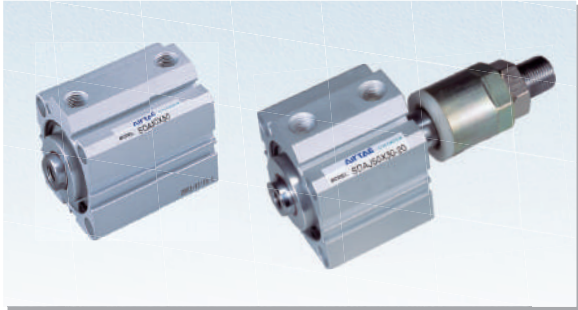
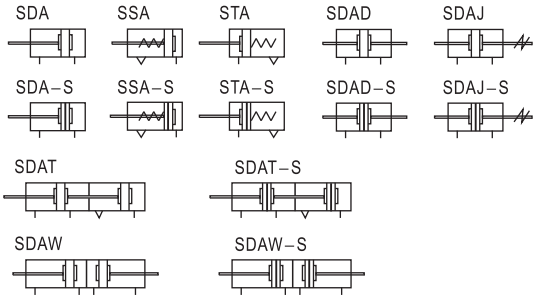


Compact cylinder

SDA Series



Symbol



Product feature

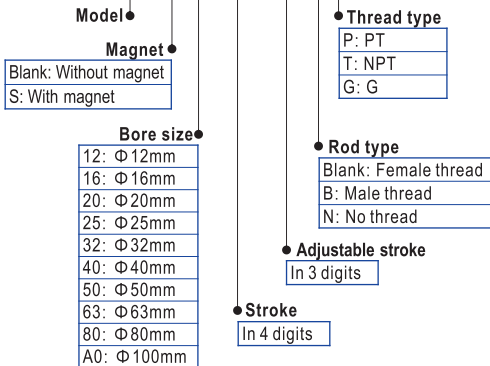
- 1. Manufactured by our enterprise.
- 2. Riveted structure is adopted to connect the cylinder body and back cover, and piston and piston rod to make it compact and reliable;
- 3. The inner diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent 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.

Ordering code

Model can to be changed Ordering code. Example:
Production type: SDAJ
Magnet: With magnet
Bore size: 50mm
Stroke: 80mm
Adjustable stroke: 50mm
Rod type: Male thread
Thread type: NPT

Model: SDAJ S-50 × 80-50-B-T

Ordering code: SDAJ S 50 0080 050 B T



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 μ m filter element)									
Operating pressure	Double acting	0.1~1.0MPa(15~145psi)(1.0~10.0bar)									
	Single acting	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				
Stroke tolerance											
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 P403~426 for detail of sensor switch.

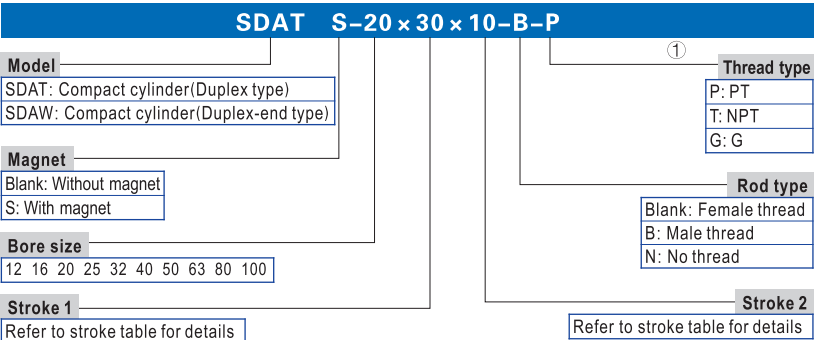
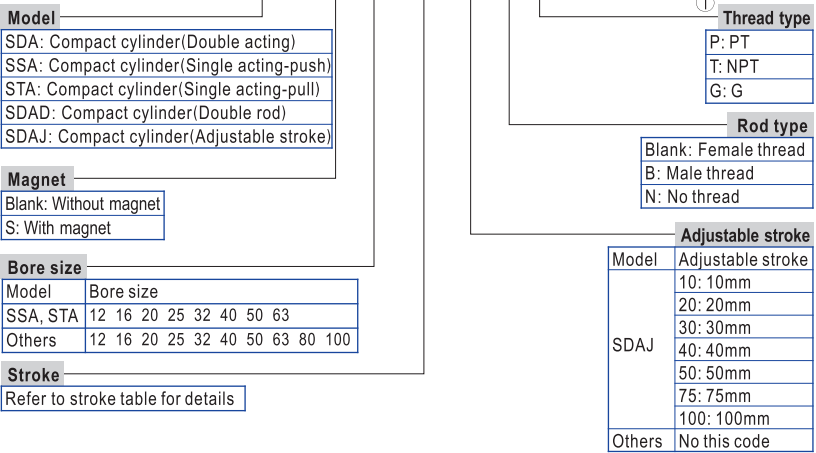
Stroke

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					90	130	
		Without magnet	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	100				100	140	
	Single acting		5	10	15	20	25	30															30	-			
25, 32 40, 50	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	120	150		
		Without magnet	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	100	110	120	130	160		
	Single acting		5	10	15	20	25	30															30	-			
63 80	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	120	150		
		Without magnet	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	100	110	120	130	160		
	Single acting		5	10	15	20	25	30															30	-			
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	130	150		
		Without magnet	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	100	110	120	130	160		
	Single acting		5	10	15	20	25	30															30	-			

- 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.

Explain of model

SDA	S-20 × 30	-B-P
SDAD	S-20 × 30	-B-P
SDAJ	S-20 × 30-30-B-P	



① Standard thread is blank here.



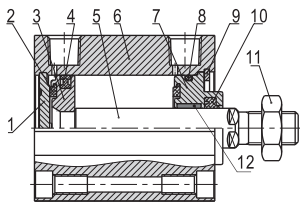
Compact cylinder



SDA Series

Inner structure and material of major parts

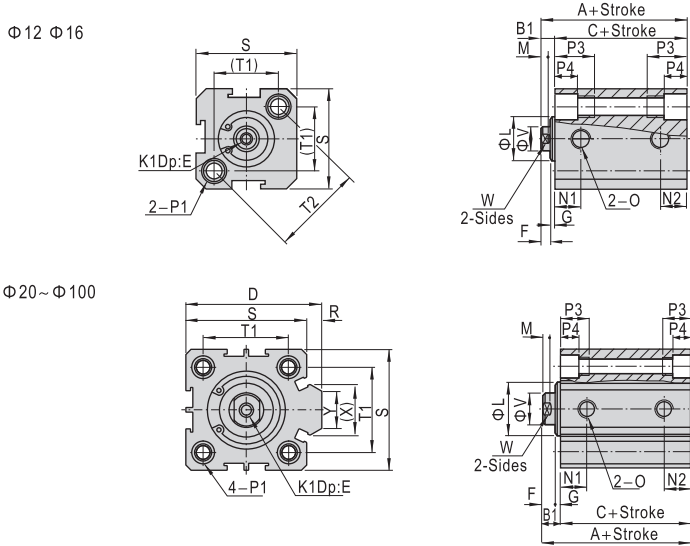
SDA



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



Item	A		C		B1	D	E	F	G	K1	L	M	N1		N2	
Bore size	Standard	With magnet	Standard	With magnet									St=5	St>5	St=5	St>5
12	22	32	17	27	5	-	6	4	1	M3×0.5	10.2	3	7.5	7.5	5	5
16	24	34	18.5	28.5	5.5	-	6	4	1.5	M3×0.5	11	3	8	8	5.5	5.5
20	25	35	19.5	29.5	5.5	36	8	4	1.5	M4×0.7	13	3	9	9	5.5	5.5
25	27	37	21	31	6	42	10	4	2	M5×0.8	17	3	9.2	9.2	5.5	5.5
32	31.5	41.5	24.5	34.5	7	50	12	4.6	2.4	M6×1.0	22	3	9	9	6.5	9
40	33	43	26	36	7	58.5	12	4	3	M8×1.25	28	3	9.5	9.5	7.5	7.5
50	37	47	28	38	9	71.5	15	5	4	M10×1.5	38	3	8	10.5	8	10.5
63	41	51	32	42	9	84.5	15	5	4	M10×1.5	40	3	9.5	12	9.5	11
80	52	62	41	51	11	104	20	6	5	M14×1.5	45	4	11.5	14.5	11.5	14.5
100	63	73	51	61	12	124	20	7	5	M18×1.5	55	4	16	20.5	16	20.5

Bore size\Item	O	P1	P3	P4	R	S	T1	T2	V	W	X	Y
12	M5×0.8	2-Sides: Φ6.5 Thread:M5×0.8 Thru.hole: Φ4.2	12	4.5	-	25	16.2	23	6	5	-	-
16	M5×0.8	2-Sides: Φ6.5 Thread:M5×0.8 Thru.hole: Φ4.2	12	4.5	-	29	19.8	28	6	5	-	-
20	M5×0.8	2-Sides: Φ6.5 Thread:M5×0.8 Thru.hole: Φ4.2	14	4.5	2	34	24	-	8	6	11.3	10
25	M5×0.8	2-Sides: Φ8.2 Thread:M6×1.0 Thru.hole: Φ4.6	15	5.5	2	40	28	-	10	8	12	10
32	1/8"	2-Sides: Φ8.2 Thread:M6×1.0 Thru.hole: Φ4.6	16	5.5	6	44	34	-	12	10	18.3	15
40	1/8"	2-Sides: Φ10 Thread:M8×1.25 Thru.hole: Φ6.5	20	7.5	6.5	52	40	-	16	14	21.7	16
50	1/4"	2-Sides: Φ11 Thread:M8×1.25 Thru.hole: Φ6.5	25	8.5	9.5	62	48	-	20	17	30	20
63	1/4"	2-Sides: Φ11 Thread:M8×1.25 Thru.hole: Φ6.5	25	8.5	9.5	75	60	-	20	17	28.7	20
80	3/8"	2-Sides: Φ14 Thread:M12×1.75 Thru.hole: Φ9.2	25	10.5	10	94	74	-	25	22	36	26
100	3/8"	2-Sides: Φ17.5 Thread:M14×2.0 Thru.hole: Φ11.3	30	13	10	114	90	-	32	27	35	26



SDA

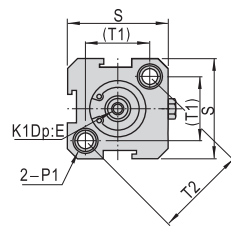
Compact cylinder

SDA Series

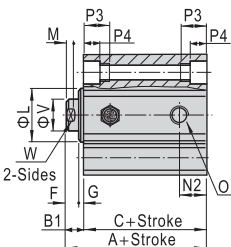
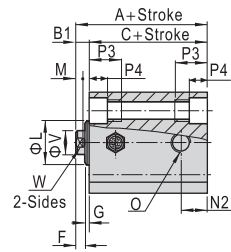
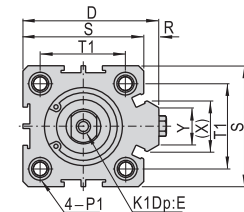
AIRTAC

SSA

Φ 12 Φ 16

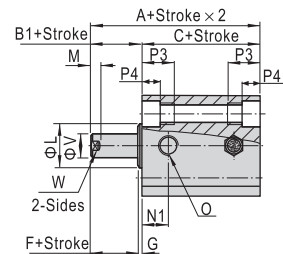
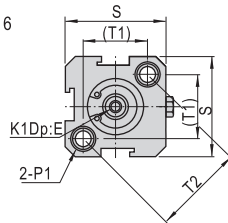


Φ 20~Φ 63

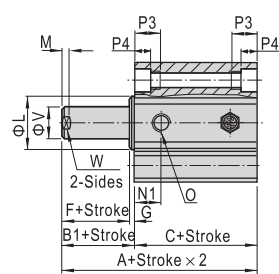
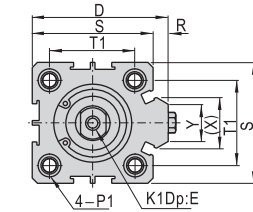


STA

Φ 12 Φ 16



Φ 20~Φ 63



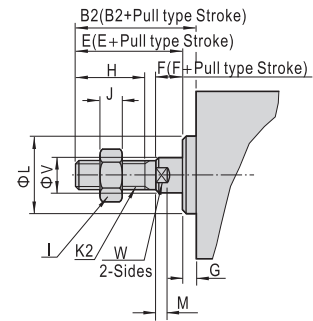
Bore size\Item	A(Standard)		A(With magnet)		C(Standard)		C(With magnet)		B1	D	E
	St≤10	St>10	St≤10	St>10	St≤10	St>10	St≤10	St>10			
12	32	42	42	52	27	37	37	47	5	-	6
16	34	44	44	54	28.5	38.5	38.5	48.5	5.5	-	6
20	35	45	45	55	29.5	39.5	39.5	49.5	5.5	36	8
25	37	47	47	57	31	41	41	51	6	42	10
32	41.5	51.5	51.5	61.5	34.5	44.5	44.5	54.5	7	50	12
40	43	53	53	63	36	46	46	56	7	58.5	12
50	47	57	57	67	38	48	48	58	9	71.5	15
63	51	61	61	71	42	52	52	62	9	84.5	15

Bore size\Item	F	G	K1	L	M	N1	N2	O	R	S	T1	T2
12	4	1	M3 × 0.5	10.2	3	7.5	5	M5 × 0.8	-	25	16.2	23
16	4	1.5	M3 × 0.5	11	3	8	5.5	M5 × 0.8	-	29	19.8	28
20	4	1.5	M4 × 0.7	13	3	9	5.5	M5 × 0.8	2	34	24	-
25	4	2	M5 × 0.8	17	3	9.2	5.5	M5 × 0.8	2	40	28	-
32	4	2.4	M6 × 1.0	22	3	9	9	1/8"	6	44	34	-
40	4	3	M8 × 1.25	28	3	9.5	7.5	1/8"	6.5	52	40	-
50	5	4	M10 × 1.5	38	3	10.5	10.5	1/4"	9.5	62	48	-
63	5	4	M10 × 1.5	40	3	12	11	1/4"	9.5	75	60	-

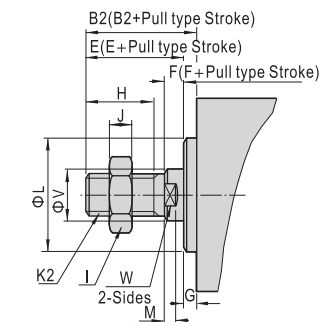
Bore size\Item	P1	P3	P4	V	W	X	Y
12	2-Sides: Φ 6.5 Thread: M5 × 0.8 Thru.hole: Φ 4.2	12	4.5	6	5	-	-
16	2-Sides: Φ 6.5 Thread: M5 × 0.8 Thru.hole: Φ 4.2	12	4.5	6	5	-	-
20	2-Sides: Φ 6.5 Thread: M5 × 0.8 Thru.hole: Φ 4.2	14	4.5	8	6	11.3	10
25	2-Sides: Φ 8.2 Thread: M6 × 1.0 Thru.hole: Φ 4.6	15	5.5	10	8	12	10
32	2-Sides: Φ 8.2 Thread: M6 × 1.0 Thru.hole: Φ 4.6	16	5.5	12	10	18.3	15
40	2-Sides: Φ 10 Thread: M8 × 1.25 Thru.hole: Φ 6.5	20	7.5	16	14	21.7	16
50	2-Sides: Φ 11 Thread: M8 × 1.25 Thru.hole: Φ 6.5	25	8.5	20	17	30	20
63	2-Sides: Φ 11 Thread: M8 × 1.25 Thru.hole: Φ 6.5	25	8.5	20	17	28.7	20

Male thread

Φ 12 Φ 16



Φ 20~Φ 100



Bore size\Item	B2	E	F	G		H	I
				SDAD,SDAJ	Others		
12	17	16	4	1	1	10	8
16	17.5	16	4	1.5	1.5	10	8
20	20.5	19	4	1.5	1.5	13	10
25	23	21	4	2	2	15	12
32	25	22	4	3	2.4	15	17
40	35	32	4	3	3	25	19
50	37	33	5	4	4	25	27
63	37	33	5	4	4	25	27
80	44	39	6	5	5	30	32
100	50	45	7	5	5	35	36

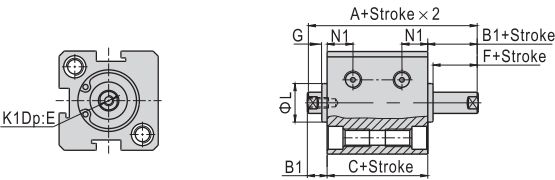
Bore size\Item	J	K2	L	M	V	W
12	4	M5 × 0.8	10.2	3	6	5
16	4	M5 × 0.8	11	3	6	5
20	5	M6 × 1.0	13	3	8	6
25	6	M8 × 1.25	17	3	10	8
32	6	M10 × 1.25	22	3	12	10
40	8	M14 × 1.5	28	3	16	14
50	11	M18 × 1.5	38	3	20	17
63	11	M18 × 1.5	40	3	20	17
80	13	M22 × 1.5	45	4	25	22
100	13	M26 × 1.5	55	4	32	27

Compact cylinder
SDA Series

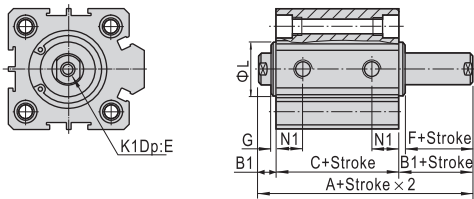
AIRTAC

SDAD

Φ 12 Φ 16



Φ 20~Φ 100



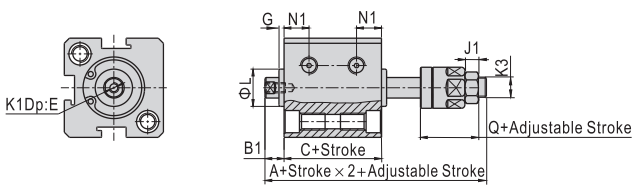
Item	A		C		E	
	Standard	With magnet	Standard	With magnet	St≤10	St>10
12	27	37	17	27	6	6
16	29.5	39.5	18.5	28.5	6	6
20	30.5	40.5	19.5	29.5	8(St=5 is 6.5)	
25	33	43	21	31	10(St=5 is 7)	
32	38.5	48.5	24.5	34.5	8	12
40	40	50	26	36	8	12
50	46	56	28	38	8	15
63	50	60	32	42	10	15
80	63	73	41	51	13	20
100	75	85	51	61	18	20

Item	N1		B1	F	G	K1	L
	St=5	St>5					
12	5.5	6.3	5	4	1	M3×0.5	10.2
16	6.5	7.3	5.5	4	1.5	M3×0.5	11
20	7.5	7.5	5.5	4	1.5	M4×0.7	15
25	8	8	6	4	2	M5×0.8	17
32	8	9	7	4	3	M6×1.0	22
40	8	10	7	4	3	M8×1.25	28
50	8	10.5	9	5	4	M10×1.5	38
63	9.5	11.8	9	5	4	M10×1.5	40
80	11.5	14.5	11	6	5	M14×1.5	45
100	16	20.5	12	7	5	M18×1.5	55

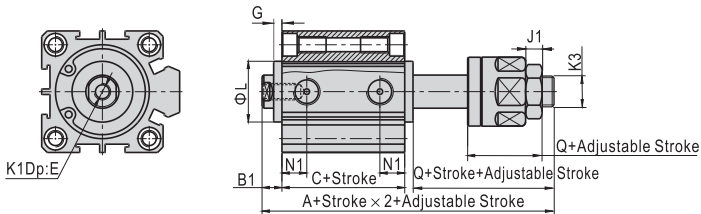
Note) The unmarked dimension is the same as SDA standard type.
Please refer to Page 286 for the dimension of male thread.

SDAJ

Φ 12 Φ 16



Φ 20~Φ 100



Item	A		C		E		N1	
	Standard	With magnet	Standard	With magnet	St≤10	St>10	St=5	St>5
12	40	50	17	27	6	6	5.5	6.3
16	42.5	52.5	18.5	28.5	6	6	6.5	7.3
20	47.5	57.5	19.5	29.5	8(St=5 is 6.5)		7.5	7.5
25	54	64	21	31	10(St=5 is 7)		8	8
32	61.5	71.5	24.5	34.5	8	12	8	9
40	64	74	26	36	8	12	8	10
50	70	80	28	38	8	15	8	10.5
63	74	84	32	42	10	15	9.5	11.8
80	92.5	102.5	41	51	13	20	11.5	14.5
100	110.5	120.5	51	61	18	20	16	20.5

Bore size\Item	B1	Q	G	J1	K1	K3	L
12	5	17	1	4	M3×0.5	M5×0.8	10.2
16	5.5	17	1.5	4	M3×0.5	M5×0.8	11
20	5.5	21	1.5	5	M4×0.7	M6×1.0	15
25	6	25	2	6	M5×0.8	M8×1.25	17
32	7	27	3	6	M6×1.0	M10×1.25	22
40	7	28	3	7	M8×1.25	M12×1.25	28
50	9	29	4	8	M10×1.5	M16×1.5	38
63	9	29	4	8	M10×1.5	M16×1.5	40
80	11	35.5	5	10	M14×1.5	M20×1.5	45
100	12	42.5	5	13.5	M18×1.5	M27×2.0	55

Note) The unmarked dimension is the same as SDA standard type.
Please refer to Page 286 for the dimension of male thread.



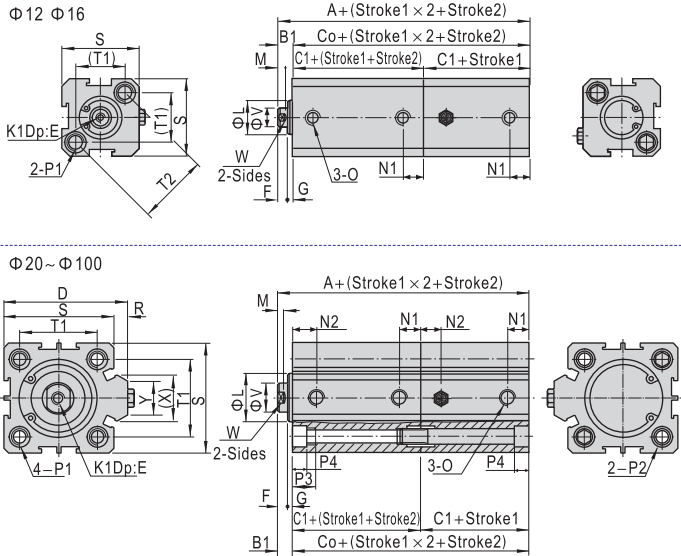
SDA

Compact cylinder

SDA Series



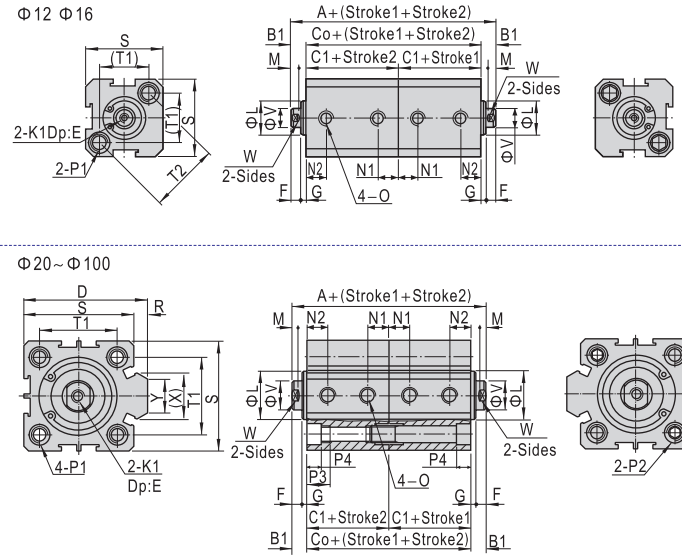
SDAT



Note) Please refer to Page 286 for the dimension of male thread.

Item		A		Co		C1		N1		N2		
Bore size	Standard	With magnet	Standard	With magnet	Standard	With magnet	Standard	With magnet	St=5	St>5	St=5	St>5
12	39	59	34	54	17	27			5	5	7.5	7.5
16	42.5	62.5	37	57	18.5	28.5			5.5	5.5	8	8
20	44.5	64.5	39	59	19.5	29.5			5.5	5.5	9	9
25	48	68	42	62	21	31			5.5	5.5	9.2	9.2
32	56	76	49	69	24.5	34.5			6.5	9	9	9
40	59	79	52	72	26	36			7.5	7.5	9.5	9.5
50	65	85	56	76	28	38			8	10.5	8	10.5
63	73	93	64	84	32	42			9.5	11	9.5	12
80	93	113	82	102	41	51			11.5	14.5	11.5	14.5
100	114	134	102	122	51	61			16	20.5	16	20.5
Bore size\Item												
12	5	-	6	4	1	M3 × 0.5	10.2	3	M5 × 0.8		-	
16	5.5	-	6	4	1.5	M3 × 0.5	11	3	M5 × 0.8		-	
20	5.5	36	8	4	1.5	M4 × 0.7	13	3	M5 × 0.8		2	
25	6	42	10	4	2	M5 × 0.8	17	3	M5 × 0.8		2	
32	7	50	12	4	2.4	M6 × 1.0	22	3	1/8"		6	
40	7	58.5	12	4	3	M8 × 1.25	28	3	1/8"		6.5	
50	9	71.5	15	5	4	M10 × 1.5	38	3	1/4"		9.5	
63	9	84.5	15	5	4	M10 × 1.5	40	3	1/4"		9.5	
80	11	104	20	6	5	M14 × 1.5	45	4	3/8"		10	
100	12	124	20	7	5	M18 × 1.5	55	4	3/8"		10	
Bore size\Item P1												
12	Φ 6.5 Thread:M5 × 0.8 Thru.hole: Φ 4.2							P2				
16	Φ 6.5 Thread:M5 × 0.8 Thru.hole: Φ 4.2							-				
20	2-Sides: Φ 6.5 Thread:M5 × 0.8 Thru.hole: Φ 4.2							2-Sides: Φ 6.5 Thru.hole: Φ 5.2				
25	2-Sides: Φ 8.2 Thread:M6 × 1.0 Thru.hole: Φ 4.6							2-Sides: Φ 8.2 Thru.hole: Φ 6.2				
32	2-Sides: Φ 8.2 Thread:M6 × 1.0 Thru.hole: Φ 4.6							2-Sides: Φ 8.2 Thru.hole: Φ 6.2				
40	2-Sides: Φ 10 Thread:M8 × 1.25 Thru.hole: Φ 6.5							2-Sides: Φ 10 Thru.hole: Φ 8.2				
50	2-Sides: Φ 11 Thread:M8 × 1.25 Thru.hole: Φ 6.5							2-Sides: Φ 11 Thru.hole: Φ 8.5				
63	2-Sides: Φ 11 Thread:M8 × 1.25 Thru.hole: Φ 6.5							2-Sides: Φ 11 Thru.hole: Φ 8.5				
80	2-Sides: Φ 14 Thread:M12 × 1.75 Thru.hole: Φ 9.2							2-Sides: Φ 14 Thru.hole: Φ 12.3				
100	2-Sides: Φ 17.5 Thread:M14 × 2.0 Thru.hole: Φ 11.3							2-Sides: Φ 17.5 Thru.hole: Φ 14.2				
Bore size\Item P3												
12	12	4.5	25	16.2	23	6	5	-	-	-	-	-
16	12	4.5	29	19.8	28	6	5	-	-	-	-	-
20	14	4.5	34	24	-	8	6	11.3	10			
25	15	5.5	40	28	-	10	8	12	10			
32	16	5.5	44	34	-	12	10	18.3	15			
40	20	7.5	52	40	-	16	14	21.7	16			
50	25	8.5	62	48	-	20	17	30	20			
63	25	8.5	75	60	-	20	17	28.7	20			
80	25	10.5	94	74	-	25	22	36	26			
100	30	13	114	90	-	32	27	35	26			

SDAW



Note) Please refer to Page 286 for the dimension of male thread.

A			Co		C1		N1		N2	
Bore size	Standard	With magnet	Standard	With magnet	Standard	With magnet	St=5	St>5	St=5	St>5
12	44	64	34	54	17	27	5	5	7.5	7.5
16	48	68	37	57	18.5	28.5	5.5	5.5	8	8
20	50	70	39	59	19.5	29.5	5.5	5.5	9	9
25	54	74	42	62	21	31	5.5	5.5	9.2	9.2
32	63	83	49	69	24.5	34.5	6.5	9	9	9
40	66	86	52	72	26	36	7.5	7.5	9.5	9.5
50	74	94	56	76	28	38	8	10.5	8	10.5
63	82	102	64	84	32	42	9.5	11	9.5	12
80	104	124	82	102	41	51	11.5	14.5	11.5	14.5
100	126	146	102	122	51	61	16	20.5	16	20.5

Bore size\Item										
B1	D	E	F	G	K1	L	M	O	R	
12	5	-	6	4	1	M3 × 0.5	10.2	3	M5 × 0.8	-
16	5.5	-	6	4	1.5	M3 × 0.5	11	3	M5 × 0.8	-
20	5.5	36	8	4	1.5	M4 × 0.7	13	3	M5 × 0.8	2
25	6	42	10	4	2	M5 × 0.8	17	3	M5 × 0.8	2
32	7	50	12	4	2.4	M6 × 1.0	22	3	1/8"	6
40	7	58.5	12	4	3	M8 × 1.25	28	3	1/8"	6.5
50	9	71.5	15	5	4	M10 × 1.5	38	3	1/4"	9.5
63	9	84.5	15	5	4	M10 × 1.5	40	3	1/4"	9.5
80	11	104	20	6	5	M14 × 1.5	45	4	3/8"	10
100	12	124	20	7	5	M18 × 1.5	55	4	3/8"	10

Bore size\Item P1						P2				
12	Φ 6.5 Thread:M5 × 0.8 Thru.hole: Φ 4.2					—				
16	Φ 6.5 Thread:M5 × 0.8 Thru.hole: Φ 4.2					—				
20	2-Sides: Φ 6.5 Thread:M5 × 0.8 Thru.hole: Φ 4.2					2-Sides: Φ 6.5 Thru.hole: Φ 5.2				
25	2-Sides: Φ 8.2 Thread:M6 × 1.0 Thru.hole: Φ 4.6					2-Sides: Φ 8.2 Thru.hole: Φ 6.2				
32	2-Sides: Φ 8.2 Thread:M6 × 1.0 Thru.hole: Φ 4.6					2-Sides: Φ 8.2 Thru.hole: Φ 6.2				
40	2-Sides: Φ 10 Thread:M8 × 1.25 Thru.hole: Φ 6.5					2-Sides: Φ 10 Thru.hole: Φ 8.2				
50	2-Sides: Φ 11 Thread:M8 × 1.25 Thru.hole: Φ 6.5					2-Sides: Φ 11 Thru.hole: Φ 8.5				
63	2-Sides: Φ 11 Thread:M8 × 1.25 Thru.hole: Φ 6.5					2-Sides: Φ 11 Thru.hole: Φ 8.5				
80	2-Sides: Φ 14 Thread:M12 × 1.75 Thru.hole: Φ 9.2					2-Sides: Φ 14 Thru.hole: Φ 12.3				
100	2-Sides: Φ 17.5 Thread:M14 × 2.0 Thru.hole: Φ 11.3					2-Sides: Φ 17.5 Thru.hole: Φ 14.2				

Bore size\Item P3										
P3	P4	S	T1	T2	V	W	X	Y		
12	12	4.5	25	16.2	23	6	5	-	-	
16	12	4.5	29	19.8	28	6	5	-	-	
20	14	4.5	34	24	-	8	6	11.3	10	
25	15	5.5	40	28	-	10	8	12	10	
32	16	5.5	44	34	-	12	10	18.3	15	
40	20	7.5	52	40	-	16	14	21.3	16	
50	25	8.5	62	48	-	20	17	30	20	
63	25	8.5	75	60	-	20	17	28.7	20	
80	25	10.5	94	74	-	25	22	36	26	
100	30	13	114	90	-	32	27	35	26	

