



Installation and application




- 1、 When load changes in the work, the cylinder with abundant output capacity shall be selected;
- 2、 Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion;
- 3、 Necessary protection measure shall be taken in the environment with larger humidity, much dust or water drops, oil dust and welding dregs;
- 4、 Dirty substances in the pipe must be cleared away before cylinder is connected with pipeline to prevent the entrance of sundries into the cylinder;
- 5、 The medium used by cylinder shall be filtered by the filter core of above 40um;
- 6、 Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing;
- 7、 The cylinder shall be carried out test run without load before application. Prior to run, buffer shall be turned to the minimum and gradually released to avoid the damage on cylinder caused by excessive impact;
- 8、 The cylinder shall avoid the influence of side load in operation to maintain the normal work of cylinder and extend the service life;
- 9、 If the cylinder is dismantled and stored for a long time, please to conduct anti-rust treatment to the surface. Anti-dust jam cap shall be added in air intake and outlet orifices.

Criteria for selection: Cylinder thrust

Unit: Newton (N)

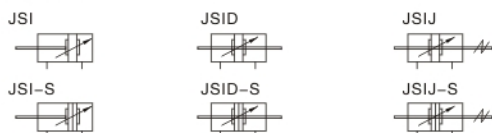
Bore size(mm)	Rod size(mm)	Acting type	Pressure area (mm ²)	Operating pressure (MPa)									
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
32	12	Single acting	Push side	804	80.4	160.8	241.2	321.6	402.0	482.4	562.8	643.2	723.6
			Pull side	690	69.0	138.0	207.0	276.0	345.0	414.0	483.0	552.0	621.0
40	16	Single acting	Push side	1256	125.6	251.2	376.8	502.4	628.0	753.6	879.2	1002.4	1130.4
			Pull side	1055	105.5	211.0	316.5	422.0	527.5	633.0	738.5	844.0	949.5
50	20	Single acting	Push side	1963	196.3	392.6	588.9	785.2	981.5	1177.8	1374.1	1570.4	1766.7
			Pull side	1649	164.9	329.8	494.7	659.6	824.5	989.4	1154.3	1399.2	1484.1
63	20	Double acting	Push side	3117	311.7	623.4	935.1	1246.8	1558.5	1870.2	2181.9	2493.6	2805.3
			Pull side	2803	280.3	560.6	840.9	1121.2	1401.5	1681.8	1962.1	2242.4	2522.7
80	25	Double acting	Push side	5026	502.6	1005.2	1507.8	2010.4	2513.0	3015.6	3518.2	4020.8	4523.4
			Pull side	4536	453.6	907.2	1360.8	1814.4	2268.0	2721.6	3175.2	3628.8	4082.4
100	30	Double acting	Push side	7853	785.3	1570.6	2355.9	3141.2	3926.5	4711.8	4288.2	6282.4	7067.7
			Pull side	7147	714.7	1429.4	2144.1	2858.9	3573.6	4288.3	5003.0	5171.7	6432.4
125	32	Double acting	Push side	12272	1227.2	2454.4	3681.6	4908.8	6136.0	7363.2	8590.4	9817.6	11044.8
			Pull side	11468	1146.8	2293.6	3440.4	4587.2	5734.0	6880.8	8027.6	9174.4	10321.2

Product series

Series name	Mounting type								Acting type	Bore size	Collocation of sensor switch		
	Basic	LB	FA	FB	CA	CB	CR	TC			CS1-B	CS1-F	CS1-U
Double acting type: JSI 	●	●	●	●	●	●	●	●	Double acting	32	●	●	●
Double rod type: JSID 	●	●	●	●	●	●	●	●		40	●	●	●
Adjustable stroke type: JSJI 	●	●	●	●	●	●	●	●		50	●	●	●
	●	●	●	●	●	●	●	●		63	●	●	●
	●	●	●	●	●	●	●	●		80	●	●	●
	●	●	●	●	●	●	●	●		100	●	●	●
	●	●	●	●	●	●	●	●	125	●	●	●	
Page	III-26										VI-39		



Symbol



Product feature

1. JIS standard cylinder;
2. The seal of piston adopts heterogeneous two way seal structure. Its dimension is tight and it has the function of oil reservation;
3. The 米-shaped aluminum barrel of JSI series has no tie rod and good performance of corrosion resistance;
4. Compared with ISO15552 standard cylinder, the cylinder of ISI series with the same cylinder diameter is shorter;
5. The buffer adjustment of cylinder is smooth and steady;
6. Cylinders and mounting accessories for installation with several specifications are optional;
7. The seal material with high temperature resistance is adopted to guarantee the normal operation of cylinder at 150°C.

Specification

Bore size	mm	32	40	50	63	80	100	125
Acting type		Double acting						
Fluid		Air (to be filtered by 40um filter element)						
Mounting type	JSI	Basic FA FB CA CB CR LB TC TF TM						
	JSID, JSIJ	Basic FA LB TC TF TM						
Operating pressure		0.1~1.0MPa(14~145Psi)						
Proof pressure		1.5MPa(215Psi)						
Temperature	°C	-20~80						
Speed range	mm/s	30~800						30~500
Stroke tolerance		0~250 ^{+1.0} ₀		251~1000 ^{+1.4} ₀		1001~1500 ^{+1.8} ₀		
Cushion type		Variable cushion						
Adjustable cushion stroke mm		24			32	37.5	40	
Port size	①	1/8"		1/4"		3/8"		1/2"

① PT thread, NPT thread and G thread are available;
Add: Refer to PVI-39-VI-50 for detail of sensor switch.

Stroke

Unit: mm

Bore size (mm)	Standard stroke	Max. stroke	Available stroke
32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	1000	1800
40		1200	1800
50		1200	1800
63	25 50 75 80 100 125 150 160 175 200 250 300 350 400	1500	1800
80	450 500 600 700 800 900 1000	1500	1800
100		1500	1800
125		1500	1800

Remark: Consult us for non-standard stroke.

Ordering code

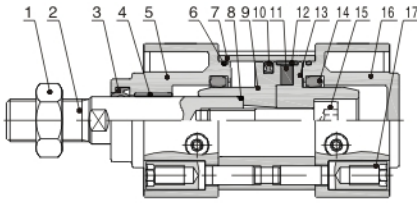
JSI	— 50 × 50	— S	— □	— P
JSID	— 50 × 50	— S	— □	— P
JSIJ	— 50 × 50 — 20	— S	— □	— P

Model	Bore size	Stroke	Adjustable stroke	Magnet	Mounting type	Thread type	Available series	Memo
JSI: Double acting type			10: 10mm 20: 20mm 30: 30mm 40: 40mm 50: 50mm 75: 75mm 100: 100mm	S: With magnet Blank: Without magnet	Blank, LB, FA, FB, CA, CB, CR, TC	P: PT T: NPT G: G	JSI JSID JSIJ	
JSID: Double rod type					Blank, LB, FA, FB, CA, CB, CR, TC		JSI JSID JSIJ	
JSIJ: Adjustable stroke type					Blank, LB, FA, FB, CA, CB, CR, TC		JSI JSID JSIJ	Be used with TF, TM

① Please refer to page III-28-III-30 for accessory parts;

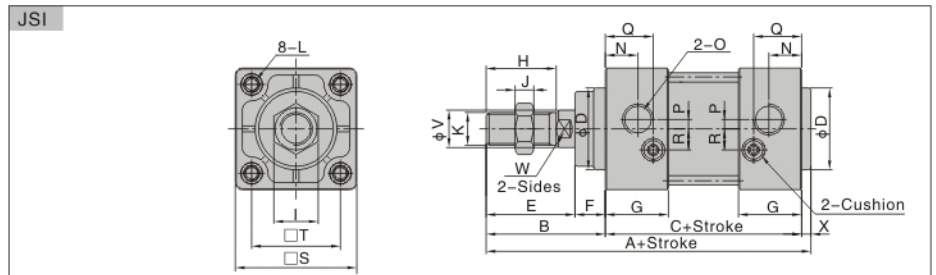


Inner structure and material of major parts



NO.	Item	Material
1	Rod nut	Carbon steel
2	Piston rod	Carbon steel with 20um chrome plated
3	Front cover packing	NBR
4	Bushing	Wear resistant material
5	Front cover	Aluminum alloy
6	O-ring	NBR
7	Barrel	Aluminum alloy
8	O-ring	NBR
9	Piston	Aluminum alloy
10	Piston O-ring	NBR
11	Magnet	Plastic
12	Wear ring	Wear resistant material
13	Magnet holder	Aluminum alloy
14	Cushion O-ring	NBR
15	Screw	Carbon steel
16	Back cover	Aluminum alloy
17	Tie-rod nut	Carbon steel

Dimensions

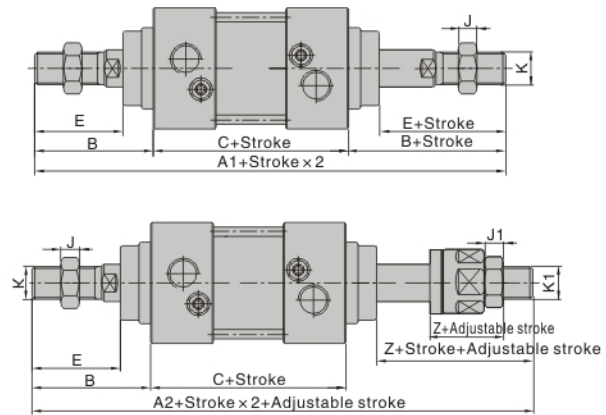


Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

Item	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P	Q
Bore size																
32	135	47	84	30	34	13	27	22	17	6	M10 x 1.25	M6	13	1/8"	4	20.5
40	139	51	84	35	38	13	27	30	19	8	M14 x 1.5	M6	14	1/4"	4	20.5
50	156	58	94	40	44	14	31.5	35	27	11	M18 x 1.5	M8	15.5	1/4"	5	23
63	156	58	94	45	44	14	30.5	35	27	11	M18 x 1.5	M8	16.5	3/8"	9	23
80	190	72	114	45	52	20	38	40	32	13	M22 x 1.5	M10	19	3/8"	11.5	26.5
100	190	72	114	55	52	20	38	40	36	13	M26 x 1.5	M10	19	1/2"	17	28.5
125	223	97	120	60	70	27	38	54	41	13.5	M27 x 2	M12	19	1/2"	17	29

Item	R	S	T	V	W	X
Bore size						
32	6.5	46	32.5	12	10	4
40	9	52	38	16	14	4
50	10.5	65	46.5	20	18	4
63	12	75	56.5	20	18	4
80	14	95	72	25	22	4
100	15	114	89	30	26	4
125	15	137	110	32	27	6

JSID JSIJ

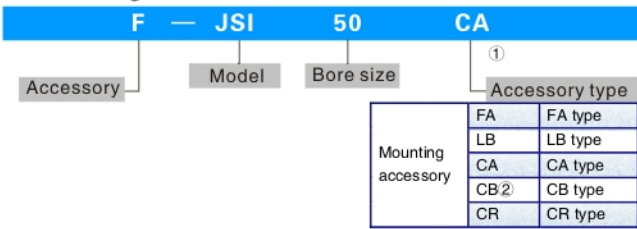


Item	A1	A2	B	C	E	J	J1	Z	K	K1
Bore size										
32	178	171	47	84	34	6	6	27	M10X1.25	M10X1.25
40	186	176	51	84	38	8	7	28	M14X1.5	M12X1.25
50	210	195	58	94	44	11	8	29	M18X1.5	M16X1.5
63	210	195	58	94	44	11	8	29	M18X1.5	M16X1.5
80	258	241.5	72	114	52	13	10	35.5	M22X1.5	M20X1.5
100	258	248.5	72	114	52	13	13.5	42.5	M26X1.5	M27X2
125	314	286.5	97	120	70	13.5	13.5	42.5	M27X2	M27X2

Remark:
1. The dimensions of magnet type cylinder are the same as non-magnet type cylinder.
2. The unmarked dimension is the same as JSI standard type.

Accessories

Ordering code



①: The listed accessories are for JSI cylinder. Accessories that are adaptable to other cylinders are not shown. Please refer to accessory list on PIII-30 for selection and ordering information.

②: CB is attached with relevant PIN.

Accessory selection

Cylinder model	Accessories	JSI		JSID		JSIJ	
		Standard	With magnet	Standard	With magnet	Standard	With magnet
Cylinder model	LB	●	●	●	●	●	●
	FA	●	●	●	●	●	●
	FB	●	●	x	x	x	x
	CA	●	●	x	x	x	x
	CB	●	●	x	x	x	x
	CR	●	●	x	x	x	x
	TC	●	●	●	●	●	●
Knuckle	TF	●	●	●	●	●	●
	TM	●	●	●	●	●	●
	I	●	●	●	●	●	●
	Y	●	●	●	●	●	●
Sensor switch	U	●	●	●	●	●	●
	F	●	●	●	●	●	●
	CS1-B	x	●	x	●	x	●
	CS1-BX	x	●	x	●	x	●
	CS1-BN	x	●	x	●	x	●
CS1-BP	x	●	x	●	x	●	

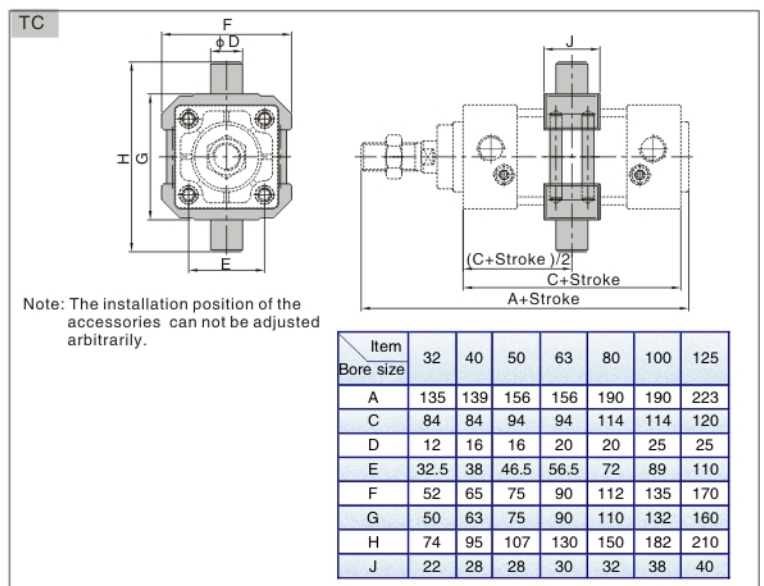
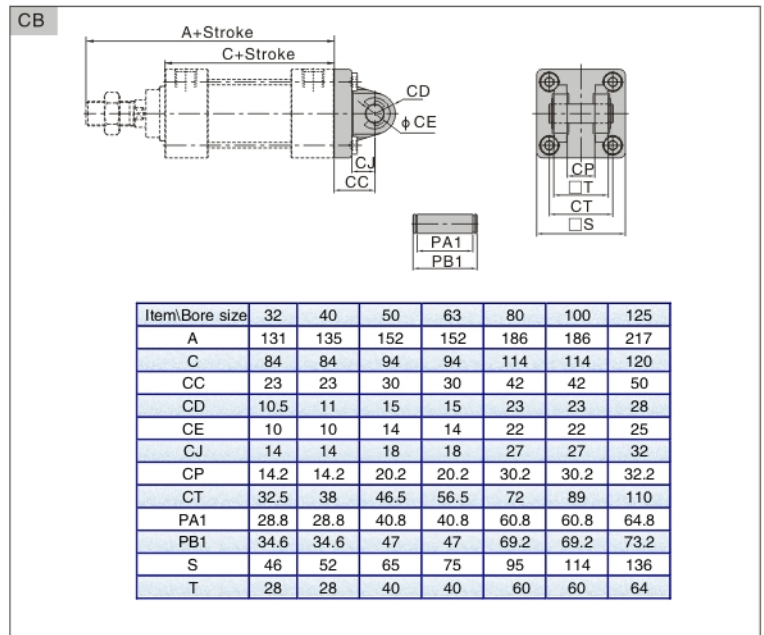
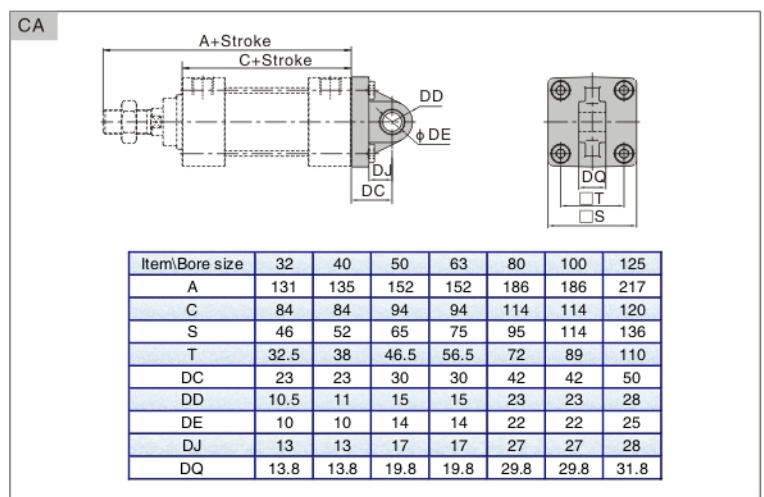
①: Please refer to PVI-33-VI-38 for knuckle detail;

②: Please refer to PVI-39-VI-50 for detail of sensor switch.

Material of accessories

Accessories	Mounting accessories							Joint accessories					
	LB	FA	FB	CA	CB	CR	TC	TF	TM	I	Y	F	U
Bore size													
32-63	SPCC	6061	FC25	Carbon steel	Nodular castiron	Carbon steel	Aluminum alloy	Carbon steel					
80、100													
125													

Dimensions



FA

FB

Item\Bore size	32	40	50	63	80	100	125
A	131	135	152	152	186	186	217
C	84	84	94	94	114	114	120
AJ	11	11	14	14	17	17	19
AK	6.5	6.5	9	9	11	11	13
BA	30.5	35.5	40.5	45.5	45.5	55.5	60.5
BB	10	10	12	12	16	16	20
BC	47	53	65	75	95	115	138
BD	32	36	45	50	63	75	102
BE	80	90	108	118	150	176	216
BF	64	72	90	100	126	150	180
BH	6.5	6.5	8.5	8.5	10.5	10.5	12.5
BP	7	9	9	9	12.5	14.5	14
T	32.5	38	46.5	56.5	72	89	110

LB

Item\Bore size	32	40	50	63	80	100	125
AA	146	154	170	176	202	210	250
AC	128	132	148	148	174	178	210
AD	9	11	11	14	14	16	20
AE	50	55	70	80	100	120	136
AF	32	38	46	56	72	89	90
AG	22	24	27	27	30	32	45
AH	30	33	40	45	55	65	81
AP	7	9	9	12	12	14	14
AT	3	3	3	4	5	5	8

CR

Item\Bore size	32	40	50	63	80	100	125	Item\Bore size	32	40	50	63	80	100	125
A	131	135	152	152	186	186	217	F	12	12	15	15	18	18	20
AA	44	44	60	60	86	86	110	H	7	7	8	8	10	10	14
B	62	62	81	81	111	111	136	I	13.8	13.8	19.8	19.8	29.8	29.8	31.8
C	84	84	94	94	114	114	120	J	10	10	14	14	22	22	25
CC	22	22	30	30	45	45	60	K	33	33	45	45	65	65	75
CD	65	65	84.5	84.5	120	120	143	L	32	32	43	43	64	64	78
CJ	23	23	31.5	31.5	47	47	53	N	25	25	40	40	30	30	30
D	42	42	53	53	73	73	90	O	45	45	60	60	55	55	50
E	6.6	6.6	9	9	11	11	13.5	N+O+90°	160	160	190	190	175	175	170

Accessories

TF

Note: The installation position of the accessories can not be adjusted arbitrarily.

Bore size Item	32	40	50	63	80	100	125
A	135	139	156	156	190	190	223
AA	22	28	28	30	32	38	40
B	66	86.5	91.5	115	126	157.5	175
C	84	84	94	94	114	114	120
CC	40	54	54	70	70	90	90
D	11	11	11	11	11	19	19
E	9	12	12	12	12	18	18
F	60	75	75	85	85	115	115

Bore size Item	32	40	50	63	80	100	125
G	80	100	100	110	110	155	155
H	52	65	75	90	112	135	170
I	12	16	16	20	20	25	25
J	20	27	31	42	54	68	80
K	50	63	75	90	110	132	160
L	62	79	91	110	130	157	185
M	77	98	110	133	153	185	213
N	12	16	16	20	20	25	25

TM

Note: The installation position of the accessories can not be adjusted arbitrarily.

Bore size Item	32	40	50	63	80	100	125
A	135	139	156	156	190	190	223
AA	14	17	17	20.5	20.5	24.5	24.5
B	52	65	75	90	112	135	170
C	84	84	94	94	114	114	120
CC	12	16	16	20	20	25	25
D	20	27	31	42	54	68	80
E	50	63	75	90	110	132	160
F	66	82	94	113.5	133.5	159.5	187.5

Bore size Item	32	40	50	63	80	100	125
G	80	99	111	134	154	184	212
H	32	36	36	42	42	50	50
I	46	55	55	65	65	75	75
J	6.8	9	9	11	11	14	14
K	11	15	15	18	18	20	20
M	30	36	36	40	40	50	50
N	7	9	9	11	11	14	14

■ List for ordering code of accessories

Bore size Accessories	32	40	50	63	80	100	125	
Cylinder model	LB	F-JSI32LB	F-JSI40LB	F-JS50LB	F-JSI63LB	F-JSI80LB	F-JSI100LB	F-JSI125LB
	FA	F-SI32FA	F-SI40FA	F-SI50FA	F-SI63FA	F-SI80FA	F-SI100FA	F-SI125FA
	FB							
	CA	F-JSI32CA	F-JSI40CA	F-JSI50CA	F-JSI63CA	F-JSI80CA	F-JSI100CA	F-JSI125CA
	CB	F-JSI32CB	F-JSI40CB	F-JSI50CB	F-JSI63CB	F-JSI80CB	F-JSI100CB	F-JSI125CB
	CR	F-JSI32CR		F-JSI50CR		F-JSI80CR		F-JSI125CR
	TC	F-SI32TC	F-SI40TC	F-SI50TC	F-SI63TC	F-SI80TC	F-SI100TC	F-SI125TC
	TF	F-SI32TF	F-SI40TF		F-SI63TF		F-SI125TF	
	TM	F-SI32TM	F-SI40TM		F-SI63TM		F-SI125TM	
Knuckle	I: I Knuckle	F-M10125I	F-M14150I	F-M18150I		F-M22150I	F-M26150I	F-M27200I
	Y: Y Knuckle	F-M10125Y	F-M14150Y	F-M18150Y		F-M22150Y	F-M26150Y	F-M27200Y
	U: U Knuckle	F-M10125U	F-M14150U	F-M18150U				F-M27200U
	F: F Knuckle	F-M10125F	F-M14150F	F-M18150F				
Sensor switch	CS1-B	CS1-B1		CS1-B2	CS1-B3	CS1-B4	CS1-B5	
	CS1-BX	CS1-B1X		CS1-B2X	CS1-B3X	CS1-B4X	CS1-B5X	
	CS1-BN	CS1-B1N		CS1-B2N	CS1-B3N	CS1-B4N	CS1-B5N	
	CS1-BP	CS1-B1P		CS1-B2P	CS1-B3P	CS1-B4P	CS1-B5P	

