



- Cylinder
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### Ordering Code

SDA	20	x	30	S	B	MT
Series	Bore		Stroke	Magnet	Cog Type	Sensor
SDA: Double acting	12		5-130 mm	S: With magnet Blank: Without magnet	Blank: Female thread	JEL-11 type
	16					
	20					
STA: Single acting, sprung-in	25				B: Male thread	
	32					
	40					
SSA: Single acting, sprung-out	50				N: No thread	
	63					
	80					
	100					
SDAD: Double-shaft type						
SDAJ: Adjustable stroke						

### Specification

Bore (mm)		12	16	20	25	32	40	50	63	80	100
Operation		Double Acting									
		Single Acting Sprung-out, Single Acting Sprung-in								-	
Working Medium		Air									
Operating Voltage Range	Double Acting	1 ~ 9.0 Kgf/cm <sup>2</sup>									
	Single Acting	2 ~ 9 Kgf/cm <sup>2</sup>								-	
Proof Pressure		10.5 Kgf/cm <sup>2</sup>									
Operating Temperature Range		0 ~ 70 °C									
Operating Speed Range	Double Acting	30 ~ 500 mm/s					30 ~ 350 mm/s		30 ~ 250 mm/s		
	Single Acting	100 ~ 500 mm/s					-				
Port Size		M5 × 0.8				G 1/8"		G 1/4"		G 3/8"	

# SDA Series

## Compact Cylinder



The way to automation

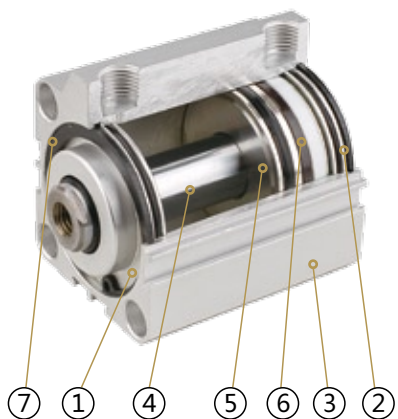
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### Stroke

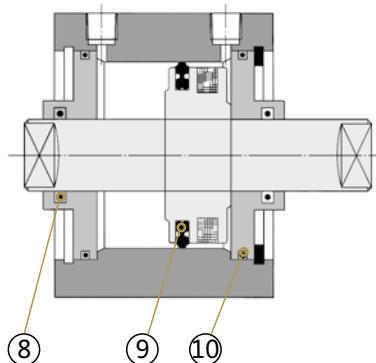
Bore (mm)		12 16	20	25	32 40 50 63 80 100		
Double Acting	Without Magnet	5 ~ 60 mm Classified every 5 mm	5 ~ 85 mm Classified every 5 mm	5 ~ 90 mm Classified every 5 mm	100 ~ 110 mm Classified every 5 mm	5 ~ 90 mm Classified every 5 mm	100 ~ 130 mm Classified every 10 mm
	With Magnet	5 ~ 50 mm Classified every 5 mm	5 ~ 75 mm Classified every 5 mm	5 ~ 90 mm Classified every 5 mm	100 mm	5 ~ 90 mm Classified every 5 mm	100 ~ 120 mm Classified every 10 mm
Single Acting	Without Magnet	5 ~ 30 mm Classified every 5 mm	5 ~ 30 mm Classified every 5 mm	5 ~ 30 mm Classified every 5 mm	5 ~ 30 mm Classified every 5 mm	-	-
	With Magnet	5 ~ 30 mm Classified every 5 mm	5 ~ 30 mm Classified every 5 mm	5 ~ 30 mm Classified every 5 mm	5 ~ 30 mm Classified every 5 mm	-	-
Max. Stroke		60mm	100mm	120mm	130mm		

### Internal Structure

#### SDA Double Acting



#### SDAD Double-rod Type

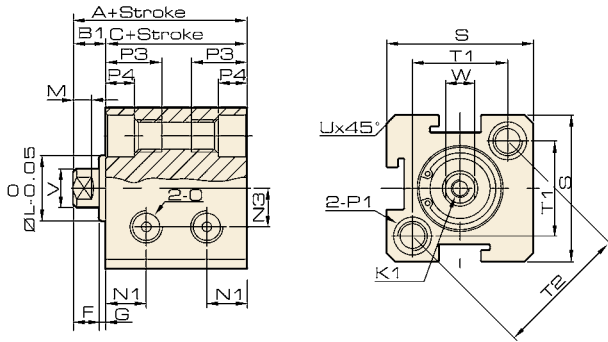


### Parts

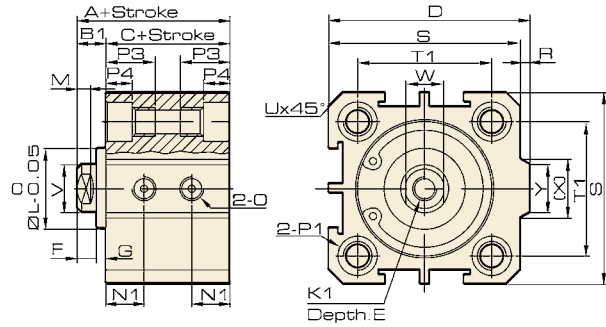
Number	Name	Material	Remark
1	Front Cover	Hard Anodised Aluminium	1
2	Back Cover	Anodised Aluminium	1
3	Barrel	Hard Anodised Aluminium	1
4	Piston Rod	Chromed Carbon Steel	1
5	Piston	Aluminium	1
6	Magnet	Plastic	1
7	Clip	Carbon Steel	1
8	Piston Rod Seal	NBR	1
9	Piston Seal	NBR	1
10	Cover Seal	NBR	2

### Overall Dimension

#### SDA12-16



#### SDA20-100



### Dimension

Type	Standard			With Magnet			D	E	F	G	K1	L	M	N1	N2	O
	A	B1	C	A	B1	C										
12	22	4.5	17.5	32	5	27	-	6	4	1	M3 x 0.5	8	2.8	6.3	6	M5 x 0.8
16	24	5.5	18.5	34	5.5	28.5	-	6	4	1.5	M3 x 0.5	10	2.8	7.3	6.5	M5 x 0.8
20	25	5.5	19.5	35	5.5	29.5	36	8	4	1.5	M4 x 0.7	15	2.8	7.5	-	M5 x 0.8
25	27	6	21	37	6	31	42	10	4	2	M5 x 0.8	17	2.8	8	-	M5 x 0.8
32	31.5	7	24.5	41.5	7	34.5	50	12	4	3	M6 x 1	22	2.8	9	-	G 1/8
40	33	7	26	43	7	36	58.5	12	4	3	M8 x 1.25	28	2.8	10	-	G 1/8
50	37	9	28	47	9	38	71.5	15	5	4	M10 x 1.5	38	2.8	10.5	-	G 1/4
63	41	9	32	51	9	42	84.5	15	5	4	M10 x 1.5	40	2.8	11.5	-	G 1/4
80	52	11	41	62	11	51	104	16	6	5	M14 x 1.5	45	4	14.5	-	G 3/8
100	63	12	51	73	12	61	124	18	7	5	M18 x 1.5	55	4	20.5	-	G 3/8

Bore Symbol	P1			P3	P4	R	S	T1	T2	U	V	W	X	Y
12	Double Side: Φ6.5	Cog: M5 x 0.8	Through Hole: Φ4.2	12	4.5	-	25	16.2	23	1.6	6	5	-	-
16	Double Side: Φ6.5	Cog: M5 x 0.8	Through Hole: Φ4.2	12	4.5	-	29	19.8	28	1.6	6	5	-	-
20	Double Side: Φ6	Cog: M5 x 0.8	Through Hole: Φ4.2	14	4.5	2	34	24	-	2.1	8	6	11.3	10
25	Double Side: Φ8	Cog: M6 x 1.0	Through Hole: Φ4.6	15	5.5	2	40	28	-	3.1	10	8	12	10
32	Double Side: Φ8	Cog: M6 x 1.0	Through Hole: Φ4.6	16	5.5	6	44	34	-	2.15	12	10	18.3	15
40	Double Side: Φ10	Cog: M8 x 1.25	Through Hole: Φ6.5	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16
50	Double Side: Φ11	Cog: M8 x 1.25	Through Hole: Φ6.5	25	8.5	9.5	62	48	-	4.15	20	17	30	20
63	Double Side: Φ11	Cog: M8 x 1.25	Through Hole: Φ6.5	25	8.5	9.5	75	60	-	3.15	20	17	28.7	20
80	Double Side: Φ14	Cog: M12 x 1.75	Through Hole: Φ9.2	25	10.5	10	94	74	-	3.65	25	22	36	26
100	Double Side: Φ17.5	Cog: M14 x 2	Through Hole: Φ11.3	30	13	10	114	90	-	3.65	32	27	35	26

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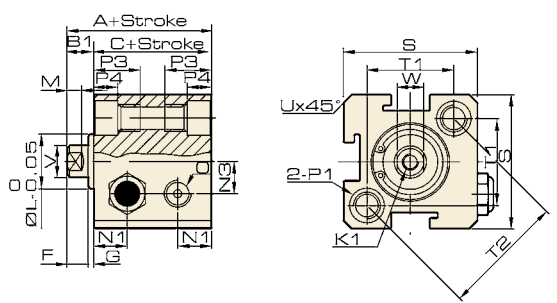


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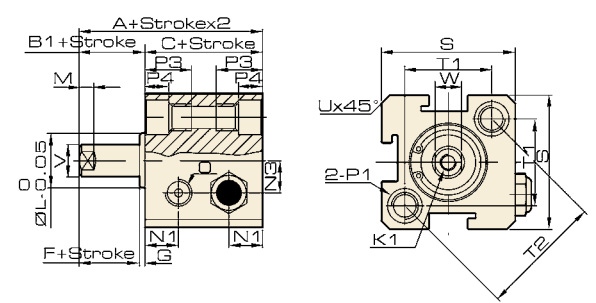
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### Overall Dimension

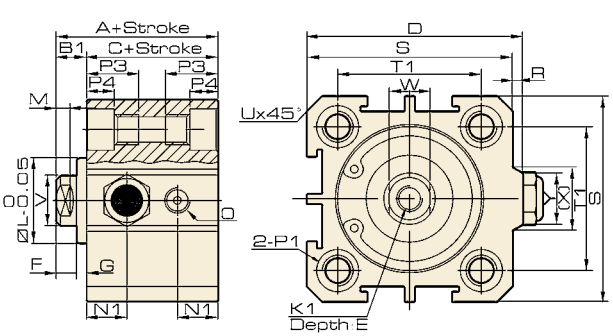
#### SSA12-16



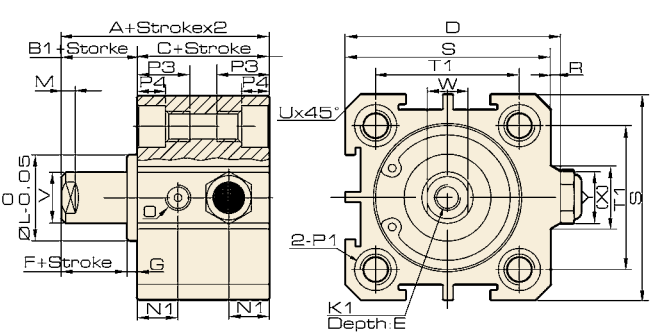
#### STA12-16



#### SSA20-40



#### STA20-40

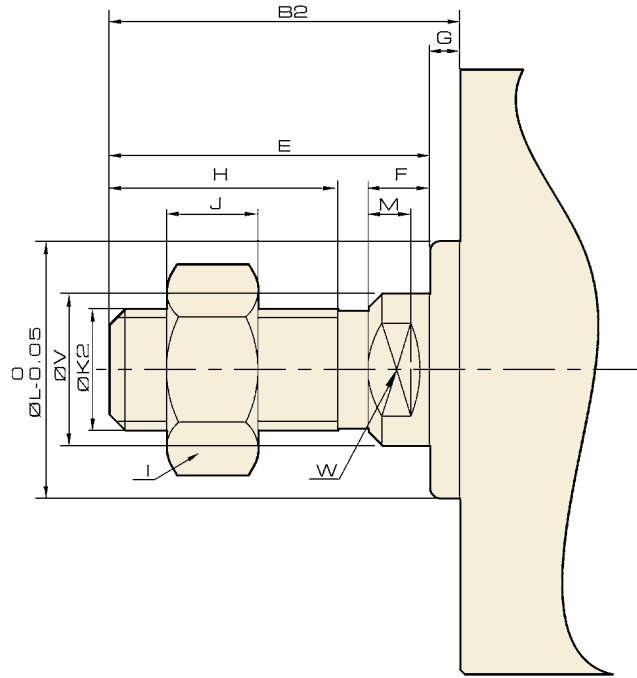


### Dimension

Type	Standard					With Magnet					D	E	F	G	K1	L	M	N1	N3
	A		B1	C		A		B1	C										
	≤10	> 10		≤10	> 10	≤10	> 10		≤10	> 10									
12	32	42	5	27	37	42	52	5	37	47	-	6	4	1	M3x0.5	8	2.8	6.3	6
16	34	44	5.5	28.5	38.5	44	54	5.5	38.5	48.5	-	6	4	1.5	M3x0.5	10	2.8	7.3	6.5
20	35	45	5.5	29.5	39.5	45	55	5.5	39.5	49.5	36	8	4	1.5	M4x0.7	15	2.8	7.5	-
25	37	47	6	31	41	47	57	6	41	51	42	10	4	2	M5x0.8	17	2.8	8	-
32	41.5	51.5	7	34.5	44.5	51.5	61.5	7	44.5	54.5	50	12	4	3	M6x1	22	2.8	9	-
40	43	53	7	36	46	53	63	7	46	56	58.5	12	4	3	M8x1.25	28	2.8	10	-

Bore Symbol	O	P1			P3	P4	R	S	T1	T2	U	V	W	X	Y
12	M5x0.8	Double Side: Φ6.5	Cog: M5×0.8	Through Hole: Φ4.2	12	4.5	-	25	16.2	23	1.6	6	5	-	-
16	M5x0.8	Double Side: Φ6.5	Cog: M5×0.8	Through Hole: Φ4.2	12	4.5	-	29	19.8	28	1.6	6	5	-	-
20	M5x0.8	Double Side: Φ6.5	Cog: M5×0.8	Through Hole: Φ4.2	14	4.5	2	34	24	-	2.1	8	6	11.3	10
25	M5x0.8	Double Side: Φ8.2	Cog: M6×1.0	Through Hole: Φ4.6	15	5.5	2	40	28	-	3.1	10	8	12	10
32	G1/8	Double Side: Φ8.2	Cog: M6×1.0	Through Hole: Φ4.6	16	5.5	6	44	34	-	2.15	12	10	18.3	15
40	G1/8	Double Side: Φ10	Cog: M8×1.25	Through Hole: Φ6.5	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16

### Outer Cog Dimension



### Dimension

Bore Symbol	B2	E	F	G	H	I	J	K2	L	M	V	W
12	17	16	4	1	10	8	4	M5 x 0.8	8	2.8	6	5
16	17.5	16	4	1.5	10	8	4	M5 x 0.8	10	2.8	6	5
20	20.5	19	4	1.5	13	10	5	M6 x 1.0	15	2.8	8	6
25	23	21	4	2	15	12	6	M8 x 1.25	17	2.8	10	8
32	25	22	4	3	15	17	6	M10 x 1.25	22	2.8	12	10
40	35	32	4	3	25	19	8	M14 x 1.5	28	2.8	16	14
50	37	33	5	4	25	27	11	M18 x 1.5	38	2.8	20	17
63	37	33	5	4	25	27	11	M18 x 1.5	40	2.8	20	17
80	44	39	6	5	30	32	13	M22 x 1.5	45	4	25	22
100	50	45	7	5	35	36	13	M26 x 1.5	55	4	32	27