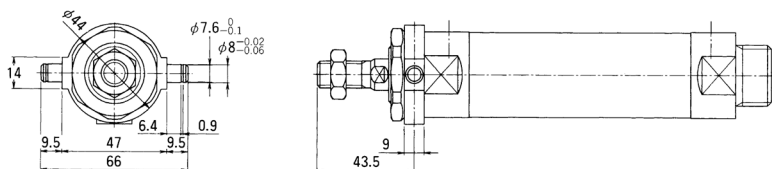
Mounting plate/A



Eye mounting/C



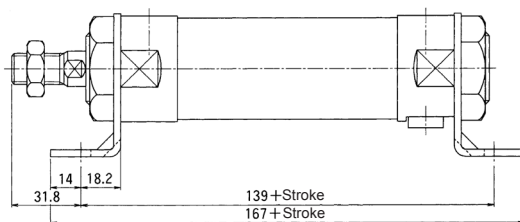
Center trunnion mounting/T



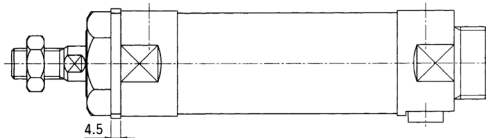
(Unit: mm)

[illegible]

Technical drawing of a mechanical part, showing a cross-section of a conical base with a central hole and a flange. Dimensions are given in millimeters: 25, 40, 3.2, 55, 80, 9.



Technical drawing of a hexagonal nut. The drawing shows a top view and a side view. The top view is a hexagon with a central circular hole. The side view shows the hexagonal shape and the central hole. Dimensions are given as follows: 50 (width of the top view), 30 (height of the side view), 80 (width of the side view), 100 (width of the top view), and 4-φ9 (four holes with diameter 9).

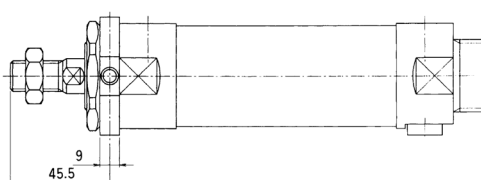


Technical drawing of a shaft assembly. The drawing includes a side view and an end view. Key dimensions and features are labeled:

- Dimensions:**
 - Overall length: $190 + \text{Stroke}$ and $140 + \text{Stroke}$
 - Segment lengths: 50, 34, 16, 26, 26, 37
 - Internal diameters: $\phi 48$, $\phi 33_{-0.3}^0$, $\phi 16$, $\phi 46$, $\phi 10^{+18}_{-12}$, $\phi 40$, $\phi 28$
 - End view diameter: 16 ± 0.1
- Callouts and Features:**
 - M14 x 1.5:** Thread specification for a bolt.
 - 2-Rc(PT) 1/4:** Thread specification for a plug.
 - M33 x 2:** Thread specification for a bolt.
 - Width across flats 22:** Dimension for the flats of a component.
 - R12:** Fillet radius.

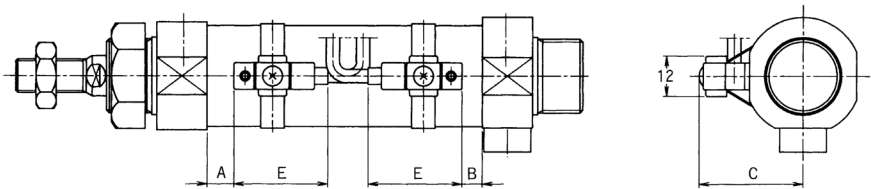
Technical drawing of a mechanical part showing dimensions and tolerances:

- $\phi 54$
- $\phi 7.6^{+0}_{-0.1}$
- $\phi 8^{-0.02}_{-0.06}$
- 9.5
- 51
- 6.4
- 9.5
- 0.9
- 70



Sensor switch mounting position/M type sensor switch

(Unit: mm)



Bore (mm)	M type reed switch		M type proximity switch		C
	A	B	A	B	
Ø20	8	6	11	10	29
Ø25	8	6	12	9	31
Ø32	16	15	19	19	34
Ø40	17	16	20	20	39

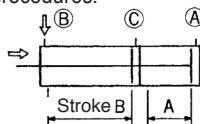
Switch	E
M type reed switch	28
M type proximity switch	26.5 (24)

(Note) value within bracket is of the MT-*U type.

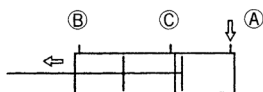
JGD2 Series

Air cylinder/Single rod, dual stroke cylinder
 Ø20, Ø25, Ø32, Ø40

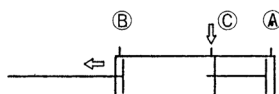
This cylinder is made of two cylinders in series. Strokes can be controlled in the two procedures.



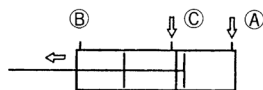
When pressure is supplied from port B, axis will retract back to the stroke between A and B.



When pressure is supplied from port A axis will only be on stroke A.



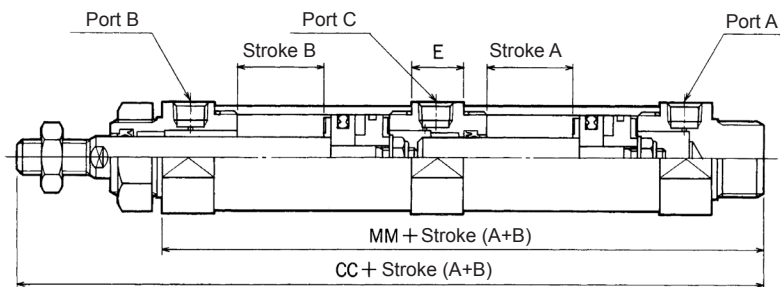
When pressure is supplied from port C axis will only be on stroke B



When pressure is supplied from port A and port C, axis will double output on stroke A

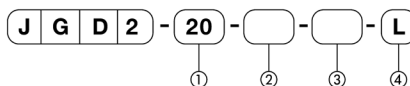
Construction and Dimensions

(Unit: mm)



(Note)
 Other dimensions are the same with J series Standard type.

Ordering Instructions



① Bore (mm)

② Stroke A (mm)

③ Stroke B (mm)

④ Mounting

Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/ lubricated air
Pressure range	MPa(kgf/cm ²)	0.1~0.7[1.0~7.1]
Temperature range	°C	5~60
Piston speed range	mm/s	50~500
Cushion		Built-in damper
Mounting		Standard type Axial foot Mounting plate Eye Center trunnion

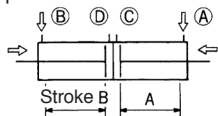
(Note) convert to SI unit: 0.1MPa = 1.02kgf/cm²

JGD7 Series

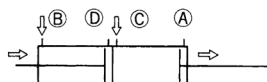
Air cylinder/Double rod, dual stroke cylinder

Ø20, Ø25, Ø32, Ø40

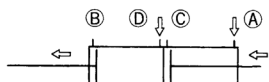
This cylinder is made of two cylinders in series. Strokes can be controlled in the three procedures.



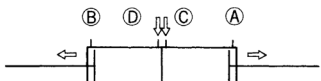
When pressure is supplied to port A and port B, axis will retract back to the original position.



When pressure is supplied to port B and port C, axis will retract to position D and the other to position A.

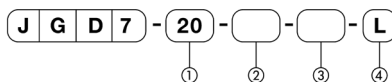


When pressure is supplied to port A and port D, axis will retract back to the stroke A and stretch the stroke A.



When pressure is supplied from port C and port D, axis will be on stroke A and stroke B

Ordering Instructions



① Bore (mm)

② Stroke A (mm)

③ Stroke B (mm)

④ Mounting

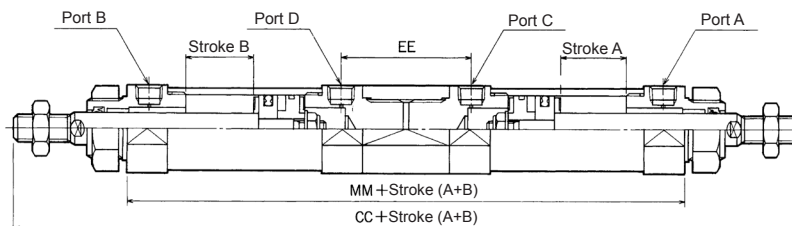
Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/ lubricated air
Pressure range	MPa(kgf/cm ²)	0.1~0.7[1.0~7.1]
Temperature range	°C	5~60
Piston speed range	mm/s	50~500
Cushion		Built-in damper
Mounting		Standard type Aixal foot Mounting plate Center trunnion

(Note) convert to SI unit: 0.1MPa = 1.02kgf/cm²

Construction and Dimensions

(Unit: mm)



(Note)

Other dimensions are the same with J series
Standard type.

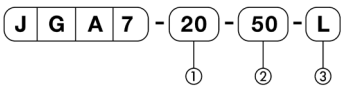
Bore	CC	MM	EE
Ø20	220	152	44
Ø25	240	156	48
Ø32	308	212	56
Ø40	340	240	60

JGA7 Series

Air cylinder/ Stroke adjustable cylinder (Rod extended)
Ø20, Ø25, Ø32, Ø40

Installing brake connector on the front axis to adjust height. When transmitting output shaft, stroke can be adjusted within 0~50mm.

Ordering Instructions



① Bore (mm)

② Stroke (mm)

③ Mounting

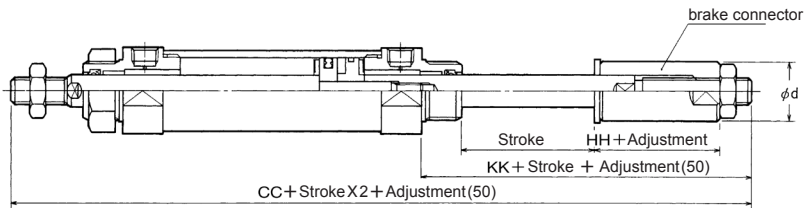
Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/ lubricated air
Pressure range	MPa(kgf/cm ²)	0.1~0.7[1.0~7.1]
Temperature range	°C	5~60
Piston speed range	mm/s	50~500
Cushion		Built-in damper
Piston adjustment		Brake connector
Adjustment range	mm	0~50
Mounting		Standard type Axial foot Mounting plate Center trunnion

(Note) convert to SI unit: 0.1MPa = 1.02kgf/cm²

Construction and Dimensions

(Unit: mm)



(Note)
Other dimensions are the same with J series
Standard type.

Bore	d	CC	HH	KK
Ø20	18	173	22	47
Ø25	22	153	22	49
Ø32	26	191	27	54
Ø40	32	211.5	31.5	58.5

JGA2 Series

Air cylinder/Stroke adjustable cylinder (Rod retracted)
 Ø20, Ø25, Ø32, Ø40

Installing adjusting bolt on the front axis to adjust height. When retracting the rod, stroke can be adjusted within 0~50mm.

Ordering Instructions

J **G** **A** **2** - **20** - **50** - **L**

① ② ③

① Bore (mm)

② Stroke (mm)

③ Mounting

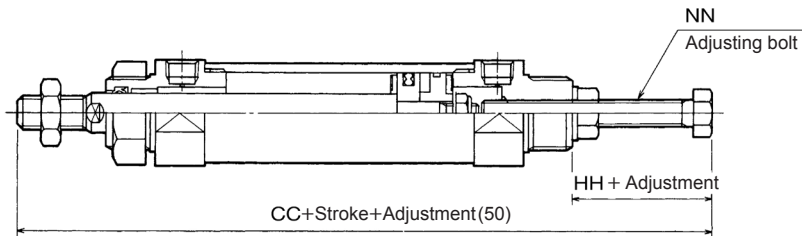
Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/ lubricated air
Pressure range	MPa(kgf/cm ²)	0.1~0.7[1.0~7.1]
Temperature range	°C	5~60
Piston speed range	mm/s	50~500
Cushion		Built-in damper
Piston adjustment		Adjusting bolt
Adjustment range	mm	0~50
Mounting		Standard type Axial foot Mounting plate Center trunnion

(Note) convert to SI unit: 0.1MPa = 1.02kgf/cm²

Construction and Dimensions

(Unit: mm)



(Note)
 Other dimensions are the same with J series
 Standard type.

Bore	CC	HH	NN
Ø20	128	19	M8×1.25
Ø25	136.5	17.5	M8×1.25
Ø32	181.5	28.5	M10×1.5
Ø40	193.5	24.5	M12×1.75

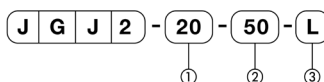
JGJ2 Series

Air cylinder/Low speed type cylinder
 Ø20, Ø25, Ø32, Ø40

Processing in non-viscous operating environment allows its exercise to reach extreme low speed as low as 10mm/s.



Ordering Instructions



① Bore (mm)

② Stroke (mm)

③ Mounting

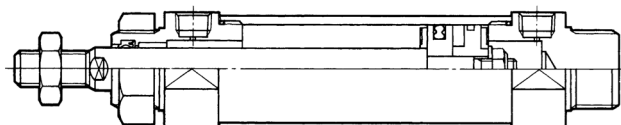
Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/ lubricated air
Pressure range	MPa(kgf/cm ²)	0.1~0.7 [1.0~7.1]
Temperature range	°C	5~60
Piston speed range	mm/s	10~100
Cushion		Built-in damper
Mounting		Standard type Axial foot Mounting plate Eye Center trunnion

(Note) convert to SI unit: 0.1MPa = 1.02kgf/cm²

Construction and Dimensions

(Unit: mm)



(Note)

Other dimensions are the same with J series Standard type.

JCX Series

Air cylinder/High-temperature cylinder
 Ø20, Ø25, Ø32, Ø40

Pneumatic cylinders of high-temperature series use heat-resistance seal capable of withstanding temperature up to 150 degree.



Ordering Instructions

J **C** **X** **2** - **20** - **50** - **L**

① ② ③

① Bore (mm)

② Stroke (mm)

③ Mounting

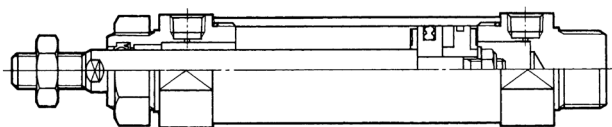
Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/ lubricated air
Pressure range	MPa(kgf/cm ²)	0.1~0.7[1.0~7.1]
Temperature range	°C	5~150
Piston speed range	mm/s	50~500
Cushion		Built-in damper
Mounting		Standard type Axial foot Mounting plate Eye Center trunnion

(Note) convert to SI unit: 0.1MPa = 1.02kgf/cm²

Construction and Dimensions

(Unit: mm)



(Note)

Other dimensions are the same with J series Standard type.

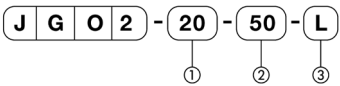
JGO Series

Air cylinder/Low oil-pressure pneumatic cylinder
Ø20, Ø25, Ø32, Ø40

Specifically for low oil pressure and
most suitable for low-speed acting
50mm/s or slower.



Ordering Instructions



① Bore (mm)

② Stroke (mm)

③ Mounting

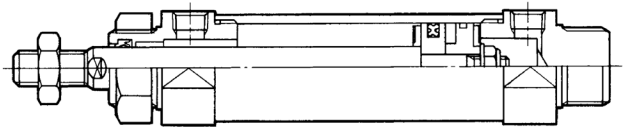
Specifications

Action	Unit	Double-acting
Fluid		oil
Pressure range	MPa(kgf/cm ²)	0.1~0.7[1.0~7.1]
Temperature range	°C	5~50
Piston speed range	mm/s	1~300
Cushion		Built-in damper
Mounting		Standard type Axial foot Mounting plate Eye Center trunnion

(Note) Recommend oil: ISO VG32.
Convert to SI unit: 0.1MPa = 1.02kgf/cm²

Construction and Dimensions

(Unit: mm)



(Note)
Other dimensions are the same with J series Standard type.

JGND Series

Air cylinder/Canopy flattened cylinder

Ø20, Ø25, Ø32, Ø40

Canopy flattened to shorten the whole length.



Ordering Instructions

J **G** **ND** **2** - **20** - **50** - **L**

① ② ③

① Bore (mm)

② Stroke (mm)

③ Mounting

Specifications

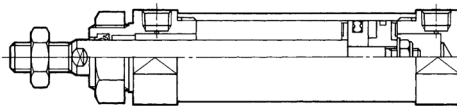
Action	Unit	Double-acting	Single-acting
Fluid		Non-lubricated air/ lubricated air	
Pressure range	MPa (kgf/cm ²)	0.1~0.7 [1.0~7.1]	0.2~0.7 [2.0~7.1]
Temperature range	°C	5~50	
Piston speed range	mm/s	50~500	
Cushion		Built-in damper	
Mounting		Standard type Axial foot Mounting plate Center trunnion	

(Note) convert to SI unit: 0.1MPa = 1.02kgf/cm²

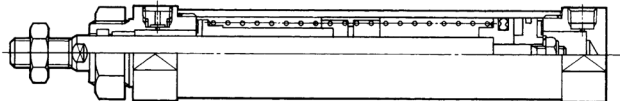
Construction and Dimensions

(Unit: mm)

Double-acting



Single-acting



(Note)

Other dimensions are the same with J series Standard type.