

Cylinder with Lock Double Acting, Single Rod

Series CNA2

ø40, ø50, ø63, ø80, ø100

How to Order

CNA2 L 50 - 100 JN - D -

With auto switch **CDNA2 L 50 - 100 JN - D - M9BW**

With auto switch (Built-in magnet)
Mounting

B	Basic
L	Axial foot
F	Rod flange
G	Head flange
C	Single clevis
D	Double clevis
T	Center trunnion

Cylinder tube material

Nil	Aluminum tube
F*	Steel tube

* Auto switches are not available with steel tube.

Bore size

40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Thread type

Nil	Rc
TN	NPT
TF	G

Cylinder stroke (mm)

Refer to the next page for standard stroke.

Locking direction

D Both directions

Auto switch

Nil Without auto switch

* For applicable auto switches, refer to the below table.

With bellows/cushion

Bellows	J	Nylon tarpaulin
	K	Heat resistant tarpaulin
Cushion	Nil	With double-side cushion
	N	Without cushion

Made to Order
Refer to the next page for details.

Number of auto switches

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

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) CDNA2L40-100-D

Applicable Auto Switches

Refer to Best Pneumatics No. 3 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	Tie-rod mounting	Band mounting	0.5 (Nil)	1 (M)	3 (L)	5 (Z)						
Solid state auto switch	—	Grommet	—	3-wire (NPN)	24 V	5 V, 12 V	—	M9N	●	●	○	○	—	IC circuit				
				3-wire (PNP)				M9P	●	●	○	○						
				2-wire	—	12 V	100 V, 200 V	M9B	●	●	○	○	—	—				
				—				K59	●	●	○	○						
				Diagnostic indication (2-color indication)	Grommet	Yes	3-wire (NPN)	24 V	12 V	5 V, 12 V	—	J51	●	—	●	○	—	—
							2-wire					G39C	—	—	—	—		
	3-wire (PNP)	24 V	12 V				5 V, 12 V	—	K39C	—	—	—	—	—	IC circuit			
	2-wire								M9NW	●	●	○	○					
	3-wire (NPN)	24 V	12 V				5 V, 12 V	—	M9PW	●	●	○	○	—	—			
	3-wire (PNP)								G59W	●	—	●	○			○		
	Water resistant (2-color indication)	Grommet	—	2-wire	24 V	12 V	5 V, 12 V	—	M9BW	●	●	○	○	—	—			
				—					K59W	●	●	○	○					
3-wire (NPN)				24 V	12 V	5 V, 12 V	—	M9NA	—	○	○	○	○	—	—			
3-wire (PNP)								M9PA	—	○	○	○	○					
2-wire				24 V	12 V	5 V, 12 V	—	M9BA	—	○	○	○	○	—	—			
—								G5BA	—	—	●	○	○					
With diagnostic output (2-color indication)	Grommet	—	4-wire (NPN)	24 V	12 V	5 V, 12 V	—	F59F	●	—	●	○	—	IC circuit				
Magnetic field resistant (2-color indication)			2-wire (Non-polar)					P3DW	—	●	—	●			○	○		
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	24 V	12 V	100 V	A96	—	●	—	●	—	—	—			
				—				A93	—	●	—	●	—			—		
				No	2-wire	24 V	12 V	100 V or less	100 V, 200 V	200 V or less	A90	—	●	—	●	—	—	IC circuit
											A54	B54	●	—	●	●		
				Yes	Terminal conduit	2-wire	24 V	12 V	100 V, 200 V	100 V, 200 V	A64	B64	●	—	●	—	—	—
											A33C	A33	—	—	—	—		
				Yes	DIN terminal	2-wire	24 V	12 V	100 V, 200 V	100 V, 200 V	A34C	A34	—	—	—	—	—	—
											A44C	A44	—	—	—	—		
				Diagnostic indication (2-color indication)	Grommet	—	—	—	—	—	A59W	B59W	●	—	●	—	—	—

* Lead wire length symbols: 0.5 m Nil (Example) M9NW
1 m M (Example) M9NWM
3 m L (Example) M9NWL
5 m Z (Example) M9NWX

* Solid state auto switches marked with "○" are produced upon receipt of order.

* Since there are other applicable auto switches than listed, refer to page 28 for details.

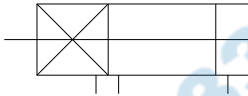
* For details about auto switches with pre-wired connector, refer to Best Pneumatics No. 3. Refer to CAT.ES20-201 catalog for the D-P3DW□.

* The D-A9□/M9□□□/P3DW□ auto switches are shipped together, (but not assembled). (Only auto switch mounting brackets are assembled at the time of shipment for the D-A9□/M9□□□.)

Cylinder with Lock Double Acting, Single Rod **Series CNA2**



Symbol
Double acting,
Single rod



Made to Order
(For details, refer to Best Pneumatics No. 3.)

Symbol	Specifications
—XA□	Change of rod end shape
—XC3	Special port location
—XC4	With heavy duty scraper
—XC11	Dual stroke cylinder/Single rod
—XC14	Change of trunnion bracket mounting position
—XC15	Change of tie-rod length
—XC35	With coil scraper

Refer to pages 23 to 28 for cylinders with auto switches.

- Minimum stroke for auto switch mounting
- Auto switch proper mounting position (detection at stroke end) and mounting height
- Operating range
- Auto switch mounting bracket/Part no.

Minimum mountable stroke for a cylinder with auto switch(es)

⚠ Caution

- Each switch and mounting style of cylinder has a different minimum mountable stroke. Be especially careful of the center trunnion style.
(Refer to pages 25 and 26 for details.)

Specifications

Bore size (mm)	40	50	63	80	100
Lubrication	Not required (Non-lube)				
Action	Double acting				
Proof pressure	218 psi				
Max. operating pressure	145 psi				
Min. operating pressure	12 psi				
Piston speed	50 to 1000 mm/s *				
Ambient and fluid temperature	Without auto switch: 15 to 160°F (No freezing) With auto switch: 15 to 140°F (No freezing)				
Cushion	Air cushion				
Stroke length tolerance	Up to 250: $^{+1.0}_0$, 251 to 1000: $^{+1.4}_0$, 1001 to 1500: $^{+1.8}_0$				
Mounting	Basic, Axial foot, Rod flange, Head flange, Single clevis, Double clevis, Center trunnion				

* Load limits exist depending on the piston speed when locked, mounting direction and operating pressure.

Lock Specifications

Bore size (mm)	40	50	63	80	100
Locking action	Spring locking (Exhaust locking)				
Unlocking pressure	36 psi or more				
Lock starting pressure	29 psi or less				
Max. operating pressure	145 psi				
Locking direction	Both directions				
Holding force (N)	882	1370	2160	3430	5390

* Be sure to select cylinders in accordance with the procedures on page 1.

Standard Stroke

For cases with auto switches, refer to the table of minimum stroke for auto switch mounting on pages 25 and 26.

Bore size (mm)	Standard stroke (mm) ^{Note 1)}	Long stroke (mm) ^{Note 2)}
40	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500	800
50, 63	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600	1200
80, 100	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600, 700	ø80: 1400 ø100: 1500

Note 1) Intermediate strokes other than the above are produced upon receipt of order.

Spacers are not used for intermediate strokes.

Note 2) Long stroke applies to the axial foot and the rod flange.

When exceeding the stroke range for each bracket, determine the maximum stroke referring to the Selection Table (front matter 29 in Best Pneumatics No. 2).

Stopping Accuracy

Lock type	Piston speed (mm/s)			
	100	300	500	1000
Spring locking	±0.3	±0.6	±1.0	±2.0

Condition: Lateral, Supply pressure P = 73 psi

Load weight Upper limit of allowed value

Solenoid valve for locking mounted on the unlocking port

Maximum value of stopping position dispersion from 100 measurements