

Series 10-/11-21-/22-CG1-Z

ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100
Air Cylinder: Double acting, Single rod

RoHS

How to Order

Clean series

10	Relief type
11	Vacuum suction type

Built-in magnet

Nil	No
D	With auto switch (Built-in magnet)

Type

N	Rubber bumper, ø20 to ø100
A	Air cushion, ø40 to ø63

Bore size (mm)

10 - C D G 1 B N 40 - 150 Z - M9BW

21 - C D G 1 B N 40 - 150 Z - M9BW

Mounting

B*	Basic
L	Axial foot
F	Rod flange
G	Head flange

Rod end thread

Nil	Male rod end
F	Female rod end

Auto switch


Solid state	M9B, M9BW, K59, K59W
Reed switch	A93, B54

Number of auto switches

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

* No trunnion mounting female thread is provided for clean series.

* The minimum stroke for auto switch mounting, operating range and auto switch mounting brackets/part no. are the same as standard products.



Model

Model	Bore size (mm)	Port size	Lubrication	Action	Standard stroke (mm) ^{Note 2)}	Long stroke (mm) ^{Note 1) Note 2)}	Auto switch mounting		Cushion							
							Rubber	Air	Rubber	Air						
Relief type	10-/21-CG1 □ 20	20	Non-lube	Double acting, Single rod	25, 50, 75, 100, 125, 150, 200	Up to 1500	○	○	(ø40 to ø63)							
	10-/21-CG1 □ 25	25														
	10-/21-CG1 □ 32	32														
	10-/21-CG1 □ 40	40														
	10-/21-CG1 □ 50	50														
	10-/21-CG1 □ 63	63														
Vacuum suction type	10-/21-CG1 □ 80	80			1/8						1/4	150, 200, 250, 300				
	10-/21-CG1 □ 100	100														
	11-/22-CG1 □ 20	20														
	11-/22-CG1 □ 25	25														
	11-/22-CG1 □ 32	32														
	11-/22-CG1 □ 40	40														
Vacuum suction type	11-/22-CG1 □ 50	50	1/8	1/4	150, 200, 250, 300											
	11-/22-CG1 □ 63	63														
	11-/22-CG1 □ 80	80														
	11-/22-CG1 □ 100	100														
	11-/22-CG1 □ 100	100														
	11-/22-CG1 □ 100	100														

Note 1) When exceeding the standard strokes above, the particle generation class may not be satisfied.
Note 2) Intermediate strokes and long strokes not listed above are produced upon receipt of order.

Specifications

Item	Bore size (mm)									
	20	25	32	40	50	63	80	100		
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°C to 70°C With auto switch: -10°C to 60°C (No freezing)									
Piston speed	10-/11-: 30 to 400 mm/s, 21-/22-: 50 to 400 mm/s									
Stroke length tolerance	Up to 1000 ^{+1.4} mm, Up to 1500 ^{+1.8} mm									
Mounting	Basic/Axial foot Rod flange/Head flange									
Grease	10-/11-: Fluorine grease 21-/22-: Lithium soap based grease									
Cleanliness class (ISO class)	10-: Class 4, 21-: Class 5 11-/22-: Class 3									
Allowable kinetic energy (J)	Rubber bumper	Male rod end	0.28	0.41	0.66	1.20	2.00	3.40	5.90	9.90
		Female rod end	0.11	0.18	0.29	0.52	0.91	1.54	2.71	4.54
	Air cushion	Male rod end	—	—	—	1.80	3.40	4.90	—	—
		Female rod end	—	—	—	0.52	0.91	1.54	—	—

Note) Operate the cylinder within the allowable kinetic energy.

Suction Flow Rate of Vacuum Suction Type (Reference values)

Bore size	Suction flow rate L/min (ANR)
20/25/32/40	10
50/63/80/100	20