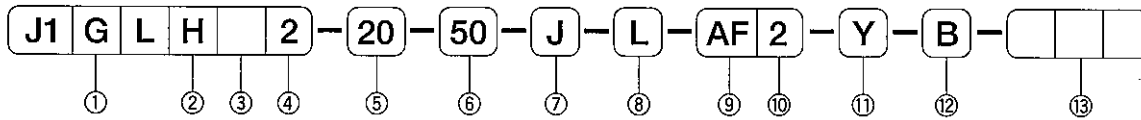


AIR CYLINDER/WITH LOCK MECHANISM

J1○L series

φ 20, φ 25, φ 32, φ 40

ORDERING INSTRUCTIONS



①Magnet

G	Built-in magnet	Cylinder with switch available
---	-----------------	--------------------------------

②Lock position

H	Head side
R	Rod side

③Head cover/rod cover shape

No symbol	Basic type
ND	Boss cut type
NB	Axial port position
EB	Bottom cover mount
EF	Front cover mount

(Note) Refer to "Combination of head cover/rod cover shape and mounting" on Page 75.

④Action

2	Double-acting, single rod
---	---------------------------

⑤Bore (mm)

20	φ 20
25	φ 25
32	φ 32
40	φ 40

⑥Stroke (mm)

Refer to Standard Strokes (Page 75).

⑦Dustproof cover

No symbol	No dustproof cover provided (Standard)
J	With bellows (Nylon tarpaulin)
JN	With bellows (Chloroprene)
JK	With bellows (CONEX)

CONEX : Registered trademark of Teijin Ltd.

⑧Mounting

N	Nose
L	Both-foot
LS	Single foot
A	Rod side flange
B	Head side flange
R	Rod side trunnion
H	Head side trunnion
C	Eye (Basic type)

(Note) LS : φ 20, φ 25 alone

⑨Type of switch

No symbol	No switch		
AF	AX101		
AG	AX105	DC5~30V	
AH	AX111	AC5~120V	
AJ	AX115		
AE	AX125	DC5~50V AC5~120V	
AK	AX11A	AC5~120V	
AL	AX11B	DC5~30V	
JA	ZC201A	AC85~115V	
JB	ZC201B	DC5~28V	
JC	ZC205A	DC10~28V	
JD	ZC205B		
S	SR405	AC80~220V	Solid-state switch
BE	AX201	DC5~30V	
BF	AX205		
BH	AX221		
BJ	AX225		
CE	AX211		
CF	AX215		
JJ	ZC230A	DC10~28V	
JK	ZC230B		
JL	ZC253A		
JM	ZC253B		

⑩Number of switch

No symbol	No switch
2	With 2 units
1	With 1 unit

⑪Bracket at rod end

No symbol	No bracket
Y	With rod end clevis
I	With rod end eye

(Note) Y : Provided with pin

⑫Bracket

No symbol	No bracket
B	With bracket

(Note) Models with bracket : R, H and C alone

⑬Special shape of rod end

No symbol	Standard
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(Note) Refer to Pages 37 and 38.

Model No. of Mounting Bracket

Bore (mm)	φ 20	φ 25	φ 32	φ 40	
Foot mounting	J120-L	J120-L	J132-L	J140-L	
Flange mounting	J120-A	J120-A	J132-A	J140-A	
Trunnion mounting	J120-R	J120-R	J132-R	J140-R	
Bracket	For C	J120-BA	J120-BA	J132-BA	J140-BA
	For R, H	J120-BC	J120-BC	J132-BC	J140-BC

Model No. of Packing Kit

Bore (mm)	Packing kit
φ 20	J120-PS
φ 25	J125-PS
φ 32	J132-PS
φ 40	J140-PS

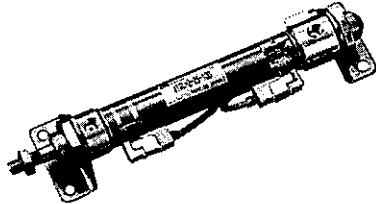
(Note) Packing kit : Rod packing alone

AIR CYLINDER/WITH LOCK MECHANISM J1○L series

φ 20, φ 25, φ 32, φ 40

Each air cylinder is equipped with a magnet.

When compressed air discharges at the stroke end, locking mechanism is actuated to lock the piston, thereby preventing the cylinder from dropping and also preventing a trouble when restarting operation.



SPECIFICATIONS

Action	Unit	Double-acting
Fluid		Non-lubricated air
Pressure range	MPa	0.2~1
Proof pressure	MPa	1.5
Temperature range	°C	-10~70
Piston speed range	mm/s	20~700
Cushion		Damper cushion
Piston stroke allowance	mm	Below 250 : $\begin{matrix} +1.0 \\ 0 \end{matrix}$ 251~900 : $\begin{matrix} +1.4 \\ 0 \end{matrix}$
Lock position	mm	Head side, rod side
Piston travel when locked		φ 20, φ 25 : Below 1 φ 32, φ 40 : Below 1.5
Mounting		Basic type, Both-foot, Single foot, Rod-side flange, Head-side flange, Rod side trunnion, Head-side trunnion, Cover mount

(Note) •When setting a switch at the intermediate position, set the maximum cylinder speed to less than 300 mm/s by reason of the relation with the response speed of relays etc.

•Use the cylinder within a temperature range where it is not frozen.

STANDARD STROKE

(Unit : mm)

Bore	Standard stroke																Max. stroke
	15	25	30	50	75	100	125	150	175	200	250	300	350	400	450	500	
φ 20	○	○	○	○	○	○	○	○	○	○	—	—	—	—	—	—	900
φ 25	○	○	○	○	○	○	○	○	○	○	○	○	—	—	—	—	900
φ 32	○	○	○	○	○	○	○	○	○	○	○	○	○	○	—	—	900
φ 40	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	900

HOLDING POWER (Unit : N)

Bore (mm)	Holding power
φ 20	220
φ 25	330
φ 32	550
φ 40	860

COMBINATION OF HEAD COVER/ROD COVER SHAPE AND MOUNTING

Lock position	Shape of head cover/rod cover	Mounting							
		Nose /N	Both-foot /L	Single foot /LS	Rod-side flange /A	Head-side flange /B	Rod-side trunnion /R	Head-side trunnion /H	Eye (Basic type) /C
Rod side	Basic type	—	○	△	○	○	○	○	○
	Boss cut type/ND	○	—	△	○	—	○	—	—
	Axial port position/NB	○	—	△	○	—	○	—	—
Head side	Basic type	—	○	△	○	○	○	○	○
	Boss cut type/ND	○	—	△	○	—	○	—	—
	Axial port position/NB	○	—	△	○	—	○	—	—
	Cover mount Bottom mounting type/EB	○	—	—	—	—	—	—	—
	Cover mount Front mounting type/EF	○	—	—	—	—	—	—	—

○ : Matchable combination △ : Matchable for φ 20, φ 25

AIR CYLINDER/WITH LOCK MECHANISM J1○L series

MODEL WITH SWITCH/For detailed specifications, handling precautions and mounting method of switches, refer to Page 80.

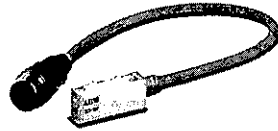
•AX Type Switch

•ZC Type Switch

•SR Type Switch

Cord type

Connector type



LIST OF SWITCHES

Type	Symbol of switch	Load voltage range	Load current range	Max. switching capacity	Protective circuit	Pilot lamp	Connection	Cord length	Applicable load	
Reed switch	AF AX101	DC5~30V	DC: 5~40mA AC: 5~20mA	DC: 1.5W AC: 2VA	Not provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	1.5m	Miniature relay PLC	
	AG AX105							5m		
	AH AX111	AC5~120V			Provided	Not provided		Not provided		1.5m
	AJ AX115									5m
	AE AX125	DC5~50V AC5~120V	AC5~120V	5~20mA	2VA	Provided	LED (Red LED lights up at ON.)	4-pin connector Cord direction : Axial		5m
	AK AX11A	AC5~120V								5~40mA
	AL AX11B	DC5~30V	5~40mA	1.5W	Provided	LED (Red LED lights up at ON.)	4-pin connector Cord direction : Axial	0.5m		
	JA ZC201A	AC85~115V	AC: 2~25mA	—	Not provided	Not provided	0.2 mm ² 2-core, OD φ 3 mm Cord direction : Axial	1m		
	JB ZC201B	DC5~28V	DC: 0.1~40mA	—	Not provided	Not provided		3m		
	JC ZC205A	DC10~28V	DC: 5~40mA	—	Not provided	LED (Red LED lights up at ON.)		1m		
	JD ZC205B							3m		
S SR405	AC80~220V	2~300mA	30VA	Provided	Neon lamp (Red lights up at OFF.)	0.5 mm ² 2-core, OD φ 6 mm Cord direction : Axial	5m			
Solid-state switch	BE AX201	DC5~30V	5~40mA	—	Provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	1.5m	Miniature relay PLC IC circuit	
	BF AX205							5m		
	CE AX211					LED (Dual light : Red/green)		1.5m		
	CF AX215							5m		
	BH AX221	DC5~30V	Max. 200mA NPN open collector output	—	Provided	LED (Red LED lights up at ON.)	0.3 mm ² 3-core, OD φ 4 mm Cord direction : Axial	1.5m		
	BJ AX225							5m		
	JJ ZC230A	DC10~28V	5~40mA	—	Provided	LED (Lights up at ON.)	0.2 mm ² 2-core, OD φ 3 mm Cord direction : Axial	1m		
	JK ZC230B							3m		
	JL ZC253A	DC4.5~28V	MAX.100mA	—	Provided	LED (Lights up at ON.)	0.2 mm ² 3-core, OD φ 3 mm Cord direction : Axial	1m		
	JM ZC253B							3m		

(Note) •When using inductive load (relay etc.) in a switch without a protective circuit, be sure to fit a protective circuit (SK-100) to the load.
•AX type switch can be mounted on other type than above-mentioned. Refer to Specifications for Switches at the end of this catalog.

MINIMUM STROKE FOR AIR CYLINDER WITH SWITCH

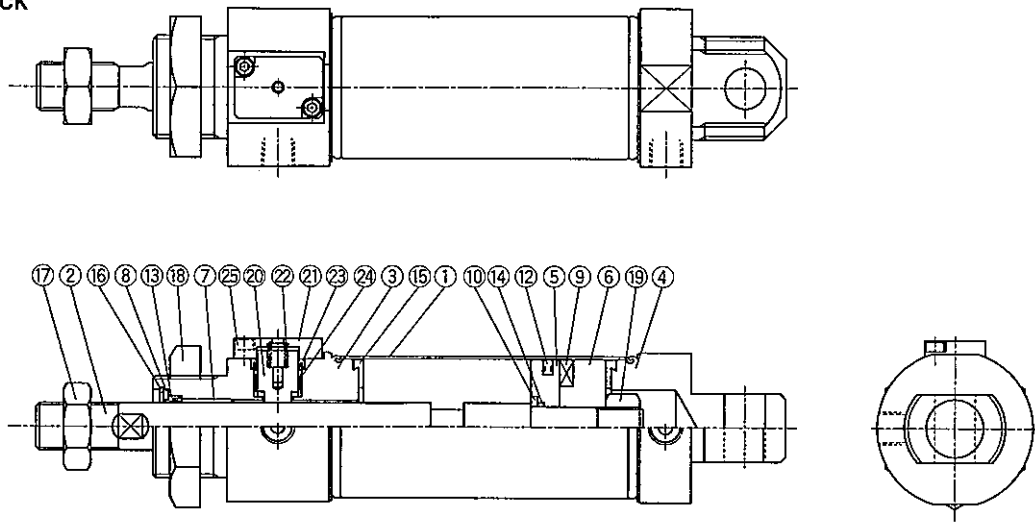
(Unit : mm)

Bore	Number of mounted switch										
	With 1 unit					With 2 units					
	Reed switch				Solid-state switch		Reed switch			Solid-state switch	
	AX	ZC201	ZC205	SR	AX	ZC	AX	ZC	SR	AX	ZC
φ 20, φ 25	10	10	15	15	10	10	15	15	35	20	10
φ 32, φ 40				10							

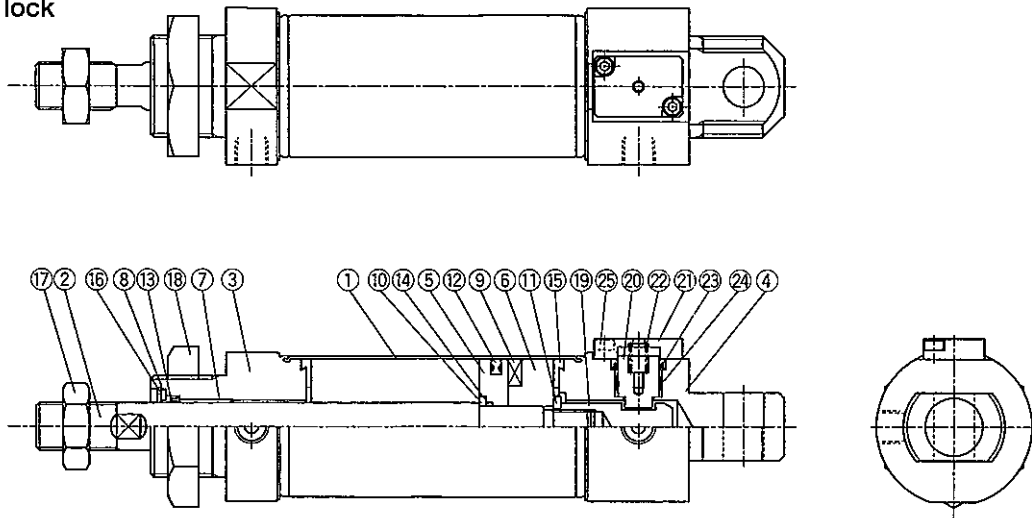
AIR CYLINDER/WITH LOCK MECHANISM J1○L series

CONSTRUCTIONS

Rod side lock



Head side lock



※The above drawing is basic type cylinder.

PARTS LIST

No.	Description	Material	No.	Description	Material
①	Cylinder tube	Stainless steel	⑭	O-ring for piston rod	Nitril rubber
②	Piston rod	Carbon steel for machine structure (Hard chromium plating)	⑮	Cushion pad	Urethane rubber
③	Rod cover	Aluminium alloy	⑯	Snap ring	Spring steel
④	Head cover	Aluminium alloy	⑰	Rod end nut	Rolled steel for general structure
⑤	Piston A	Aluminium alloy	⑱	Nose nut	Rolled steel for general structure
⑥	Piston B	Aluminium alloy (Abrasion-resistant surface)	⑲	Piston nut (with lock)	Carbon steel for machine structure
⑦	Bushing	Dry bearing	⑳	Lock piston	Stainless steel
⑧	Rod packing hold-down plate	Cold rolled steel	㉑	Lock cover	Aluminium alloy
⑨	Magnet	—	㉒	Lock spring	Piano wire
⑩	Piston washer	Cold rolled steel	㉓	Lock packing	Nitril rubber
⑪	Washer	Cold rolled steel	㉔	Bushing	Dry bearing
⑫	Piston packing	Nitril rubber	㉕	Hexagon socket head bolt	Steel
⑬	Rod packing	Nitril rubber			

AIR CYLINDER/WITH LOCK MECHANISM J1○L series



(Unit : mm)

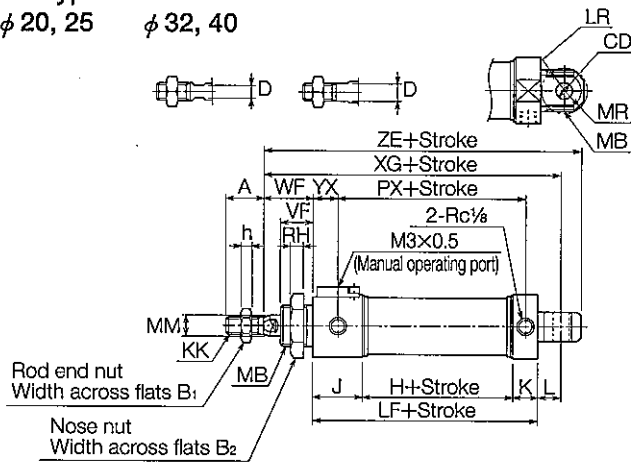
DIMENSIONS

Basic type

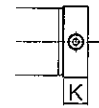
Rod side lock

Basic type

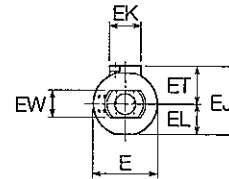
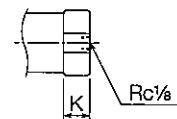
φ 20, 25 φ 32, 40



Boss cut type

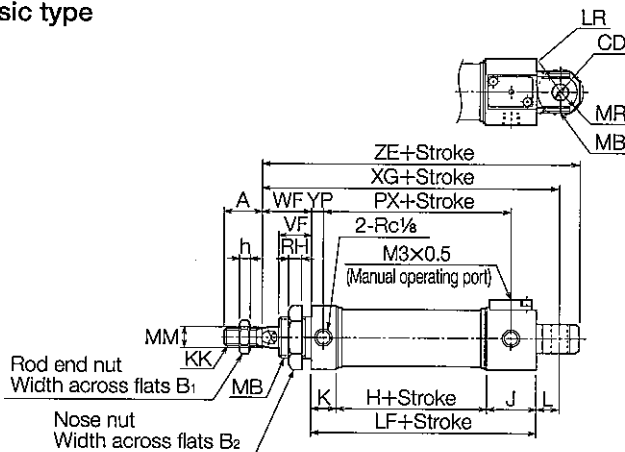


Axial port position

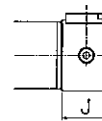


Head side lock

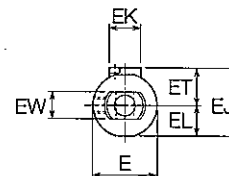
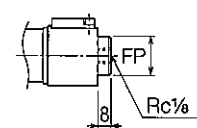
Basic type



Boss cut type



Axial port position



Bore	A	B1	B2	CD	D	E	EJ	EK	EL	ET	EW	FP	H	h	J	K	KK	L
φ 20	20 (20)	13	30	φ 8 ^{H9}	8	φ 28	31.5	12.5	13	18.5	16 ^{-0.1 -0.3}	φ 22	31	5	24	14	M 8×1.25	12
φ 25	22 (22)	17	30	φ 8 ^{H9}	8	φ 31	34	12.5	14.5	19.5	16 ^{-0.1 -0.3}	φ 22	35	6	24.5	14.5	M10×1.5	12
φ 32	22 (22)	19	32	φ 10 ^{H9}	10	φ 38	40.5	18	18	22.5	16 ^{-0.1 -0.3}	φ 24	40	7	30	15	M12×1.25	14
φ 40	24 (24)	22	41	φ 12 ^{H9}	12	φ 48	48	18	22	26	20 ^{-0.1 -0.3}	φ 30	42	8	30	15	M14×1.5	16

Bore	LF	LR	MB	MM	MR	PX	RH	VF	WF	XG	YX	YP	ZE
φ 20	69	R11	M22×1.5	φ 8	R12	50	7	16 (13)	24	105	12	7	115
φ 25	74	R11	M22×1.5	φ 10	R12	54.5	7	18 (15)	28	114	12	7.5	124
φ 32	85	R13	M24×2	φ 12	R14	62.5	8	20 (16)	30	129	15	7.5	141
φ 40	87	R15	M30×2	φ 14	R16	64.5	9	22 (18)	32	135	15	7.5	147

(Note) •Bracketed figures in size A and VF columns are thread lengths.

•For other mounting bracket, refer to J1 cylinder.

AIR CYLINDER/WITH LOCK MECHANISM J1○L series

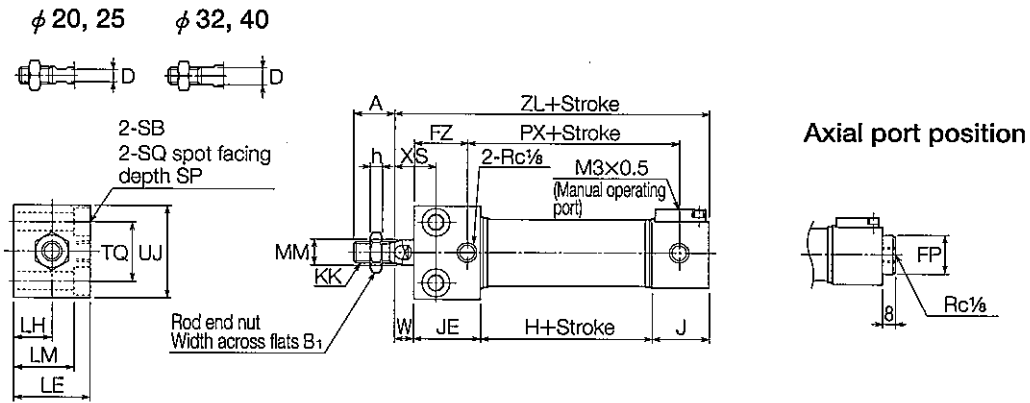


(Unit : mm)

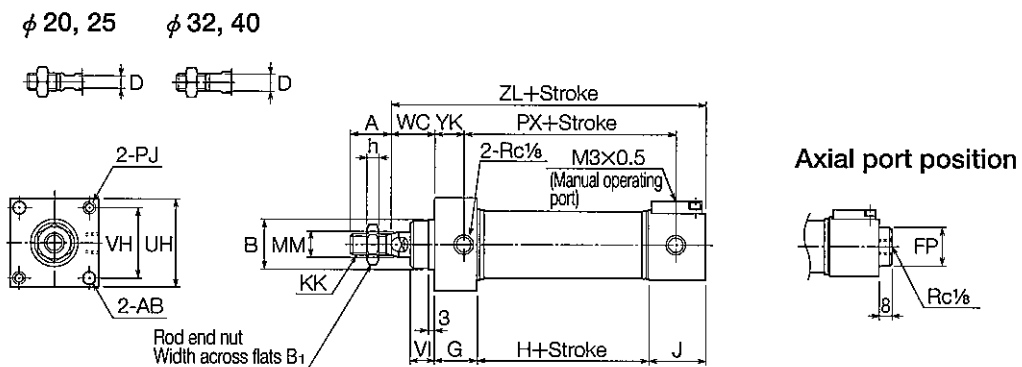
DIMENSIONS

Cover mount type

Bottom mounting



Front mounting



※ : Cover mount : Provided only for head side lock.

Bore	A	AB	B	B1	D	FP	FZ	G	H	h	J	JE	KK	LE	LH	LM	MM
φ 20	20 (20)	φ 5.5	φ 20 ^{f8}	13	6	φ 22	23	20	31	5	24	30	M 8×1.25	28	14	21.5	φ 8
φ 25	22 (22)	φ 5.5	φ 22 ^{f8}	17	8	φ 22	25.5	22.5	35	6	24.5	32.5	M10×1.5	34	17	27.5	φ 10
φ 32	22 (22)	φ 6.6	φ 24 ^{f8}	19	10	φ 24	28	23	40	7	30	35	M12×1.25	40	20	31.4	φ 12
φ 40	24 (24)	φ 9	φ 28 ^{f8}	22	12	φ 30	30	25	42	8	30	37	M14×1.5	48	24	37.2	φ 14

Bore	PJ	PX	SB	SP	SQ	TQ	UH	UJ	VH	VI	W	WC	XS	YK	ZL
φ 20	M5×0.8	50	φ 6.6	6.5	φ 11	20	□34	34	□24	10	8	18	18	13	93
φ 25	M5×0.8	54.5	φ 6.6	6.5	φ 11	24	□38	38	□28	10	10	20	20	15.5	102
φ 32	M6×1	62.5	φ 9	8.6	φ 14	30	□46	46	□36	12	10	22	22	16	115
φ 40	M8×1.25	64.5	φ 11	10.8	φ 17.5	36	□56	56	□42	12	10	22	22	18	119

(Note) Bracketed figures in size A columns are thread lengths.