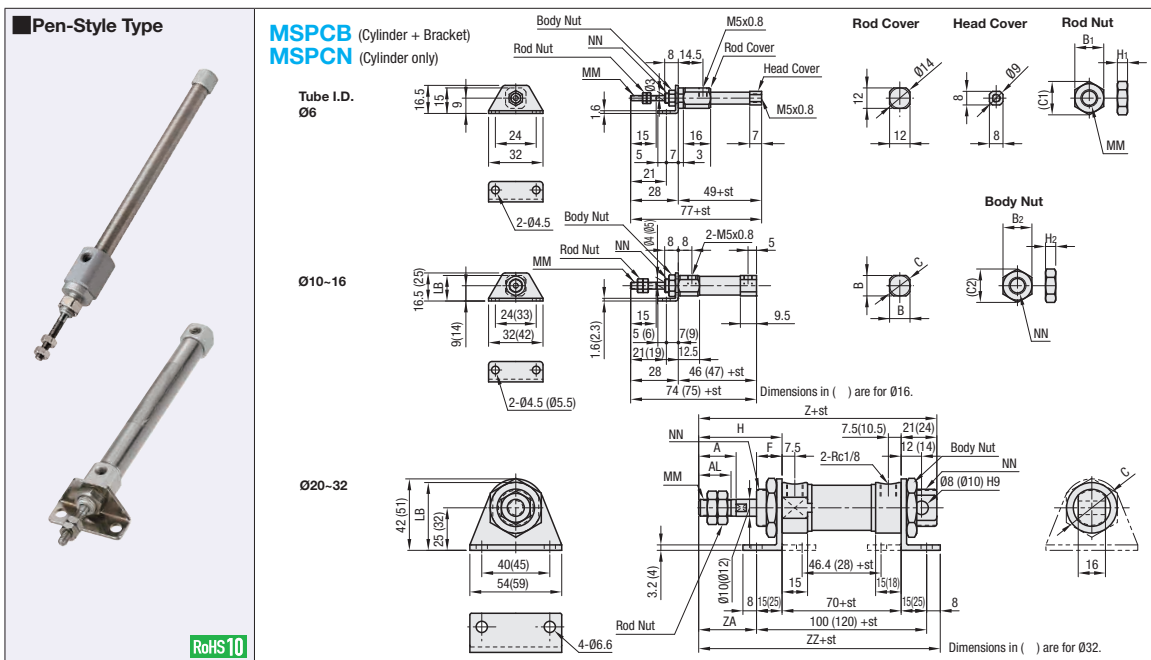


Air Cylinders

Pen-Style Type (Double Acting)

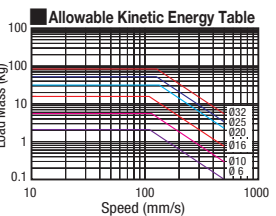
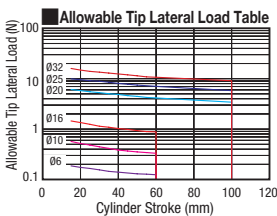
Coupling Rods for Air Cylinders / Thread Conversion Adapters

L Selectable / L Configurable / L and F Configurable



Tube I.D. (mm)	A	AL	B	B1	B2	C	C1	C2	F	H	H1	H2	LB	MM	NN	Z	ZA	ZZ
6	-	-	5.5	8	-	6.4	9.2	-	-	2.4	4	-	-	M3x0.5	M6x1.0	-	-	-
10	-	-	12	7	11	14	8.1	12.7	-	3.2	4	15	-	M4x0.7	M8x1.0	-	-	-
16	-	-	18	8	14	20	9.2	16.2	-	4	4	23	-	M5x0.8	M10x1.0	-	-	-
20	20	18	-	13	30	28	15	34.6	12	38	5	6	38.4	M8x1.25	M22x1.5	129	23	131
25	22	20	-	17	30	33.5	19.6	34.6	15	49	6	6	39.9	M10x1.25	M22x1.5	140	34	142
32	22	20	-	17	32	37.5	19.6	37	18	52	6	8	50	M10x1.25	M24x2.0	146	27	155

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



Theoretical Output (Unit: N)

Tube I.D. (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	23.8	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	

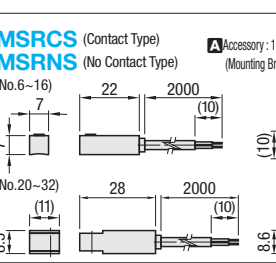
Pen-Style Type : Basic Specification

Tube I.D. (mm)	Operating Type
6	Double Acting
10, 16, 20, 25, 32	Double Acting
	Applicable 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
	Stroke Tolerance (mm): 0 ~ +1.5 / 0 ~ -2.0
	Lubrication: Lubrication Free
	Pipe Connection Bore Dia.: M5x0.8 / Rc1/8



Part Number

Type	No.	Applicable Cylinder	Unit Price
MSRCS	6	MSPC_06	
	10	MSPC_10	
	16	MSPC_16	
	20	MSPC_20	
	25	MSPC_25	
	32	MSPC_32	



Ordering Example

Part Number: MSPCB6 - Stroke: 30

Specifications : Special Sensor for Pen-Style Type

Type	MSRCS	MSRNS
No.	6-16 / 20-32	6-16 / 20-32
Contact Type	Contact	No Contact
Contact Structure	Normally Open	No Contact
Operating Supply Voltage Range	5-24VAC / 5-22VDC	5-24VDC / 5-30VDC
Load Current Range	100mA or Less / 40mA or Less / 20mA or Less / 10mA or Less	
Impact Resistance	30G	50G
Internal Voltage Drop	2.5V or Less / 0V or Less / 0.5V or Less / 5V or Less	
Response Time	1ms or Less	
Operating Temperature	5 ~ 60°C	
Lead Wire	2 Conductors (R2) / 3 Conductors (R3) / 4 Conductors (R4)	3 Conductors (R3)
Lead Wire Length	2m	
Protection Structure	IP67	IP66 / IP67 / IP68
Indicator Light	Lights when ON	
Indicator Light Color	Green	Green / Red / Green

Part Number

Type	No.	Applicable Cylinder	Unit Price
MSRCS	6	MSPCB_06	
	10	MSPCB_10	
	16	MSPCB_16	
	20	MSPCB_20	
	25	MSPCB_25	
	32	MSPCB_32	



Type	Material	Surface Treatment	Accessory
L Selectable	S45C Equivalent	Black Oxide / Electroless Nickel Plating	SS400 / SUS304
L Configurable	S45C Equivalent	Black Oxide / Electroless Nickel Plating	SS400 / SUS304
L and F Configurable	S45C Equivalent	Black Oxide / Electroless Nickel Plating	SS400 / SUS304

Part Number	Type	M-Pitch	L		F		A	B	C	B'	C'	T	Qty.	Included Nut							Unit Price
			Selectable	Configurable (1mm Increment)	Standard	Configurable (1mm Increment)								FJEB	FJER	FJES	FJEB	FJER	FJES	FJEB	
L Selectable FJEB FJER FJES		3-0.5	20 25 30 35 40 50 75 100	20-100	17.5	10-15	2.5	6	6.9	5.5	6.4	2.4	2 pcs.								
		4-0.7																			
		5-0.8																			
L Configurable FJEB FJER FJES		6-1.0	30 35 40 50 75 100 150 200	24-100	18	14-40	3	10	11.5	10	11.5	4	5								
		8-1.0																			
		8-1.25																			
		10-1.5																			
L and F Configurable FJEB FJER		12-1.25	40 50 75 100 150 200	48-200	24	16-60	5	21	19.9	17	19.6	6	1 pc.								
		12-1.5																			
		14-1.5																			
		18-1.5																			
		20-1.5																			
		22-1.5																			
		30																			



Type	Material	Surface Treatment
Full Thread Type	S45C Equivalent	Black Oxide / Electroless Nickel Plating
Stepped Thread Type	S45C Equivalent	Black Oxide / Electroless Nickel Plating
Hex Type	S45C Equivalent	Black Oxide / Electroless Nickel Plating
Hex Shoulder Type	S45C Equivalent	Black Oxide / Electroless Nickel Plating

Type	Part Number		L	1mm Increment	M (Coarse)		NS (Fine)		E	H	B	C
	Coarse	Fine Thread			Coarse	Fine	Coarse	Fine				
SAA	5	-	20-100	3	4*				5-16		8	9.2
SAB	6	-	20-100	3	4	5*			6-20		10	11.5
SAC	8	8S	30-150	4	5	6*			8-24		13	15
SAD	10	10S	30-150	5	6*	8*		8*	10-32		17	19.6
SAA	12	12S	40-200	6	8	10*		8 10*	12-40		19	21.9
SAB	14	14S	40-200	6	8	10*	12*	8 10* 12*	14-48		22	25.4
SAC	16	16S	50-200	8	10	12*	14*	8 10 12* 14*	16-56		24	27.7
SAD	18	18S	50-200	10	12	14*	16*	10 12 14* 16*	18-64		27	31.2
SAA	20	20S	50-200	10	12	14	16*	18*	20-72		30	34.6

* marked dimensions are not available for SAA, SAAM and SAAS.

NS (Fine Thread) pitch is same as M Fine Thread (Nominal Thread Dia.).

SAA, SAAM, SAAS are L≥Nx4 SAB, SABM, SABS are L≥Mx2+E SAC, SACM, SACS are L≥Mx4+E SAD, SADM, SADS are M+H+E≤L≤Mx4+H+(N)Sx4

Part Number

Coarse	Fine Thread	L	N	E	F
5	-	30	-	-	-
6	-	100	-	-	-
8	8S	50	-	50	-
10	10S	50	-	E20	-