

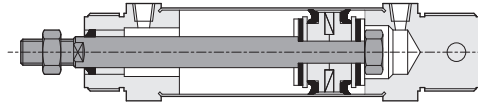
SDA series Miniature Cylinder (Stainless Steel Tube)

Product features

CHELIC



Internal structure



Specification

Item	Bore size (mm)	Ø12 ~ Ø16	Ø20 ~ Ø40
Action		Double acting	
Fluid		Air	
Mounting type		FA, LB, CB	
Pressure range	Kgf/cm ² (kPa)	1 ~ 7 (100 ~ 700)	
Max. operating pressure	Kgf/cm ² (kPa)	9 (900)	
Ambient and fluid temperature	°C	0 ~ 60	
Piston speed	mm/s	50 ~ 700	
Cushion		Without cushion	Rubber washer/ Air cushioning
Lubrication		Lubrication free type	
Port size		M5 x 0.8	PT 1/8
Sensing device		With magnet	

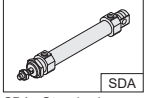





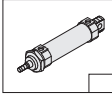
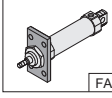
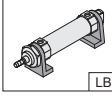
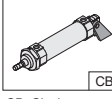
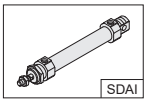
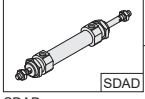
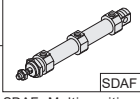
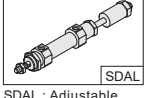
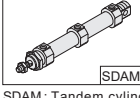
Standard stroke

Unit : mm

Bore size	Standard stroke	Max. stroke	Maximum
Ø12	25, 50, 75, 100, 150	150	150
Ø16	25, 50, 75, 100, 150	150	150
Ø20	25, 50, 75, 100, 150, 200, 250, 300	300	300
Ø25	25, 50, 75, 100, 150, 200, 250, 300	300	300
Ø32	25, 50, 75, 100, 150, 200, 250, 300	500	500
Ø40	25, 50, 75, 100, 150, 200, 250, 300	500	500

Code of order

SDA - **25** × **150** - **C** - **9D** - **12S** - **2** - **FA**

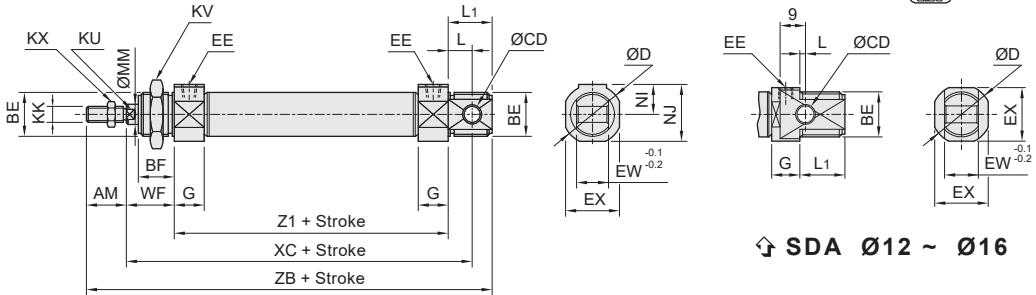
Model	Bore size	Stroke	Head cover shape	Cushion	Sensor switch	Mounting bracket	Sensor/ Bracket q'ty	Mounting type														
 SDA : Standard	12 - Ø12 mm 16 - Ø16 mm 20 - Ø20 mm 25 - Ø25 mm 32 - Ø32 mm 40 - Ø40 mm	25 - 25 mm 50 - 50 mm 75 - 75 mm 100 - 100 mm 125 - 125 mm 150 - 150 mm 175 - 175 mm 200 - 200 mm	 None: Standard  K: Short head	 None: No cushion  C: With cushion ※Ø12,Ø16 Without cushion	 CS-9D (Magnetic type) 9D None: Standard	<table border="1"> <thead> <tr> <th>Mark</th> <th>Cylinder (Inner dia.)</th> </tr> </thead> <tbody> <tr> <td>12S</td> <td>Ø12</td> </tr> <tr> <td>16S</td> <td>Ø16</td> </tr> <tr> <td>20S</td> <td>Ø20</td> </tr> <tr> <td>25S</td> <td>Ø25</td> </tr> <tr> <td>32S</td> <td>Ø32</td> </tr> <tr> <td>40S</td> <td>Ø40</td> </tr> </tbody> </table>	Mark	Cylinder (Inner dia.)	12S	Ø12	16S	Ø16	20S	Ø20	25S	Ø25	32S	Ø32	40S	Ø40	1 : 1 PC 2 : 2 PC	 None: Standard  FA: Front flange  LB: Double foot  CB: Clevis
Mark	Cylinder (Inner dia.)																					
12S	Ø12																					
16S	Ø16																					
20S	Ø20																					
25S	Ø25																					
32S	Ø32																					
40S	Ø40																					
 SDAI : Single acting (Normal in)	※ SDA Ø12 - Ø25 ISO-6432	※ Refer to stroke list																				
 SDAD : Double rod type																						
 SDAF : Multi-position tandem Cylinder																						
 SDAL : Adjustable stroke cylinder																						
 SDAM : Tandem cylinder																						

SDA series Miniature Cylinder (Stainless Steel Tube)

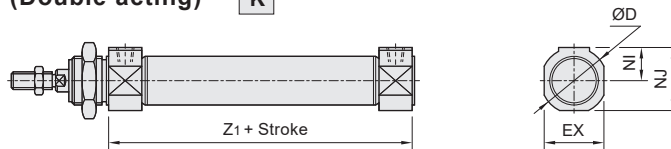
Dimension

CHELIC

Standard (Double acting) — SDA

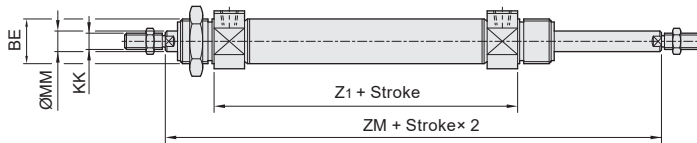


Short head type (Double acting) — K



Bore size (mm)	AM	BE	BF	CD	D	EE	EX	EW	G	KK	KU	KV	KX	L	L ₁	MM	NI	NJ	WF	XC	Z ₁	ZB
Ø12	16	M16x1.5	16	6	21	M5	19	12	10	M6x1.0	5	24	12	2	16	6	—	—	22	75	51	105
Ø16	16	M16x1.5	16	6	21	M5	19	12	10	M6x1.0	5	24	12	2	16	6	—	—	22	82	58	112
Ø20	20	M22x1.5	18	8	30	PT 1/8	27	16	15	M8x1.25	7	27	14	12	22	8	15	28.5	24	95	59	125
Ø25	22	M22x1.5	20	8	30	PT 1/8	27	16	16	M10x1.25	9	27	17	12	22	10	15	28.5	28	104	64	136
Ø32	23	M27x2.0	20	10	38	PT 1/8	35	20	16	M10x1.25	10	35	17	15	27	12	19	36.5	28	115	72	150
Ø40	23	M33x2.0	20	10	45	PT 1/8	42	20	16	M14x1.5	14	41	22	15	27	16	22.5	43.5	28	115	72	150

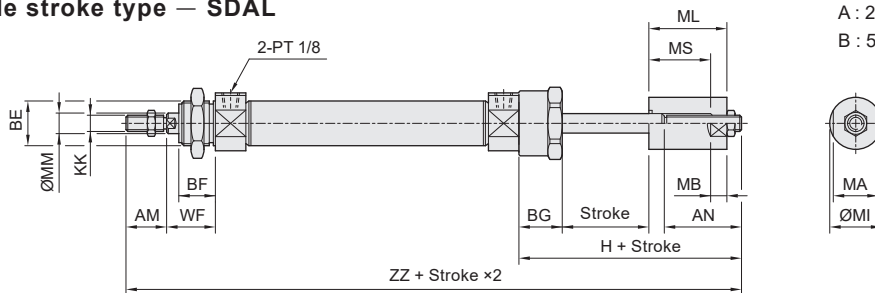
Double rod type (Double acting) — SDAD



Adjustable stroke type — SDAL

● Adjustable stroke

- A : 25mm
- B : 50mm



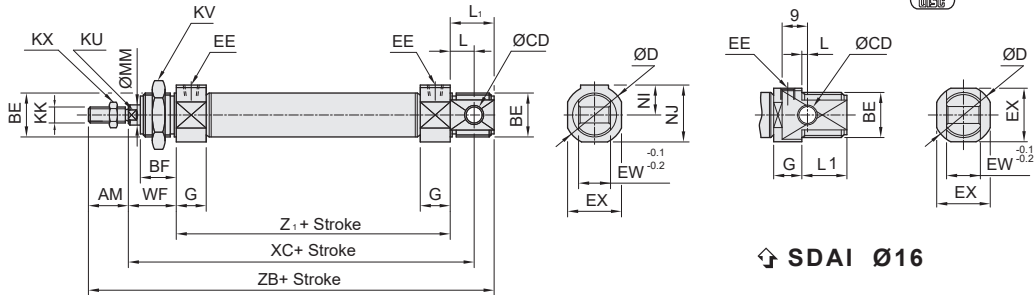
Bore size (mm)	AN		AM	BE	BF	BG	H		KK	MA	MB	MI	ML		MM	MS		WF	ZZ		ZM
	A	B					A	B					A	B		A	B		A	B	
Ø20	45	70	20	M22x1.5	18	25	78	103	M8x1.25	22	8	24	43	68	8	33	58	24	181	206	107
Ø25	46	71	22	M22x1.5	20	25	79	104	M10x1.25	22	8	24	45	70	10	35	60	28	193	218	120
Ø32	46	71	23	M27x2.0	20	25	79	104	M10x1.25	27	10	29	47	72	12	35	60	28	202	227	128
Ø40	50	75	23	M33x2.0	20	25	83	108	M14x1.5	32	10	35	47	72	16	35	60	28	206	231	128

SDAI, SDAO series Miniature Cylinder (Stainless Steel Tube)

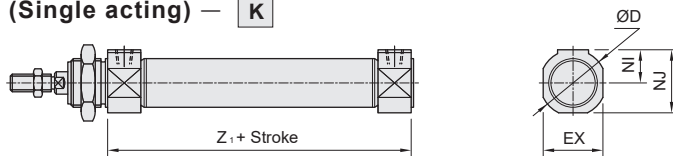
Dimension

CHELIC

Standard (Single acting) — SDAI



Short head type (Single acting) — K



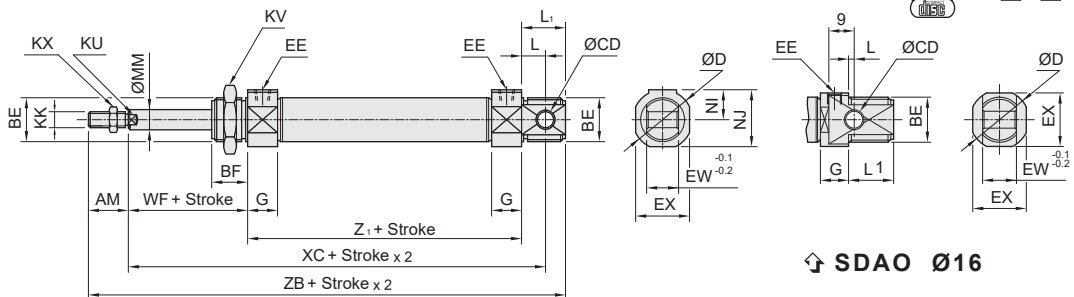
Unit: mm

Bore size	AM	BE	BF	CD	D	EE	EX	EW	G	KK	KU	KV	KX	L	L1	MM	NI	NJ	WF	Stroke 1~50			Stroke 51~100		
																				XC	Z1	ZB	XC	Z1	ZB
Ø16	16	M16x1.5	16	6	21	M5	19	12	10	M6x1.0	5	24	12	2	16	6	-	-	22	82	58	112	107	83	137
Ø20	20	M22x1.5	18	8	30	PT 1/8	27	16	15	M8x1.25	7	27	14	12	22	8	15	28.5	24	95	59	125	120	84	150
Ø25	22	M22x1.5	20	8	30	PT 1/8	27	16	16	M10x1.25	9	27	17	12	22	10	15	28.5	28	104	64	136	129	89	161
Ø32	23	M27x2.0	20	10	38	PT 1/8	35	20	16	M10x1.25	10	35	17	15	27	12	19	36.5	28	115	72	150	140	97	175
Ø40	23	M33x2.0	20	10	45	PT 1/8	42	20	16	M14x1.5	14	41	22	15	27	16	22.5	43.5	28	115	72	150	140	97	175

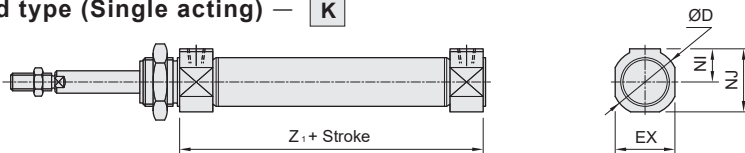
SBA

SDA

Standard (Single acting) — SDAO



Short head type (Single acting) — K



Unit: mm

Bore size	AM	BE	BF	CD	D	EE	EX	EW	G	KK	KU	KV	KX	L	L1	MM	NI	NJ	WF	Stroke 1~50			Stroke 51~100		
																				XC	Z1	ZB	XC	Z1	ZB
Ø16	16	M16x1.5	16	6	21	M5	19	12	10	M6x1.0	5	24	12	2	16	6	-	-	22	82	58	112	107	83	137
Ø20	20	M22x1.5	18	8	30	PT 1/8	27	16	15	M8x1.25	7	27	14	12	22	8	15	28.5	24	95	59	125	120	84	150
Ø25	22	M22x1.5	20	8	30	PT 1/8	27	16	16	M10x1.25	9	27	17	12	22	10	15	28.5	28	104	64	136	129	89	161
Ø32	23	M27x2.0	20	10	38	PT 1/8	35	20	16	M10x1.25	10	35	17	15	27	12	19	36.5	28	115	72	150	140	97	175
Ø40	23	M33x2.0	20	10	45	PT 1/8	42	20	16	M14x1.5	14	41	22	15	27	16	22.5	43.5	28	115	72	150	140	97	175

SDX

DBS2

DBF2

DBT

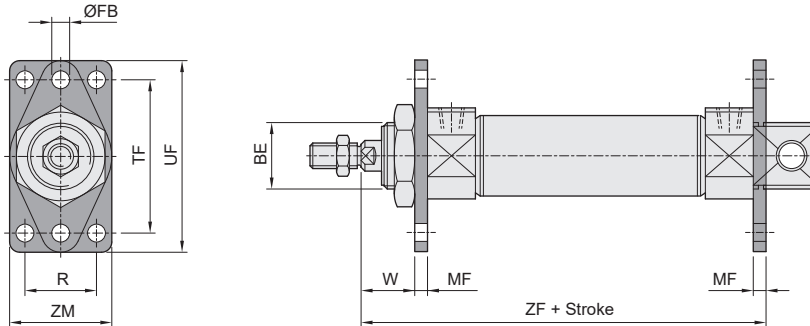
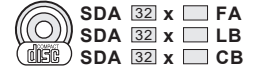
FDA

SDA series Miniature Cylinder (Stainless Steel Tube)

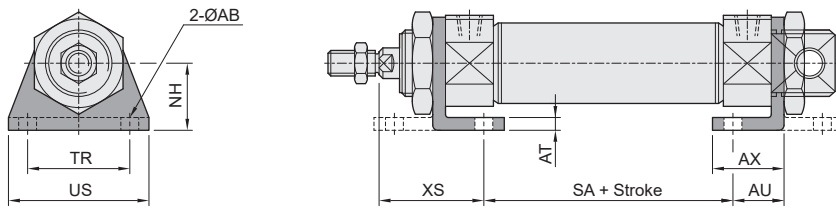
Bracket dimensions

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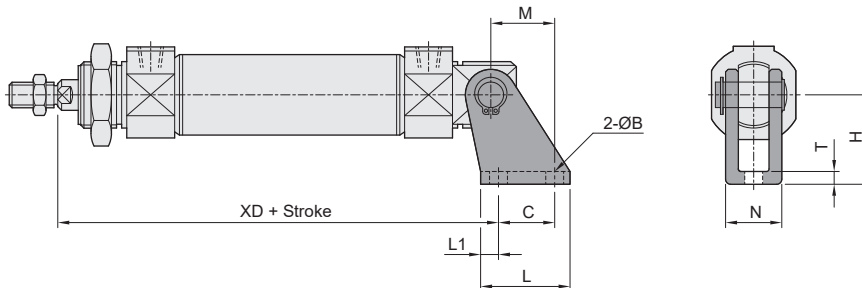
Front flange — FA



Double foot for both front and rear — LB



Clevis — CB



Unit: mm

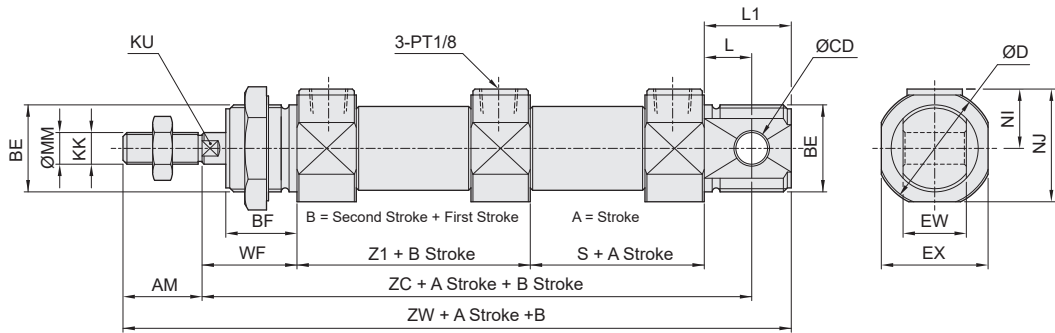
Bore size	AB	AT	AU	AX	B	BE	C	FB	H	L	L1	M	MF	N	NH	R	SA	T	TF	TR	UF	US	W	XD	XS	ZF	ZM
Ø12	6	4	14	20	6	M16x1.5	15	6	27	25	5	13	4	18	20	-	31	3	40	32	53	42	18	73	32	77	30
Ø16	6	4	14	20	6	M16x1.5	15	6	27	25	5	13	4	18	20	-	38	3	40	32	53	42	18	80	32	84	30
Ø20	7	5	17	25	7	M22x1.5	20	7	30	32	6	16	5	24	25	-	35	4	50	40	66	54	19	91	36	88	40
Ø25	7	5	17	25	7	M22x1.5	20	7	30	32	6	16	5	24	25	-	40	4	50	40	66	54	23	100	40	97	40
Ø32	7	5	20	30	7	M27x2.0	25	7	40	40	7.5	20	5	28	35	20	42	4	60	40	80	55	23.5	110	43.5	104.5	45
Ø40	9	5	20	30	9	M33x2.0	25	9	40	40	7.5	20	5	28	40	30	42	4	80	50	100	75	23.5	110	43.5	104.5	50

SDAF, SDAM series Miniature Cylinder (Stainless Steel Tube)

Dimension

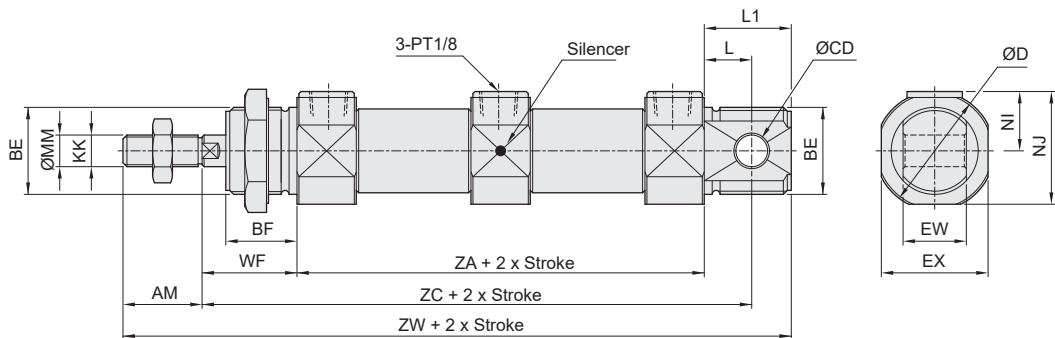
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SDAF – Multi-Position tandem stainless steel cylinder



※ Note: Max. stroke: 200 mm

SDAM – Tandem stainless steel cylinder



※ Note: Max. stroke: 200 mm

Unit: mm

Bore size	AM	BE	BF	CD	D	EX	EW	KK	KU	L	L1	MM	NI	NJ	S	WF	ZA	ZC	ZW	Z1
Ø20	20	M22x1.5P	18	8	30	27	16	M8x1.25P	7	12	22	8	15	28.5	44	24	103	139	169	59
Ø25	22	M22x1.5P	20	8	30	27	16	M10x1.25P	9	12	22	10	15	28.5	48	28	112	152	184	64
Ø32	23	M27x2.0P	20	10	38	35	20	M10x1.25P	10	15	27	12	19	36.5	56	28	128	171	206	72
Ø40	23	M33x2.0P	20	10	45	42	20	M14x1.5P	14	15	27	16	22.5	43.5	56	28	128	171	206	72

SBA

SDA

SDX

DBS2

DBF2

DBT

FDA

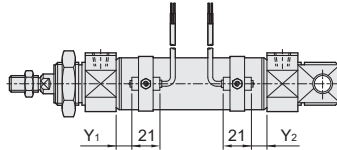
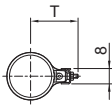
SDA series Miniature Cylinder (Stainless Steel Tube)

Sensor switch operating range and the setting

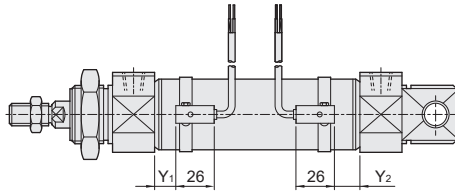
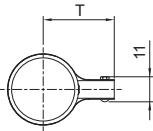
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☐ Sensor switch mounting type/ Dimension (Reference)

● SDA Ø 12, Ø16



● SDA Ø 20, Ø40



Unit: mm

Bore size	T	Y1	Y2
Ø 12	18.5	3	3
Ø 16	20.5	5	6
Ø 20	22.5	6.5	5
Ø 25	25	9	10
Ø 32	29	12	15
Ø 40	33	13	11

- Please install sensor at front and rear sides of cylinder, it is better to make same direction as line of visible at easy visible position of indicator light.
- Electric wire is arranged following cylinder and fixed to avoid any pulling and dragging affecting the reception of signal.

☐ Sensing range

- Sensor switch is fixed on the cylinder body. The magnetic piston head will activate the Sensor switch when it enters the operating range. It has 0.5mm differential.

☐ Operating range

- When piston head moves the switch setting and adjustment will be based on the responding range generated by the magnetic field and the switch. (Please refer to the below table)

Unit: mm

Model	CS-9D	
	Operating range(F)	Hysteresis(R)
Ø 12	4.5	1
Ø 16	4.5	1
Ø 20	4	1
Ø 25	5	1
Ø 32	5.5	1
Ø 40	7	1

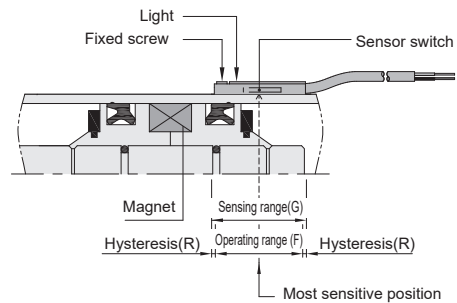
☐ Sensor switch introduction

● CS-9D



Voltage: DC 5 ~ 120 V
AC 5 ~ 120 V

☐ Sensor switch setting and operating range



☐ Accessory and assembly (Stainless steel cylinder tube use)

- CS-9D series-Applicable to round body cylinder

Round the metallic belt to the cylinder body with sensor switch like below images, then screw to the holder and tighten to prevent sensor switch fallen.

