

Air Cylinder: Non-rotating Rod Type

Double Acting, Single Rod

Series CM2K

ø20, ø25, ø32, ø40

How to Order



Mounting style		Cylinder stroke (mm)		Bore size		Cushion		Made to Order	
B	Basic style	T	Head side trunnion style	20	20 mm	Nil	Rubber bumper	(Refer to page 172 for details.)	
L	Axial foot style	E	Clevis integrated style	25	25mm	A	Air cushion		
F	Rod side flange style	BZ	Boss-cut basic style	32	32 mm				
G	Head side flange style	FZ	Boss-cut rod side flange style	40	40 mm				
C	Single clevis style	UZ	Boss-cut rod side trunnion style						
D	Double clevis style								
U	Rod side trunnion style								

CM2K **L** **40** - **150** **A** -

With auto switch **CDM2K** **L** **40** - **150** **A** - **M9BW** -

With auto switch (Built-in magnet)

Rod boot

Nil	None
J	Nylon tarpaulin
K	Heat resistant tarpaulin

Number of auto switches

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

Auto switch

Nil	Without auto switch
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* For the applicable auto switch model, refer to the table below.

Built-in Magnet Cylinder Model

If a built-in magnet cylinder without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) CDM2KF32-100

Applicable Auto Switch/Refer to pages 1263 to 1371 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model	Lead wire length (m)					Pre-wired connector	Applicable load		
					DC	AC		0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)				
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24V	5V, 12V	—	M9N	●	●	●	○	—	○	IC circuit	Relay, PLC
		3-wire (PNP)				M9P		●	●	●	○	—	○			
		2-wire		12V		M9B		●	●	●	○	—	○			
				H7C		●		—	●	●	—	—				
	Connector			5V, 12V	G39A **	—	—	—	—	●	—	IC circuit				
	Grommet	2-wire		12V	K39A **	—	—	—	—	●	—	—				
		3-wire (NPN)		5V, 12V	M9NW	●	●	●	○	—	○	IC circuit				
		3-wire (PNP)		5V, 12V	M9PW	●	●	●	○	—	○					
				M9BW	●	●	●	○	—	○						
		Water resistant (2-color indication)		Grommet	2-wire	12V	H7BA	—	—	●	○		—	○	—	
4-wire (NPN)			5V, 12V		H7NF	●	—	●	○	—	○	IC circuit				
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5V	—	A96	●	—	●	—	—	—	IC circuit	Relay, PLC
				2-wire	24V	12V	100V	A93	●	—	●	—	—	—	—	
							100V or less	A90	●	—	●	—	—	—	IC circuit	
							100V, 200V	B54 **	●	—	●	●	—	—	—	
		200V or less					B64 **	●	—	●	—	—	—	—		
		—					C73C	●	—	●	●	●	—	—		
		24V or less					C80C	●	—	●	●	●	—	IC circuit		
		—					A33A **	—	—	—	—	●	—	—		
		100V, 200V					A34A **	—	—	—	—	●	—	—		
		Terminal conduit		Grommet	Yes										PLC	

* Lead wire length symbols: 0.5 m Nil (Example) M9NW
 1 m M (Example) M9NWM
 3 m L (Example) M9NWL
 5 m Z (Example) M9NWZ
 None N (Example) H7CN

* Solid state auto switches marked with "○" are produced upon receipt of order.
 * D-A9□V/M9□V/M9□WV and D-M9□A(V)L cannot be mounted.
 * Do not indicate suffix "N" for no lead wire on D-A3□A/A44A/G39A/K39A models.
 ** D-A3□A/A44A/G39A/K39A/B54/B64 cannot be mounted on bore sizes ø20 and ø25 cylinder with air cushion.

* Since there are other applicable auto switches than listed above, refer to page 218 for details.
 * For details about auto switches with pre-wired connector, refer to pages 1328 and 1329.
 * D-A9□/M9□/M9□W auto switches are shipped together (not assembled). (However, auto switch mounting brackets are assembled when being shipped.)

CJ1
CJP
CJ2
CM2
CG1
MB
MB1
CA2
CS1
CS2

D-□
-X□
Individual
-X□
Technical
data

Series CM2K

A cylinder which rod does not rotate because of the hexagonal rod shape.

Non-rotating accuracy

ø20, ø25—±0.7°

ø32, ø40—±0.5°

Can operate without lubrication.

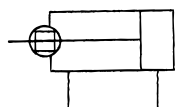
The same installation dimensions as the standard cylinder.

Auto switches can also be mounted.

It can be installed with auto switches to simplify the detection of the stroke position of the cylinder.

JIS Symbol

Double acting,
Single rod



Made to Order Specifications
(For details, refer to pages 1373 to 1498.)

Symbol	Specifications
—XA□	Change of rod end shape
—XB6	Heat resistant cylinder (150°C)
—XB12	External stainless steel cylinder
—XC3	Special port location
—XC6	Piston rod and rod end nut made of stainless steel
—XC8	Adjustable stroke cylinder/Adjustable extension type
—XC9	Adjustable stroke cylinder/Adjustable retraction type
—XC10	Dual stroke cylinder/Double rod type
—XC11	Dual stroke cylinder/Single rod type
—XC13	Auto switch mounting rail style
—XC20	Head cover axial port
—XC22	Fluororubber seals
—XC25	No fixed orifice of connecting port
—XC27	Double clevis pin and double knuckle pin made of stainless steel
—XC52	Mounting nut with set screw

Specifications

Bore size (mm)		20	25	32	40
Rod non-rotating accuracy		±0.7°		±0.5°	
Type		Pneumatic			
Action		Double acting, Single rod			
Fluid		Air			
Cushion		Rubber bumper			
Proof pressure		1.5 MPa			
Maximum operating pressure		1.0 MPa			
Minimum operating pressure		0.05 MPa			
Ambient and fluid temperature		Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)			
Lubrication		Not required (Non-lube)			
Stroke length tolerance		+1.4 0 mm			
Piston speed		50 to 500 mm/s			
Cusion		Rubber bumper, Air cushion			
Allowable kinetic energy	Rubber bumper	0.27 J	0.4 J	0.65 J	1.2 J
	Air cushion (Effective cushion length (mm))	0.54 J (11.0)	0.78 J (11.0)	1.27 J (11.0)	2.35 J (11.8)

Standard Stroke

Bore size (mm)	Standard stroke ^{Note)} (mm)
20	25, 50, 75, 100, 125, 150 200, 250, 300
25	
32	
40	



Note 1) Other intermediate strokes can be manufactured upon receipt of order.
Manufacture of intermediate strokes at 1 mm intervals is possible. (Spacers are not used.)

Note 2) The maximum limit is 1000 stroke, but the products that exceed the standard stroke might not be able to fulfill the specifications.

Rod Boot Material

Symbol	Rod boot material	Max. ambient temperature
J	Nylon tarpaulin	70°C
K	Heat resistant tarpaulin	110°C *

* Maximum ambient temperature for the rod boot itself.

Mounting Bracket/Part No.

Mounting bracket	Min. order	Bore size (mm)				Description (for min. order)
		20	25	32	40	
Axial foot *	2	CM-L020B	CM-L032B	CM-L040B		2 foot, 1 mounting nut
Flange	1	CM-F020B	CM-F032B	CM-F040B		1 flange
Single clevis**	1	CM-C020B	CM-C032B	CM-C040B		1 single clevis, 3 liners
Double clevis*** (with pins)	1	CM-D020B	CM-D032B	CM-D040B		1 double clevis, 3 liners, 1 clevis pins, 2 retaining rings
Trunnion (with nuts)	1	CM-T020B	CM-T032B	CM-T040B		1 trunnion, 1 trunnion nut

* Order 2 foot brackets for each cylinder unit.

** 3 Liners are attached with a clevis bracket for adjusting the mounting angle.

*** Clevis pins and retaining rings (cotter pins for ø40) are attached.

Boss-cut style

Boss for the head side cover bracket is eliminated and the total length of cylinder is shortened.



Comparison of the Full Length Dimension (Versus standard type) (mm)

ø20	ø25	ø32	ø40
▲13	▲13	▲13	▲16

Mounting style

- Boss-cut basic style (BZ)
- Boss-cut flange style (FZ)
- Boss-cut trunnion style (UZ)



Refer to pages 214 to 218 for cylinders with auto switches.

- Minimum stroke for auto switch mounting
- Proper auto switch mounting position (detection at stroke end) and mounting height
- Operating range
- Switch mounting bracket: Part no.