



Compact cylinder——SDA Series

Product series

Series name		Acting type	Bore size	Collocation of sensor switch			
				CS1-J	DS1-J	CS1-G	DS1-G
Double acting type: SDA	Adjustable stroke type: SDAJ	Double acting	12	●	●		
			16	●	●		
			20	●		●	●
			25	●	●	●	●
			32	●	●	●	●
			40	●	●	●	●
			50	●	●	●	●
			63	●	●	●	●
			80	●	●	●	●
			100	●	●	●	●
Double rod type: SDAD	Duplex type: SDAT Duplex-end type: SDAW	Single acting	12	●	●		
			16	●	●		
			20	●		●	●
			25	●	●	●	●
			32	●	●	●	●
			40	●	●	●	●
			50	●	●	●	●
			63	●	●	●	●

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Installation and application

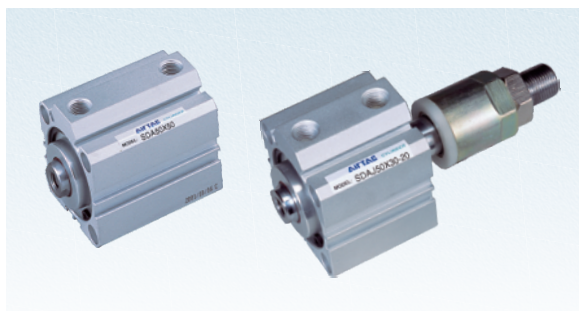
- When load changes in the work, the cylinder with abundant output capacity shall be selected.
- Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion.
- Necessary protection measure shall be taken in the environment 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 40 μm or below.
- As both of the front cover and piston of the cylinder are short, typically too large stroke can not be selected.
- Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
- 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. The front and back cover can not be dismantled, which shall be especially noticed.

Criteria for selection: Cylinder thrust

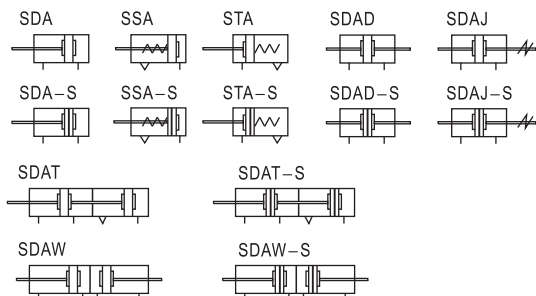
Unit: Newton(N)

Bore size (mm)	Rod size (mm)	Acting type	Pressure area (mm ²)	Operating pressure(MPa)							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					0.1	0.2	0.3	0.4	0.5	0.6	0.7		
12	6	Single acting	Push side	113.1	-	12.6	23.9	35.2	46.5	57.9	69.2	40	16	Single acting	Push side	1256.6	-	168.6	294.3	420.0	545.6	671.3	796.9
			Pull side	84.8	-	7.0	15.4	23.9	32.4	40.9	49.4				Double acting	Push side	113.1	-	22.6	33.9	45.2	56.5	67.9
		Pull side	84.8	-	17.0	25.4	33.9	42.4	50.9	59.4	Double acting			Push side		1256.6	125.7	251.3	377.0	502.7	628.3	754.0	879.6
		Pull side	84.8	-	17.0	25.4	33.9	42.4	50.9	59.4				Double acting	Push side	1055.6	105.6	211.1	316.7	422.2	527.8	633.3	738.9
16	6	Single acting	Push side	201.1	-	20.2	40.3	60.4	80.5	100.6	120.7	50	20		Single acting	Push side	1963.5	89.3	285.7	482.0	678.4	874.7	1071.1
			Pull side	172.8	-	14.6	31.8	49.1	66.4	83.7	101.0			Double acting		Push side	1649.3	57.9	222.9	387.8	552.7	717.7	882.6
		Pull side	201.1	-	40.2	60.3	80.4	100.5	120.6	140.7	Double acting				Push side	1963.5	196.3	392.7	589.0	785.4	981.7	1178.1	1374.4
		Pull side	172.8	-	34.6	51.8	69.1	86.4	103.7	121.0				Double acting	Push side	1649.3	164.9	329.9	494.8	659.7	824.7	989.6	1154.5
20	8	Single acting	Push side	314.2	-	39.8	71.2	102.7	134.1	165.5	196.9	63	20		Single acting	Push side	3117.2	135.7	447.4	759.2	1070.9	1382.6	1694.3
			Pull side	263.9	-	29.8	56.2	82.6	108.9	135.3	161.7			Double acting		Push side	2803.1	104.3	384.6	664.9	945.2	1225.5	1505.9
		Pull side	314.2	-	62.8	94.2	125.7	157.1	188.5	219.9	Double acting				Push side	3117.2	311.7	623.4	935.2	1246.9	1558.6	1870.3	2182.1
		Pull side	263.9	-	52.8	79.2	105.6	131.9	158.3	184.7				Double acting	Push side	2803.1	280.3	560.6	840.9	1121.2	1401.5	1681.9	1962.2
25	10	Single acting	Push side	490.9	-	69.7	118.8	167.8	216.9	266.0	315.1	80	25		Double acting	Push side	5026.5	502.7	1005.3	1508.0	2010.6	2513.3	3015.9
			Pull side	412.3	-	54.0	95.2	136.4	177.7	218.9	260.1			Double acting		Push side	4535.7	453.6	907.1	1360.7	1814.3	2267.8	2721.4
		Pull side	490.9	-	98.2	147.3	196.3	245.4	294.5	343.6	Double acting				Push side	7854.0	785.4	1570.8	2356.2	3141.6	3927.0	4712.4	5497.8
		Pull side	412.3	-	82.5	123.7	164.9	206.2	247.4	288.6				Double acting	Push side	7049.7	705.0	1409.9	2114.9	2819.9	3524.9	4229.8	4934.8
32	12	Single acting	Push side	804.2	-	105.3	185.8	266.2	346.6	427.0	507.5	100	32		Double acting	Push side	7854.0	785.4	1570.8	2356.2	3141.6	3927.0	4712.4
			Pull side	691.2	-	82.7	151.8	221.0	290.1	359.2	428.3			Double acting		Push side	7049.7	705.0	1409.9	2114.9	2819.9	3524.9	4229.8
		Pull side	804.2	-	160.8	241.3	321.7	402.1	482.5	563.0	Double acting				Push side	7854.0	785.4	1570.8	2356.2	3141.6	3927.0	4712.4	5497.8
		Pull side	691.2	-	138.2	207.3	276.5	345.6	414.7	483.8				Double acting	Push side	7049.7	705.0	1409.9	2114.9	2819.9	3524.9	4229.8	4934.8





Symbol



Product feature

1. Manufactured by our enterprise.
2. Riveted structure is adopted to connect the cylinder body and back cover, and piston and piston rod to make it compact and reliable;
3. The inner diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent abrasion resistance and durability.
4. The seal of piston adopts heterogeneous two-way seal structure. It has compact dimension and the function of grease reservation.
5. Compact structure can effectively save installation space.
6. There are magnetic switch slots around the cylinder body, which is convenient to install sensor switch
7. Mounting accessories with various specifications are optional.

Specification

Bore size(mm)	12	16	20	25	32	40	50	63	80	100
Acting type	Double acting									
	Single acting-Push type, Single acting-Pull type									
Fluid	Air(to be filtered by 40 μm filter element)									
Operating pressure	0.1~1.0MPa(15~145psi)(1.0~10.0bar)									
Stroke tolerance	0.2~1.0MPa(28~145psi)(2.0~10.0bar)									
Proof pressure	1.5MPa(215psi)(15bar)									
Temperature °C	-20~80									
Speed range mm/s	Double acting: 30~500 Single acting: 50~500									
Cushion type	Bumper									
Port size ①	M5 × 0.8 1/8" 1/4" 3/8"									

① PT thread, NPT thread and G thread are available. Add) Refer to P397~420 for detail of sensor switch.

Stroke

Bore size (mm)			Standard stroke (mm)																Max. std stroke	Max. stroke				
12 16	Double acting	With magnet	5	10	15	20	25	30	35	40	45	50							50	70				
		Without magnet	5	10	15	20	25	30	35	40	45	50	55	60					60	80				
	Single acting		5	10	15	20	25	30										30	-					
20	Double acting	With magnet	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90				
		Without magnet	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	100			
	Single acting		5	10	15	20	25	30										30	-					
25, 32 40, 50 63	Double acting	With magnet	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	100	110	120	
		Without magnet	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	100	110	120	130
	Single acting		5	10	15	20	25	30											30	-				
80 100	Double acting	With magnet	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	100	110	120	
		Without magnet	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	100	110	120	130

Note) 1. Please contact the company for other special strokes.

2. The dimensions of non-std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder. e.g. 23mm stroke cylinder has the same dimensions of 25 std. stroke cylinder.

Ordering code

SDA 20 × 30 S B □
SDAD 20 × 30 S B □
SDAJ 20 × 30~30 S B □

Model	Thread type ①	Rod type	Magnet	Adjustable stroke
SDA: Compact cylinder(Double acting)	Blank: PT	Blank: Female thread	Blank: Without magnet	Model Adjustable stroke
SSA: Compact cylinder(Single acting-push)	T: NPT	B: Male thread	S: With magnet	10: 10mm
STA: Compact cylinder(Single acting-pull)	G: G			20: 20mm
SDAD: Compact cylinder(Double rod)				30: 30mm
SDAJ: Compact cylinder(Adjustable stroke)				40: 40mm
				50: 50mm
				75: 75mm
				100: 100mm
				Others No this code

SDAT 20 × 30 × 10 S B □

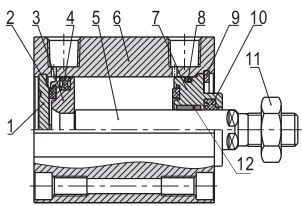
Model	Thread type ①	Rod type	Magnet	Stroke 1	Stroke 2
SDAT: Compact cylinder(Duplex type)	Blank: PT	Blank: Female thread	Blank: Without magnet	Refer to stroke table for details	Refer to stroke table for details
SDAW: Compact cylinder(Duplex-end type)	T: NPT	B: Male thread	S: With magnet		
	G: G				

① Standard thread is blank here.

Compact cylinder

SDA Series

Inner structure and material of major parts

SDA		
		
NO.	Item	Material
1	Back cover	No(Φ 12, 16) Aluminum alloy(Others)
2	Bumper	NBR
3	Piston	Brass(Φ 12, 16) Aluminum alloy(Others)
4	Piston seal	NBR
5	Piston rod	Carbon steel with 20 μ m chrome plated
6	Body	Aluminum alloy
7	Front cover	Aluminum alloy
8	O-ring	NBR
9	C clip	Spring steel
10	Front cover packing	NBR
11	Piston nut	Carbon steel
12	Bushing	No(Φ 12~32) Wear resistant material(Others)

Dimensions

SDA

Φ 12 Φ 16

Φ 20 ~ Φ 100

Bore size\Item	A	AC	A	AC	AB	B	BA	D	DA	E	EA	H	J	JA	K
	Without magnet		With magnet												
12	22	17	32	27	5	25	-	6	4	M3 × 0.5	6	5	6.5	4.5	M5 × 0.8 Thru.hole: Φ 4.2
16	24	18.5	34	28.5	5.5	29	-	6	4	M3 × 0.5	6	5	6.5	4.5	M5 × 0.8 Thru.hole: Φ 4.2
20	25	19.5	35	29.5	5.5	34	36	8	4	M4 × 0.7	8	6	6.5	4.5	M5 × 0.8 Thru.hole: Φ 4.2
25	27	21	37	31	6	40	42	10	4	M5 × 0.8	10	8	8.2	5.5	M6 × 1.0 Thru.hole: Φ 4.6
32	31.5	24.5	41.5	34.5	7	44	50	12	4.5	M6 × 1.0	12	10	8.2	5.5	M6 × 1.0 Thru.hole: Φ 4.6
40	33	26	43	36	7	52	58.5	16	4	M8 × 1.25	12	14	10	7.5	M8 × 1.25 Thru.hole: Φ 6.5
50	37	28	47	38	9	62	71.5	20	5	M10 × 1.5	15	17	11	8.5	M8 × 1.25 Thru.hole: Φ 6.5
63	41	32	51	42	9	75	84.5	20	5	M10 × 1.5	15	17	11	8.5	M8 × 1.25 Thru.hole: Φ 6.5
80	52	41	62	51	11	94	104	25	6	M14 × 1.5	20	22	14	10.5	M12 × 1.75 Thru.hole: Φ 9.2
100	63	51	73	61	12	114	124	32	7	M18 × 1.5	20	27	17.5	13	M14 × 2.0 Thru.hole: Φ 11.3

Bore size\Item	KA	KB	M	MA	P	PA	PB	T		
						St=5	St>5	St=5	St>5	
12	12	16.2	10.2	1	M5 × 0.8	7.5	7.5	5	5	23
16	12	19.8	11	1.5	M5 × 0.8	8	8	5.5	5.5	28
20	14	24	13	1.5	M5 × 0.8	9	9	5.5	5.5	-
25	15	28	17	2	M5 × 0.8	9	9	5.5	5.5	-
32	16	34	22	2.5	1/8"	9	9	6.5	9	-
40	20	40	28	3	1/8"	9.5	9.5	7.5	7.5	-
50	25	48	38	4	1/4"	8	10.5	8	10.5	-
63	25	60	40	4	1/4"	9.5	12	9.5	11	-
80	25	74	45	5	3/8"	11.5	14.5	11.5	14.5	-
100	30	90	55	5	3/8"	16	20.5	16	20.5	-



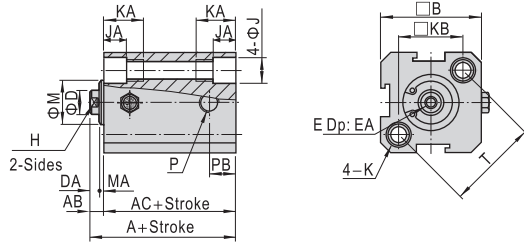
SDA

Compact cylinder

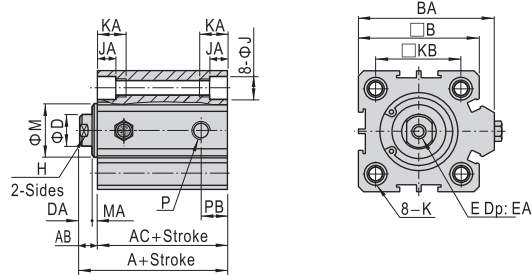
SDA Series

SSA

Φ12 Φ16

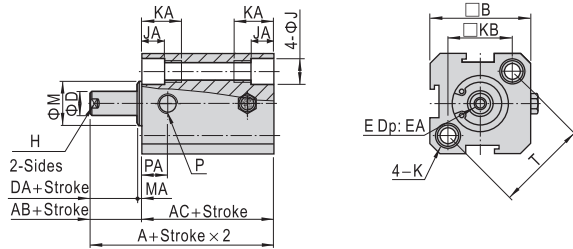


Φ20~Φ63

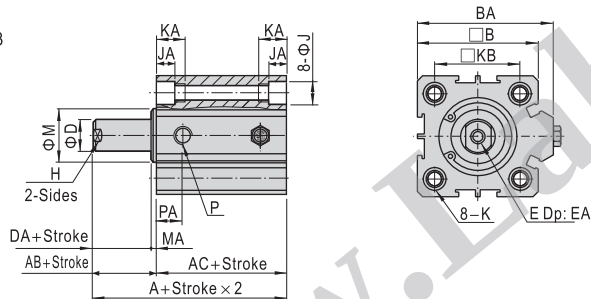


STA

Φ12 Φ16

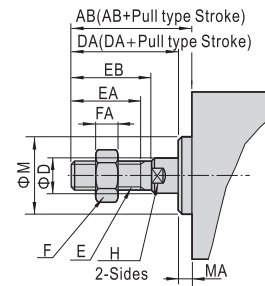


Φ20~Φ63

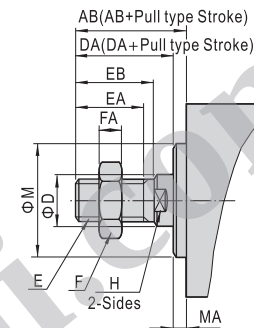


Male thread

Φ12 Φ16



Φ20~Φ100



Item	AB	D	DA	E	EA	EB	F	FA	H	M	MA	SDA	ISDA	Others
Bore size														
12	17	6	16	M5 × 0.8	10	12	8	4	5	10.2	1			1
16	17.5	6	16	M5 × 0.8	10	12	8	4	5	11	1.5			1.5
20	20.5	8	19	M6 × 1.0	13	15	10	5	6	13	1.5			1.5
25	23	10	21	M8 × 1.25	15	17	12	6	8	17	2			2
32	25	12	22	M10 × 1.25	15	18	17	6	10	22	3			2.5
40	35	16	32	M14 × 1.5	25	28	19	8	14	28	3			3
50	37	20	33	M18 × 1.5	25	28	27	11	17	38	4			4
63	37	20	33	M18 × 1.5	25	28	27	11	17	40	4			4
80	44	25	39	M22 × 1.5	30	33	32	13	22	45	5			5
100	50	32	45	M26 × 1.5	35	38	36	13	27	55	5			5

Bore size\Item	A				AC				A				AC				AB	B	BA
	Without		magnet		Without		magnet		Without		magnet								
Stroke	St≤10	St>10	St≤10	St>10	St≤10	St>10	St≤10	St>10	St≤10	St>10	St≤10	St>10	St≤10	St>10					
12	32	42	27	37	42	52	37	47	5	25	-								
16	34	44	28.5	38.5	44	54	38.5	48.5	5.5	29	-								
20	35	45	29.5	39.5	45	55	39.5	49.5	5.5	34	36								
25	37	47	31	41	47	57	41	51	6	40	42								
32	41.5	51.5	34.5	44.5	51.5	61.5	44.5	54.5	7	44	50								
40	43	53	36	46	53	63	46	56	7	52	58.5								
50	47	57	38	48	57	67	48	58	9	62	71.5								
63	51	61	42	52	61	71	52	62	9	75	84.5								

Bore size\Item	D	DA	E	EA	H	J	JA	K	KA	KB
12	6	4	M3 × 0.5	6	5	6.5	4.5	M5 × 0.8 Thru.hole: Φ4.2	12	16.2
16	6	4	M3 × 0.5	6	5	6.5	4.5	M5 × 0.8 Thru.hole: Φ4.2	12	19.8
20	8	4	M4 × 0.7	8	6	6.5	4.5	M5 × 0.8 Thru.hole: Φ4.2	14	24
25	10	4	M5 × 0.8	10	8	8.2	5.5	M6 × 1.0 Thru.hole: Φ4.6	15	28
32	12	4	M6 × 1.0	12	10	8.2	5.5	M6 × 1.0 Thru.hole: Φ4.6	16	34
40	16	4	M8 × 1.25	12	14	10	7.5	M8 × 1.25 Thru.hole: Φ6.5	20	40
50	20	5	M10 × 1.5	15	17	11	8.5	M8 × 1.25 Thru.hole: Φ6.5	25	48
63	20	5	M10 × 1.5	15	17	11	8.5	M8 × 1.25 Thru.hole: Φ6.5	25	60

Bore size\Item	M	MA	P	PA	PB	T
12	10.2	1	M5 × 0.8	7.5	5	23
16	11	1.5	M5 × 0.8	8	5.5	28
20	13	1.5	M5 × 0.8	9	5.5	-
25	17	2	M5 × 0.8	9	5.5	-
32	22	2.4	1/8"	9	9	-
40	28	3	1/8"	9.5	7.5	-
50	38	4	1/4"	10.5	10.5	-
63	40	4	1/4"	12	11	-

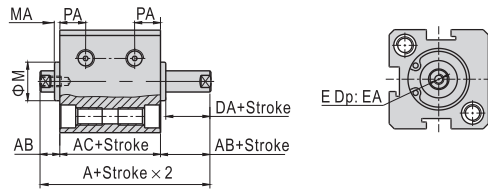


Compact cylinder

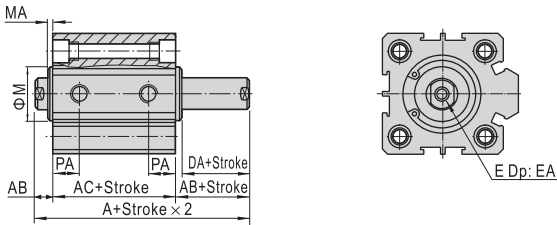
SDA Series

SDAD

Φ 12 Φ 16



Φ 20 ~ Φ 100



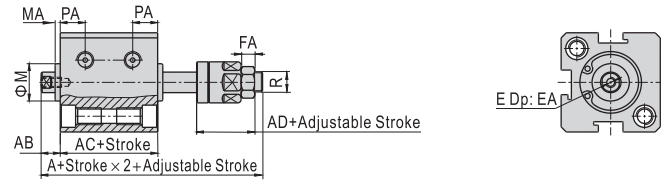
Bore size\Item	A	AC	A	AC	AB	DA
	Without magnet	With magnet	Without magnet	With magnet		
12	27	17	37	27	5	4
16	29.5	18.5	39.5	28.5	5.5	4
20	30.5	19.5	40.5	29.5	5.5	4
25	33	21	43	31	6	4
32	38.5	24.5	48.5	34.5	7	4
40	40	26	50	36	7	4
50	46	28	56	38	9	5
63	50	32	60	42	9	5
80	63	41	73	51	11	6
100	75	51	85	61	12	7

Bore size\Item	E	EA		M	MA	PA	
		St≤10	St>10			St=5	St>5
12	M3 × 0.5	6	6	10.2	1	5.5	6.3
16	M3 × 0.5	6	6	11	1.5	6.5	7.3
20	M4 × 0.7	8(St=5 is 6.5)		15	1.5	7.5	7.5
25	M5 × 0.8	10(St=5 is 7)		17	2	8	8
32	M6 × 1.0	8	12	22	3	8	9
40	M8 × 1.25	8	12	28	3	8	10
50	M10 × 1.5	8	15	38	4	8	10.5
63	M10 × 1.5	10	15	40	4	9.5	11.8
80	M14 × 1.5	13	20	45	5	11.5	14.5
100	M18 × 1.5	18	20	55	5	16	20.5

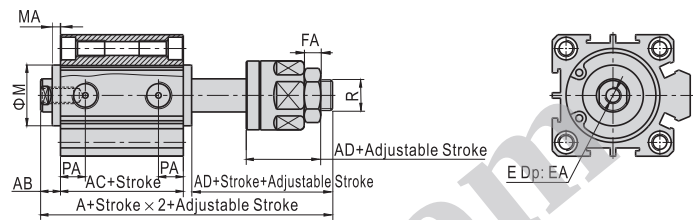
Note) The unmarked dimension is the same as SDA standard type.
Please refer to Page 266 for the dimension of male thread.

SDAJ

Φ 12 Φ 16



Φ 20 ~ Φ 100



Bore size\Item	A	AC	A	AC	AB	AD	E
	Without magnet	With magnet	Without magnet	With magnet			
12	40	17	50	27	5	17	M3 × 0.5
16	42.5	18.5	52.5	28.5	5.5	17	M3 × 0.5
20	47.5	19.5	57.5	29.5	5.5	21	M4 × 0.7
25	54	21	64	31	6	25	M5 × 0.8
32	61.5	24.5	71.5	34.5	7	27	M6 × 1.0
40	64	26	74	36	7	28	M8 × 1.25
50	70	28	80	38	9	29	M10 × 1.5
63	74	32	84	42	9	29	M10 × 1.5
80	92.5	41	102.5	51	11	35.5	M14 × 1.5
100	110.5	51	120.5	61	12	42.5	M18 × 1.5

Bore size\Item	EA		FA	M	MA	PA		R
	St≤10	St>10				St=5	St>5	
12	6	6	4	10.2	1	5.5	6.3	M5 × 0.8
16	6	6	4	11	1.5	6.5	7.3	M5 × 0.8
20	8(St=5 is 6.5)		5	15	1.5	7.5	7.5	M6 × 1.0
25	10(St=5 is 7)		6	17	2	8	8	M8 × 1.25
32	8	12	6	22	3	8	9	M10 × 1.25
40	8	12	7	28	3	8	10	M12 × 1.25
50	8	15	8	38	4	8	10.5	M16 × 1.5
63	10	15	8	40	4	9.5	11.8	M16 × 1.5
80	13	20	10	45	5	11.5	14.5	M20 × 1.5
100	18	20	13.5	55	5	16	20.5	M27 × 2.0

Note) The unmarked dimension is the same as SDA standard type.
Please refer to Page 266 for the dimension of male thread.



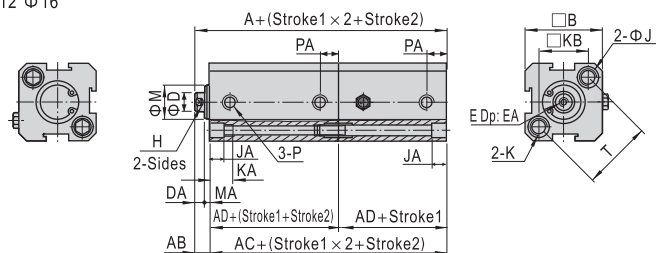
SDA

Compact cylinder

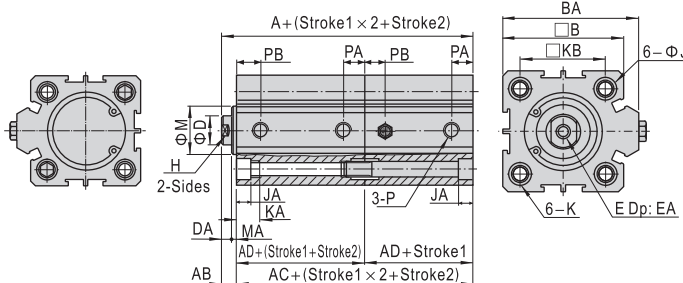
SDA Series

SDAT

Φ 12 Φ 16



Φ 20 ~ Φ 100



Note) Please refer to Page 266 for the dimension of male thread.

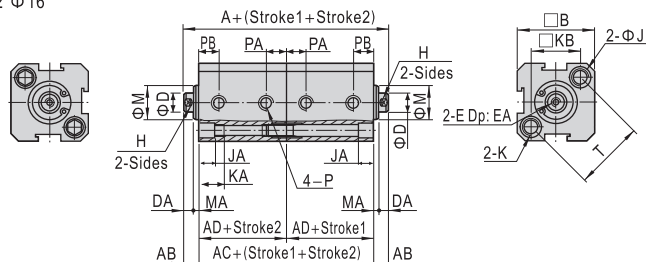
Bore size/Item	Without magnet			With magnet			AB	B	BA	D	DA
	A	AC	AD	A	AC	AD					
12	39	34	17	59	54	27	5	25	-	6	4
16	42.5	37	18.5	62.5	57	28.5	5.5	29	-	6	4
20	44.5	39	19.5	64.5	59	29.5	5.5	34	36	8	4
25	48	42	21	68	62	31	6	40	42	10	4
32	56	49	24.5	76	69	34.5	7	44	50	12	4
40	59	52	26	79	72	36	7	52	58.5	16	4
50	65	56	28	85	76	38	9	62	71.5	20	5
63	73	64	32	93	84	42	9	75	84.5	20	5
80	93	82	41	113	102	51	11	94	104	25	6
100	114	102	51	134	122	61	12	114	124	32	7

Bore size/Item	E	EA	H	J	JA	K	KA
12	M3 × 0.5	6	5	6.5	4.5	M5 × 0.8 Thru.hole: Φ 4.2	12
16	M3 × 0.5	6	5	6.5	4.5	M5 × 0.8 Thru.hole: Φ 4.2	12
20	M4 × 0.7	8	6	6.5	4.5	M5 × 0.8 Thru.hole: Φ 4.2	14
25	M5 × 0.8	10	8	8.2	5.5	M6 × 1.0 Thru.hole: Φ 4.6	15
32	M6 × 1.0	12	10	8.2	5.5	M6 × 1.0 Thru.hole: Φ 4.6	16
40	M8 × 1.25	12	14	10	7.5	M8 × 1.25 Thru.hole: Φ 6.5	20
50	M10 × 1.5	15	17	11	8.5	M8 × 1.25 Thru.hole: Φ 6.5	25
63	M10 × 1.5	15	17	11	8.5	M8 × 1.25 Thru.hole: Φ 6.5	25
80	M14 × 1.5	20	22	14	10.5	M12 × 1.75 Thru.hole: Φ 9.2	25
100	M18 × 1.5	20	27	17.5	13	M14 × 2.0 Thru.hole: Φ 11.3	30

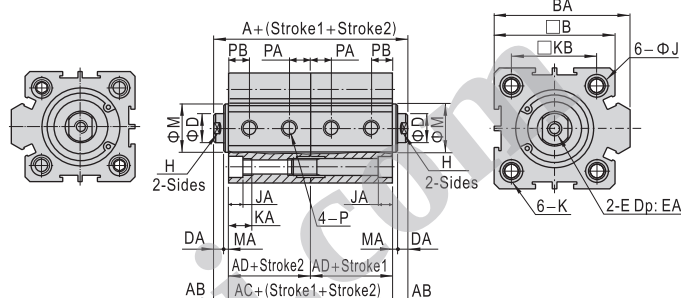
Bore size/Item	KB	M	MA	P	PA		PB	
					St=5	St>5	St=5	St>5
12	16.2	10.2	1	M5 × 0.8	5	5	7.5	7.5
16	19.8	11	1.5	M5 × 0.8	5.5	5.5	8	8
20	24	13	1.5	M5 × 0.8	5.5	5.5	9	9
25	28	17	2	M5 × 0.8	5.5	5.5	9	9
32	34	22	2.5	1/8"	6.5	9	9	9
40	40	28	3	1/8"	7.5	7.5	9.5	9.5
50	48	38	4	1/4"	8	10.5	8	10.5
63	60	40	4	1/4"	9.5	11	9.5	12
80	74	45	5	3/8"	11.5	14.5	11.5	14.5
100	90	55	5	3/8"	16	20.5	16	20.5

SDAW

Φ 12 Φ 16



Φ 20 ~ Φ 100



Note) Please refer to Page 266 for the dimension of male thread.

Bore size/Item	Without magnet			With magnet			AB	B	BA	D	DA
	A	AC	AD	A	AC	AD					
12	44	34	17	64	54	27	5	25	-	6	4
16	48	37	18.5	68	57	28.5	5.5	29	-	6	4
20	50	39	19.5	70	59	29.5	5.5	34	36	8	4
25	54	42	21	74	62	31	6	40	42	10	4
32	63	49	24.5	83	69	34.5	7	44	50	12	4
40	66	52	26	86	72	36	7	52	58.5	16	4
50	74	56	28	94	76	38	9	62	71.5	20	5
63	82	64	32	102	84	42	9	75	84.5	20	5
80	104	82	41	124	102	51	11	94	104	25	6
100	126	102	51	146	122	61	12	114	124	32	7

Bore size/Item	E	EA	H	J	JA	K	KA
12	M3 × 0.5	6	5	6.5	4.5	M5 × 0.8 Thru.hole: Φ 4.2	12
16	M3 × 0.5	6	5	6.5	4.5	M5 × 0.8 Thru.hole: Φ 4.2	12
20	M4 × 0.7	8	6	6.5	4.5	M5 × 0.8 Thru.hole: Φ 4.2	14
25	M5 × 0.8	10	8	8.2	5.5	M6 × 1.0 Thru.hole: Φ 4.6	15
32	M6 × 1.0	12	10	8.2	5.5	M6 × 1.0 Thru.hole: Φ 4.6	16
40	M8 × 1.25	12	14	10	7.5	M8 × 1.25 Thru.hole: Φ 6.5	20
50	M10 × 1.5	15	17	11	8.5	M8 × 1.25 Thru.hole: Φ 6.5	25
63	M10 × 1.5	15	17	11	8.5	M8 × 1.25 Thru.hole: Φ 6.5	25
80	M14 × 1.5	20	22	14	10.5	M12 × 1.75 Thru.hole: Φ 9.2	25
100	M18 × 1.5	20	27	17.5	13	M14 × 2.0 Thru.hole: Φ 11.3	30

Bore size/Item	KB	M	MA	P	PA		PB	
					St=5	St>5	St=5	St>5
12	16.2	10.2	1	M5 × 0.8	5	5	7.5	7.5
16	19.8	11	1.5	M5 × 0.8	5.5	5.5	8	8
20	24	13	1.5	M5 × 0.8	5.5	5.5	9	9
25	28	17	2	M5 × 0.8	5.5	5.5	9	9
32	34	22	2.5	1/8"	6.5	9	9	9
40	40	28	3	1/8"	7.5	7.5	9.5	9.5
50	48	38	4	1/4"	8	10.5	8	10.5
63	60	40	4	1/4"	9.5	11	9.5	12
80	74	45	5	3/8"	11.5	14.5	11.5	14.5
100	90	55	5	3/8"	16	20.5	16	20.5