



Standard cylinder——SE Series

—— In accordance with ISO15552 and VDMA24562 standard

■ 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 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	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	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	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	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	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	Push side	7853	785.3	1570.6	2355.9	3141.2	3926.5	4711.8	5497.1	6282.4	7067.7
		Pull side	7362	736.2	1472.4	2208.6	2944.8	3681.0	4417.2	5153.4	5889.6	6625.8
125	32	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

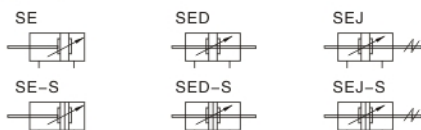
■ Product series

Series name	Mounting type									Acting type	Bore size	Collocation of sensor switch			
	Basic	LB	FA	FB	CA	CB	CR	TC	FTC			CS1-E	CS1-EX	CS1-EN	CS1-EP
Double acting type: SE	●	●	●	●	●	●	●	●	●	Double acting	32	●	●	●	●
Double rod type: SED	●	●	●	●	●	●	●	●	●		40	●	●	●	●
Adjustable stroke type: SEJ	●	●	●	●	●	●	●	●	●		50	●	●	●	●
	●	●	●	●	●	●	●	●	●		63	●	●	●	●
	●	●	●	●	●	●	●	●	●		80	●	●	●	●
	●	●	●	●	●	●	●	●	●		100	●	●	●	●
	●	●	●	●	●	●	●	●	●		125	●	●	●	●
Page	III-02											VI-39			





Symbol



Product feature

- 1、ISO15552 and VDMA24562 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 square aluminum pipe without tie rod has good corrosion resistance;
- 4、The buffer adjustment of cylinder is smooth and steady;
- 5、Cylinders and accessories for installation with several specifications are optional.

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	SE	Basic FA FB CA CB CR LB TC FTC TF TM						
	SED	Basic FA LB TC FTC TF TM						
	SEJ	Basic FA LB TC FTC TF TM						
Operating pressure		0.1~1.0MPa(14~145Psi)						
Proof pressure		1.5MPa(215Psi)						
Temperature	℃	-20~80						
Speed range	mm/s	30~800						
Stroke tolerance		0~250 ^{+1.0} 251~1000 ^{+1.4} 1001~1500 ^{+1.8}						
Cushion type		Variable cushion						
Adjustable cushion stroke	mm	27 30 36 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	25	50	75	80	100	125	150	160	175	200	250	300	350	400	450	500	1200	1800
50	25	50	75	80	100	125	150	160	175	200	250	300	350	400	450	500	1200	1800
63	25	50	75	80	100	125	150	160	175	200	250	300	350	400	450	500	1500	1800
80	25	50	75	80	100	125	150	160	175	200	250	300	350	400	450	500	1500	1800
100	25	50	75	80	100	125	150	160	175	200	250	300	350	400	450	500	1500	1800
125	25	50	75	80	100	125	150	160	175	200	250	300	350	400	450	500	1500	1800

Remark: Consult us for non-standard stroke.

Ordering code

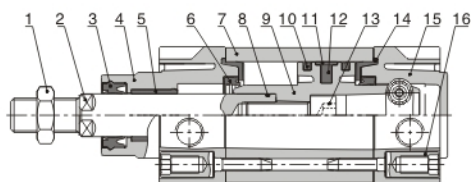
SE—80	□	x	50	—S—	□	—	□	—	P
SED—80	□	x	50	—S—	□	—	□	—	P
SEJ—80	□	x	50—20	—S—	□	—	□	—	P

Model	Bore size	Adjustable stroke	Rod Material	Magnet	Stroke	Seals Material	Thread type	Mounting type
SE: Double acting type	10: 10mm	10: 10mm	Blank: Medium carbon steel	S: With magnet	Blank: TPU	P: PT	Blank	SE
SED: Double rod type	20: 20mm	20: 20mm	A: SUS420J2	Blank: Without magnet	H: Viton	T: NPT	LB	SED
SEJ: Adjustable stroke type	30: 30mm	30: 30mm	B: SUS304		N: NBR	G: G	FA	SEJ
	40: 40mm	40: 40mm	C: SUS316				FB	SE
	50: 50mm	50: 50mm					CA	SE
	75: 75mm	75: 75mm					CB	SE
	100: 100mm	100: 100mm					CR	SE
							FTC	SE
							TC	SEJ

① Please refer to page III-04~III-06 for accessory parts.

Inner structure and material of major parts

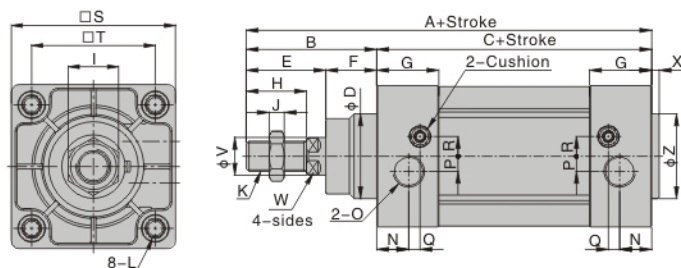
SE-S



NO.	Item	Material
1	Rod nut	Carbon steel /Stainless steel
2	Piston rod	Carbon steel with 20um chrome plated
		Stainless steel
3	Front cover packing	TPU
4	Front cover	Aluminum alloy
5	Bushing	Wear resistant material
6	Cushion O-ring	TPU
7	Barrel	Aluminum alloy
8	O-ring	NBR
9	Piston	Aluminum alloy
10	Piston O-ring	TPU
11	Wear ring	Wear resistant material
12	Magnet	Plastic / Rubber (φ 125)
13	Bolt	Carbon steel
14	Buffer gasket	TPU
15	Back cover	Aluminum alloy
16	Screw	Carbon steel /Stainless steel

■ Dimensions

SE

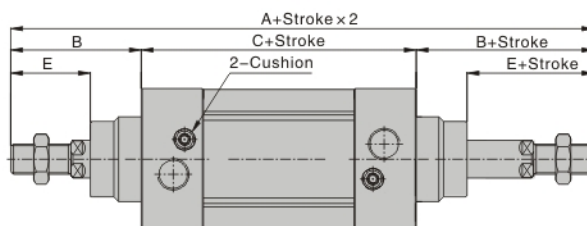


Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

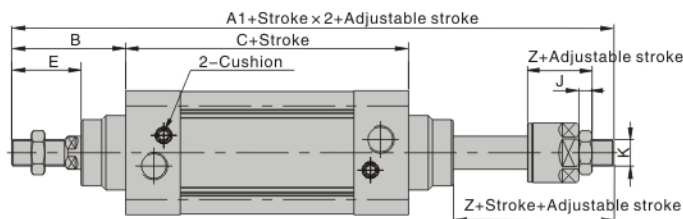
Item Bore size	A	B	C	D	E	F	G	H	I	J	K	L	N
32	142	48	94	30	29	19	27.5	22	17	6	M10 × 1.25	M6	13.5
40	159	54	105	35	33	21	32	24	17	7	M12 × 1.25	M6	17.5
50	175	69	106	40	42	27	31	32	23	8	M16 × 1.5	M8	14
63	190	69	121	45	42	27	33	32	23	8	M16 × 1.5	M8	17
80	214	86	128	45	53	33	33	40	26	10	M20 × 1.5	M10	16.5
100	229	91	138	55	55	36	37	40	26	10	M20 × 1.5	M10	19.5
125	279	119	160	60	74	45	46	54	41	13.5	M27 × 2	M12	23

Item Bore size	O	P	Q	R	S	T	V	W	X	Z
32	1/8"	5.8	6	6.3	46.5	32.5	12	10	3	30
40	1/4"	6	5.5	9	54	38	16	13	3.5	35
50	1/4"	8	5	10.5	64	46.5	20	17	3.5	40
63	3/8"	8	6	10.5	75	56.5	20	17	4	45
80	3/8"	8	8.5	12.5	93	72	25	22	4	45
100	1/2"	10	7	12	110	89	25	22	4	55
125	1/2"	11	12	11	134	110	32	27	4	60

SED



SEJ



Item Bore size	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

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

Accessories

Ordering code

F	SE	50	CA
Accessory	Model	Bore size	Accessory type
①			
Mounting accessory		CA	CA type
		CB ②	CB type
		TC	TC type

① The listed accessories are for SE cylinder. Accessories that are adaptable to other cylinders are not shown. Please refer to accessory list on PIII-06 for selection and ordering information.

② CB is attached with relevant PIN.

Accessory selection

Cylinder model	SE		SED		SEJ	
	Standard	With magnet	Standard	With magnet	Standard	With magnet
Accessories						
Mounting accessory						
LB	●	●	●	●	●	●
FA	●	●	●	●	●	●
FB	●	●	×	×	×	×
CA	●	●	×	×	×	×
CB	●	●	×	×	×	×
CR	●	●	×	×	×	×
TC	●	●	●	●	●	●
FTC	●	●	●	●	●	●
TF	●	●	●	●	●	●
TM	●	●	●	●	●	●
Knuckle						
① I	●	●	●	●	●	●
Y	●	●	●	●	●	●
U	●	●	●	●	●	●
F	●	●	●	●	●	●
Sensor switch						
② CS1-E	×	●	×	●	×	●
CS1-EX	×	●	×	●	×	●
CS1-EN	×	●	×	●	×	●
CS1-EP	×	●	×	●	×	●

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		
Bore size	LB	FA	FB	TM	CR	CA	CB	FTC	TF	I, Y	F, U
32~100	Low carbon steel	Aluminum alloy			Nodular cast iron			Cast steel		Carbon steel	
125											

CA		Mounting accessories								Joint accessories		
		LB	FA	FB	TM	CR	CA	CB	FTC	TF	I, Y	F, U
		Low carbon steel	Aluminum alloy			Nodular cast iron			Cast steel		Carbon steel	

Item	Bore size	32	40	50	63	80	100	125
A	142	159	175	190	214	229	279	
C	94	105	106	121	128	138	160	
S	46.5	54	64	75	93	110	134	
T	32.5	38	46.5	56.5	72	89	110	
DC	22	25	27	32	36	41	50	
DD	10.5	12	12	15	15.5	20	24	
DE	10	12	12	16	16	20	25	
DJ	13	16	17	22	22	27	33	
DQ	25.8	27.8	31.7	39.7	49.7	59.7	69.7	

Dimensions

LB		Mounting accessories								Joint accessories		
		LB	FA	FB	TM	CR	CA	CB	FTC	TF	I, Y	F, U
		Low carbon steel	Aluminum alloy			Nodular cast iron			Cast steel		Carbon steel	

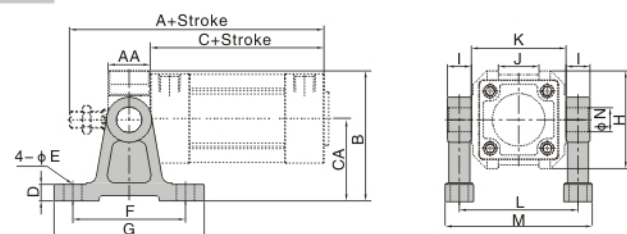
Bore size	32	40	50	63	80	100	125
A	142	159	175	190	214	229	279
C	94	105	106	121	128	138	160
AA	158	179	190	209	248	266	290
AC	142	161	170	185	210	228	250
AD	8	9	10	12	19	19	20
AE	47	53	65	75	95	115	140
AF	32	36	45	50	63	75	90
AG	24	28	32	32	41	45	45
AH	32	36	45	50	63	71	90
AP	7	9	9	9	12.5	14.5	16.5
AT	3	3	3	3	4	4	8

FA		Mounting accessories								Joint accessories		
		LB	FA	FB	TM	CR	CA	CB	FTC	TF	I, Y	F, U
		Low carbon steel	Aluminum alloy			Nodular cast iron			Cast steel		Carbon steel	

Bore size	32	40	50	63	80	100	125
A	142	159	175	190	214	229	279
C	94	105	106	121	128	138	160
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	139
BD	32	36	45	50	63	75	90
BE	80	90	108	118	150	176	218
BF	64	72	90	100	126	150	180
BP	7	9	9	9	12.5	14.5	16.5
T	32.5	38	46.5	56.5	72	89	110

Accessories

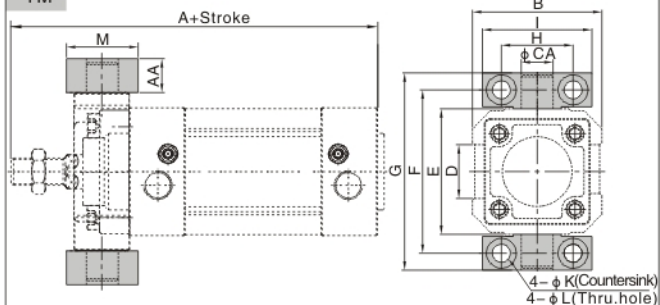
TF



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

Item/Bore size	32	40	50	63	80	100	125
A	142	159	175	190	214	229	279
AA	19	21	26	28	31	35	43
B	66	86.5	91.5	115	126	157.5	169.3
C	94	105	106	121	128	138	160
CA	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
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	135	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

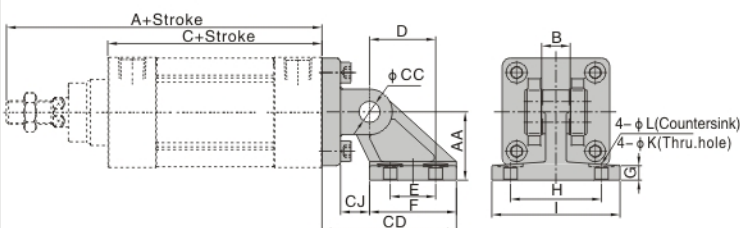
TM



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

Item/Bore size	32	40	50	63	80	100	125
A	142	159	175	190	214	229	279
AA	14	17	17	20.5	20.5	24.5	24.5
B	52	65	75	90	112	135	170
CA	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
G	80	99	111	134	154	184	212
H	32	36	36	42	42	50	50
I	46	55	55	65	65	75	75
K	11	15	15	18	18	20	20
L	7	9	9	11	11	14	14
M	30	36	36	40	40	50	50

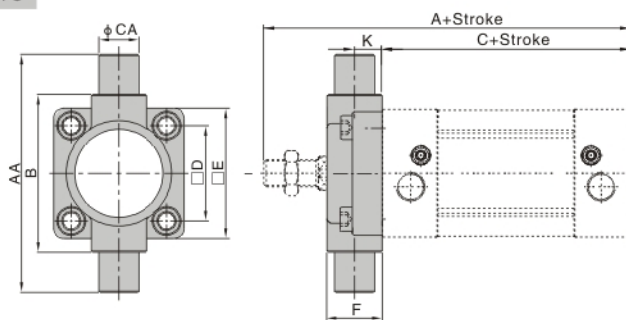
CR(Be used with CB)



Item/Bore size	32	40	50	63	80	100	125
A	142	159	175	190	214	229	279
AA	32	36	45	50	63	71	90
B	26	28	32	40	50	60	70
C	94	105	106	121	128	138	160
CC	10	12	12	16	16	20	25
CD	50	56	68	77	93	106	135
CJ	10	12	13	17	19	22	26

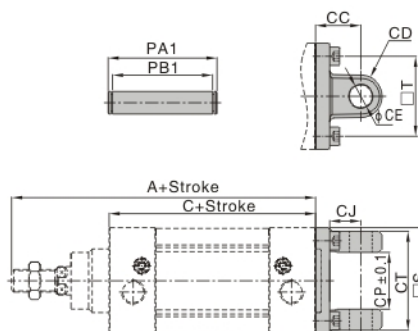
Item/Bore size	32	40	50	63	80	100	125
D	21	24	33	37	47	55	70
E	18	22	30	35	40	50	60
F	31	35	45	50	60	70	90
G	8	10	12	12	14	15	20
H	38	41	50	52	66	76	94
I	51	54	65	67	86	96	124
K	6.6	6.6	9	9	11	11	14
L	-	-	-	-	18	18	20

FTC



Item/Bore size	32	40	50	63	80	100	125
A	142	159	175	190	214	229	279
AA	74	95	107	130	150	182	210
B	50	63	75	90	110	132	160
C	94	105	106	121	128	138	160
CA	12	16	16	20	20	25	25
D	32.5	38	46.5	56.5	72	89	110
E	46	52	64	74	94	114	139
F	19	21	26	28	31	35	43
K	10	10	12	12	16	16	20

CB



Bore size	32	40	50	63	80	100	125
Item							
A	142	159	175	190	214	229	279
C	94	105	106	121	128	138	160
CC	22	25	27	32	36	41	50
CD	10.5	12	12	15	15.5	20	24
CE	10	12	12	16	16	20	25
CJ	13	16	17	22	22	27	33

Bore size	32	40	50	63	80	100	125
Item							
CP	26	28	32	40	50	60	70
CT	45	52	60	70	90	110	130
PA1	51	59	67	77	97	119	139
PB1	45.5	52.5	60.5	70.5	90.5	110.5	130.5
S	46.5	54	64	75	93	110	134
T	32.5	38	46.5	56.5	72	89	110

Accessories

List for ordering code of accessories

Cylinder model		32	40	50	63	80	100	125
Accessories								
Mounting accessory	LB	F-SI32LB	F-SI40LB	F-SI50LB	F-SI63LB	F-SI80LB	F-SI100LB	F-SI125LB
	FA	F-SI32FA	F-SI40FA	F-SI50FA	F-SI63FA	F-SI80FA	F-SI100FA	F-SI125FA
	FB							
	CA	F-SE32CA	F-SE40CA	F-SE50CA	F-SE63CA	F-SE80CA	F-SE100CA	F-SE125CA
	CB	F-SE32CB	F-SE40CB	F-SE50CB	F-SE63CB	F-SE80CB	F-SE100CB	F-SE125CB
	CR	F-SI32CR	F-SI40CR	F-SI50CR	F-SI63CR	F-SI80CR	F-SI100CR	F-SI125CR
	TC ①	F-SE32TC	F-SE40TC	F-SE50TC	F-SE63TC	F-SE80TC	F-SE100TC	F-SE125TC
	FTC	F-SI32FTC	F-SI40FTC	F-SI50FTC	F-SI63FTC	F-SI80FTC	F-SI100FTC	F-SI125FTC
	TF	F-SI32TF	F-SI40TF		F-SI63TF		F-SI125TF	
	TM	F-SI32TM	F-SI40TM		F-SI63TM		F-SI125TM	
Knuckle	I:I Knuckle	F-M10125II	F-M12125II	F-M16150II		F-M20150II		F-M27200II
	Y:Y Knuckle	F-M10125YI	F-M12125YI	F-M16150YI		F-M20150YI		F-M27200YI
	U:U Knuckle	F-M10125U	F-M12125U	F-M16150U		F-M20150U		F-M27200U
	F:F Knuckle	F-M10125F	F-M12125F	F-M16150F		F-M20150F		-
Sensor switch	CS1-E				CS1-E			
	CS1-EX				CS1-EX			
	CS1-EN				CS1-EN			
	CS1-EP				CS1-EP			

①: TC accessories are under development.