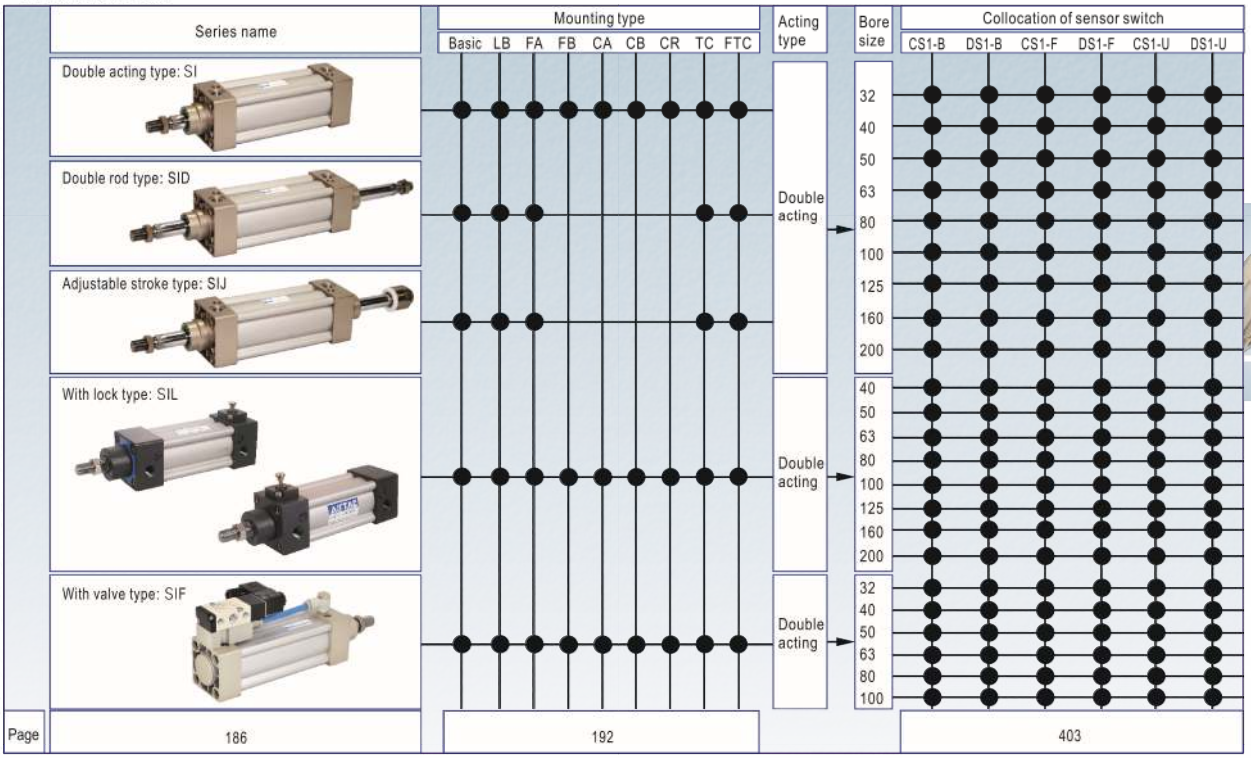
In accordance with ISO15552 standard

Product series



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 higher humidity, much dust or water drops, oil dust and welding dregs.
4. Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline to prevent the entrance of particles into the cylinder.
5. The medium used by cylinder shall be filtered to 40 μ m or below.
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 conduct anti-rust treatment to the surface. Anti-dust caps shall be added in air inlet and outlet ports.

Criteria for selection: Cylinder thrust

Unit：Newton(N)

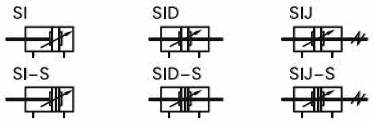
Bore size (mm)	Rod size (mm)	Acting type		Pressure area (mm²)	Operating pressure(MPa) 0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
32	12	Double acting	Push side	804	80.4	160.8	241.2	321.6	402.0	482.4	562.8	643.2	723.6
			Pull side	690	69.0	138.0	207.0	276.0	345.0	414.0	483.0	552.0	621.0
40	16	Double acting	Push 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
52	20	Double 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	25	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	7362	736.2	1472.4	2208.6	2948.6	3681.0	4417.2	5153.4	5889.6	6625.8
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
160	40	Double acting	Push side	20106	2010.6	4021.2	6031.8	8042.4	10053.0	12063.6	14074.2	16084.8	18095.4
			Pull side	18849	1884.9	3769.8	5654.7	7539.6	9424.5	11309.4	13194.3	15079.2	16964.1
200	40	Double acting	Push side	31416	3141.6	6283.2	9424.8	12566.4	15708.0	18849.6	21991.2	25132.8	28274.4
			Pull side	30157	3015.7	6031.4	9047.1	12062.8	15078.5	18094.2	21109.9	24125.6	27141.3

ISO15552 Standard cylinder

SI Series

SI

Symbol



Product feature

1. ISO15552 (original ISO6431) standard cylinder;
2. The piston seal is composed of two Y-shape one-way seal structure, which has compensation function, long service life and low start-up pressure;
3. The ※-shaped aluminum pipe without tie rod has good corrosion esistance;
4. The buffer adjustment of cylinder is smooth and steady;
5. Cylinders and accessories for installation with several specifications are optional.

Ordering code

Model can to be changed Ordering code. Example:
Production type: SIJ
Bore size: 160mm
Rod material: SUS420J2
Stroke: 500mm
Adjustable stroke: 75mm
Magnet: With magnet
Mounting type: LB
Seals material: NBR
Thread type: NPT
Model: SIJ-160A×500-75-S-N-LB-T
Ordering code: SIJ C0 A S 0500 075 LB N T

- **Model**
- **Bore size**
  - 32: Φ32mm
  - 40: Φ40mm
  - 50: Φ50mm
  - 63: Φ63mm
  - 80: Φ80mm
  - A0: Φ100mm
  - B0: Φ125mm
  - C0: Φ160mm
  - D0: Φ200mm
- **Rod Material**
  - Blank: Medium carbon steel
  - A: SUS420J2
  - B: SUS304
- **Magnet**
  - Blank: Without magnet
  - S: With magnet
- **Stroke** — In 4 digits
- **Adjustable stroke** — In 3 digits
- **Mounting type**
- **Seals Material**
  - Blank: TPU
  - H: Viton
  - N: NBR
- **Thread type**
  - P: PT
  - T: NPT
  - G: G

Specification

Bore size(mm)		32	40	50	63	80	100	125	160	200
Acting type		Double acting								
Fluid		Air(to be filtered by 40 μ m filter element)								
Mounting type	SI	Basic FA FB CA CB CR LB TC FTC TCM1 TCM2								
	SID、SIJ	Basic FA LB TC FTC TCM1 TCM2								
Operating pressure		0.1~1.0MPa(15~145psi)(1.0~10.0bar)								
Proof pressure		1.5MPa(215psi)(15bar)								
Temperature ℃		-20~80								
Speed range mm/s		30~800						30~500		
Stroke tolerance		$0\sim250^{+1.0}_{0}$		$251\sim1000^{+1.4}_{0}$			$1001\sim1500^{+1.8}_{0}$			
Cushion type		Variable cushion								
Adjustable cushion stroke mm		27		30		36		40		50
Port size ①		1/8"	1/4"		3/8"		1/2"			3/4"

① **PT thread,** NPT thread and G thread are available.
Add) Refer to P403~426 for detail of sensor switch.

Stroke

Bore size (mm)	Standard stroke (mm)	Max. std stroke	Max. stroke
32	**25** 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	1000	1800
40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800	1200	1800
50	**25** 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1200	1800
63	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
80	**25** 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
100	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
125	**25** 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
160	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
200	**25** 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000

Note) Consult us for non-standard stroke.

Explain of model

SI -160 □ × 50 -S-□-□-P
SID-160 □ × 50 -S-□-□-P
SIJ-160 □ × 50-20-S-□-□-P

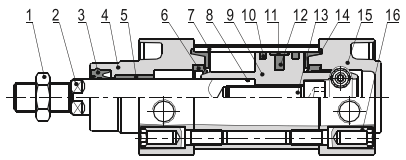
- **Model**
  - SI: Double acting type
  - SID: Double rod type
  - SIJ: Adjustable stroke type
- **Bore size**
  - 32 40 50 63 80 100 125 160 200
- **Rod Material**
  - Blank: Medium carbon steel
  - A: SUS420J2
  - B: SUS304
- **Stroke**
  - Refer to stroke table for details
- **Adjustable stroke**
  - 10: 10mm
  - 20: 20mm
  - 30: 30mm
  - 40: 40mm
  - 50: 50mm
  - 75: 75mm
  - 100: 100mm
- **Magnet**
  - Blank: Without magnet
  - S: With magnet
- **Thread type**
  - P: PT
  - T: NPT
  - G: G
- **Seals Material**
  - Blank: TPU
  - H: Viton
  - N: NBR
- ① **Mounting type**

	Mounting type	Available series	Memo
Blank		SI SID SIJ	
LB			
FA			
FB		SI	
CA			
CB			
CR			Be used with CB
FTC		SI SID SIJ	Be used with TCM1 TCM2
TC			

① Please refer **to page 192~194 for accessory parts.**

Inner structure and material of major parts

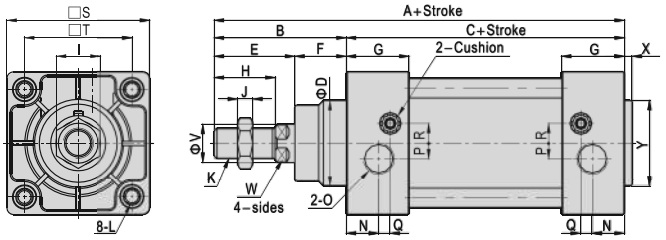
SI



NO.	Item	Material
1	Rod nut	Carbon steel
2	Piston rod	Carbon steel with 20 μ m chrome plated or Stainless steel
3	Front cover packing	TPU
4	Front cover	Aluminum alloy
5	Bushing	Wear resistant material
6	Cushing O-ring	TPU
7	Barrel	Aluminum alloy
8	Rod O–ring	NBR
9	Piston	Aluminum alloy
10	Piston seal	TPU
11	Wear ring	Wear resistant material
12	Magnet	Plastic(Φ100 or below)\Rubber(other)
13	Bolt	Carbon steel
14	Buffer gasket	TPU
15	Back cover	Aluminum alloy
16	Tie-rod nut	Carbon steel

Dimensions

SI

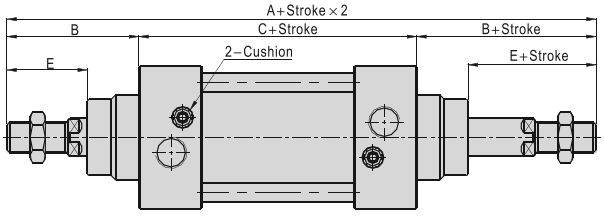


Bore size\Item	A	B	C	D	E	F	G	H	I	J	K
32	142	48	94	30	29	19	27.5	22	17	6	M10×1.25
40	159	54	105	35	33	21	32	24	17	7	M12×1.25
50	175	69	106	40	42	27	31	32	23	8	M16×1.5
63	190	69	121	45	42	27	33	32	23	8	M16×1.5
80	214	86	128	45	53	33	33	40	26	10	M20×1.5
100	229	91	138	55	55	36	37	40	26	10	M20×1.5
125	279	119	160	60	74	45	46	54	41	13.5	M27×2.0
160	332	152	180	65	94	58	50	72	55	18	M36×2.0
200	347	167	180	75	100	67	50	72	55	18	M36×2.0

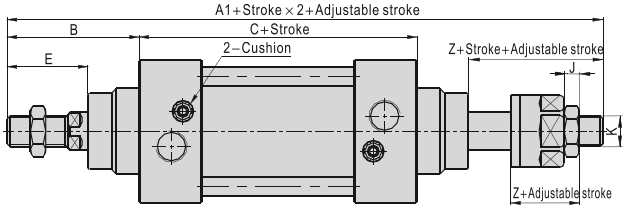
Bore size\Item	L	N	O	P	Q	R	S	T	V	W	X	Y
32	M6	13	1/8"	5.5	6	6	47	32.5	12	10	3	30
40	M6	17	1/4"	6	7.5	8.5	53	38	16	13	3.5	35
50	M8	15.5	1/4"	7.5	6.5	9.5	65	46.5	20	17	3.5	40
63	M8	16.5	3/8"	7.5	7.5	11.5	75	56.5	20	17	4	45
80	M10	16.5	3/8"	9	7.5	13.5	95	72	25	22	4	45
100	M10	18.5	1/2"	9.5	8.5	13.5	115	89	25	22	4	55
125	M12	23	1/2"	14	12	14	140	110	32	27	4	60
160	M16	25	3/4"	15	12	20	180	140	40	36	4	65
200	M16	25	3/4"	15	12	20	220	175	40	36	5	75

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

SID



SIJ



Bore size\Item	A	A1	B	C	E	Z	J	K
32	190	188	48	94	29	27	6	M10X1.25
40	213	208	54	105	33	28	7	M12X1.25
50	244	231	69	106	42	29	8	M16X1.5
63	259	246	69	121	42	29	8	M16X1.5
80	300	282.5	86	128	53	35.5	10	M20X1.5
100	320	300.5	91	138	55	35.5	10	M20X1.5
125	398	366.5	119	160	74	42.5	13.5	M27X2.0
160	484	458	152	180	94	68	18	M36X2.0
200	514	482	167	180	100	68	18	M36X2.0

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

SI