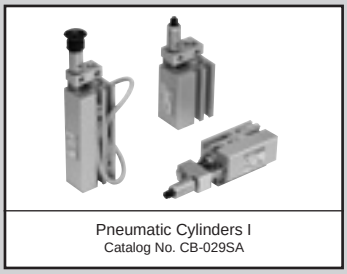


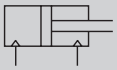
Pneumatic Cylinders I
Catalog No. CB-029SA

Compact cylinder with suction pad Double acting

MVC Series

●Bore size:ø6,ø10

JIS symbol



● Double acting

RoHS CAD

Specifications

Item	MVC	
Bore size mm	ø6	ø10
Actuation	Double acting	
Working fluid	Compressed air	
Max. working pressure MPa	0.7	
Min. working pressure MPa	0.15	0.1
Proof pressure MPa	1.05	
Vacuum port pressure	-101 kPa to 0.6 MPa *1	
Ambient temperature °C	0 to 60 (no freezing) *2	
Port size	M3	M5
Stroke tolerance mm	+1.0 0	
Working piston speed mm/s	50 to 500	
Cushion	Rubber cushion	
Non-rotating accuracy degrees	±0.5 (*3)	
Lubrication	Not available	
Applicable pad	Refer to "How to order" on the following page or the table below for details.	
Allowable absorbed energy J	0.0046	0.035

With buffer specifications

Specifications other than below are the same as at left.

Item	MVC-*-*-B
Buffer Stroke mm	4
BarBuffer spring load N	When set: 1.3 Operated: 1.62 (buffer Stroke of 4 mm operated)
Non-rotating accuracy (reference value)°	±2.6 (ø6), ±2.0 (ø10)(*3)

*1: Do not use the cylinder within buffer stroke of 4 mm or larger. This may cause malfunction.
*2: The value of non-rotating accuracy indicates the value of the pull end (pull). As the value of the push end (push) varies depending on the Stroke, contact CKD separately.
*3: Initial value at the pull end.

*1: Application of pressure from the vacuum port can be performed only at vacuum burst. In addition, use burst pressure equal to the cylinder working pressure or less for this process.
*2: When using MVC with proximity switch, use the cylinder at ambient temperature of 40°C or less. Otherwise, this could lead to switch detection malfunction.
*3: Initial value at the pull end.

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
ø6	5/10/15/20/25/30	30	10	5 (10)	5	5
ø10	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 indicated in ( ).

■ Theoretical lifting force

● Circular pad

(N)

Pad diameter (ø mm))	2	3.5	5	6	8	10
Suction area (cm^2) / Vacuum pressure	0.031	0.096	0.196	0.282	0.502	0.785
-93.3 kPa	0.284	0.873	1.765	2.550	4.511	7.061
−80.8 kPa	0.245	0.745	1.569	2.158	3.923	6.080
−66.7 kPa	0.206	0.618	1.275	1.863	3.236	5.099
−53.4 kPa	0.167	0.500	0.981	1.471	2.550	4.021
−40.0 kPa	0.118	0.373	0.785	1.079	1.961	3.040

Values in table are calculated values.

■ Pad material and characteristics

Item / Material	Hardness HS	Tensile strength N/cm^2	Tearing strength N/cm^2	Stretch %	Heat resistance temperature °C	Oil resistance	Sunlight resistance	Ozone resistance	Acid resistance	Anti-Alucid	Abrasion resistance	Electrical insulation property	Gas permeation resistance
Nitrile rubber (NBR)	50° to 90°	686 to 1961	313 to 490	150 to 620	−26 to 120	◎	x	x	△	○	◎	x	○
Silicone rubber (SI)	54° to 80°	441 to 784	117 to 411	100 to 300	−60 to 250	△	◎	◎	△	○	x	◎	x
Urethane rubber (U)	50° to 80°	686 to 4315	588 to 1961	310 to 750	−20 to 75	△	◎	◎	x	x	◎	○	○
Fluoro rubber (FKM)	58° to 90°	931 to 1765	166 to 470	100 to 350	−10 to 230	◎	◎	◎	◎	△	◎	◎	◎

This table shows the general characteristics of synthetic rubber available from CKD.
◎: Ideal for use ○: Suitable for use △: Suitable for use under some conditions x: Unsuitable for use

Compatibility table by variation

Applicable bore size		Double acting
		MVC
ø6, ø10	P4	●
	P40	●

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

How to order

● Without switch

MVC - 6 - 10 ——— P2A - B - P4 / P40

● With switch

MVC - 6 - 10 - SW81 - R - P2A - B - P4 / P40

Model No.
Ⓐ Bore size
Ⓑ Stroke
Ⓒ Switch model No.
Ⓓ Switch quantity
Ⓔ Pad type
Ⓕ Buffer

Code	Description
Ⓐ Bore size (mm)	
6	ø6
10	ø10
Ⓑ Stroke (mm)	
5, 10, 15, 20, 25, 30	
Ⓒ Switch model No.	
Refer to the compatibility table on Intro Pages 23 to 26 for switch model No.	
Ⓓ Switch quantity	
R	1 on rod side
H	1 on head side
D	2
Ⓔ Pad type	
Blank	Without pad
P2A	Material: Nitrile rubber
P3.5A	
P5A	
P6A	
P8A	
P10A	
P2AU	Material: Urethane rubber
P3.5AU	
P5AU	
P6AU	
P8AU	
P10AU	
P2AS	Material: Silicone rubber
P3.5AS	
P5AS	
P6AS	
P8AS	
P10AS	
P2AF	Material: Fluoro rubber
P3.5AF	
P5AF	
P6AF	
P8AF	
P10AF	
Ⓕ Buffer	
Blank	Without buffer
B	With buffer

* Consult with CKD as support is also available for pad types other than the above.

Related products

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

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