

Air Cylinders

Pen Double Acting Type

Air Cylinders – Pen Double Acting Type

RoHS 10

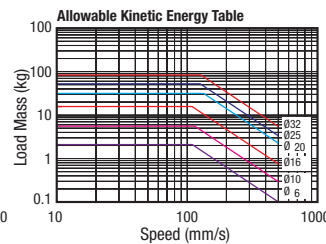
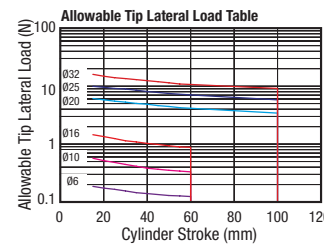
MSPCB Cylinder + Bracket
MSPCN Cylinder Only

Tube Inner Ø6
Ø10-16
Ø20-32

Dimensions in () are for Ø16.
Dimensions in () are for Ø32.

Tube Inner Dia. (mm)	A	AL	B	B ₁	B ₂	C	C ₁	C ₂	F	H	H ₁	H ₂	LB	MM	NN	Z	ZA	ZZ
6	—	—	—	5.5	8	—	6.4	9.2	—	—	2.4	4	—	M3 x 0.5	M6 x 1.0	—	—	—
10	—	—	12	7	11	14	8.1	12.7	—	—	3.2	4	15	M4 x 0.7	M8 x 1.0	—	—	—
16	—	—	18	8	14	20	9.2	16.2	—	—	4	4	23	M5 x 0.8	M10 x 1.0	—	—	—
20	20	18	—	13	30	26.7	15	34.6	12	38	5	6	38.4	M8 x 1.25	M22 x 1.5	129	23	131
25	22	20	—	17	30	29.7	19.6	34.6	15	49	6	6	39.9	M10 x 1.25	M22 x 1.5	140	34	142
32	22	20	—	17	32	36	19.6	37	18	52	6	8	50	M10 x 1.25	M24 x 2.0	146	27	155

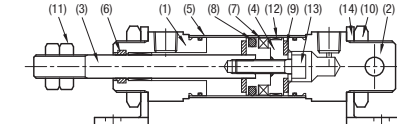
Part Number		St Stroke (mm)
Type	Tube Inner Dia. (mm)	
Cylinder + Bracket MSPCB	6	15 30 45 60
	10	15 30 45 60
	16	15 30 45 60
	20	15 25 50 100
Cylinder only MSPCN	25	15 25 50 100
	32	15 25 50 100



Theoretical Output Unit (N)

Tube Inner Diameter (mm)	Operating Direction	Operating Pressure (MPa)					
		0.2	0.3	0.4	0.5	0.6	0.7
6	Push	5.7	8.5	11.3	14.1	17	19.8
	Pull	4.2	6.4	8.5	10.6	12.7	14.8
10	Push	15.7	23.6	31.4	39.3	47.1	55
	Pull	13.2	19.8	26.4	33	39.6	46.2
16	Push	40	60	80	101	121	141
	Pull	36	54	73	91	109	127
20	Push	63	94	126	157	189	220
	Pull	47	71	94	118	141	165
25	Push	98	147	196	245	295	344
	Pull	83	124	165	206	247	289
32	Push	161	241	322	402	483	563
	Pull	138	207	277	346	415	484

Air Cylinder (Pen Type) Structure Diagram



Pen-Style Type: Parts List

Number	Part Name	Ø6	Ø10	Ø16	Ø20	Ø25	Ø32
1	Rod Cover	6061 Aluminum Alloy					
2	Head Cover	6061 Aluminum Alloy					
3	Piston Rod	303 Stainless Steel			1045 Carbon Steel or Equivalent		
4	Piston	6061 Aluminum Alloy (Note)					
5	Tube	304 Stainless Steel					
6	Rod Gasket	NBR Nitrile Rubber					
7	Magnet	—					
8	Piston Gasket	NBR Nitrile Rubber					
9	Cushion	NBR Nitrile Rubber					
10	Body Nut	C36000 Brass	1018 Carbon Steel or Equivalent		—		—
11	Rod Nut	C36000 Brass	1018 Carbon Steel or Equivalent		—		—
12	Wear Contact	Teflon					
13	Piston Bolt	4137 Alloy Steel					
14	Foot	1018 Carbon Steel or Equivalent					

Note: JIS-C36000 Brass is for Ø10 and Ø16, PDM Polyoxymethylene is for Ø25 is for Ø25.

Pen-Style Type: Basic Specification

Tube Inner Diameter (mm)	6	10 / 16	20-32
Operating Type	Double Acting		
Permissible Fluid	Air		
Min. Operating Pressure (MPa)	0.12	0.06	
Max. Operating Pressure (MPa)	0.7		
Pressure Resistance (MPa)	1.0		
Operating Temp. Range (°C)	5-60		
Piston Speed (mm/s)	50-500		
Cushion Mechanism	NBR Rubber		
Stroke Tolerance (mm)	0-1.5	0-2.0	
Lubrication	Lube - Maintenance Free		
Pipe Connection Bore Diameter	M5 x 0.8	Rc1/8	

For theoretical reference speed, refer to P.3584

Air Cylinders

Special Sensor for Pen-Shaped Type / Panel Mount Single Acting Type

Special Sensor for Pen-Shaped Type

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MSRCS Contact Type
MSRNS No Contact Type

Accessories: 1 pc. (Mounting Brackets)

No.	Ø6	Ø10	Ø16	Ø20	Ø25	Ø32
A	41.5	53	71	84	100	123

Part Number		Applicable Cylinder
Type	No.	
MSRCS MSRNS	6	MSPC_6_
	10	MSPC_10_
	16	MSPC_16_
	20	MSPC_20_
	25	MSPC_25_
	32	MSPC_32_

Part Number Example: MSRCS10 - Stroke 30

Specifications: Special Sensor for Pen-Shaped Type

Type	MSRCS	MSRNS
No.	6-32	6-32
Contact Type	Contact	No Contact
Contact Structures	Normally Open	
Operating Supply Voltage Range	AC/DC5-240V	DC5-28V
Load Current Range	100mA or less	50mA or less
Impact Resistance	30G	50G
Internal Voltage Drop	3.5V or less	1.5V or less
Operating Temperature	5-60°C	
Lead Wire	2 Conductors Ø3.3	3 Conductors Ø3.3
Lead Wire Length	2m	
Protection Structure	IP67	
Indicator Light	Lights when ON	
Indicator Light Color	Red	

For theoretical reference speed, refer to P.3584

Air Cylinders – Panel Mount Single Acting Type

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MSPCM Panel Mount Single Acting Type

Part Number		St Stroke (mm) Selection	L
Type	Tube Inner Dia. (mm)		
MSPCM	6	5	12.5
		10	19.5
		15	26.5

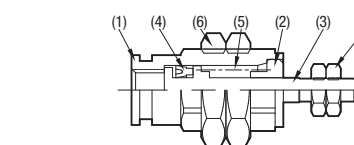
MSPCM: Parts List

Number	Part Name	Material	Surface Treatment
1	Body	C3604 Brass (JIS)-CD	Electroless Nickel Plating
2	Cover	C5441B Bronze	—
3	Piston Rod	303 Stainless Steel	—
4	Piston Gasket	NBR Rubber	—
5	Spring	SWP Spring Steel	—
6	Body Nut	C3604 Brass (JIS)-CD	Electroless Nickel Plating
7	Rod Nut	C3604 Brass (JIS)-CD	Electroless Nickel Plating

Application Example: Low Carbon Steel

Part Number Example: MSPCM6 - Stroke 5

Low Carbon Steel Structure



MSPCM Basic Specifications

Tube Inner Diameter (mm)	6
Operating Type	Single Acting Push Type
Permissible Fluid	Air
Min. Operating Pressure (MPa)	0.2
Max. Operating Pressure (MPa)	0.7
Pressure Resistance (MPa)	1.0
Operating Temp. Range (°C)	5-60
Piston Speed (mm/s)	50-500
Cushion Mechanism	No
Stroke Tolerance (mm)	0-1.0
Lubrication	Lube - Maintenance Free
Pipe Connection Bore Diameter	M5 x 0.8