



Standard cylinder—SAI Series

In accordance with ISO15552 standard

Compendium of SAI Series

ISO15552 Standard cylinder
 Bore size: 32, 40, 50, 63, 80
 100, 125, 160, 200

Adjustable air buffer
 With adjustable air buffer on the front and back cover

Four kinds of cylinder joints

I Knuckle Y Knuckle Floating Joint Universal Joint

Extruded body with switch groove
 With switch groove on the two sides of body, the counterpart sensor switch type is: CMSE \ DMSE.

Multi-type cylinder

SAI: Double acting type SAID: Double rod type SAIJ: Adjustable stroke type

SAIL: Double acting with locker type

Multi-mounting accessories

LB FA FB

CA CB CR

FTC TCM1 TCM2

TC

Criteria for selection: Cylinder thrust

Unit: Newton(N)

Bore size	Rod size	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	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		
50	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		

Installation and application



- When load changes in the work, the cylinder with abundant output capacity shall be selected.
- Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion.
- Necessary protection measure shall be taken in the environment with higher humidity, much dust or water drops, oil dust and welding dregs.
- Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline to prevent the entrance of particles into the cylinder.
- The medium used by cylinder shall be filtered to 40μm or below.
- Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
- 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.
- The cylinder shall avoid the influence of side load in operation to maintain the normal work of cylinder and extend the service life.
- 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.



ISO15552 Standard cylinder

SAI Series



Specification

Bore size(mm)	32	40	50	63	80	100	125	160	200	
Acting type	Double acting									
Fluid	Air(to be filtered by 40µm filter element)									
Mounting type	SAI	Basic FA FB CA CB CR LB TC FTC TCM1 TCM2								
	SAID、SAIJ	Basic FA LB TC FTC TCM1 TCM2								
Operating pressure	0.15~1.0MPa(22~145psi)(1.5~10.0bar)									
Proof pressure	1.5MPa(215psi)(15bar)									
Temperature °C	-20~70									
Speed range mm/s	30~800						30~500			
Stroke tolerance	0~250 ^{+1.0} ₀		251~1000 ^{+1.5} ₀			1001~1500 ^{+2.0} ₀				
Cushion type	Variable cushion									
Adjustable cushion stroke	27		30			36		40		50
Port size [Note1]	1/8"		1/4"		3/8"		1/2"		3/4"	

[Note1] G thread is available.

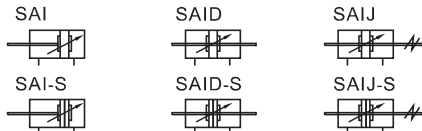
Add) Refer to P528 for detail of sensor switch.

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.

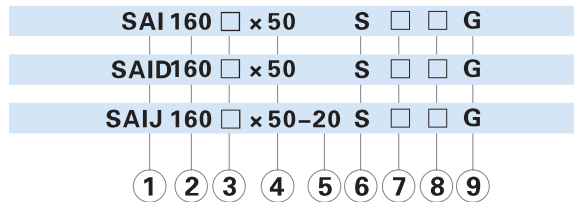
Symbol



Product feature

- ISO15552 (original ISO6431) standard cylinder;
- 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;
- The aluminum profile without tie rod has good corrosion resistance. With sensor switch groove on the two sides of body;
- The buffer adjustment of cylinder is smooth and steady;
- Cylinders and accessories for installation with several specifications are optional.

Ordering code



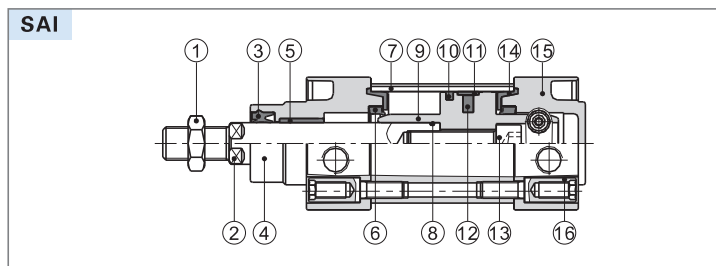
① Model	② Bore size	③ Rod Material	④ Stroke	⑤ Adjustable stroke	⑥ Magnet	⑦ Mounting type[Note1]	⑧ Seals Material	⑨ Thread type
SAI: Double acting type	32 40 50 63 80 100 125 160 200	Blank: Medium carbon steel A: SUS420J2 B: SUS304	Refer to stroke table for details	No this code	Blank: Without magnet S: With magnet	Blank LB FA FB CA CB CR FTC TC	Blank: TPU H: Viton N: NBR	G: G Thread
SAID: Double rod type						Blank LB FA FTC TC		
SAIJ: Adjustable stroke type				10 20 30 40 50 75 100				

[Note1] CR is used with CB; FTC、TC are used with TCM1、TCM2.

ISO15552 Standard cylinder

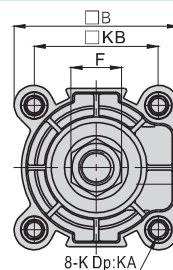
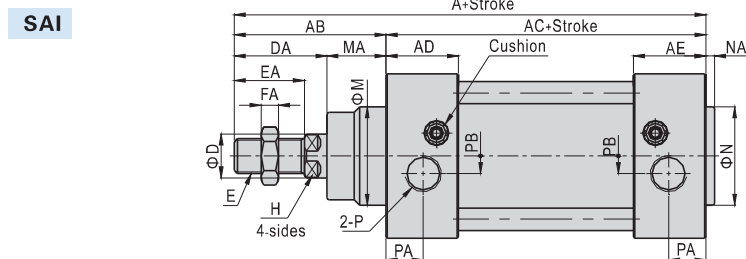
SAI Series

Inner structure and material of major parts



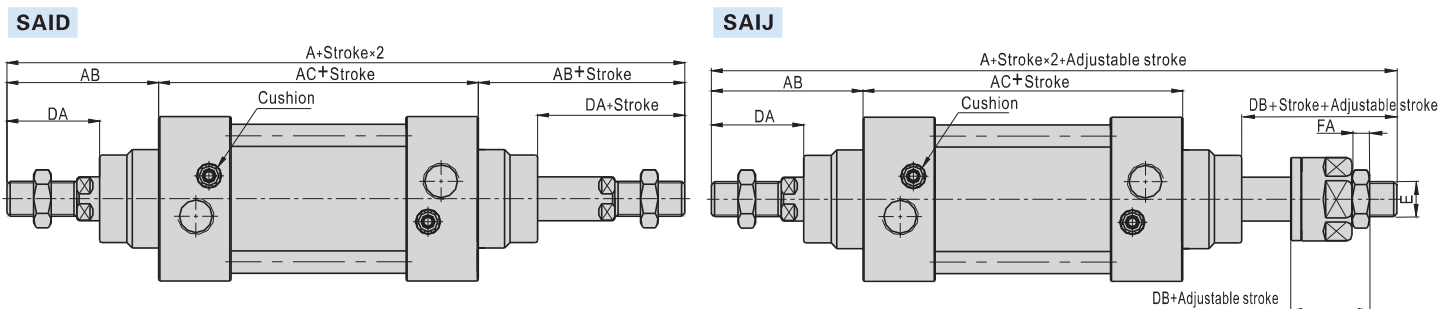
NO.	Item	Material
1	Rod nut	Carbon steel\Stainless steel
2	Piston rod	Carbon steel with 20μm chrome plated or Stainless steel
3	Front cover packing	TPU
4	Front cover	Aluminum alloy
5	Bushing	Wear resistant material
6	Cushing O-ring	TPU
7	Barrel	Aluminum alloy
8	O-ring	NBR
9	Piston	Aluminum alloy
10	Piston Seal	NBR
11	Wear ring	Wear resistant material
12	Magnet	Plastic(Φ 100 and below)\Rubber(Others)
13	Bolt	Carbon steel
14	Buffer gasket	TPU
15	Back cover	Aluminum alloy
16	Screw	Carbon steel\Stainless steel

Dimensions



Bore size\Item	A	AB	AC	AD	AE	B	D	DA	E	EA	F	FA	M	MA	H	K	KA	KB	N	NA	P	PA	PB
32	142	48	94	27.5	27.5	47	12	29	M10×1.25	22	17	6	30	19	10	M6	16	32.5	30	3	1/8"	13	5.5
40	159	54	105	32	32	53	16	33	M12×1.25	24	17	7	35	21	13	M6	17	38	35	3.5	1/4"	17	6
50	175	69	106	31	31	65	20	42	M16×1.5	32	23	8	40	27	17	M8	17	46.5	40	3.5	1/4"	15.5	7.5
63	190	69	121	33	33	75	20	42	M16×1.5	32	23	8	45	27	17	M8	17	56.5	45	4	3/8"	16.5	7.5
80	214	86	128	33	33	95	25	53	M20×1.5	40	26	10	45	33	22	M10	19	72	45	4	3/8"	16.5	9
100	229	91	138	37	37	115	25	55	M20×1.5	40	26	10	55	36	22	M10	19	89	55	4	1/2"	18.5	9.5
125	279	119	160	46	46	140	32	74	M27×2.0	54	41	13.5	60	45	27	M12	22	110	60	4	1/2"	23	14
160	332	152	180	50	50	180	40	94	M36×2.0	72	55	18	65	58	36	M16	30	140	65	4	3/4"	25	15
200	347	167	180	50	50	220	40	100	M36×2.0	72	55	18	75	67	36	M16	30	175	75	5	3/4"	25	15

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



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

Remark:

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