

# Air Cylinder

## SC/SU series standard cylinder

**SC**



**SU**



Interchange: **AIRTAC**

Order model

<b>SC/SU</b>	<b>50×50</b>	<b>S</b>	<b>FA</b>
Serial number	Cylinder bore×stroke	Magnet code	Fixed type
SC: Standard double action type (draw bar type)		Blank:	Blank: basic type
SU: Standard type (built-in rod)		no magnetic	CA: Rear lid fixed (single ear type)
SCD: Double axle type standard cylinder		S:A magnet	CB: Back cover fixed (ear type)
SCJ: Two axis adjustable standard cylinder			FA: Front cover fixed (front flange)
SCJ: Step cylinder			FB: Rear lid fixed (rear flange)
			LB: Tripod type
			TC: Rock and roll
			TC-M: Rocking type plus foot seat

Air Cylinder

### Technical parameter

Internal diameter (mm)	32	40	50	63	80	100
Action type	Complex type					
Working medium	Air (clean air filtered by 40 μm)					
Use pressure	0.1~0.9Mpa(1~9kgf/cm <sup>2</sup> )					
Seal resistance pressure	1.35MPa(13.5kgf/cm <sup>2</sup> )					
Operating temperature range	-5~70°C					
Cushion type	Adjustable buffer					
Buffer stroke (mm)	24					32
Pipe Size	1/8"	1/4"	3/8"		1/2"	
Body material	Aluminium alloy					

### Selection of inductive switches

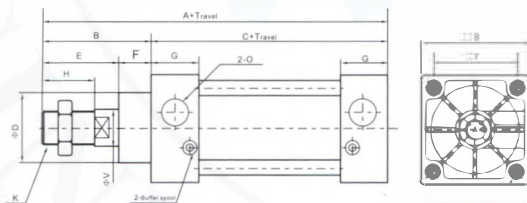
Type	Internal diameter	32	40	50	63	80	100	125	160
Induction switch		CS1-F CS1-U							
Inductive switch fixing seat		F-50	F-63	F-100	F-125	F-160			

### Cylinder stroke

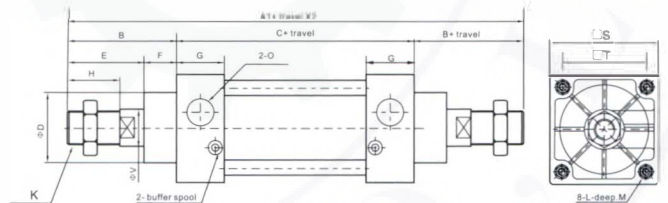
Internal diameter (mm)	Standard stroke (mm)										Max stroke	Permissible stroke
	25	30	35	40	45	50	55	60	65	70		
32	25	30	35	40	45	50	55	60	65	70	1000	2000
40	25	30	35	40	45	50	55	60	65	70	1200	2000
50	25	30	35	40	45	50	55	60	65	70	1200	2000
63	25	30	35	40	45	50	55	60	65	70	1500	2000
80	25	30	35	40	45	50	55	60	65	70	1500	2000
100	25	30	35	40	45	50	55	60	65	70	1500	2000
125	25	30	35	40	45	50	55	60	65	70	1500	2000
160	25	30	35	40	45	50	55	60	65	70	1500	2000

### Exterior dimension

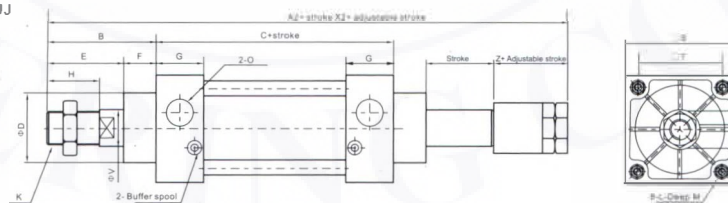
SC/SU



SCD/SUD



SCJ/SUJ



Internal diameter(mm)	A	A1	A2	B	C	D	E	F	G	H	K	K	O	S	T	V
32	140	187	182	47	93	28	32	15	27.5	22	M10×1.25	M6×1	G1/8	45	33	12
40	142	191	185	49	93	32	34	15	27.5	24	M12×1.25	M6×1	G1/4	50	37	16
50	150	207	196	57	93	38	42	15	27.5	32	M16×1.5	M6×1	G1/4	62	47	20
53	153	210	199	57	96	38	42	15	27.5	32	M16×1.5	M8×1.25	G3/8	75	56	20
80	183	258	243	75	108	47	54	21	33	40	M20×1.5	M10×1.25	G3/8	94	70	25
100	189	264	249	75	114	47	54	21	33	40	M20×1.5	M10×1.25	G1/2	112	84	25
125	242	339	314	96	146	60	64	32	40	54	M27×2	M12	G1/2	140	110	32
160	328	480	441	152	176	70	99	53	45	72	M36×2	M16	G1/2	180	145	40
200	343	-	-	154	189	75	99	55	50	72	M36×2	M16	G1/2	220	180	40
250	384	-	-	189	195	95	119	70	50	84	M42×2	M20	G1/2	280	225	50
320	431	-	-	221	210	110	136	85	55	96	M48×2	M24	G3/4	350	280	60

# Air Cylinder

## DNC series standard cylinder (ISO6431 standard cylinder)

# DNC



Interchange: **SMC**

Order model

<b>DNC</b>	<b>63×50</b>	<b>PPV</b>	<b>A</b>
Serial number	Bore×stroke	No: no buffer PPV: tape buffer	No: Standard A: ring
DNC: Basic type HNC: Axial foot seat FNC: Before and after the law SNCB: Ear seat SNCL: Single ear seat			

### Selection of inductive switches

Type	Internal diameter	32	40	50	63	80	100	125	160
Induction switch		CS1-M							
Inductive switch fixing seat									

### Technical parameter

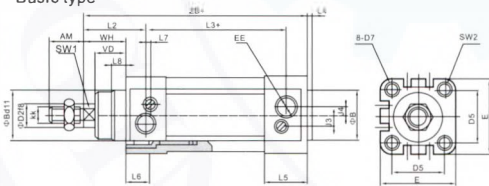
Bore(mm)	32	40	50	63	80	100
Working medium	Double action					
Use pressure	Air (clean air filtered by 40 m)					
Use pressure	0.1~0.9Mpa(kgf/cm <sup>2</sup> )					
Ensure resistance to pressure	1.35Mpa(13.5kgf/cm <sup>2</sup> )					
Operating temperature range	-5~70℃					
Cushion type	Gas relief (standard)					
Buffer stroke (mm)	24				32	
Pipe Size	1/8"	1/4"	3/8"		1/2"	
Body material	Aluminium alloy					

### Travel

Bore (mm)	Standard stroke(mm)										Max stroke (mm)	Permissible stroke(mm)								
32	25	50	75	100	125	150	175	200	250	300	350	400	500	1000	2000					
40	25	50	75	100	125	150	175	200	250	300	350	400	500	600	700	800	1000	1200	2000	
50	25	50	75	100	125	150	175	200	250	300	350	400	500	600	700	800	900	1000	1200	2000
63	25	50	75	100	125	150	175	200	250	300	350	400	500	600	700	800	900	1000	1500	2000
80	25	50	75	100	125	150	175	200	250	300	350	400	500	600	700	800	900	1000	1500	2000
100	25	50	75	100	125	150	175	200	250	300	350	400	500	600	700	800	900	1000	1500	2000
125	25	50	75	100	125	150	175	200	250	300	350	400	500	600	700	800	900	1000	1500	2000
160	25	50	75	100	125	150	175	200	250	300	350	400	500	600	700	800	900	1000	1500	2000

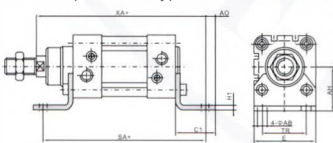
### Exterior dimension

DNC...PPV-A  
Basic type



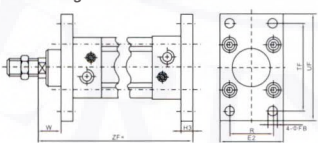
Bore(mm)	AM	E	D2	D5	D7	E	EE(G)	J3	J4	KK	L2	L3	L4	L5	L6	L7	L8	SW1	SW2	VD	WH	ZB
32	22	30	12	32.5	M6	45	1/8	6	5.2	M10×1.25	41.6	62.8	4	25.1	16	3.3	10	10	6	18	26	120
40	24	35	16	38	M6	54	1/4	8	6	M12×1.25	44	77	4	29.6	16	3.6	10.5	13	6	21.5	30	135
50	32	40	20	46.5	M8	64	1/4	10	8.5	M16×1.5	51	78	4	29.6	17	5.1	11.5	17	8	28	37	143
63	32	45	20	56.5	M8	75	3/8	12.4	10	M16×1.5	54	87	4	35.6	17	6.6	15	17	8	28.5	37	158
80	40	45	25	72	M10	93	3/8	12.5	8	M20×1.5	52.4	95.2	4	35.9	17	10.5	15.7	22	10	34.7	46	174
100	40	55	25	89	M10	100	1/2	11.8	10	M20×1.5	69.8	100.4	4	38.8	100	8	19.2	22	10	38.2	51	189

DNC...PPV-A  
Double piston rod type



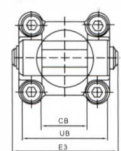
FNC...PPV-A  
Front and rear flanges

Front end installation Backend installation

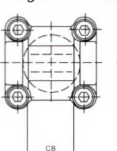


Bore(mm)	AB	AH	AO	C1	E	H1	SA	TR	XA	E2	H13	H3	R	TF	UF	W	ZF
32	7	32	6.5	30.5	45	5	142	32	144	50	7	10	32	64	80	16	130
40	10	36	9	37	54	5	161	36	163	55	9	10	36	72	90	20	14
50	10	45	10.5	41.5	64	6	170	45	175	65	9	12	45	90	110	25	155
63	10	50	12.5	44.5	75	6	185	50	190	75	9	12	50	100	125	25	170
80	12	63	15	56	93	6	210	63	215	100	12	16	63	126	154	30	190
100	14	71	17.5	58.5	100	6	220	75	230	120	14	16	75	150	186	35	205

SNCB...PPV-A  
Ear seat



SNCL...PPV-A  
Single ear seat



Bore(mm)	CB	DB	E3	H2	L	MR	UB	XD
32	26	10	55	6	13	10	45	142
40	28	12	63	6	16	12	52	160
50	32	12	71	7	16	12	60	170
63	40	16	83	7	21	16	70	190
80	50	16	103	10.5	22	16	90	210
100	60	20	127	10.5	27	20	110	230

Air Cylinder

# Air Cylinder

## SDA series of thin cylinder

### SDA



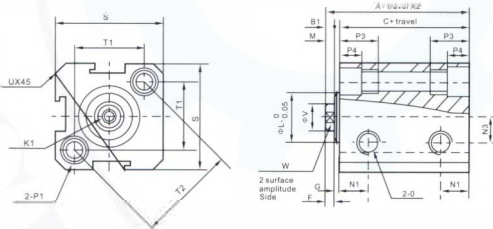
SDA-B  
(External thread)

#### Technical parameter

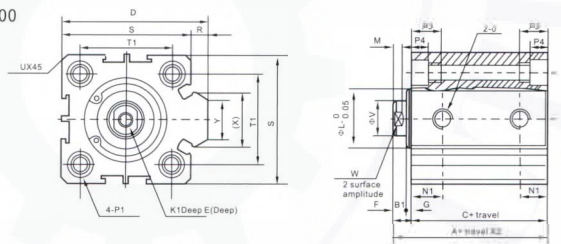
Internal diameter (mm)	12	16	20	25	32	40	50	63	80	100
Action type	Complex type									
Working medium	Air (clean air filtered by 40 μm)									
Use pressure	0.1~0.9Mpa(kgf/cm <sup>2</sup> )									
Ensure resistance to pressure	1.35Mpa(13.5kgf/cm <sup>2</sup> )									
Use temperature	-5~70℃									
Cushion type	Have buffer									
Pipe Size	M5		1/8"		1/4"		3/8"			
Body material	Aluminium alloy									

#### Exterior dimension

φ12-φ16



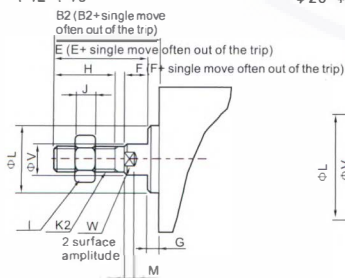
φ20-φ100



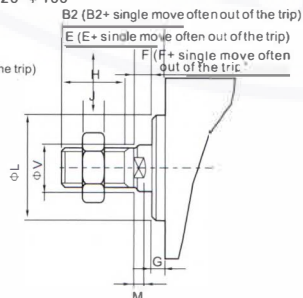
Internal diameter (mm)	Standard type			Attached magnetic type													
	A	B1	C	A	B1	C	D	E	E	F	G	K1	L	M	N1	N3	O
12	22	5	17	32	5	27	-	6	6	4	1	M3×0.5	10.2	2.8	6.3	6	M5×0.8
16	24	5.5	18.5	34	5.5	28.5	-	6	6	4	1.5	M3×0.5	11	2.8	7.3	6.5	M5×0.8
20	25	5.5	19.5	35	5.5	29.5	36	8	8	4	1.5	M4×0.7	16	2.8	7.5	-	M5×0.8
25	27	6	21	37	6	31	42	10	10	4	2	M5×0.8	17	2.8	8	-	M5×0.8
32	31.5	7	24.5	41.5	7	34.5	50	12	12	4	3	M6×1	22	2.8	9	-	G1/8
40	33	7	26	43	7	36	58.5	12	12	4	3	M8×1.25	28	2.8	10	-	G1/8
50	37	9	28	47	9	38	71.5	15	15	5	4	M10×1.5	38	2.8	10.5	-	G1/4
63	41	9	32	51	9	42	84.5	15	15	5	4	M10×1.5	40	2.8	11.8	-	G1/4
80	52	11	41	62	11	51	104	15	20	7	4	M14×1.5	45	4	13.5	-	G3/8
100	63	12	51	73	12	61	124	18	20	7	5	M18×1.5	55	4	17	-	G3/8

Internal diameter (mm)	Standard type											P3	P4	R5	S	T1	T2	U	V	W	X	Y																
	Bilateral	φ6.5 teeth	M5×0.8	Through hole	φ4.2	φ6.5 teeth	M5×0.8	Through hole	φ4.2	φ8.2 teeth	M6×1.0												Through hole	φ4.6	φ8.2 teeth	M6×1.0	Through hole	φ4.6	φ10 teeth	M8×1.25	Through hole	φ6.5	φ11 teeth	M8×1.25	Through hole	φ6.5	φ11 teeth	M8×1.25
12	12	4.5	-	25	16.2	23	1.6	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	12	4.5	-	29	19.8	28	1.6	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	14	4.5	2	34	24	-	2.0	8	6	11.3	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	15	5.5	2	40	28	-	3.4	10	8	12	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	16	5.5	6	44	34	-	2.15	12	10	18.3	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	20	7.5	6.5	52	40	-	2.25	16	15	21.3	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
50	25	8.5	9.5	62	48	-	4.15	20	17	30	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
63	25	8.5	9.5	75	60	-	3.15	20	17	28.7	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
80	25	10.5	10	94	74	-	3.65	25	22	36	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
100	30	13	10	114	90	-	3.65	25	22	35	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

φ12-φ16



φ20-φ100



Internal diameter (mm)	B2	E	F	G	H	I	J	K2	L	M	V	W
12	17	16	4	1	10	8	4	M5×0.8	10.2	2.8	6	5
16	17.5	16	4	1.5	10	8	4	M5×0.8	11	2.8	6	5
20	20.5	19	4	1.5	13	10	5	M6×1.0	15	2.8	8	6
25	23	21	4	2	15	12	6	M8×1.25	17	2.8	10	8
32	25	22	4	3	15	17	6	M10×1.25	22	2.8	12	10
40	35	32	4	3	25	19	8	M14×1.5	28	2.8	16	14
50	37	33	5	4	25	27	11	M18×1.5	38	2.8	20	17
63	37	33	5	4	25	27	11	M18×1.5	40	2.8	20	17
80	44	39	6	5	30	32	13	M22×1.5	45	4	25	22
100	50	45	7	5	35	36	13	M22×1.5	55	4	25	27

# Air Cylinder

## CQ2B series of thin cylinder

### CQ2B



CQ2B-M  
(External thread)

Interchange: SMC

#### Order model

CQ2	B	50×50	D	M
CQ2 Standard type	Install	Bore × stroke	Action type	Piston rod thread form
CDQ2 Standard magnetic type	B: through hole A: both ends of the internal thread		D: complex motion S: single acting pre contraction T: single acting Pre Stretch	Blank: internal thread M: external thread

#### Selection of inductive switches

Type	Internal diameter	16	20	25	32	40	50	63	80	100	125	160
Induction switch		D-A73L D-A93										

#### Travel

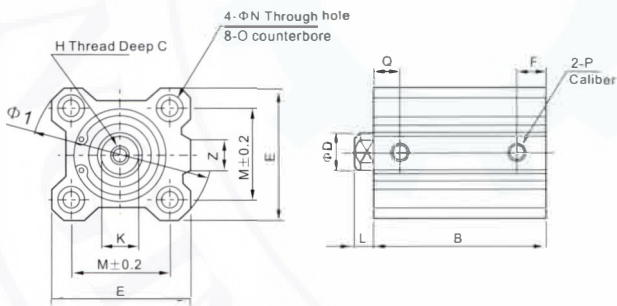
Internal diameter (mm)	Standard stroke (mm)												Max stroke	Permissible stroke								
12	5	10	15	20	25	30	35	40	45	50	50	60										
16	5	10	15	20	25	30	35	40	45	50	50	60										
20	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	80	90				
25	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	80	90				
32	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	130	150
40	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	130	150
50	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	130	150
63	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	130	150
80	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	130	150
100	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	130	150

#### Technical parameter

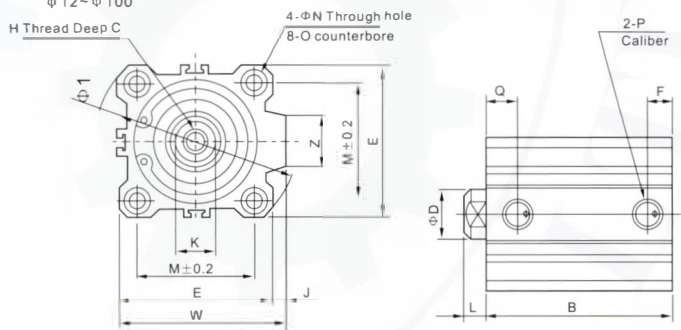
Internal diameter (mm)	12	16	20	25	32	40	50	63	80	100
Action type	Complex type									
Working medium	Air (clean air filtered by 40 μm)									
Use pressure	0.1~0.9Mpa(kgf/cm <sup>2</sup> )									
Ensure resistance to pressure	1.35Mpa(13.5kgf/cm <sup>2</sup> )									
Use temperature	-5~70°C									
Cushion type	No buffer									
Pipe Size	M5			1/8"		1/4"		3/8"		
Body material	Aluminium alloy									

#### Exterior dimension

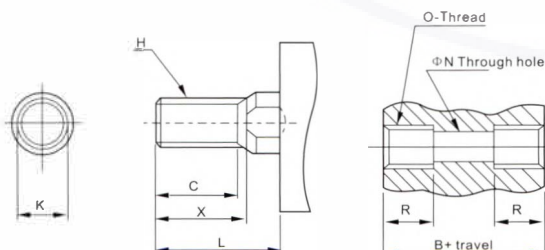
φ12~φ16



φ12~φ100



Inside diameter (mm)	B	φD	E	F	H	C	I	J	K	L	M	φN	φO	P	Q	W	Z
12	17+st	6	25	5	M3×0.5	6	32	-	5	3.5	15.5	3.5	6.5depth3.5	M5×0.8	7.5	-	-
16	18.5+st	8	29	5.5	M4×0.7	8	38	-	6	3.5	20	3.5	6.5depth3.5	M5×0.8	8	-	10
20	19.5+st	10	36	5.5	M5×0.8	7	47	-	8	4.5	25.5	5.5	9depth7	M5×0.8	9	-	10
25	22.5+st	12	40	5.5	M6×1.0	12	52	-	10	5	28	5.5	9depth7	M5×0.8	11	-	10
32	23+st	16	45	7.5	M8×1.25	13	60	4.5	14	7	34	5.5	9depth7	1/8	10.5	49.5	18
40	29.5+st	16	52	8	M8×1.25	13	69	5	14	7	40	5.5	9depth7	1/8	11	57	18
50	30.5+st	20	64	10.5	M10×1.5	15	86	7	17	8	50	6.6	11depth3	1/4	10.5	74	22
63	36+st	20	77	10.5	M10×1.5	15	103	7	17	8	60	9	14depth10.5	1/4	15	84	22
80	43.5+st	25	98	12.5	M16×2.0	21	132	6	22	10	77	11	17.5depth13.5	3/8	16	104	26
100	53+st	30	117	13	M20×2.5	27	156	6.5	27	12	94	11	17.5depth13.5	3/8	23	123.5	26



Inside diameter (mm)	C	X	D	H	L	K	O	R
12	9	10.5	6	M5×0.8	14	5	M4×0.7	7
16	10	12	8	M6×1.0	15.5	6	M7×0.7	7
20	13	14	10	M8×1.25	18.5	8	M6×1.0	10
25	15	17.5	12	M10×1.25	22.5	10	M6×1.0	10
32	20.5	23.5	16	M14×1.5	28.5	14	M6×1.0	10
40	20.5	23.5	16	M14×1.5	28.5	14	M6×1.0	10
50	26	28.5	20	M18×1.5	33.8	17	M8×1.25	14
63	26	28.5	20	M18×1.5	33.5	17	M10×1.5	18
80	32.5	35.5	25	M22×1.5	43.5	22	M12×1.75	22
100	32.5	35.5	30	M26×1.5	43.5	27	M12×1.75	22

# Air Cylinder

Slim cylinder MAL series ( High temperature, high pressure seals, based on the original price plus 50% ) Interchange:AIRTAC



Model	Bore size	Port size	Standard stroke mm	Max. Cylinder principle force	Piston port size	Body type	Valve type	Max. operating pressure
MAL16	16	M5	25~300	14Kgf	M6X1	FA-front flange FB-rear flange CA-single clevis CB-double clevis LB-foot bracket Y-Y joint I-I joint	MAL-S MALD MALJ MASL MATL	0~10 kgf/cm <sup>2</sup>
MAL20	20	PT1/8	25~300	28Kgf	M8X1.25			
MAL25	25	PT1/8	25~500	44Kgf	M10X1.25			
MAL32	32	PT1/8	25~500	70Kgf	M10X1.25			
MAL40	40	PT1/4	25~500	110Kgf	M12X1.25			

Slim cylinder MA series ( High temperature, high pressure seals, based on the original price plus 50% ) Interchange:AIRTAC



Model	Bore size	Port size	Standard stroke mm	Max. Cylinder principle force	Piston port size	Body type	Valve type	Max. operating pressure
MA16	16	M5	25~300	14Kgf	M6X1	FA-front flange FB-rear flange CA-single clevis CB-double clevis LB-foot bracket Y-Y joint I-I joint	MA-S MAD MAJ MSA MTA	0~10 kgf/cm <sup>2</sup>
MA20	20	PT1/8	25~300	28Kgf	M8X1.25			
MA25	25	PT1/8	25~500	44Kgf	M10X1.25			
MA32	32	PT1/8	25~500	70Kgf	M10X1.25			
MA40	40	PT1/4	25~500	110Kgf	M12X1.25			

Slim cylinder CDM2B series ( High temperature, high pressure seals, based on the original price plus 50% ) Interchange:SMC



Model	Bore size	Port size	Standard stroke mm	Max. Cylinder principle force	Piston port size	Body type	Valve type	Max. operating pressure
CDM2B20	20	PT1/8	25~300	28Kgf	M8X1.25	FA-front flange FB-rear flange CA-single clevis CB-double clevis LB-foot bracket Y-Y joint I-I joint	CDM2B CM2BD CM2BJ CM2SB CM2TB	0~10 kgf/cm <sup>2</sup>
CDM2B25	25	PT1/8	25~500	44Kgf	M10X1.25			
CDM2B32	32	PT1/8	25~500	70Kgf	M10X1.25			
CDM2B40	40	PT1/4	25~500	110Kgf	M12X1.25			

Slim cylinder CD85 series (ISO6432) Interchange:ISO6432



Model	Port size	Bore size	Standard stroke mm	Max. Cylinder principle force	Piston port size	Body type	Valve type	Max. operating pressure
CD85 08	8	M5	5~100	2.5Kgf	M4X0.7	FA-front flange FB-rear flange CA-single clevis CB-double clevis LB-foot bracket Y-Y joint I-I joint	CD85 C85D C85J CS85 CT85	0~10 kgf/cm <sup>2</sup>
CD85 10	10	M5	5~100	4Kgf	M4X0.7			
CD85 12	12	M5	5~100	7Kgf	M6X1			
CD85 16	16	M5	25~300	14Kgf	M6X1			
CD85 20	20	PT1/8	25~300	28Kgf	M8X1.25			
CD85 25	25	PT1/8	25~500	44Kgf	M10X1.25			

Slim cylinder CDJ2B series Interchange:SMC



Model	Bore size	Port size	Piston port size	Valve type
CDJ2B6	6	M5	M3X0.5	CDJ2B CJ2BD CJ2BJ CJ2SB CJ2TB
CDJ2B10	10	M5	M4X0.7	
CDJ2B16	16	M5	M5X0.8	

# Air Cylinder

Compact guide cylinder MGPM/MGPL(with bearing)series Interchange:SMC



Model	Bore size	Port size	Standard stroke mm	Max.Cylinder principle force	Piston port size	Max.operating pressure
MGPM12	12	M5	5~50	10Kgf	M3X0.5,M5X0.8	0~10/kgf/cm <sup>2</sup>
MGPM16	16	M5	5~50	14Kgf	M3X0.5,M5X0.8	
MGPM20	20	M5	5~50	28Kgf	M4X0.7,M6X1	
MGPM25	25	M5	5~50	44Kgf	M5X0.8,M8X1.25	
MGPM32	32	PT1/8	5~500	70Kgf	M6X1,M10X1.25	
MGPM40	40	PT1/8	5~500	110Kgf	M8X1.25,M14X1.5	
MGPM50	50	PT1/4	5~500	170Kgf	M10X1.5,M18X1.5	
MGPM63	63	PT1/4	5~500	280Kgf	M10X1.5,M18X1.5	
MGPM80	80		5~500			
MGPM100	100		5~500			

Twin-rod cylinder TN series



Interchange:AIRTAC

Model	Bore size	Port size	Standard stroke mm	Max.Cylinder principle force	Piston OD.	Body type	Valve type	Max.operating pressure
TN 10	10	M5	5~50	4Kgf	6	Y-Y joint I-I joint	TN	0~8/kgf/cm <sup>2</sup>
TN 16	16	M5	5~100	7Kgf	8			
TN 20	20	M5	5~100	14Kgf	10			
TN 25	25	PT1/8	5~100	28Kgf	12			
TN 32	32	PT1/8	5~100	44Kgf	16			

Twin-rod cylinder CXS series



Interchange:SMC

Model	Bore size	Port size	Standard stroke mm	Max.Cylinder principle force	Piston OD.	Body type	Valve type	Max.operating pressure
CXS10	10	M5	5~50	4Kgf	6	Y-Y joint I-I joint	CXS	0~8/kgf/cm <sup>2</sup>
CXS16	16	M5	5~100	7Kgf	8			
CXS20	20	M5	5~100	14Kgf	10			
CXS25	25	PT1/8	5~100	28Kgf	12			
CXS32	32	PT1/8	5~100	44Kgf	16			

Compact cylinder ADVU series



Interchange:FESTO

Model	Bore size	Port size	Standard stroke mm	Max.Cylinder principle force	Piston port size	Body type	Max.operating pressure
ADVU20	20	M5	5~50	28Kgf	M10X1.25		0~10/kgf/cm <sup>2</sup>
ADVU25	25	M5	5~50	44Kgf	M10X1.25		
ADVU32	32	PT1/8	5~100	70Kgf	M10X1.25		
ADVU40	40	PT1/8	5~100	110Kgf	M10X1.25		
ADVU50	50	PT1/8	5~100	170Kgf	M12X1.25		

Slim cylinder CJ2D series



Interchange:SMC

Model	Bore size	Port size	Piston port size	Valve type
CJ2D6	6	M5	M3X0.5	CJ2DD CJ2DJ CJ2SD CJ2TD
CJ2D10	10	M5	M4X0.7	
CJ2D16	16	M5	M5X0.8	

# Air Cylinder

## Sulti mount cylinder MHZ2 series



Interchange: SMC

Double type	Double type	Double type	single open type	Double type	single closed type	Double type	Port size	stroke	Standard	Operating pressure
MHZ2-6D	6.1 N	3.3 N	MHZ2-6S	1.9 N	MHZ2-6C	3.7 N	M3X0.5	4mm	180 c.p.m.	0~8kgf/cm <sup>2</sup>
MHZ2-10D	17 N	9.8 N	MHZ2-10S	6.3 N	MHZ2-10C	12 N	M3X0.5	4mm	180 c.p.m.	
MHZ2-16D	40 N	30 N	MHZ2-16S	24 N	MHZ2-16C	31 N	M5X0.8	6mm	180 c.p.m.	
MHZ2-20D	66 N	42 N	MHZ2-20S	28 N	MHZ2-20C	56 N	M5X0.8	10mm	180 c.p.m.	
MHZ2-25D	104 N	65 N	MHZ2-25S	45 N	MHZ2-25C	83 N	M5X0.8	14mm	180 c.p.m.	
MHZ2-32D	193 N	158 N	MHZ2-32S	131 N	MHZ2-32C	161 N	M5X0.8	22mm	60 c.p.m.	
MHZ2-40D	318 N	254 N	MHZ2-40S	137 N	MHZ2-40C	267 N	M5X0.8	30mm	60 c.p.m.	

## Sulti mount cylinder MHC2 series



Interchange: SMC

Double type	Double type	single open type	Double type	Port size	Standard stroke	Standard	Operating pressure
MHC2-10D	9.8 N	MHC2-10S	6.9 N	M3X0.5	4mm	180 c.p.m.	0~8kgf/cm <sup>2</sup>
MHC2-16D	39.2N	MHC2-16S	31.4 N	M5X0.8	6mm	180 c.p.m.	
MHC2-20D	69.7 N	MHC2-20S	54 N	M5X0.8	10mm	180 c.p.m.	
MHC2-25D	136 N	MHC2-25S	108 N	M5X0.8	14mm	180 c.p.m.	

## Sulti mount cylinder MHY2 series



Interchange: SMC

Type	Bore size	Pore size	Action mode	Clamping force(N·M)
MHY2-10D	10	M5X0.8	Double role	0.16
MHY2-16D	16			0.54
MHY2-20D	20			1.10
MHY2-25D	25			2.28

## Sulti mount cylinder MHL2 series



Interchange: SMC

Type	Bore size	Pore size	Action mode	Clamping force(N)
MHL2-10	10	M5X0.8	Double role	14
MHL2-16	16			45
MHL2-20	20			74
MHL2-25	25			131
MHL2-32	32	RC1/8	Double role	228
MHL2-40	40			396

## Sulti mount cylinder MHT2 series



Interchange: SMC

Type	Bore size	Use pressure range	Action mode	Clamping force(N)
MHT2-32D	φ 32	0.1~0.6MPa	Double role	12.4
MHT2-40D	φ 40			36.0
MHT2-50D	φ 50			106
MHT2-63D	φ 63			63.0

# Air Cylinder

## HDP



### Common specifications Interchange:CHELIC

Model	HDP-10	HDP-16	HDP-20	HDP-25	HDP-32	
Cylinder bore(mm)	10	16	20	25	32	
Action form	Compound movement type					
Using fluids	Air					
Operating pressure range	1.5~7(150~700)					
Service temperature range	0~60					
The highest frequency of action (sub/min)	100					
For oil	Cylinder	Free supply mode				
	Bent arm position	Need(Lubricating oil smearing)				
Theoretical holding moment (M)kgf-cm	Closed side	0.8	2.4	4.7	7.5	10
	Open side	0.5	1.8	3.5	6.0	8.5
Maximum claw arm contact length (L) mm	30	40	60	70	85	
Clamping jaw opening and closing stroke mm	4	8	12	14	16	
Piping caliber	M3×0.5p	M5×0.8				
Magnet device	Magnet attached device					

## HDS



### Common specifications Interchange:CHELIC

Model	HDS-10	HDS-16	HDS-20	HDS-25	HDS-32	
Cylinder bore(mm)	10	16	20	25	32	
Action form	HDS: compound moving HRS: single action and normally open type					
Using fluids	Air					
Operating pressure range kgf/cm <sup>2</sup>	1.5~7(50~700)					
Service temperature range °C	0~60					
The highest frequency of action (sub/min)	80					
For oil	Cylinder	Free supply mode				
	Bent arm position	Need(Lubricating oil smearing)				
Theoretical holding moment (M)kgf-cm	Closed side	0.16×P	0.8×P	1.7×P	3.4×P	6.1×P
	Open side	0.26×P	1.1×P	2.3×P	4.3×P	8.1×P
Maximum claw arm contact length (L) mm	30	40	60	70	85	
Effective holding force (F) kgf	F=M/L×0.85					
Angle of clamping jaw opening and closing	-10~+30					
Piping caliber	M3×0.5p	M5×0.8				
Magnet device	Magnet attached device					

## HDM



### Common specifications Interchange:CHELIC

Model	HDM-10	HDM-16	HDM-20	HDM-25	HDM-32	
Cylinder bore(mm)	10	16	20	25	32	
Action form	Compound movement type					
Using fluids	Air					
Operating pressure range kgf/cm <sup>2</sup>	1.5~7(50~700)					
Service temperature range °C	0~60					
The highest frequency of action (sub/min)	80					
For oil	Cylinder	Free supply mode				
	Bent arm position	Need(Lubricating oil smearing)				
Theoretical holding moment (M)kgf-cm	Closed side	0.2×P	0.8×P	1.7×P	3.4×P	6.1×P
	Open side	0.5×P	1.1×P	2.3×P	4.3×P	8.1×P
Maximum claw arm contact length (L) mm	40	80	100	120	140	
Effective holding force (F) kgf	F=M/L×0.85					
Angle of clamping jaw opening and closing	-1° ~+180°					
Piping caliber	M5×0.8					
Magnet device	Magnet attached device					



# Air Cylinder

## MXS Series Slide cylinder

### MXS



### Technical parameters Interchange:SMC

Model	MXS6	MXS8	MXS12	MXS16	MXS20	MXS25
Bore(mm)	φ 6x2 <small>(The equivalent of φ 6)</small>	φ 8x2 <small>(The equivalent of φ 11)</small>	φ 12x2 <small>(The equivalent of φ 17)</small>	φ 16x2 <small>(The equivalent of φ 22)</small>	φ 20x2 <small>(The equivalent of φ 28)</small>	φ 25x2 <small>(The equivalent of φ 35)</small>
The use of fluid	Air					
Action mode	Double action					
Use the lowest pressure	0.7MPa					
Maximum working pressure	0.15MPa					
Environment and fluid temperature	-10~+60°C (But not frozen)					
Take over product size	M3x0.5	M5x0.8			Rc1/8	

## MXH Series Slide cylinder

### MXH



### Technical parameters Interchange:SMC

Bore(mm)	6	10	16	20
Guide bearing width	5	7	9	12
The use of fluid	Air			
Action mode	Double action			
Use the lowest pressure	0.15MPa	0.06MPa	0.05MPa	
Maximum working pressure	0.07MPa			
Environment and fluid temperature	Without magnetic switch: -10~+70°C With magnetic switch: 10~+60°C (But not frozen)			
Piston speed	50~500 mm/s			
Allow the energy J	0.0125	0.025	0.05	0.1
The magnetic switch selection	Reed type: D-A9□, Solid state electronic type: D-M9□			
Take over product size	M5x0.8			
Standard stroke	5, 10, 15, 20, 25, 30, 40, 50, 60			

## MXQ Series Slide cylinder

### MXQ

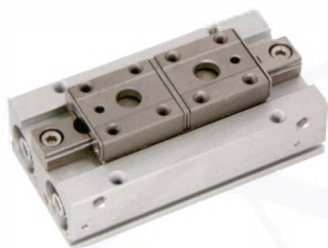


### Common specifications Interchange:SMC

Model	MXQ6	MXQ8	MXQ12	MXQ16	MXQ20	MXQ25
Cylinder bore(mm)	φ 6×2 <small>(Equivalent to φ 6)</small>	φ 8×2 <small>(Equivalent to φ 11)</small>	φ 12×2 <small>(Equivalent to φ 8)</small>	φ 16×2 <small>(Equivalent to φ 22)</small>	φ 20×2 <small>(Equivalent to φ 28)</small>	φ 25×2 <small>(Equivalent to φ 35)</small>
Using fluids	Air					
Movement mode	Double action					
Maximum operating pressure (MPa)	0.7MPa					
Minimum operating pressure (MPa)	0.15MPa					
Environment and fluid temperature	-10~60°C (But not frozen)					
Piston speed	50~1000mm/s(Metal retainer:50~200mm/s)					
Buffer	Rubber buffer (standard)/Hydraulic buffer/No metal limiter					
Travel length tolerance(mm)	+1.0 0					
For oil	Unwanted					
Pipe Size (Rc)	M5×0.8			Rc1/8		

# Air Cylinder

## MHF2



### Common specifications Interchange: SMC

Model	MHF2-8D	MHF2-12D	MHF2-16D	MHF2-20D
Cylinder bore(mm)	8	12	16	20
Using fluids	Air(No oil)			
Operating pressure range(MPa)	0.15~0.7	0.1~0.7		
Environment and fluid temperature	-10°C~+60°C(But not frozen)			
Repeatability accuracy (mm)	±0.05			
Maximum use frequency (c.p.m)	Short stroke, medium stroke: 120; Long stroke: 60			
Movement mode	Double action			
Effective gripping force of each finger(N)	19	48	90	141
Opening and closing stroke (both sides)(mm)	8,16,32	12,24,48	16,32,64	20,40,80

## MHS

(MHS2, MHS3, MHS4)



MHS2

MHS4

MHS2-16D MHS3-16D MHS4-16D  
 MHS2-20D MHS3-20D MHS4-20D  
 MHS2-25D MHS3-25D MHS4-25D  
 MHS2-32D MHS3-32D MHS4-32D  
 MHS2-40D MHS3-40D MHS4-40D  
 MHS2-50D MHS3-50D MHS4-50D  
 MHS2-63D MHS3-63D MHS4-63D  
 MHS3-80D  
 MHS3-100D  
 MHS3-125D

### Common specifications Interchange: SMC

Model	MHS-16D	MHS-20D	MHS-25D	MHS-32D	MHS-40D	MHS-50D	MHS-63D
Cylinder bore(mm)	16	20	25	32	40	50	63
Using fluids	Air						
Operating pressure range	0.2~0.6MPa			0.1~0.6MPa			
Environment and fluid temperature	-10~+60°C						
Repeatability accuracy	±0.01mm						
Maximum action frequency	120 c.p.m			60 c.p.m			
For oil	Outer diameter clamping						
Action form	Inner diameter clamping						
Clamping force	21	27	63	111	177	280	502
Pressure	23	42	71	123	195	306	537
Finger travel(mm)	4	4	6	8	8	12	16
Pipe holding caliber	M3×0.5			M5×0.8			
Magnetic switch	Built in magnetic ring type						
Magnetic switch type	M9P(V)M9N(V) · M9B(V),F9BA		Y59A · Y59B		Y69A, Y69B, Y7BA		

Air Cylinder

## MXF



### Common specifications Interchange: SMC

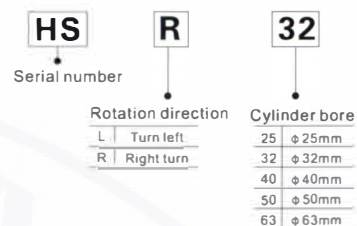
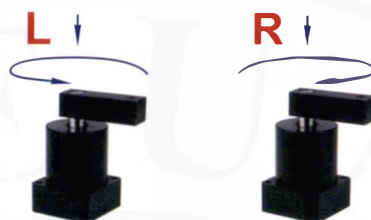
Model	8	12	16	20
Using fluids	Air			
Movement mode	Double action			
Maximum operating pressure(MPa)	0.7MPa			
Minimum operating pressure(MPa)	0.15MPa			
Environment and fluid temperature	-10~+60°C (But not frozen)			
Piston speed	50~500mm/s			
Buffer	Both ends of the rubber buffer			
Travel length tolerance(mm)	+1.0 (mm)			
Range of travel adjustment	The forward end 5mm and the back end 5mm			
For oil	Unwanted			
Pipe Size	M3×0.5	M5×0.8		

Bore	Standard stroke
8	10,20,30
12	20,30,50
16	30,50,75
20	30,50,75,100

# Air Cylinder

## Model representation method Interchange:SMC

### HS

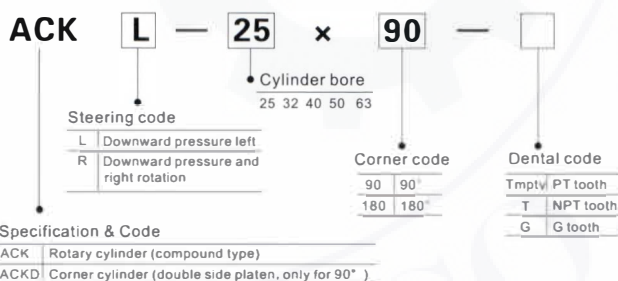


### Common specifications

Model	HS-L-25	HS-L-32	HS-L-40	HS-L-50	HS-L-63
Project	HS-R-25	HS-R-32	HS-R-40	HS-R-50	HS-R-63
Cylinder bore(mm)	φ 25	φ 32	φ 40	φ 50	φ 63
Port Size	M5	1/8"	1/8"	1/4"	1/4"
Action form	Compound action				
Using fluids	Air				
Operating pressure range kgf/cm <sup>2</sup> (MPa)	1.5~9.5(150~950)				
Service temperature °C	0~60				
Service speed mm/sec	30~500				
Turning stroke mm	11	13		15	
Down stroke mm	11	13		15	
Rotation angle	90° can be customized(0° ,45° ,60° )				
Rotation direction	Turn left (right to left), -L, turn right (left to right) -R				
Buffer direction	Rubber gasket buffer				
Lubrication	Free supply mode				
Caliber	M5×0.8				

## Model representation method Interchange:AIRTAC

### ACK

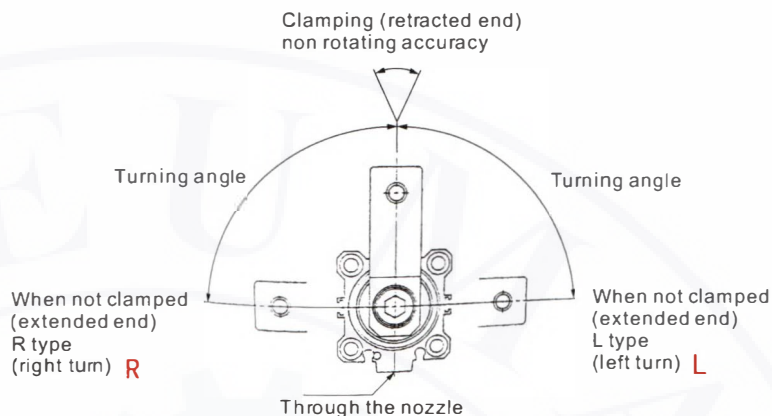


Cylinder bore(mm)	25	32	40	50	63
Action form	Compound movement type				
Working medium	Air(Filter through 40 μ m above screen)				
Operating pressure range	0.15~1.0MPa(22~145psi)				
Ensure the resistance to pressure	1.5MPa(215psi)				
Working temperature°C	-20~80				
Range of use speed mm/s	30~300				
Range of travel tolerance					
Tolerance range of rotation angle	± 1.5°				
Buffer form	No				
Pipe Size	M×0.8			PT 1/8	

# Air Cylinder

Rotary cylinder MK series Interchange: SMC

## MKB

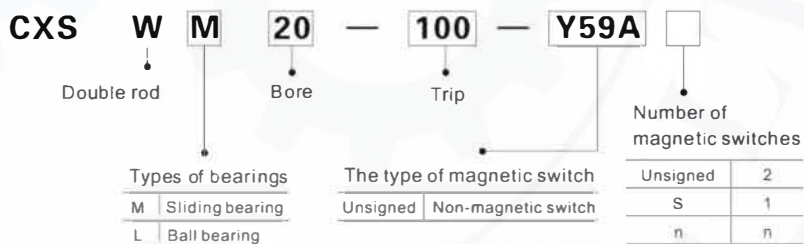


Model	Bore size	port size	Standard stroke mm	Rotary angle	Max.cylinder Clamp force	Pisron OD.	Available accessories	Mode	Max.operating pressure
MKB16	16	M5	10,20	90°	75 N	8	FB-rear flange	MKB:Four holes through hole MKA:Four holes with thread R:Right L:Left	0~8/kgf/cm <sup>2</sup>
MKB25	20	M5	10,20	90°	100 N	12			
MKB25	25	M5	10,20	90°	185N	12			
MKB32	32	PT1/8	10,20	90°	300N	16			
MKB40	40	PT1/8	10,20	90°	525 N	16			
MKB45	50	PT1/4	20,50	90°	825 N	20			
MKB63	63	PT1/4	20,50	90°	1400 N	20			

Air Cylinder

■ Model representation method Interchange: SMC

## CXSWM



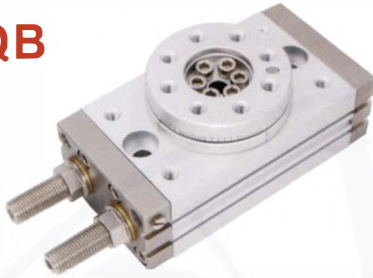
### Common specifications

Cylinder bore(mm)	6	10	15	20	25	32
Using fluids	Air					
Movement mode	Double action					
Maximum operating pressure(MPa)	0.7					
Minimum operating pressure(MPa)	0.15			0.1		
Environment and fluid temperature	-10~+60°C (But not frozen)					
Buffer	Rubber buffer at both ends					
Piston speed mm/s	50~500					
Structure	Double cylinder (2 times the output power)					
For oil	Unwanted					
Range of travel adjustment	0~-10mm					
Bearing	Sliding bearing / Ball bearing					
Pipe Size	M5×0.8				Rc 1/8	

# Air Cylinder

■ Model representation method Interchange: SMC

## MSQB



MSQB-10A MSQB-10R  
 MSQB-20A MSQB-20R  
 MSQB-30A MSQB-30R  
 MSQB-50A MSQB-50R  
 MSQB-70A MSQB-70R  
 MSQB-100A MSQB-100R  
 MSQB-200A MSQB-200R

## MSQB

10

A

Size code

10	70
20	100
30	200
50	

Optional

A	Angle adjusting screw
R	With hydraulic buffer

### Common specifications

Cylinder bore(mm)	10	20	30	50	70	100	200	
Using fluids	Air(No oil)							
Movement mode	Double action							
Maximum operating pressure(MPa)	Angle adjusting screw	1Mpa						
	With hydraulic buffer	0.6MPa						
Minimum operating pressure(MPa)	0.1MPa(The high precision type 10 is 0.2MPa and 20~50 is 0.1MPa)							
Environment and fluid temperature	0~60°C (But not frozen)							
Buffer	Rubber buffer (standard) / hydraulic buffer (optional)							
Allow kinetic energy	Angle adjusting screw	0.007J	0.025J	0.048J	0.081J	0.24J	0.32J	0.56J
	With hydraulic buffer	0.039J	0.116J		0.294J	1.1J	1.6J	2.9J
Angle adjusting range	0~190°							
Maximum swing angle	190°							
Stable swing time range	Angle adjusting screw	0.2~1.0s/90°			0.2~1.5s/90°	0.2~2.0s/90°	0.2~2.5s/90°	
	With hydraulic buffer	0.2~0.7s/90°			0.2~1.0s/90°			
Cylinder bore	φ 15	φ 18	φ 21	φ 25	φ 28	φ 32	φ 40	
Pipe Size	End face opening	M5×0.8			Rc1/8			
	Side opening	M5×0.8						

Air Cylinder

■ Model representation method Interchange: SMC

## CDRQ2BS



## CDRQ2BW



C D R Q 2 B S 20 - 90 - A90

The built-in magnetic ring  
 Unsigned Not built in  
 D Built-in

Installation form: basic type

Shaft type  
 S Single axis  
 W Biaxial

Bore

10	φ 10mm
15	φ 15mm
20	φ 20mm
30	φ 30mm
40	φ 40mm

Types of thread

Bore	Thread type (through port)
10,15	Unsigned M5X0.8
20	Unsigned Rc 1/8
30	TF G1/8
40	TN NPT 1/8
	TT NMP TF 1/8

Magnetic switch model  
 Unsigned Magnetic switch

Magnetic switch type see table below  
 Not without the built-in ring

Worm number

Swing angle	90 80 ~ 100°	Bore (mm)	Air cushion
	180 170 ~ 190°	10,15	No Yes
		20,30,40	Unsigned C

Bore φ 4, φ 10 no gas buffer

### Common specifications

Cylinder bore(mm)	10	15	20	30	40
Using fluids	Air(No oil)				
Movement mode	Double action				
Operating pressure range MPa	0.15~0.7		0.1~1.0		
Environment and fluid temperature	0~60°C (Not frozen)				
Buffer	Cushion cushion		No / gas buffer		
Swing angle	80~100° , 170~190°				
Adjustable angle range	±5°				
Output torque(N·m)	0.3	0.75	1.8	3.1	5.3
Allow kinetic energy J	Cushion cushion	-	0.025	0.048	0.081
	No buffer	0.25×10 <sup>-3</sup>	0.39×10 <sup>-3</sup>	-	-
	Gas buffer	-	-	0.12	0.25
Adjustable range of swing speed s/90°	0.2-0.7		0.2-1.0		

# Air Cylinder

## Model representation method

Interchange: SMC

CDRA1BS



**C** **D** **RA1** **B** **W** **50** — **90**

The built-in magnetic ring  
 Unsigned No built-in magnetic ring  
 D The built-in magnetic ring

Shaft form

S Single axis

W\* Biaxial

Only 30 biaxial. In addition, there are single axis tetrahedral (X), biaxial bond (Y) and biaxial quadrilateral (Z) for selection.

Cylinder bore

30 30mm

50 50mm

63 63mm

80 80mm

100 100mm

Swing angle

90 90°

180 180°

30 no gas buffer.  
 Angle adjustment type air cushion.

CDRA1BW



Installation form

B Basic type

L Foot type

\*F Flange type

\*φ30 can not orchid type

## Common specifications

Interchange: SMC

Cylinder bore(mm)	30	50	63	80	100	
Using fluids	Air					
Movement mode	Double action					
Maximum operating pressure(MPa)	1MPa					
Minimum operating pressure(MPa)	0.1MPa					
Environment and fluid temperature	0~60°C (But not frozen)					
Gear gap	1° within(Because of the built-in limiter, the cylinder has no backlash when the pressure is 30)					
Swing angle tolerance	+4° 0					
For oil	Unwanted					
Output torque(N · m)	1.9	9.3	17	32	74	
Allow kinetic energy J	No buffer	0.01	0.05	0.12	0.16	0.54
	Gas buffer	-	0.98	1.5	2.0	2.9
Adjustable range of swing speed s/90°	0.2~1	0.2~2	0.2~3	0.2~4	0.2~5	
Pipe Size Rc	M5×0.8	1/8	1/8	1/4	3/8	

Air Cylinder

## Model representation method

Interchange: CHELIC

RTH40×90° RTH63×90° RTH80×90°  
 RTH40×180° RTH63×180° RTH80×180°

RTH



**RTH** **63** — **180** — **F** — **SB 2**

Rotation angle

90 90°

180 180°

Cylinder bore

40 | φ40mm

63 | φ63mm

80 | φ100mm

Aircraft type  
 RTH series rotary cylinder

Induction device

Sensor mark

Inductor quantity

1 1 sensors

2 2 sensors

Inductor CS32B-φ40 applicable

CS50B-φ63 applicable

CS80B-φ80 applicable

Spindle type

unsigned Standard type (spindle / outer groove)

F Inner pass (no spindle / inner groove)

2D Biaxial type (double spindle / outer groove)

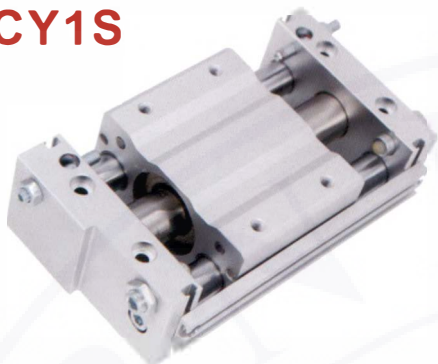
## Common specifications

Project	Type of machine	RTH40-□	RTH63-□	RTH80-□
Action form	Compound action			
Using fluids	Air			
Torsion	10	40	60	
Shaft diameter	φ16	φ24	φ28	
Swing angle	90° , 80°			
Adjustment angle	±5°			
Pipe Size	G 1/4	G 3/8		
Working pressure	1.5~7(150~700)			
Service temperature range	-10° ~ 60°			
Allowable axial recombination	10kg	12kg	20kg	

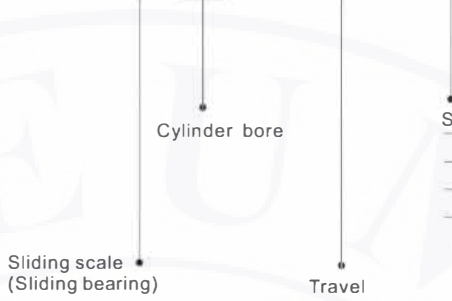
# Air Cylinder

## Model representation method Interchange:SMC

### CY1S



CY1S 25 - 300 □ Z



Stroke adjustment mode

Unsigned	Bolt with travel (2)
B	Buffer with oil pressure (2)
BS	Buffer with oil pressure (1)

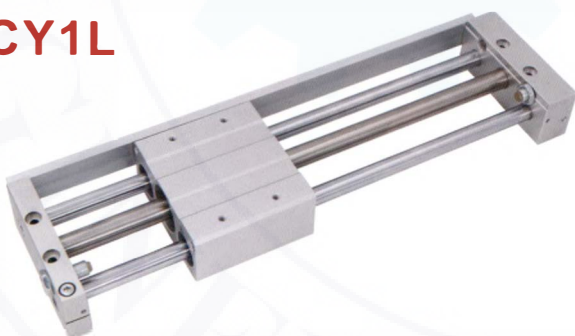
### Common specifications

Cylinder bore(mm)	6	10	15	20	25	32	40
Using fluids	Air						
Maximum withstand voltage	1.05MPa						
Maximum operating pressure	0.7MPa						
Minimum operating pressure	0.18MPa						
Environment and fluid temperature	-10~60°C (But not frozen)						
Piston speed	50~400mm/s						
Buffer	Rubber buffer / hydraulic buffer						
Travel tolerance(mm)	0~250: <sup>+1.0</sup> <sub>0</sub>		251~1000: <sup>+1.4</sup> <sub>0</sub>		1001~: <sup>+1.8</sup> <sub>0</sub>		
Lubricating oil	Unwanted						
Retention force(N)	19.6	53.9	137	231	363	588	922

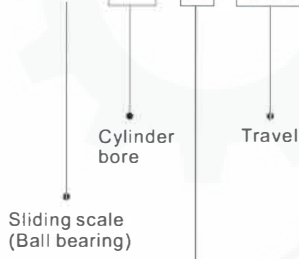
Air Cylinder

## Model representation method Interchange:SMC

### CY1L



CY1L 25 H 300 A72



The type of magnetic switch

Unsigned	Non-magnetic switch
----------	---------------------

Types of magnet holding force

H	High retention
L	Subsistence allowances

### Common specifications

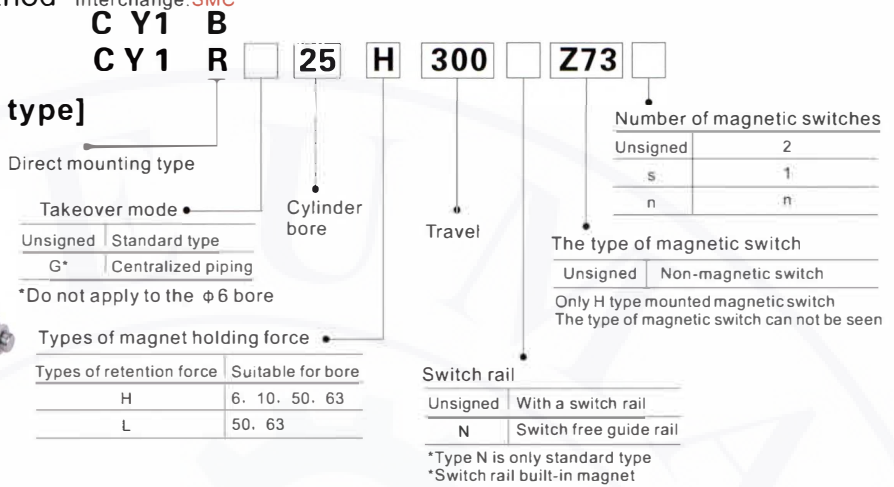
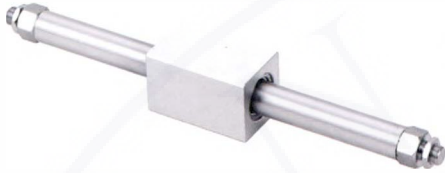
Cylinder bore(mm)	6	10	15	20	25	32	40
Using fluids	Air						
Movement mode	Double action						
Maximum operating pressure(MPa)	0.7MPa						
Minimum operating pressure(MPa)	0.18MPa						
Environment and fluid temperature	-10~+60°C (But not frozen)						
Piston speed	50~1000mm/s						
Buffer	Rubber buffer / hydraulic buffer(Optional)						
Travel tolerance(mm)	0~250: <sup>+1.0</sup> <sub>0</sub>		251~1000: <sup>+1.4</sup> <sub>0</sub>		1001~: <sup>+1.8</sup> <sub>0</sub>		
For oil	Unwanted						
Pipe Size (Rc)	M5×0.8		1/8		1/4		
Installation posture	Unlimited						

# Air Cylinder

## Model representation method Interchange:SMC

**CY1B** [Basic type]

**CY1R** [Direct mounting type]



### Common specifications

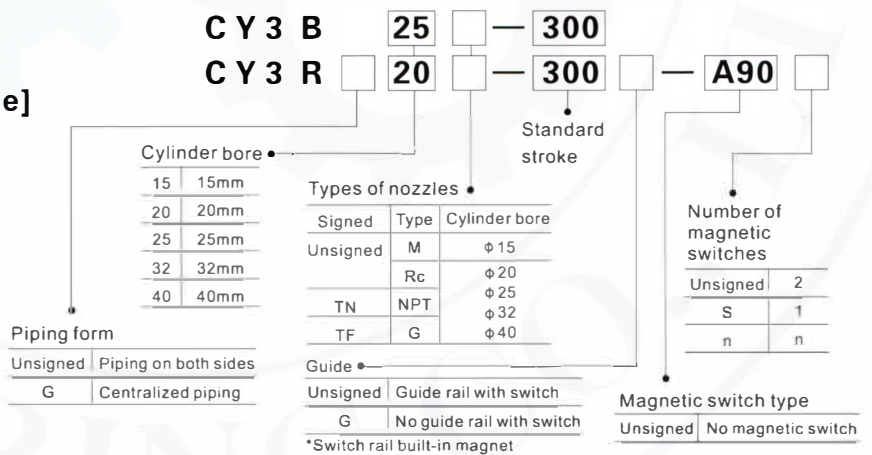
Cylinder bore(mm)	6	10	32	40	50	63
Using fluids	Air					
Movement mode	Double action					
Maximum operating pressure(MPa)	0.7MPa					
Minimum operating pressure(MPa)	0.18MPa					
Environment and fluid temperature	-10~+60°C (But not frozen)					
Piston speed	50~500mm/s					
Buffer	Rubber buffer					
Travel tolerance(mm)	0~250: $^{+1.0}_0$		251~1000: $^{+1.4}_0$		1001~: $^{+1.8}_0$	
For oil	Unwanted					
Pipe Size	M5×0.8			RC1/4		

\*When the magnetic switch is not installed at both ends of the stroke (in the middle position), the maximum piston speed is less than 300mm/s.

## Model representation method Interchange:SMC

**CY3B** [Basic type]

**CY3R** [Direct mounting type]



### Common specifications

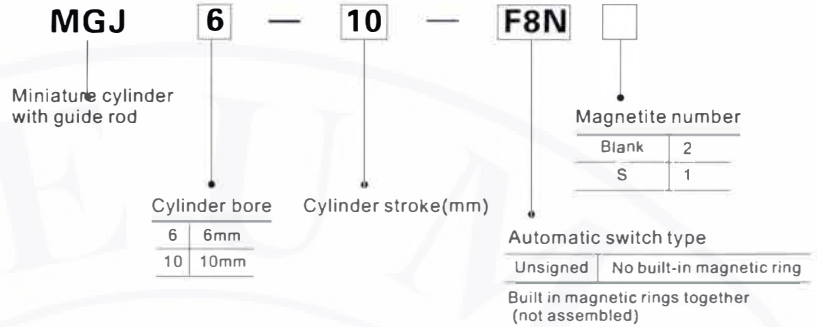
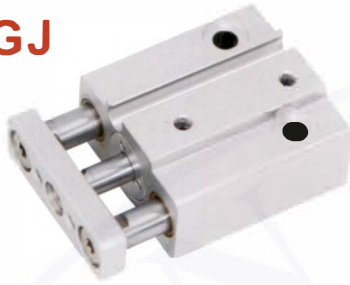
Cylinder bore(mm)	15	20	25	32	40
Using fluids	Air(No oil)				
Maximum operating pressure(MPa)	0.7				
Minimum operating pressure(MPa)	0.16	0.15	0.14	0.12	
Environment and fluid temperature	-10~+60°C (But not frozen)				
Piston speed	CY3B:50~400; CY3R:50~500				
Buffer	Cushion at both ends				
Stroke length tolerance (mm)	0~250: $^{+1.0}_0$		251~1000: $^{+1.4}_0$		1001~: $^{+1.8}_0$
Magnetic retention force (N)	137	231	363	588	922
Piping passage	M5×0.8		RC1/8 • NPT1/8 • G1/8		



# Air Cylinder

■ Model representation method Interchange:SMC

## MGJ

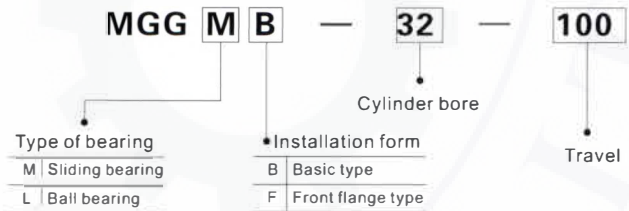
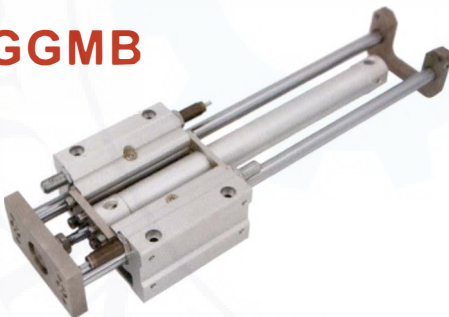


### Common specifications

Cylinder bore(mm)	6	10
Action type	Double action type	
Using fluids	Air	
Explosion pressure	1.05Mpa	
Maximum operating pressure(MPa)	0.7MPa	
Minimum operating pressure(MPa)	0.15MPa	
Environment and fluid temperature	-10~+60°C (But not frozen)	
Buffer	Rubber bumper ends	
Lubrication	Non lubricating oil	
Piston speed	50~500mm/s	
Thread tolerance	II level standard	
Travel length tolerance	+1.0 0	
Port size	M3×0.5	
Guide rod diameter	φ5	φ6

■ Model representation method Interchange:SMC

## MGGMB



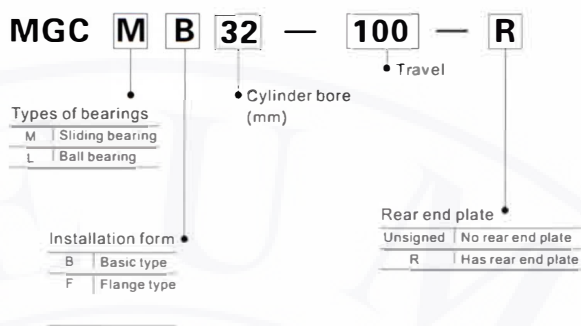
### Common specifications

Cylinder bore(mm)	20	25	32	40	50	63	80	100
Using fluids	Air							
Movement mode	Double action							
Maximum operating pressure(MPa)	1.0MPa							
Minimum operating pressure(MPa)	0.15MPa(Horizontal non load)							
Environment and fluid temperature	-10~+60°C (But not frozen)							
Piston speed	50~1000mm/s				50~700mm/s			
Buffer	Hydraulic buffer (2) for cylinder rubber buffer / guide rod							
Travel tolerance	~1000 <sup>+1.9</sup> <sub>+0.2</sub> , 1001~1300 <sup>+2.3</sup> <sub>+0.2</sub>							
Stroke adjustable range (Dan Ce) (mm)	0~-10	0~-15						
Maximum absorption energy (J)	5.88	19.6	58.8			147		
For oil	Unwanted							
Bearing	Sliding bearing / ball bearing							
Non rotation accuracy of piston rod	Sliding bearing	±0.07°	±0.06°	±0.05°	±0.04°		±0.03°	
	Ball bearing	±0.06°	±0.05°	±0.04°		±0.03°		±0.02°
Nozzle caliber Rc	1/8			1/4		3/8	1/2	

# Air Cylinder

## Model representation method Interchange: SMC

### MGCMB



## Common specifications

Cylinder bore(mm)	20		25		32	40	50
Using fluids	Air						
Movement mode	Double action						
Maximum operating pressure(MPa)	1.0MPa						
Minimum operating pressure(MPa)	0.15MPa						
Environment and fluid temperature	-10~+60°C (But not frozen)						
Piston speed	50~750mm/s						
Buffer	Gas buffer (cylinder itself)						
Allowed kinetic energy absorption(J)	Side bar:0.35	Rodless side:0.42	Side bar:0.56	Rodless side:0.65	0.91	1.8	3.4
Travel length tolerance	+0.19 +0.22 mm						
For oil	Unwanted						
Bearing	Journal bearing/Ball bearing						
Non rotation accuracy of piston rod	Sliding bearing	±0.07°		±0.06°		±0.06°	±0.05° ±0.04°
	Ball bearing	±0.06°		±0.05°		±0.04°	±0.04° ±0.04°
Pipe Size	M5×0.8				1/8	1/4	

Air Cylinder

## TD series Biaxial cylinder Interchange: CHELIC

### TD



Type	Bore Φ mm	Shaft diameter Φ mm	Theoretical force kgf	Use speed mm/s	Use of pressure range kgf/cm <sup>2</sup> (Kpa)	Standard stroke mm
TD-6	6	4	2.8	50~700	1~8.5 (100~850)	10~50
TD-10	10	6	7.8			10~100
TD-16	16	8	20	100~500		10~250
TD-20	20	10	31			
TD-25	25	12	49			
TD-32	32	16	80			
TD-40	40	16	124			

## TB series Guide rod thin cylinder Interchange: CHELIC

### TB



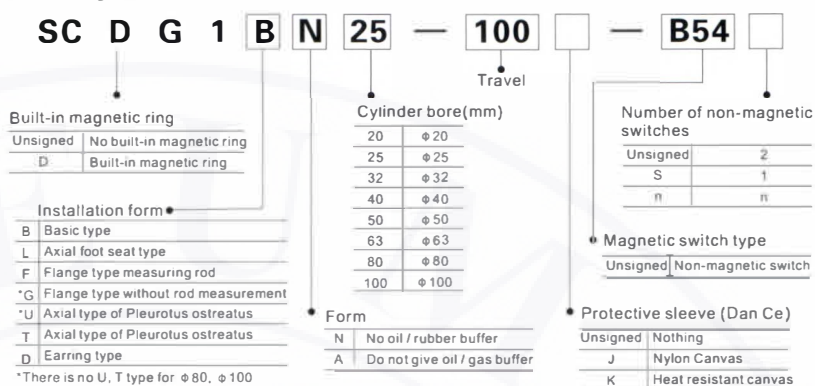
Type	Type of bearing	Bore Φ mm	Theoretical force kgf	Non rotation accuracy θ	Use speed mm/s	Use of pressure range kgf/cm <sup>2</sup> (Kpa)	Standard stroke mm
TB-10	B: Teflon bearings (steel rod)	10	3.9	±0.08	50~500	1.5~7 (150~700)	25~100
TB-16		16	10				25~200
TB-20		20	15	±0.07			25~200
TB-25		25	24				
TB-32		32	40	±0.06			30~250
TB-40		40	62				
TB-50	50	98	±0.05	50~350	30~150		
TB-63	63	155					

Application: TB is suitable for heavy load and slow moving function.  
TU is suitable for light load and fast moving function.

# Air Cylinder

## Model representation method Interchange: SMC

### SCG1

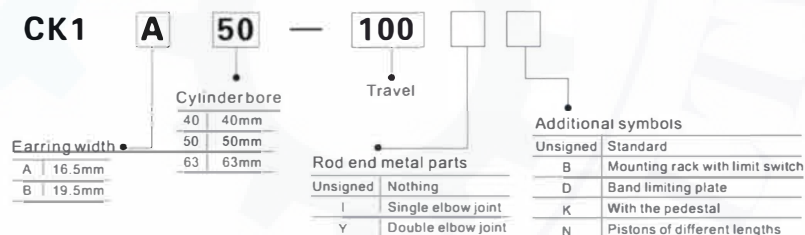


### Common specifications

Cylinder bore(mm)	20	25	32	40	50	63	80	100
Using fluids	Air							
Movement mode	Double action							
Maximum operating pressure(MPa)	1.0MPa							
Minimum operating pressure(MPa)	0.05MPa							
Environment and fluid temperature	Magnetic switch:-10~+60°C ,Non-magnetic switch:-10~+70°C							
Piston speed	50~500mm/s							
Buffer	Rubber buffer / gas cushion							
Travel length tolerance	~1000: $^{+1.4}_0$		~1200: $^{+1.8}_0$		~1000: $^{+1.4}_0$		~1500: $^{+1.8}_0$	
For oil	Unwanted							
Pipe Size	1/8	1/8	1/8	1/8	1/4	1/4	3/8	1/2

## Model representation method Interchange: SMC

### CK1



### Common specifications

Earring width	16.5mm	CK1A series	
	19.5mm	CK1B series	
Cylinder bore(mm)	40	50	63
Using fluids	Air		
Standard stroke (mm)	50, 75, 100, 125, 150		
Maximum operating pressure(MPa)	1.0MPa		
Minimum operating pressure(MPa)	0.05MPa		
Environment and fluid temperature	Magnetic switch:-10~+60°C ,Non-magnetic switch:-10~+70°C		
Piston speed	50~500mm/s		
Gas cushion	The standard is on both sides		
For oil	Unwanted		
Thread tolerance	JIS II		
Travel tolerance(mm)	Travel length tolerance		
Speed control valve	The standard is on both sides		
Installation fixed form	Double Earrings (only in this form)		
Pipe Size Rc	1/4	1/4	1/4

# Air Cylinder

## Model representation method

Interchange: SMC

### CDQMB



**C** **D** **QM** **B** **20** **10**

Built-in magnetic ring  
 Unsigned | No built-in magnetic ring  
 D | Built-in magnetic ring

Installation form  
 B | Through hole (standard)  
 A | Screw holes at both ends (φ32-φ100)

\* The φ12-φ25 "A" is also represented by "B"

Cylinder bore	
12	12mm
16	16mm
20	20mm
25	25mm
32	32mm
40	40mm
50	50mm
63	63mm
80	80mm
100	100mm

Travel(mm)

## Common specifications

Movement mode	Single rod double action	
Maximum operating pressure(MPa)	1.0MPa	
Minimum operating pressure(MPa)	φ12, φ16,	0.12MPa
	φ20~φ100	0.1MPa
Environment and fluid temperature	Magnetic switch:-10~+60°C, Non-magnetic switch:-10~+70°C (But not frozen)	
Buffer	Cushion on both sides	
Stroke length tolerance	+1.0 0	
Piston speed	φ12~φ40,	50~500mm/s
	φ50~φ100	50~300mm/s

## Slim cylinder CJ1B series

### CJ1B



Interchange: SMC

Model	Bore size	Port size	Standard stroke mm	Max.Cylinder principle force	Piston port size	Body type	Valve type	Max operating pressure
CJ1B2.5	2.5	4X2.5PU Tube	5,10	0.5Kgf	1mm		CDJ2B CJ2SB CJ2TB	0~5kgf/cm <sup>2</sup>
CJ1B4	4	4X2.5PU Tube	5,10,15,20	1Kgf	M2X0.4			

## Slim cylinder CJPB/CJPD series

### CJPB



Interchange: SMC

Model	Bore size	Port size	Standard stroke mm	Max.Cylinder principle force	Piston port size	Body type	Valve type	Max operating pressure
CJPB6	6	M5	5,10,15,20	1.4Kgf	M3X0.5		CJPB CJPD	0~5kgf/cm <sup>2</sup>
CJPB10	10	M5	5,10,15,20	4Kgf	M4X0.7			
CJPB15	15	M5	5,10,15,20	10Kgf	M5X0.8			

## Sulti mount cylinder CDU (MD) series

Interchange: SMC

### CDU (MD) CDUK (MK)



Model	Bore size	Port size	Standard stroke mm	Max.Cylinder principle force	Piston port size	Body type	Valve type	Max operating pressure
CDU 6	6	M5	5~50	2.5Kgf	M3X0.5	Y-Y joint I-I joint	CDU	0~8kgf/cm <sup>2</sup>
CDU 10	10	M5	5~50	4Kgf	M4X0.7			
CDU 16	16	M5	5~100	7Kgf	M5X0.8			
CDU 20	20	M5	5~100	14Kgf	M6X1			
CDU 25	25	PT1/8	5~100	28Kgf	M8X1.25			
CDU32	32	PT1/8	5~100	44Kgf	M10X1.25			

## ISO6431 Standard cylinder SI series

Interchange: RS6431

### SI

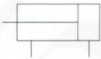


Model	Bore size	Port size	Standard stroke mm	Max.Cylinder principle force	Piston port size	Body type	Valve type	Max operating pressure
SI-32	32	PT1/8	25~500	70Kgf	M10X1.25	FA-front flange FB-rear flange CA-angle clevis CB-double clevis LB-foot bracket Y-Y joint I-I joint TC-center trunnion	SI-S SI-D SI-J SSU ST I	0~10kgf/cm <sup>2</sup>
SI-40	40	PT1/4	25~800	110Kgf	M12X1.25			
SI-50	50	PT1/4	25~1000	170Kgf	M16X1.5			
SI-63	63	PT3/8	25~1000	280Kgf	M16X1.5			
SI-80	80	PT3/8	25~1000	450Kgf	M20X1.5			
SI-100	100	PT1/2	25~1000	700Kgf	M20X1.5			
SI-125	125	PT1/2	25~1000	1050Kgf	M27X2			
SI-160	160	PT1/2	25~1000	1800Kgf	M36X2			

# Air Cylinder

## CA2(ISO 6431) series standard cylinder

### CA2 (ISO 6431)



### Standard Specification Interchange: SMC

Bore (mm)	40	50	63	80	100
<b>Use pressure range</b>	0.05~1.0MPa				
Ambient and fluid temperature	Non magnetic switch: -10 C ~ +70 C, with a magnetic switch: -10 C ~ +60 C				
<b>Use piston speed</b>	50~500mm/s				
<b>Buffer</b>	Air cushion				
<b>Stroke length tolerance (mm)</b>	-250: $^{+1.0}_0$ , 251~1000: $^{+1.4}_0$ , 1001~1500: $^{+1.8}_0$				
For oil	Unwanted				
<b>Nozzle diameter (Rc)</b>	1/4	3/8			1/2

### Stroke / magnetic switch selector

Bore (mm)	Standard stroke (mm)	Magnetic switch model		Magnetic switch mounting device	
		Pull rod installation		M9 $\frac{N}{P}$	Only 54
40	25,50,75,100,125,150,175,200,250,300,350,400,450,500	M9N M9P M9B	A54	BA7-040	BT-04
				BA7-063	BT-06
80	25,50,75,100,125,150,175,200,250,300,350,400,450,500,600,700			BA7-080	BT-08

### Product characteristics

1. Mass ratio CA1 series to reduce 5 ~ 15%
2. Buffer capacity is increased, the phenomenon of rapid extension of the piston rod will not appear.
3. It is easier to adjust the buffer valve, and the valve is not exposed surface of cylinder buffer.
4. Can absorb more than the kinetic energy of the CA1 series can be increased by 30%, the buffer seal ring life can be extended by about 5 times.
5. The lower bending of the piston rod is about 5 to 10% lower than that of the CA1 series.
6. The installation dimensions are the same as the CA1 series.
7. Nozzle thread in addition to Rc, as well as NPT and G thread.

### Model representation method

**C D A 2 L** **50** **100** **JN** **M9B**

The built-in magnetic ring  
 Unsigned | No internal ring  
 D The built-in magnetic ring

Installation form  
 B Basic type  
 L Axial foot seat type  
 F Rod side flange type  
 G Non rod side flange type  
 C Single ear ring  
 D Ear ring  
 T Middle ear axis type

Bore  
 40 40mm  
 50 50mm  
 63 63mm  
 80 80mm  
 100 100mm

Vent thread  
 Unsigned Rc  
 TN NPT  
 TF G

Cylinder material  
 Unsigned Aluminum tube  
 \*F Iron cylinder  
 \*With magnetic switch is not available "F"

Cylinder stroke  
 100

Protective sleeve  
 Unsigned nothing  
 J Nylon Canvas  
 K Heat resistant canvas  
 Unsigned Both sides with air buffer  
 N Air cushion

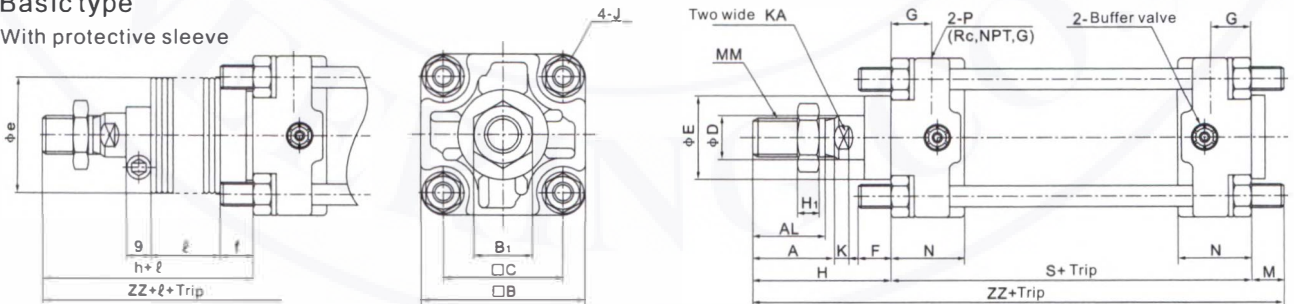
Magnetic switch number  
 Unsigned 2  
 S 1  
 3 3  
 n n

Magnetic switch model  
 Unsigned Magnetic switch

### Outline dimension (mm)

#### Basic type

#### With protective sleeve



Bore (mm)	Travel range		A	AL	□B	B <sub>1</sub>	C	D	E	F	G	H <sub>1</sub>	J	K	KA	M	MM	N	P	S	No protective cover		With protective sleeve				
	No protective cover	With protective sleeve																			H	ZZ	e	f	h	ℓ	ZZ
40	~500	20~500	30	27	60	22	44	16	32	10	15	8	M8X1.25	6	14	11	M14X1.5	27	1/4	84	51	146	43	11.2	59	1/4 travel	154
50	~600	20~600	35	32	70	27	52	20	40	10	17	11	M8X1.25	7	18	11	M18X1.5	30	3/8	90	58	159	52	11.2	66	1/4 travel	167
63	~600	20~600	35	32	85	27	64	20	40	10	17	11	M10X1.5	7	18	14	M18X1.5	31	3/8	98	58	170	52	11.2	66	1/4 travel	178
80	~750	20~750	40	37	102	32	78	25	52	14	21	12	M12X1.75	10	22	17	M22X1.5	37	1/2	116	71	204	65	12.5	80	1/4 travel	213
100	~750	20~750	40	37	116	41	92	30	52	14	21	16	M12X1.75	10	26	17	M26X1.5	40	1/2	126	72	215	65	14	81	1/4 travel	224

# Air Cylinder

## Stainless steel cylinder Interchange: AIRTAC

### BSC

- Acid alkali
- Corrosion resistance
- High temperature resistance -5~150°C

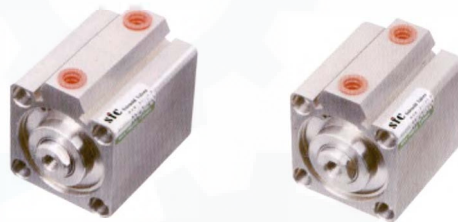


Inside diameter (mm)	Action mode	Working medium	Fixed form		Use pressure range	Ensure resistance to pressure	Cushion type	Material of Oil Seal	Temperature	Pipe Size
			BSC series	BSCJ, BSCD series						
32	Complex type	Air (via 40μm filter)	Basic type FB type CA type CB type LB type TC type Y type FA	Basic type LB type TC type Y type I type FA	0.1~1.0MPa (14~145psi)	1.5MPa (215psi)	Adjustable buffer	VITON	-5~150°C	PT1/8
40										PT1/4
50										PT3/8
63										PT3/8
80										PT3/8
100										PT1/2

## Stainless steel cylinder Interchange: AIRTAC

### BSDA

- Acid alkali
- Corrosion resistance
- High temperature resistance -5~150°C

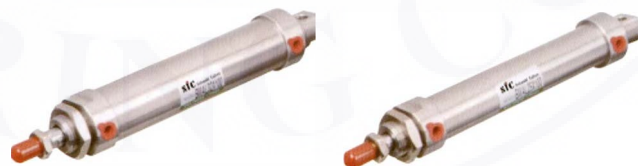


Inside diameter (mm)	Action mode	Working medium	Use pressure range		Ensure resistance to pressure	Cushion type	Material of Oil Seal	Temperature	Pipe Size
			Complex type	Single acting type					
20	Complex type	Air	0.1~1.0MPa (14~145psi)	0.2~1.0MPa (28~145psi)	1.5MPa (215psi)	Crash pad	VITON	-5~150°C	M5 X 0.8
25									PT1/8
32									PT1/8
40									PT1/4
50									PT1/4
63									PT3/8
80									PT3/8
100	PT3/8								

## Stainless steel cylinder Interchange: AIRTAC

### BMA

- Acid alkali
- Corrosion resistance
- High temperature resistance -5~150°C



Bore(mm)	Working medium	Installation form	Use pressure		Pressure resistance	Material of Oil Seal	Temperature	Pipe Size
			Complex type	Single acting type				
20	Air	Basic type FA SDB LB	0.1~1.0 MPa (14~145psi)	0.2~1.0 Mpa (28~145psi)	1.5MPa (215psi)	VITON	-5~150°C	PT1/8"
25								PT1/8"
32								PT1/4"
40								PT1/4"

# Air Cylinder

## Turbocharged Cylinder

### Product performance and picture

**MPT**



Items	Conditions	MPT-CA Standard 1-20T Hydro Pneumatic Cylinder
Action type		Double action
Action pressure		Clean compressed air of 3-7kg/cm <sup>2</sup>
Anti-wear hydraulic oil		Anti-wear hydraulic oil of VG 68#
Operating temperature		0-55℃
Operating speed		50-400mm/s
Anti-pressure of oil tank		300kg/cm <sup>2</sup>
Anti-pressure of neumatic cylinder		12kg/cm <sup>2</sup>
Prepress stroke tolerance		+1.00mm 0.00mm
Power stroke tolerance		+0.20mm 0.00mm
Frequency		20-40times/min(related to the specific pre-pressure and booster stroke
High pressure output		1-20T(the actual output tonnage according to the customer demand)

The cylinder has a reasonable product structure and is easy to operate and maintain. It has a medium length in longitudinal compare to others, so only apply to the word environment without restrictions in longitudinal length. As a result of the above characteristics, so this cylinder applies to metal stamping, riveting electronic components and squeezing die and forming, as well as other word environment without high requirements for frequency.

※ In the absence of special circumstances, the cylinders are used in oil and gas contact mode, the cylinder can only adopting the mode (down from the installation, such as mode); if need to use other installation, should inform our company before ordering.

### Product detailed models information

## MPT-100-100-20E-10T

Derived numbers of standard 1-20T Prepress booster

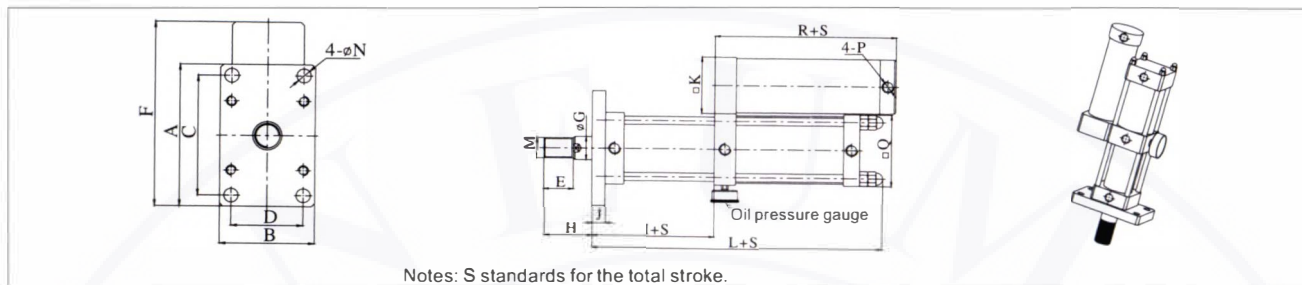
Cylinder diameter and output		Total stroke		Power stroke		Output tonnage	
Cylinder diameter	High-pressure output	Scale value	Approach stroke	Scale value	Power stroke	Scale value	Tonnage value
63	1 ton force	50	50mm	5E	5mm	1T	1 tons
63	3 ton force	100	100mm	10E	10mm	3T	3 tons
80	5 ton force	150	150mm	15E	15mm	5T	5 tons
80	8 ton force	200	200mm	20E	20mm	10T	10 tons
100	10 ton force	250	250mm			15T	15 tons
100	13 ton force	300	300mm			20T	20 tons
125	15 ton force	350	350mm				
125	20 ton force	400	400mm				

- Note: 1. Above data is designed by our company. If you need the customized 'tonnage', 'output stroke', 'prepress stroke' and 'lifting force', we accept the special order.  
 2. Above output is the output tonnage at the work pressure of 6kg/cm<sup>2</sup>.  
 3. Above total stroke is the sum of the quick and high-pressure output stroke.

# Air Cylinder

## Turbocharged Cylinder

### MPT-CA graphic symbols and installing size



Notes: S standards for the total stroke.

Cylinder diameter and output	Boosting stroke	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R
63 (1T)	5	160	100	132	65	50	192	35	75	110	20	70	300	M30*1.5	14	ZG3/8"	85	233
	10	160	100	132	65	50	192	35	75	110	20	70	350	M30*1.5	14	ZG3/8"	85	233
	15	160	100	132	65	50	192	35	75	110	20	70	400	M30*1.5	14	ZG3/8"	85	233
	20	160	100	132	65	50	192	35	75	110	20	70	450	M30*1.5	14	ZG3/8"	85	233
63 (3T)	5	160	100	132	65	50	198	35	75	110	20	70	302	M30*1.5	14	ZG3/8"	96	233
	10	160	100	132	65	50	198	35	75	110	20	70	352	M30*1.5	14	ZG3/8"	96	233
	15	160	100	132	65	50	198	35	75	110	20	70	402	M30*1.5	14	ZG3/8"	96	233
	20	160	100	132	65	50	198	35	75	110	20	70	452	M30*1.5	14	ZG3/8"	96	233
80 (5T)	5	190	118	155	87	50	241	35	90	115	20	90	321	M30*1.5	17	ZG3/8"	112	233
	10	190	118	155	87	50	241	35	90	115	20	90	385	M30*1.5	17	ZG3/8"	112	233
	15	190	118	155	87	50	241	35	90	115	20	90	449	M30*1.5	17	ZG3/8"	112	233
	20	190	118	155	87	50	241	35	90	115	20	90	513	M30*1.5	17	ZG3/8"	112	233
80 (8T)	5	190	118	155	87	50	241	35	90	115	20	90	337	M30*1.5	17	ZG3/8"	112	233
	10	190	118	155	87	50	241	35	90	115	20	90	417	M30*1.5	17	ZG3/8"	112	233
	15	190	118	155	87	50	241	35	90	115	20	90	497	M30*1.5	17	ZG3/8"	112	233
	20	190	118	155	87	50	241	35	90	115	20	90	577	M30*1.5	17	ZG3/8"	112	233
100 (10T)	5	225	145	190	110	55	295	45	90	127	25	112	349	M39*2.0	22	ZG1/2"	140	240
	10	225	145	190	110	55	295	45	90	127	25	112	413	M39*2.0	22	ZG1/2"	140	240
	15	225	145	190	110	55	295	45	90	127	25	112	477	M39*2.0	22	ZG1/2"	140	240
	20	225	145	190	110	55	295	45	90	127	25	112	541	M39*2.0	22	ZG1/2"	140	240
100 (13T)	5	225	145	190	110	55	295	45	90	127	25	112	436	M39*2.0	22	ZG1/2"	140	240
	10	225	145	190	110	55	295	45	90	127	25	112	516	M39*2.0	22	ZG1/2"	140	240
	15	225	145	190	110	55	295	45	90	127	25	112	596	M39*2.0	22	ZG1/2"	140	240
	20	225	145	190	110	55	295	45	90	127	25	112	676	M39*2.0	22	ZG1/2"	140	240
125 (15T)	5	300	200	255	140	55	380	60	90	138	28	140	408	M48*2.0	25	ZG1/2"	180	250
	10	300	200	255	140	55	380	60	90	138	28	140	472	M48*2.0	25	ZG1/2"	180	250
	15	300	200	255	140	55	380	60	90	138	28	140	536	M48*2.0	25	ZG1/2"	180	250
	20	300	200	255	140	55	380	60	90	138	28	140	600	M48*2.0	25	ZG1/2"	180	250
125 (20T)	5	300	200	255	140	55	380	60	90	140	30	140	443	M48*2.0	25	ZG1/2"	180	250
	10	300	200	255	140	55	380	60	90	140	30	140	530	M48*2.0	25	ZG1/2"	180	250
	15	300	200	255	140	55	380	60	90	140	30	140	617	M48*2.0	25	ZG1/2"	180	250
	20	300	200	255	140	55	380	60	90	140	30	140	704	M48*2.0	25	ZG1/2"	180	250

Air Cylinder

### Theoretical output and lifting force table

Output	Working Pressure	4kg/cm <sup>2</sup>				5kg/cm <sup>2</sup>				6kg/cm <sup>2</sup>				7kg/cm <sup>2</sup>					
		Lifting force	Increasing pressure	Lifting force	Increasing pressure	Lifting force	Increasing pressure	Lifting force	Increasing pressure	Lifting force	Increasing pressure	Lifting force	Increasing pressure	Lifting force	Increasing pressure				
63	1T	86	1236	107	1545	129	1854	150	2164	100	10T	250	6254	313	7818	375	9382	438	10946
63	3T	86	1994	107	2492	129	2991	150	3489	100	13T	250	7862	313	9828	375	11793	438	13759
80	5T	162	4019	203	5024	243	6028	284	7033	125	15T	377	10258	471	12823	566	15388	660	17953
80	8T	162	5024	203	6280	243	7536	284	8792	125	20T	377	13953	471	17441	566	20930	660	24418

※ The lifting force in the table just is the theoretical data, as the actual returning pulling force is proposed not to exceed 50% of the data in case of affecting the speed!



# Air Cylinder

## RSQ TYPE

FLANGED Y-STRAINER

**RSQ** - **B** - **20** X **15** - **D** **R**

### Series Code

RSQ:Basic Type  
RSDQ:Magnet  
Within:Type

### Installation

B:hole  
A:Internal thread  
both ends

### Cylinder Bore

20-φ20mm  
32-φ32mm  
40-φ40mm  
50-φ50mm

### Stroke

### Action

D:double action  
S:single action  
(with spring return)  
T:single action  
(with spring extent)

### Rod end Type

Blank:Round bar type(φ20-φ50)  
K:Chamfered Type(φ20-φ50)  
R:Roller type(φ20-φ50)  
L:Level type with adjustable shock absorber,  
with cancel cap(φ32-φ50)  
D:Level type with adjustable shock absorber,  
with lock mechanism(φ32-φ50)  
E:Level type with adjustable shock absorber,  
with cancel cap & lock(φ32-φ50)

**RSQ**



## Specification Interchange:SMC

Bore(mm)	12	16	20	32	40	50
Motion Pattern	Double acting,Double acting with spring loaded,Single acting (Spring extend)					
Fluid	Air					
Ensured Pressure Resistance	1.5Mpa(15.3kgf/cm <sup>2</sup> )					
Max. pressure	1.0Mpa(10.2kgf/cm <sup>2</sup> )					
Ambient and fluid temperature	-10~+70°C (Without auto switch:No freezing)+60°C					
Buffering	Rubber bumper					
Tolerance of stroke	+1.4(mm) 0					
Lubrication	Not required					
Mounting	Through-hole,Both ends tapped common					
Port size	M5X0.8			RC(PT 1/8)		

Air Cylinder

## TWH TYPE

FLANGED Y-STRAINER

**TWH**



## Specifications Interchange:AIRTAC

Internal diameter(mm)	20	25	32	40	50	63	80
Action mode	Double moving type and single moving introduction type						
Working medium	Atmosphere						
Use pressure range	Complex type	0.15~1.0MPa(23~145psi)					
	Single move introduction	20:0.25~1.0MPa(35~145psi) Other:0.2~1.0MPa(28~145psi)					
Ensure resistance to pressure	1.5MPa(215psi)						
Working temperature°C	-20~80						
Range of travel tolerance	+1.0 0						
Cushion type	Crash pad						
lubrication	Unwanted						
Installation method	Flange type						
Blocking mode	Lever type roller type (non adjustable buffer)		Lever type roller type (adjustable buffer)				
Pipe Size	M5X0.8		PT1/8			PT1/4	
Proximity sensor tooth type	M5X0.5				M8X1.0		

Another: the content of the induction switch refer to PVI-83-VI-106 pageStandard stroke

## Trip

Inside diameter (mm)	20	25	32	40	50	63	80
Standard stroke (mm)	15	15	20	30	30	30	40

# Air Cylinder

BDAS

## BDAS

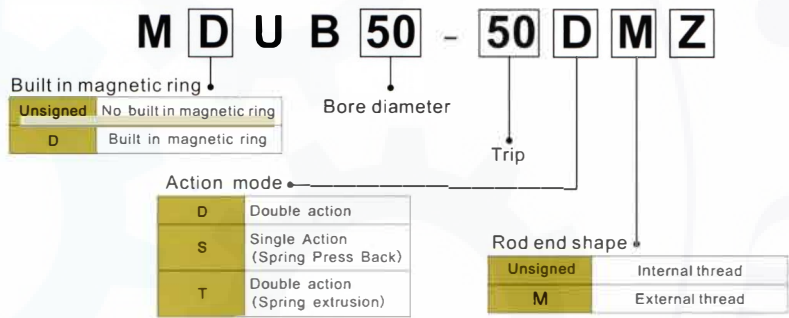
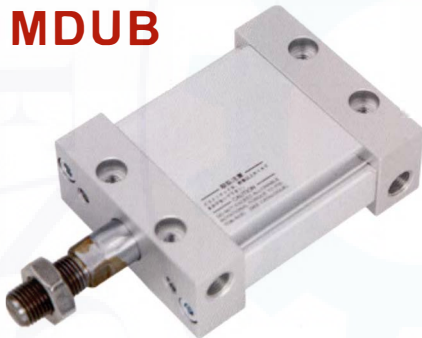


Project		Cylinder bore diameter (mm)		
		6	10	16
Use fluid		Air		
Pressure range (MPa)	Double acting type	0.15~0.7	0.1~0.7	0.08~0.7
	Launch single action type	0.2~0.7	0.15~0.7	0.15~0.7
	Indentation type single action type	0.3~0.7	0.2~0.7	0.2~0.7
	Double-acting type of two-end-out rod	0.2~0.7	0.15~0.7	0.1~0.7
Prof Pressure (MPa)		1.03		
Temperature range (°C)		0~60		
Use speed range (mm/s)		50~500		
Buffer		Rubber buffering mode		
Oil adding		No need (add 1 turbo oil [ISO VG32] equivalent when refueling)		
Piping connection caliber		M5×0.8		
Stroke tolerance (mm)		+1 0		

## MDUB new elliptical piston cylinder (rod does not rotate)

The magnetic switch can be installed on all sides with a travel of 300 mm

## MDUB



### Common specifications

Bore diameter (mm)	25	32	40	50	63
Action mode	Double-acting/single-acting (Spring press-back/Spring press-out)				
Use fluid	Atmosphere				
Maximum service pressure	0.7MPa				
Minimum service pressure	Double action	0.05MPa			
	Single action	0.18MPa			
Environment and fluid temperature	-10~60°C (not frozen)				
Lubrication	Unwanted				
Piston speed	50~500mm/s				
buffer	Rubber buffer at both ends				
Stroke tolerance (mm)	±1.4 0				
Rod non rotation accuracy	±1°	±0.8°	±0.5°		
Nozzle diameter (Rc)	M5X0.8	1/8	1/4		

### Trip

Bore diameter (mm)	Standard stroke (mm)	
	Double action	Single action
25	5,10,15,20,25,30,	5,10
32	35,40,50,75,100,	
40	125,150,175,200,	5,10
50	250,300	15,20
63		

## SCLF

Bore size  
SCLF40  
SCLF50  
SCLF63  
SCLF80  
SCLF100  
SCLF125  
SCLF160  
SCLF200



## SCLB

Bore size  
SCLB40  
SCLB50  
SCLB63  
SCLB80  
SCLB100  
SCLB125  
SCLB160  
SCLB200

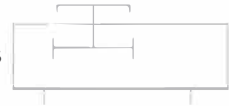


# Air Cylinder

## Mechanical Joint Type Rodless Cylinder (Basic Type)

### MY1B Series (10-100)

Graphic symbols



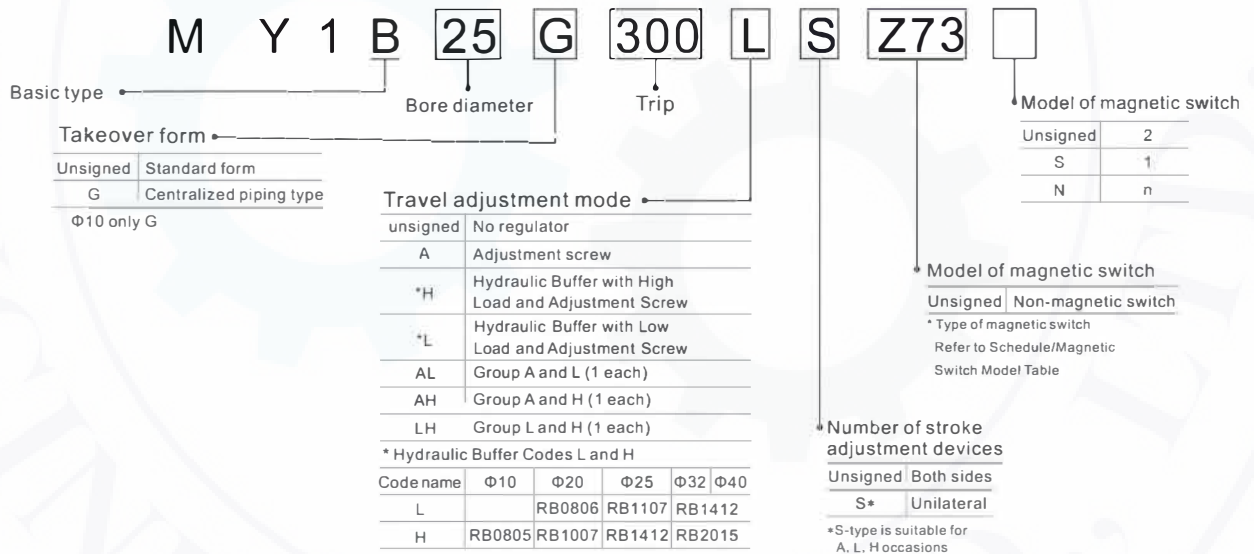
Range/magnetic switch model table

Bore diameter	Standard itinerary*(mm)	Maximum travel*(mm)	** Type of magnetic switch
10,16	100,200,300,	3000	A93,A96, M9N,M9B,M9P,F9NW
20	400,500,600,		
25,32,40,	700,800,900,	5000	Z73,Z76 Y59A,Y69A Y59B,Y69B,Y7NW
50,63,80,	1000,1200,		
100	1400,1600, 1800,2000		

\* When the journey has passed 2000 mm, Please add "-XB11" at the end of the model.  
For example: MY1B25-2500-XB11

\*\* The specifications and characteristics of magnetic switches can be consulted in the series of magnetic switches. Behind the type of magnetic switches, the length of the attached conductor indicates the sign "No mark - 0.5m, L - 3m, Z - 5m", for example: A96, A96L.

### Model Representation Method



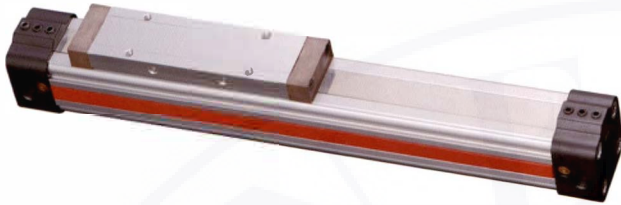
Cylinder diameter (mm)	10	16	20	25	32	40	50	63	80	100
Use fluid	Air									
Action mode	Double action									
Maximum operating pressure	0.8MPa									
Minimum operating pressure	0.2MPa	0.1MPa								
Environment and fluid temperature	5~60°C									
Piston speed(mm/s)	100~1000	100~1500(Centralized piping 100-1000)								
* Buffer	Cushion cushion	Air Buffer/Hydraulic Buffer (optional)								
Travel length tolerance	2700below <sup>+1.8</sup> <sub>0</sub> , 2701~5000 <sup>+2.8</sup> <sub>0</sub>									
** Oil.	Unwanted									
Pipe Size	M5×0.8			Rc1/8		Rc1/4	Rc3/8		Rc1/2	

\* Standard rodless cylinder (with air cushion only), piston speed can not exceed 1000mm/s

\*\* If you need oil, please use Turbine No. 1 Oil ISOVG32

# Air Cylinder

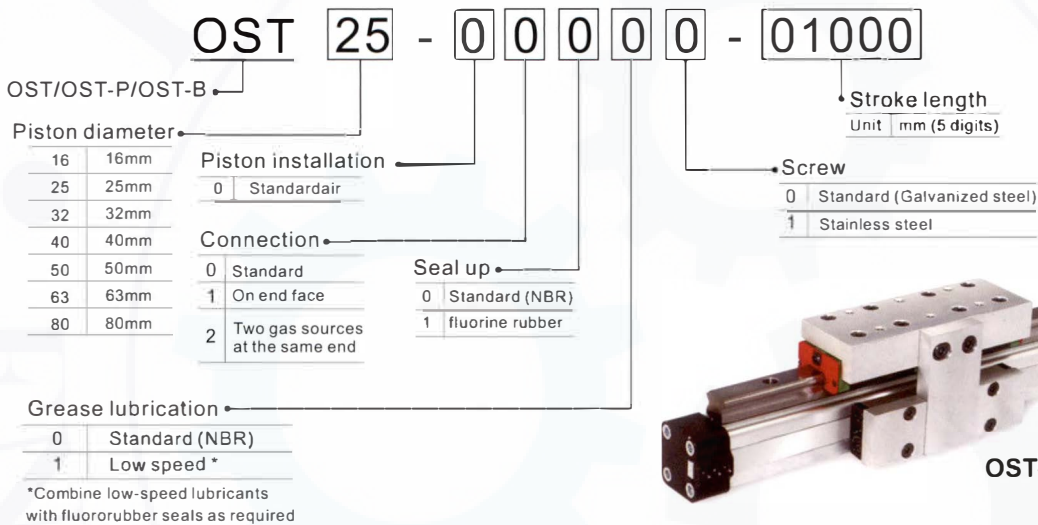
## OST Rodless Cylinder



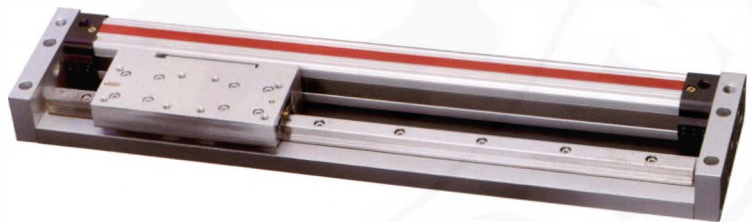
The bending moment is calculated at the midpoint of the linear cylinder. F is the actual force.

### Common specifications

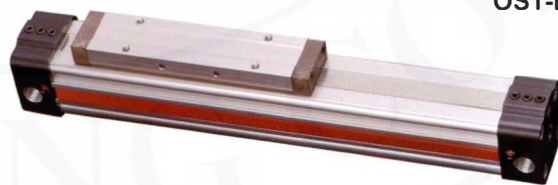
Cylinder series (mm $\phi$ )	Theoretical force at 6 bar (N)	The effective force FA at 6bar (N)	Maximum torque			Maximum load F (N)	Buffer length (mm)
			Mx (Nm)	My (Nm)	Mz (Nm)		
OST10	47	32	0.2	1	0.3	20	2.5
OST16	120	78	0.45	4	0.5	120	11
OST25	295	250	1.5	15	3	300	17
OST32	483	420	3	30	5	450	20
OST40	754	640	6	60	8	750	27
OST50	1178	1000	10	115	15	1200	30
OST63	1870	1550	12	200	24	1650	32
OST80	3016	2600	24	360	48	2400	39



OST-P Serie



OST-B Serie



OST Serie

### Linear Drive Accessories

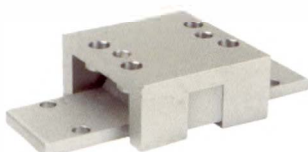
OST Fittings Size/End Cover Bracket Type A1  
• Inner diameter  $\phi$  16~32

OST Fittings Size/End Cover Bracket Type C1  
• Inner diameter  $\phi$  40~63



OST Fittings Size/U Bracket  
• Inner diameter  $\phi$  16~32

OST Fittings Size/U Bracket  
• Inner diameter  $\phi$  40-63



Type	KL3045R	KL3045N	KL3045P
Switch Logic	SPST Normally open type	Electronic contactless; normal type.	

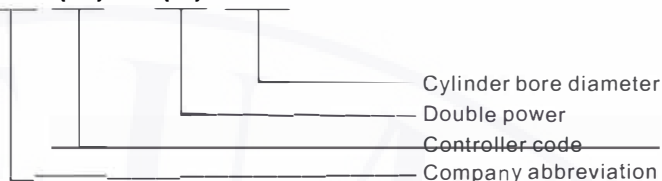
# Air Cylinder

## Single Column Machine Series Pneumatic punch press

TH: Standard Single Column Machine

THK: With Controller

**TH (K) - (2) 100**



Air Cylinder

Model	TH-50	TH-63	TH-80	TH-100	TH-125	TH-2100	TH-160	
	THK-50	THK-63	THK-80	THK-100	THK-125	THK-2100	THK-160	
Male weigh strength(kg)	120	200	300	500	800	1000	1500	
Bore diameter(mm)	50	63	80	100	125	100 times cylinder	160	
Total stroke(mm)	50	75	100	100	100	100	100	
Adjustable stroke(mm)	30	50	50	50	50	50	50	
Intake pipe specification	8#	8#	10#	10#	12#	12#	12#	
column diameter(mm)	Φ30	Φ30	Φ60	Φ60	Φ70	Φ70	Φ70	
Maximum Space for Die Loading (Workpiece Loading)(mm)	240	240	240	240	240	240	240	
Workbench dimensions(mm)	120×140	150×180	200×240	200×240	270×320	270×320	270×320	
throat depth(mm)	70	90	100	120	160	160	160	
Hole size of die shank(mm)	12	12	20	20	20	20	20	
Specification of pressure plate screw for T-groove	M12	M12	M12	M12	M12	M12	M12	
Maximum gas consumption/times(L)	0.20	0.31	0.43	0.50	0.79	1.23	2.32	
Holding time	Digital display type(s)	299.7	300.7	301.7	302.7	303.7	304.7	305.7
	Relay type(s)	12h	12h	12h	12h	12h	12h	12h
Voltage(V)	220	220	220	220	220	220	220	
Service temperature(°C)	-20~65	-20~65	-20~65	-20~65	-20~65	-20~65	-20~65	

## Standard Double Column Machine Series Pneumatic punch press

**TH S Q - (2) 100**



Model	THSQ-63	THSQ-80	THSQ-100	THSQ-125	THSQ-2100	THSQ-2125
	Male weigh strength(kg)	200	300	500	800	1000
Bore diameter(mm)	63	80	100	125	100 times cylinder	160 times cylinder
Total stroke(mm)	100	100	100	100	100	100
Adjustable stroke(mm)	50	50	50	50	50	50
Intake pipe specification	8#	10#	10#	12#	12#	12#
column diameter(mm)	Φ45×2	Φ45×2	Φ45×2	Φ45×2	Φ45×2	Φ45×2
Maximum Space for Die Loading (Workpiece Loading)(mm)	240	240	240	240	240	240
Workbench dimensions(mm)	240×240	240×240	240×240	240×240	240×240	240×240
throat depth(mm)	120	120	120	120	120	120
Hole size of die shank(mm)	12	20	20	20	20	20
Specification of pressure plate screw for T-groove	M12	M12	M12	M12	M12	M12
Maximum gas consumption/times(L)	0.31	0.43	0.50	0.79	1.23	2.32
Holding time	Digital display type(s)	997	997	997	997	997
	Relay type(s)	12h	12h	12h	12h	12h
Voltage(V)	220	220	220	220	220	220
Service temperature(°C)	-20~65	-20~65	-20~65	-20~65	-20~65	-20~65

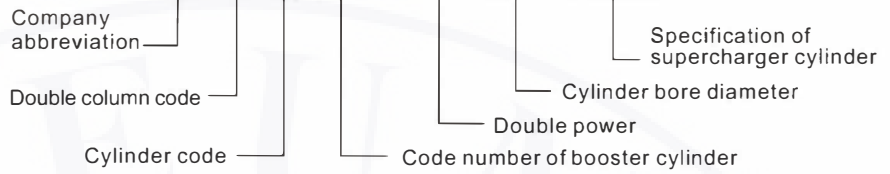
# Air Cylinder

## Double Column H Series Pneumatic punch press

THSQ: with cylinder

THSZ: with booster cylinder

**TH S Q (Z) - (2) 100 (10T)**



Model	THSQ-63H	THSQ-80H	THSQ-100H	THSQ-125H	THSQ-2100H	THSQ-160H
	THSZ-63H-1T THSZ-63H-3T	THSZ-80H-5T THSZ-80H-8T	THSZ-100H-10T THSZ-100H-13T			
Male weigh strength(kg)	200	400	500	800	1000	1500
Bore diameter(mm)	63	80	100	125	100 times cylinder	160
Total stroke(mm)	75	100	100	100	100	100
Adjustable stroke(mm)	50	50	50	50	50	50
Intake pipe specification	8#	10#	10#	12#	12#	12#
column diameter(mm)	Φ30	Φ30	Φ30	Φ30	Φ40	Φ40
Maximum Space for Die Loading (Workpiece Loading)(mm)	240	240	240	240	240	240
Workbench dimensions(mm)	240×220	240×220	240×220	240×220	360×250	360×250
Hole size of die shank(mm)	12	20	20	20	20	20
Specification of pressure plate screw for T-groove	M12	M12	M12	M12	M12	M12
Maximum gas consumption/times(L)	0.31	0.43	0.50	0.79	1.23	2.26
Holding time	Digital display type(s)	997	997	997	997	997
	Relay type(s)	12h	12h	12h	12h	12h
Voltage(V)	220	220	220	220	220	220
Service temperature(°C)	-20~65	-20~65	-20~65	-20~65	-20~65	-20~65

Air Cylinder

## Gantry type (C type) pneumatic series Pneumatic punch press

THLQ: with cylinder

THLZ: with booster cylinder

**TH L Q (Z) - (2) 100 (10T)**



Model	THLQ-63	THLQ-100	THLQ-125	THLQ-2100	THLQ-160	THLQ-2125	THLQ-200	THLQ-2160
Male weigh strength(kg)	200	500	800	1000	1500	2000	2500	3000
Bore diameter(mm)	63	100	125	100 times cylinder	160	125 times cylinder	200	160 times cylinder
Total stroke(mm)	100	100	100	100	100	100	100	100
Adjustable stroke(mm)	50	50	50	50	50	50	50	50
Intake pipe specification	8#	10#	12#	12#	12#	12#	12#	12#
Workbench dimensions(mm)	200×200Flat	250×250	250×250	250×250	250×250	250×250	300×300	300×300
throat depth(mm)	200	135	135	135	135	135	160	160
Maximum Space for Die Loading (Workpiece Loading)(mm)	220	300	300	300	300	300	300	300
Hole size of die shank(mm)	12	20	20	20	25	20	25	25
Specification of pressure plate screw for T-groove	M12	M12	M12	M12	M12	M12	M12	M12
Maximum gas consumption/times(L)	0.31	0.50	0.79	1.00	2.32	1.58	1.1	4.5
Holding time	Digital display type(s)	299	299	299	299	299	299	299
	Relay type(s)	12h	12h	12h	12h	12h	12h	12h
Voltage(V)	220	220	220	220	220	220	220	220
Service temperature(°C)	-20~65	-20~65	-20~65	-20~65	-20~65	-20~65	-20~65	-20~65

# Shock absorbers

## Shock absorbers AC/ACD series

AC: Automatic Compensation Type

ACD: Double-ended oil pressure buffer



Model	Max.absorbing energy	Max.allowable Push force	Speed(m/sec)	Stroke	Port size	Operating temp. range
AC0806	2	6	0.8~2	6mm	M8X1	-10~80°C
AC1005	3	7	0.8~3	5mm	M10X1	-10~80°C
AC1008	4	9	0.8~3	8mm	M10X1	-10~80°C
AC1210	5	30	0.8~3	10mm	M12X1	-10~80°C
AC1410	13	100	0.8~3	10mm	M14X1.5	-10~80°C
AC1412	15	110	0.8~3	12mm	M14X1.5	-10~80°C
AC1416	20	150	0.8~3	16mm	M14X1.5	-10~80°C
AC1420	22	160	0.8~3	20mm	M14X1.5	-10~80°C
AC2020	40	700	1.0~3.5	20mm	M20X1.5	-10~80°C
AC2030	50	750	1.0~3.5	30mm	M20X1.5	-10~80°C
AC2050	60	1200	1.0~3.5	50mm	M20X1.5	-10~80°C
AC2525	80	1500	1.0~4.0	25mm	M25X1.5	-10~80°C
AC2530	90	1800	1.0~4.0	30mm	M25X1.5	-10~80°C
AC2540	120	2000	1.0~4.0	40mm	M25X1.5	-10~80°C
AC2550	100	160	1.0~4.0	50mm	M25X1.5	-10~80°C
AC3660	250	2400	1.0~4.0	60mm	M36X1.5	-10~80°C
ACD2030	45	900	1.0~4.0	30mm	M20X1.5	-10~80°C
ACD2035	52	650	1.0~4.0	35mm	M20X1.5	-10~80°C
ACD2050	60	1200	1.0~3.5	50mm	M20X1.5	-10~80°C

## Shock absorbers SR (HR) series (Precision speed stabilizer)

SR(HR)



Model	Max.absorbing energy	Max.allowable Push force	Speed(m/sec)	Stroke	Operating temp. range
SR-15	0.23kgf/m	3500 N	0.5~30	15mm	-10~80°C
SR-30	0.23kgf/m	3500N	0.5~30	30mm	-10~80°C
SR-60	0.23kgf/m	3500 N	0.5~30	60mm	-10~80°C
SR-80	0.23kgf/m	3500 N	0.5~30	80mm	-10~80°C
SR-100	0.23kgf/m	3500 N	0.5~30	100mm	-10~80°C

# Shock absorbers

Shock absorbers FC(AD) series

FC(AD): Adjustable type

**FC(AD)**



Model	Max.absorbing energy	Max.allowable Push force	Speed(m/sec)	Stroke	Port size	Operating temp. range
FC 1410	20	120	3.2	10mm	M14X1.5	-10~80°C
FC 1412	20	120	3.2	12mm	M14X1.5	-10~80°C
FC 1416	22	150	3.2	16mm	M14X1.5	-10~80°C
FC 1420	22	150	3.2	20mm	M14X1.5	-10~80°C
FC 2016	28	224	3.2	16mm	M20X1.5	-10~80°C
FC 2020	35	280	3.2	20mm	M20X1.5	-10~80°C
FC 2025	40	330	3.2	25mm	M20X1.5	-10~80°C
FC 2030	45	450	3.2	30mm	M20X1.5	-10~80°C
FC 2050	60	500	3.2	50mm	M20X1.5	-10~80°C
FC 2525	78	624	3.5	25mm	M25X1.5	-10~80°C
FC 2530	105	785	3.5	30mm	M25X1.5	-10~80°C
FC 2540	122	976	3.5	40mm	M25X1.5	-10~80°C
FC 2550	148	1048	3.5	50mm	M25X1.5	-10~80°C
FC 3625	180	880	3.2	25mm	M36X1.5	-10~80°C
FC 3650	220	1760	3.2	50mm	M36X1.5	-10~80°C
FC 4225	280	3200	3.7	25mm	M42X1.5	-10~80°C
FC 4250	500	4000	4.5	50mm	M42X1.5	-10~80°C
FC 4275	750	6000	4.5	75mm	M42X1.5	-10~80°C

Shock absorbers

Basic type

**RB**

RB1411  
RB1412  
RB2015  
RB2725



Rubber cap

**RBC**

RBC1411  
RBC1412  
RBC2015  
RBC2725



Model		Basic type										Rubber pad			Hexagon nut		
Basic type	Rubber pad	MM	D	E1	E2	F	H	K	L	LL	S	E3	2L	Z	B	C	h
RB0604	RBC6040	M6×0.75	1.8	4.5	4.8	2	4		22.5	32.5	28.5	4.7	37	5	8	9.2	3
RB0805	RBC0805	M8×1.0	3.0	6.5	6.5	2.4	5		33.4	45.5	40.5	6.5	51.5	6.2	12	13.9	4
RB0806	RBC0806	M8×1.0	3.0	6.5	6.5	2.4	6		33.4	46.5	40.5	6.5	52.5	6.2	12	13.9	4
RB1006	RBC1006	M10×1.0	3	8.2	8.2	2.7	6		38	52.5	45.5	8.5	60	7.2	14	16.2	4
RB1007	RBC1007	M10×1.0	3	8.2	8.2	2.7	7		38	53.5	46.5	8.5	61	7.2	14	16.2	4
RB1411	RBC1411	M14×1.5	5	12.2	12	3.5	11	12	58.8	79	67	12	91	13.5	19	21.9	6
RB1412	RBC1412	M14×1.5	5	12.2	12	3.5	12	12	58.8	80	68	12	92	13.5	19	21.9	6
RB2015	RBC2015	M20×1.5	6	18.2	18	4	15	18	62.2	90	74.5	18	106	16	27	31.2	6
RB2725	RBC2725	M27×1.5	8	25.2	25	5	25	25	86	127	102	25	146	19	36	41.6	6



# O-Ring / Cooling pipe / Cylinder parts

## O-Ring



Type	Bore size									
	32	40	50	63	80	100	125	160	200	250
Sc	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Su	Y	Y	Y	Y	Y	Y				
DNC	Y	Y	Y	Y	Y	Y				
SI	Y	Y	Y	Y	Y	Y	Y	Y		
Mo	Y	Y	Y	Y	Y	Y	Y	Y		
Ho	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Type	Bore size									
	12	16	20	25	32	40	50	63	80	100
Mal		Y	Y	Y	Y	Y				
Ma		Y	Y	Y	Y	Y				
CM2B		Y	Y	Y	Y	Y				
C85		Y	Y	Y	Y	Y				
SDA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CQ2B	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

## Cooling pipe ( Round mouth=0 Flat mouth=F)



Round mouth=0 Flat mouth=F

tube dia × tube dia	Port size	L
OEL-01/O	PT1/8"	300mm
OEL-01/F	PT1/8"	300mm
OEL-02/O	PT1/4"	300mm
OEL-02/F	PT1/4"	300mm
OEL-03/O	PT3/8"	300mm
OEL-03/F	PT3/8"	300mm
OEL-04/O	PT1/2"	280mm
OEL-04/F	PT1/2"	280mm



Round mouth=0 Flat mouth=F

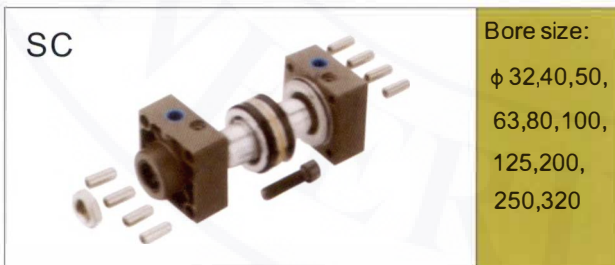
tube dia × tube dia	Port size	L
OELV-01/O	PT1/8"	300mm
OELV-01/F	PT1/8"	300mm
OELV-02/O	PT1/4"	300mm
OELV-02/F	PT1/4"	300mm
OELV-03/O	PT3/8"	300mm
OELV-03/F	PT3/8"	300mm
OELV-04/O	PT1/2"	280mm
OELV-04/F	PT1/2"	280mm



Part No.

OEL-ST02-12"
OEL-ST02-16"
OEL-ST02-18"
OEL-ST02-24"
OEL-ST03-12"
OEL-ST03-12"
OEL-ST03-14"
OEL-ST03-16"
OEL-ST03-20"
OEL-ST03-24"

## Cylinder parts



Bore size:

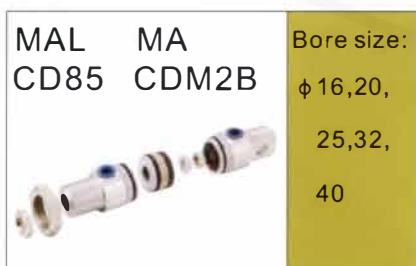
φ 32,40,50,  
63,80,100,  
125,200,  
250,320



DNC

Bore size:

φ 32,40,50,  
63,80,  
100,125



Bore size:

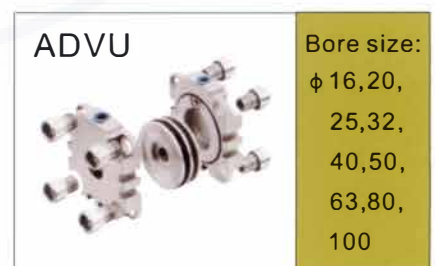
φ 16,20,  
25,32,  
40



SDA

Bore size:

φ 12,16,  
20,25,  
32,40,  
50,63,  
80,100



ADVU

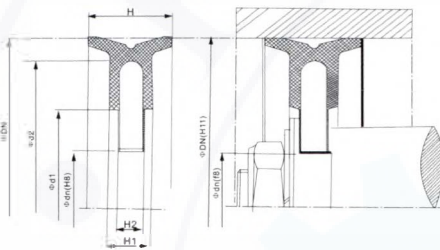
Bore size:

φ 16,20,  
25,32,  
40,50,  
63,80,  
100

# Air Cylinder Integral piston

## Standard cylinder integral piston TDUOP product table

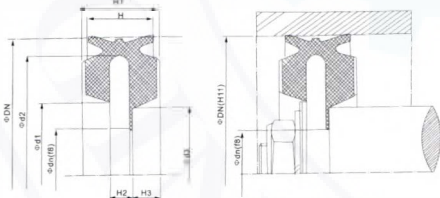
Adapt to: SC, SU, DNC, SI...



Size Code No.	DN	dn	d1	d2	H	H1	H2
TDUOP-25	25	8	15.6	21.4	12	4.6	3.8
TDUOP-32	32	8	20	27.8	15	6.2	3.8
TDUOP-40	40	10	25	35	18	7.4	4.8
TDUOP-50	50	10	37	45	18	7.4	4.8
TDUOP-63	63	12	43	57.4	22	9	6
TDUOP-70	70	12	50	64.4	22	9	6
BTGZ-75	75	12	53	69.4	22	10	7
TDUOP-80	80	16	55	73.5	25	9	6
BTGZ-80	80	12	63	73.5	22	8	5
TDUOP-90	90	12	65	80	24	10	7
TDUOP-95	95	12	70	85	25	10	7
TDUOP-100	100	16	75	93.5	25	9	7
BTGZ-100	100	12	80	93.5	22	8	5
TDUOP-125	125	20	95	118	30	13	9.6
TDUOP-140	140	20	110	132.5	30	14	11.6
TDUOP-190	190	18	150	170	32	15	12
BTGZ-203	203.2	19.05	145	196	25	14	8
BTGZ-203A	203.2	31.75	145	196	25	14	8

## Thin whole piston NADUOP

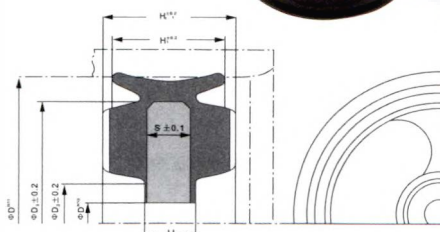
Adapt to: SDA, CQ2B, MAL...



Size Code No.	DN	dn	d1	d2	d3	H	H1	H2	H3
NADUOP-08	8	3	4.8	6	4.8	4.2	4.2	1.8	2
NADUOP-10	10	3	5	8	5	4.2	5.2	1.8	2
NADUOP-12	12	4.5	6.6	9.8	6.7	5.2	6	2.3	2.5
NADUOP-16	16	4.5	9.7	13.2	9.8	5.7	6.7	2.3	2.5
NADUOP-20	20	6	9.7	16.8	10	6.7	8	2.3	2.5
NADUOP-25	25	7	10.6	21.8	10.5	8	9	3.3	2.5
NADUOP-32	32	8	15	28.8	16	8	9	4.5	2.5
NADUOP-40	40	10	17	36.8	18	8.5	9	4.5	2.5
NADUOP-50	50	10	25	46.5	25	8.5	10	4.5	2.5
NADUOP-63	63	16	35.5	58.8	36	9.5	11	5.5	3
NADUOP-80	80	16	48.5	74.8	48.5	9.5	10	5.5	3
NADUOP-100	100	16	58	96.8	58	12.5	15	8.5	3

## DP Integral piston (Band buffer)

Adapt to: SDA, CQ2B, MAL...



Size Code No.	φD	d	H1	H2	S	H	D2	D3
DP-0602	6	2	3.8	3	1.25	1.45	3.2	5
DP-0803	8	3	5	4	1.5	1.8	4.2	6.3
DP-1003	10	3	5	4	1.5	1.8	5.2	8
DP-1203	12	4.5	6	4	2	2.3	6.9	9.4
DP-1603	16	4.5	6.5	4.5	2	2.8	6.9	13.2
DP-2005	20	6	7.5	5.5	2.5	2.8	9.4	17
DP-2506	25	7	8.8	7	3	3.5	10.8	21.2
DP-3208	32	8	11	8	3	3.5	12.5	27
DP-4008	40	8	11.8	8.8	4	4.5	17	34.9
DP-5010	50	10	14	10	4	4.5	26	43.9
DP-6312	63	12	14	10	4	4.5	26	56.6
DP-8016	80	16	16	12	5	5.5	30	72
DP-A020	100	20	18	14	6	6.5	35	91

Air Cylinder Integral piston

# Air cylinder Spare part

## Air cylinder Spare part

**EJ-11**



Model	Thread size
EJ-1105	M5×0.8
EJ-1106	M6×1.0
EJ-1108	M8×1.25
EJ-1110	M10×1.25
EJ-1112	M12×1.25
EJ-1114	M14×1.5
EJ-1116	M16×1.5
EJ-1118	M18×1.5
EJ-1120	M20×1.5
EJ-1127	M27×2
EJ-1136	M36×2

**EJ-21**



Model	Thread size
EJ-2105	M5×0.8
EJ-2106	M6×1.0
EJ-2108	M8×1.25
EJ-2110	M10×1.5
EJ-2112	M12×1.75
EJ-2114	M14×2.0
EJ-2116	M16×2.0
EJ-2120	M20×1.5
EJ-2128	M27×2.0
EJ-2130	M30×2.0

**EJST-11**



Stainless steel

Model	Thread size
EJST-1106	M6×1.0
EJST-1108	M8×1.25
EJST-1110	M10×1.25
EJST-1112	M12×1.25
EJST-1116	M16×1.5
EJST-1120	M20×1.5


**FJ-10**



STFJ  
Stainless steel

Model	Thread size
FJ-1005	M5×0.8
FJ-1006	M6×1.0
FJ-1008	M8×1.25
FJ-1010	M10×1.25
FJ-1012	M12×1.25
FJ-1014	M14×1.5
FJ-1016	M16×1.5
FJ-1018	M18×1.5
FJ-1020	M20×1.5
FJ-1027	M27×2.0
FJ-1036	M36×2.0

**FJF**



Model	Thread size	Suitable for cylinder diameter	Model	Thread size	Suitable for cylinder diameter
FJF6-3-050	M3×0.5	6	FJF40-14-150	M14×1.5	40
FJF10-4-070	M4×0.7	10	FJF50-16-150	M16×1.5	50 63
FJF15-5-080	M5×0.8	10 15	FJF50-16-200	M16×2.0	50 63
FJF15-6-100	M6×1.0	10 15	FJF63-18-150	M18×1.5	50 63
FJF20-8-125	M8×1.25	20	FJF80-20-150	M20×1.5	80
FJF30-10-125	M10×1.25	25 30	FJF80-20-250	M20×2.5	80
FJF30-10-150	M10×1.5	25 30	FJF80-22-150	M22×1.5	80
FJF40-12-125	M12×1.25	40	FJF100-26-150	M26×1.5	100
FJF40-12-150	M12×1.5	40	FJF125-27-200	M27×2.0	125 140
FJF40-12-175	M12×1.75	40	FJF140-30-150	M30×1.5	125 140

# Magnetic switch / Air cylinder Spare part

## Magnetic switch



Type	Cylinder
CS1-F	SC, MAL, MA, C85
CS1-U	SC, MAL, MA, C85
CS1-S	SC, MAL, MA, C85
CS1-J	SDA, TN
CS1-G	MD, CXSW, CXS, MGPM, MGQM




Type	Cylinder
D-C73	CDM2B, MA, C85, MAL
D-A54	CDRA1
D-Z73	CXSW, CXS, MGPM, MGQM
D-A93	CDQ2B, CDU, MK, CDQSB
D-A73	CDQ2B, CDU, MK, CDQSB



DNC-type magnetic switch

Magnetic switch  
Air cylinder Spare part

## Magnetic switch bracket



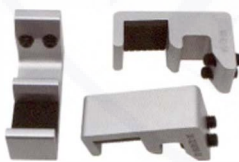
Model
U-MAL16
U-MAL20
U-MAL25
U-MAL32
U-MAL40

Applicable to MAL series Aluminum slim cylinder




Model
U-MA16
U-MA20
U-MA25
U-MA32
U-MA40

Applicable to MA, CD85, CDM2B series stainless steel slim cylinder



Model
F-SC32/40/50
F-SC63
F-SC80/100
F-SC125
F-SC160



Model
F-SU32
F-SU40
F-SU50
F-SU63
F-SU80
F-SU100



Model
F-NSU32/40/50
F-NSU63/80/100



Model	
PM6	PM16
PM8	PM20
PM10	PM25
PM12	

# Air cylinder Spare part

## Air cylinder Spare part

### Y+CLIP



Tube diaxthread size	Tube diaxthread size
Y+CLIP-16	Y+CLIP-63
Y+CLIP-20	Y+CLIP-80
Y+CLIP-25	Y+CLIP-100
Y+CLIP-32	Y+CLIP-125
Y+CLIP-40	Y+CLIP-160
Y+CLIP-50	Y+CLIP-200

### SC

### CA



Tube diaxthread size	Tube diaxthread size
CA-32	CA-125
CA-40	CA-160
CA-50	CA-200
CA-63	CA-250
CA-80	CA-320
CA-100	

### SC

### CB



Tube diaxthread size	Tube diaxthread size
CB-32	CB-125
CB-40	CB-160
CB-50	CB-200
CB-63	CB-250
CB-80	CB-320
CB-100	

### SC

### FA



Tube diaxthread size	Tube diaxthread size
FA-32	FA-125
FA-40	FA-160
FA-50	FA-200
FA-63	FA-250
FA-80	FA-320
FA-100	

### SC

### TC



Tube diaxthread size	Tube diaxthread size
TC-32	TC-100
TC-40	TC-125
TC-50	TC-160
TC-63	TC-200
TC-80	

### SC/MAL

### LB



Tube diaxthread size	Tube diaxthread size
LB-16	LB-63
LB-20	LB-80
LB-25	LB-100
LB-32	LB-125
LB-40	LB-160
LB-50	LB-200

### I



Tube diaxthread size	Tube diaxthread size
I-16	I-63
I-20	I-80
I-25	I-100
I-32	I-125
I-40	I-160
I-50	I-200

### Y

Dual role




Tube diaxthread size	Tube diaxthread size
Y-16	Y-63
Y-20	Y-80
Y-25	Y-100
Y-32	Y-125
Y-40	Y-160
Y-50	Y-200

# Air cylinder Spare part


## ISO-6431 DNC Air cylinder Spare part

**D-CA**



Tube diaxthread size
D-CA32
D-CA40
D-CA50
D-CA63
D-CA80
D-CA100

**D-CB**




Tube diaxthread size
D-CB32
D-CB40
D-CB50
D-CB63
D-CB80
D-CB100

**D-CR**



Tube diaxthread size
D-CR32
D-CR40
D-CR50
D-CR63
D-CR80
D-CR100

**D-CE**




Tube diaxthread size
D-CE32
D-CE40
D-CE50
D-CE63
D-CE80
D-CE100

**D-FA**



Tube diaxthread size
D-FA32
D-FA40
D-FA50
D-FA63
D-FA80
D-FA100

**D-LB**



Tube diaxthread size
D-LB32
D-LB40
D-LB50
D-LB63
D-LB80
D-LB100

Air cylinder Spare part

## Magnetic switch **New**



**D-M9N**



**D-M9B**



**D-M9P**

Cylinder signal generator



**PPL-1/4**

# Piston rod

## Pneumatic cylinder piston rod



E-ROD

Surface roughness	0.4~0.1
Surface Treatment of Tolerance	Above HRC60
Straightness	0.15/1000mm
Circle of Tolerance	GB1184 level 9
Full-length size Tolerance	100IT GB1 level
Axis of hardness	HB220~280
Chrome thickness	0.02~0.03 μ m
Material	45° steel
Length	2.5M

### Specifications

φ 4	φ 14	φ 25	φ 36	φ 55	φ 80
φ 5	φ 15	φ 28	φ 38	φ 60	φ 85
φ 6	φ 16	φ 30	φ 40	φ 65	φ 90
φ 8	φ 18	φ 32	φ 45	φ 70	φ 95
φ 10	φ 20	φ 35	φ 50	φ 75	φ 100
φ 12	φ 22				

Piston rod

## Stainless steel piston rod



ST-E-ROD

Surface roughness	0.4~0.1
Surface Treatment of Tolerance	Above HRC60
Straightness	0.15/1000mm
Circle of Tolerance	GB1184 level 9
Full-length size Tolerance	100IT GB1 level
Axis of hardness	HB220~280
Chrome thickness	0.02~0.03 μ m
Material	SUS 304
Length	2.5M

### Specifications

φ 4	φ 14	φ 25	φ 36	φ 55	φ 80
φ 5	φ 15	φ 28	φ 38	φ 60	φ 85
φ 6	φ 16	φ 30	φ 40	φ 65	φ 90
φ 8	φ 18	φ 32	φ 45	φ 70	φ 95
φ 10	φ 20	φ 35	φ 50	φ 75	φ 100
φ 12	φ 22				

# Honed Cylinder Tube

## Honed Cylinder Tube

H-HT



### Features:

Tubes are cold drawn and stress relief annealed to get homogeneous and superior mechanical properties and are honed by precise honing machine to match the required I.D. surface condition, roughness and tolerance of designated standard.

Costar also has adequate stock in standard sizes. Besides special specification, material and size are available upon request to satisfy all customers' needs.

### Grade (Chemical Composition, Mechanical Properties)

Grade	Chemical Composition%					Mechanical Properties		
	C	Si	Mn	P	S	Tensile Strength kg/mm <sup>2</sup>	Yield Strength kg/mm <sup>2</sup>	Elongation%
St-52	0.13	0.15	1.20	max. 0.025	max. 0.025	60min.	52min.	15min.
	0.18	0.30	1.40					
STKM-13C	max. 0.25	max. 0.35	0.30 0.90	max. 0.04	max. 0.04	52min.	39min.	15min.

### Specification:

1. I.D. Surface Roughness: Ra 0.8  $\mu$  m max.
2. I.D Tolerance: ISO H9, H7/H8 upon request
3. Wall Thickness Tolerance:  $\pm$  10%
4. Straightness: 1/1000 max.

### H-HT Available Stock Sizes

I.D. x O.D.							
20x30	50x60	63x73	75x90	100x110	125x140	150x170	200x203
25x35	50x65	65x75	75x95	100x115	125x145	150x175	200x245
30x40	55x65	65x80	80x90	100x120	135x160	160x170	225x273
32x42	55x70	70x80	80x95	110x130	140x160	160x180	250x280
35x45	60x70	70x85	90x105	115x130	140x165	160x184	250x299
40x50	60x75	75x85	90x110	120x140	150x160	180x203	300x365



# Cylinder tube/Hydraulic tube

## Aluminum alloy standard round cylinder tube



### Dimension

Inner diameter d(mm)	Outer diameter D(mm)	thickness (mm)	Inner diameter d(mm)	Outer diameter D(mm)	thickness (mm)
∅ 16	∅ 20	2	∅ 70	∅ 76	3
∅ 20	∅ 25	2.5	∅ 80	∅ 86	3
∅ 25	∅ 30	2.5	∅ 80	∅ 87	3.5
∅ 32	∅ 37	2.5	∅ 100	∅ 106	3
∅ 40	∅ 45	2.5	∅ 100	∅ 107	3.5
∅ 40	∅ 47.2	3.6	∅ 125	∅ 133	4
∅ 50	∅ 55	2.5	∅ 140	∅ 150	5
∅ 50	∅ 57.2	3.6	∅ 150	∅ 160	5
∅ 63	∅ 68	2.5	∅ 160	∅ 170	5
∅ 63	∅ 69	3	∅ 180	∅ 192	6
∅ 60	∅ 67.2	3.6	∅ 200	∅ 210	5

## SU series cylinder tube



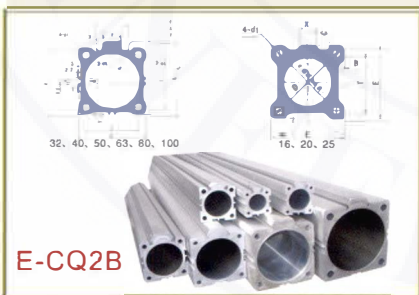
Model	
∅ 32	∅ 40
∅ 50	∅ 63
∅ 80	∅ 100
∅ 125	

## SDA series compact cylinder tube



Inner diameter Size mm	
∅ 12	∅ 16
∅ 20	∅ 25
∅ 32	∅ 40
∅ 50	∅ 63
∅ 80	∅ 100

## CQ2B series compact cylinder tube



Inner diameter Size mm	
∅ 12	∅ 16
∅ 20	∅ 25
∅ 32	∅ 40
∅ 50	∅ 63
∅ 80	∅ 100

## Stainless steel tube



Model
E-SLT-16
E-SLT-20
E-SLT-25
E-SLT-32
E-SLT-40

## Stainless steel tube



Model
Inner diameter d(mm) × Outer diameter D(mm)
E-SLT 40X50
E-SLT 50X60
E-SLT 60X70
E-SLT 63X73
E-SLT 70X80
E-SLT 80X90

Cylinder tube/  
Hydraulic tube