



Pneumatic Cylinders I
Catalog No. CB-029SA

Small compact cylinder Double acting/ Single rod

MSD Series

● Bore size: $\phi 6/\phi 8$

JIS symbol



Double acting



Specifications

Item	MSD MSD-L (with switch)
Bore size mm	$\phi 6, \phi 8$
Actuation	Double acting
Working fluid	Compressed air
Max. working pressure MPa	1.0
Min. working pressure MPa	0.15
Proof pressure MPa	1.6
Ambient temperature °C	-10 to 60 (no freezing)
Port size	M3
Stroke tolerance mm	+0.5 0
Working piston speed mm/s	50 to 500
Cushion	No
Lubrication	Not available
Allowable absorbed energy	This product cannot absorb the energy generated by an external load mounted on the cylinder. When using the product with no load, separately provide a shock absorber on the outside.

Stroke

Bore size (mm)	Standard Stroke (mm)	Max. Stroke (mm)	Min. Stroke with two switches (mm)		Min. Stroke with one switch (mm)	
			Reed switch	Proximity switch	Reed switch	Proximity switch
$\phi 6$	5/10/15/20/25/30	30	10	5 (10)	5	5
$\phi 8$	5/10/15/20/25/30	30	10	5 (10)	5	5

*1: Products with Stroke other than standard Stroke are not available.

*2: F2Y, F3Y or F3P have the min. Stroke as the dimensions in ().

Compatibility table by variation

Applicable bore size		Double acting/ single rod	Double acting/ single rod high load	Single acting/ push	Single acting/ pull	Double acting/ fine speed
			K	X	Y	F
MSD ø6 to 16	P4	●	●	○	○	
	P40	●	●	○	○	

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

How to order

● Without switch (without magnet for switch)

MSD - 6 - 5 - R P4 P40

● With switch (built-in magnet for switch)

MSD-L - 6 - 5 - SW81 - R - R P4 P40

A Model No.

B Bore size

C Stroke

D Switch model No.
*1

E Switch quantity

F Piping port position
*2

Code	Description	
A Model No.		
MSD	Double acting/Single rod	Without switch
MSD-L		With switch
B Bore size(mm)		
6	ø6	
8	ø8	
C Stroke(mm)		
5	5	
10	10	
15	15	
20	20	
25	25	
30	30	
D Switch model No.		
Refer to the compatibility table on Intro Pages 23 to 26 for switch model No.		
E Switch quantity		
R	1 on rod side	
H	1 on head side	
D	2	
F Piping port position		
Blank	Front piping	
R	Rear piping	

⚠ Precautions for model No. selection

*1: For ø6 to ø8 with switch, use a non-magnetic (stainless steel, etc.) mounting bolt.

*2: For rear piping, body side installation is possible. Note that 2 bolts are used for rod side mounting and head side mounting.

Related products

Speed controller								
Model No.	Appearance	Port size (Rc or R)			Compatible tube O.D.			Page
		M3	M5	1/8	4(ø4)	6(ø6)	8(ø8)	
SC3W-M3- *-P4		●			●			530

Specify the compatible tube O.D. code for *.

P4
Series

Pneumatic
cylinders
Hand/
Chuck
Related
products
Cylinder
Switch

Vacuum components
Pneumatic valves

Clean air
components
Speed
controller
Fitting
Auxiliary
valve
Pneumatic auxiliary components
Silencer
Tube

Gas generator
Fluid control components

Motor
specification
Motorless
specifications
Electric actuator



Pneumatic Cylinders I
Catalog No. CB-029SA

Small guided compact cylinder
Double acting/guided/with switch

MSDG-L Series

● Bore size: $\varnothing 6/\varnothing 8/\varnothing 12/\varnothing 16$



Specifications

Item	MSDG-L (With switch)			
	$\varnothing 6$	$\varnothing 8$	$\varnothing 12$	$\varnothing 16$
Bore size mm	$\varnothing 6$	$\varnothing 8$	$\varnothing 12$	$\varnothing 16$
Actuation	Double acting			
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Min. working pressure MPa	0.2	0.15		0.1
Proof pressure MPa	1.6			
Ambient temperature °C	5 to 60			
Port size	Body side surface port	M3		M5
	Rear common port	M3		M3
Stroke tolerance mm	+2.0			
	0			
Working piston speed mm/s	50 to 500			
Cushion	With rubber cushion			
Lubrication	Not available			
Allowable absorbed energy J	0.004	0.014	0.044	0.110

Stroke

Bore size (mm)	Standard Stroke (mm)	Max. Stroke (mm)	Min. stroke length with two switches (mm)		Min. stroke length with one switch (mm)	
			Reed switch	Proximity switch	Reed switch	Proximity switch
$\varnothing 6$	5/10/15/20/25/30	30	10	5	5	5
$\varnothing 8$	5/10/15/20/25/30	30	10	5	5	5
$\varnothing 12$	5/10/15/20/25/30	30	10	5	5	5
$\varnothing 16$	5/10/15/20/25/30	30	10	5	5	5

Note: Products with Stroke other than standard Stroke are not available.

Compatibility table by variation

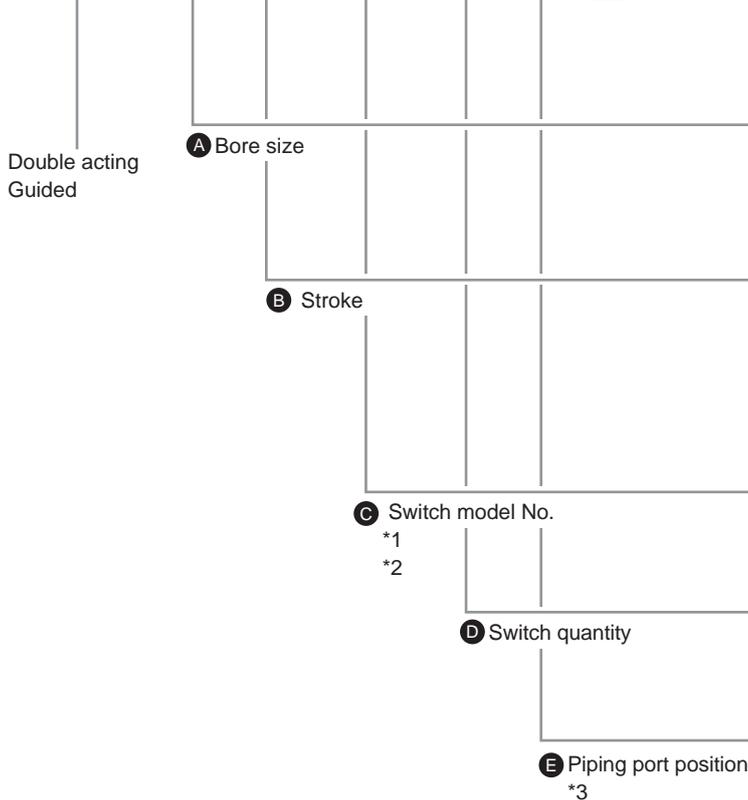
Applicable bore size		Double acting/ guided	Double acting/ guided/ fine speed
			F
MSDG ø6 to 16	P4	●	
	P40	●	

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

How to order

● With switch (built-in magnet for switch)

MSDG-L - 6 - 30 - SW81 - D - R P4 P40



Code	Description
A Bore size(mm)	
6	ø6
8	ø8
12	ø12
16	ø16
B Stroke(mm)	
5	5
10	10
15	15
20	20
25	25
30	30
C Switch model No.	
Refer to the compatibility table on Intro Pages 23 to 26 for switch model No.	
D Switch quantity	
R	1 on rod side
H	1 on head side
D	2
E Piping port position	
Blank	Front piping
R	Rear piping

⚠ Precautions for model No. selection

- *1: When using ø6, ø8 with switch, use a non-magnetic (stainless steel, etc.) mounting bolt.
- *2: When using a proximity switch with ø12, ø16, use a non-magnetic (stainless steel, etc.) through bolt.
- *3: For rear piping, body side installation is possible.

Related products

Model No.	Appearance	Port size (Rc or R)			Compatible tube O.D.			Page
		M3	M5	1/8	4(ø4)	6(ø6)	8(ø8)	
SC3W-M3- *-P4		●			●			530
SC3W-M5- *-P4			●		●	●		

Specify the compatible tube O.D. code for *.

P4
Series

Pneumatic cylinders
Hand/ Chuck
Related products
Cylinder Switch

Vacuum components
Pneumatic valves

Clean air components
Speed controller
Pneumatic auxiliary components
Fitting
Auxiliary valve
Silencer
Tube

Gas generator
Fluid control components

Motor specification
Motorless specifications
Electric actuator