

Series

11-22-MHR3

3 Finger Rotary Actuated Air Gripper
Size: 10, 15

How to Order

Clean series

11 Vacuum suction type

11 — M

D

H R 3

10

R

M9B

S

Copper, fluorine and silicone-free + Low particle generation

22 Vacuum suction type

22 — M

D

H R 3

10

R

M9B

S

Number of auto switches

Nil	2 pcs.
S	1 pc.

Auto switch

Nil	Without auto switch (Built-in magnet)
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Built-in magnet

Nil	No
D	With magnet (For auto switch)

Number of fingers

3	3 fingers
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Nominal size

10
15

Connecting port

R: Body side	E: Axial side
Port	Port

* Only R type is available for "Without auto switch".

Model

Model		Nominal size	Port size	Lubrication	Action	Gripping force N (Effective value at 0.5 MPa) Note 1)		Open/Close stroke (Diameter)			Weight Note 2)
						External	Internal	Finger closing width (mm)	Finger opening width (mm)	Stroke (mm)	
Vacuum suction type	11-12 MHR3-10	10	M3 x 0.5	Non-lube	Double acting	7	6.5	16	22	6	125 (130)
	11-22 MDHR3-10										
	11-22 MHR3-15	15				13	12	19	27	8	230 (235)
	11-22 MDHR3-15										

Note 1) Refer to the WEB catalog for details of gripping force at each gripping point.
Value of effective gripping force is measured at the middle of open/close stroke.
Note 2) Values in () show MDHR weight, but it does not include auto switch weight.

Specifications

Nominal size		10	15
Item			
Operating pressure		0.2 to 0.6 MPa	0.15 to 0.6 MPa
Ambient and fluid temperature		0 to 60°C	
Repeatability		±0.01 mm	
Maximum operating frequency		180 c.p.m.	
Grease		11-: Fluorine grease 22-: Lithium soap based grease	
Cleanliness class (ISO class)		11-/22-: Class 3	

Suction Flow Rate of Vacuum Suction Type (Reference values)

Size	Suction flow rate L/min (ANR)
10/15	1

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/Pressure Sensors

Auto Switch Specifications (Refer to the **WEB catalog** for further information on auto switches.)

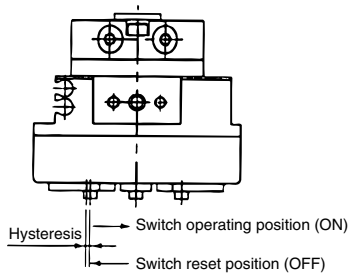
Type	Auto switch model	Load voltage	Load current range	Indicator light	Applicable load
Solid state	2-wire	D-M9B(V)	24 VDC (10 to 28 VDC)	5 to 30 mA	24 VDC relay, PLC
auto switch	3-wire	D-M9N(V)	28 VDC or less	50 mA or less	

Refer to page 946 for the applicable auto switch list.

PLC: Programmable Logic Controller

Auto Switch Hysteresis

¹¹⁻₂₂₋**MDHR3**



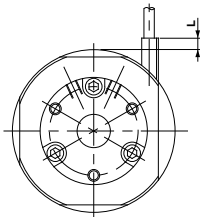
Please refer to the table as a guide when setting auto switch positions.

Model	Hysteresis (Max. value) (mm)
¹¹⁻ ₂₂₋ MDHR3-10	0.3
¹¹⁻ ₂₂₋ MDHR3-15	0.5

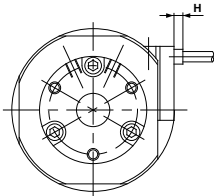
Protrusion of Auto Switch from Edge of Body

The maximum protrusion of auto switch (when fingers are fully open) from the edge of the body is shown in the table below. Use the table as a guideline for mounting.

¹¹⁻₂₂₋**MDHR3-10**



When auto switch D-M9□ is used

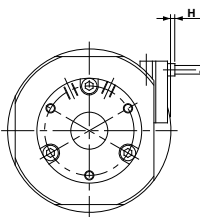


When auto switch D-M9□V is used

Max. protrusion of auto switch from edge of body: L, H (mm)

Auto switch model	D-M9□	D-M9□V
L	—	—
H	—	2.3

¹¹⁻₂₂₋**MDHR3-15**



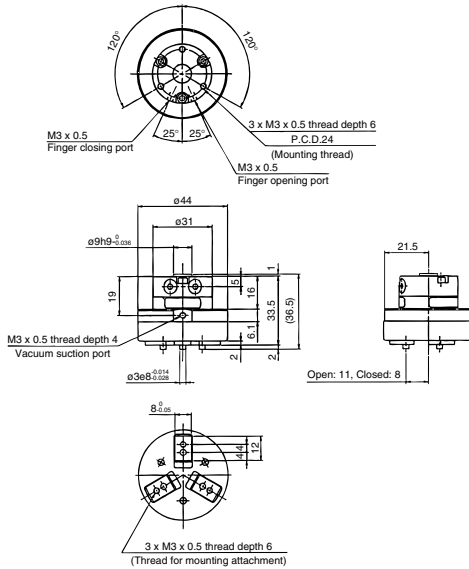
When auto switch D-M9□V is used

Max. protrusion of auto switch from edge of body: H (mm)

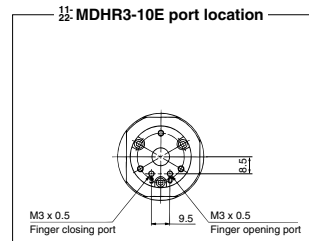
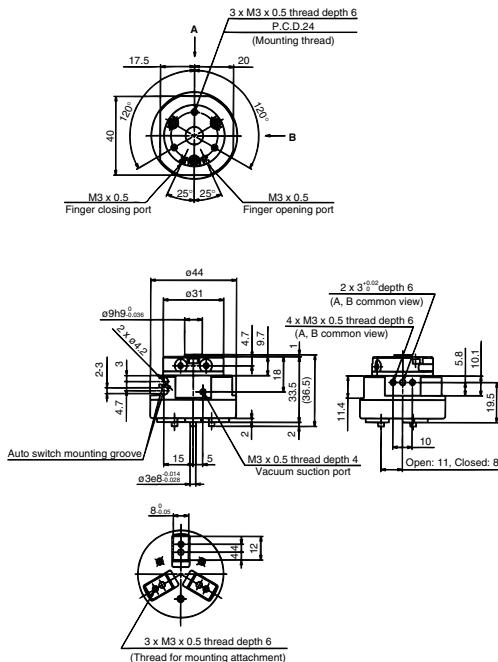
Auto switch model	D-M9□V
H	1.3

The auto switch will not protrude in the case of D-M9□.

Without Auto Switch: 11-22-MHR3-10R



With Auto Switch: 11-22-MDHR3-10R



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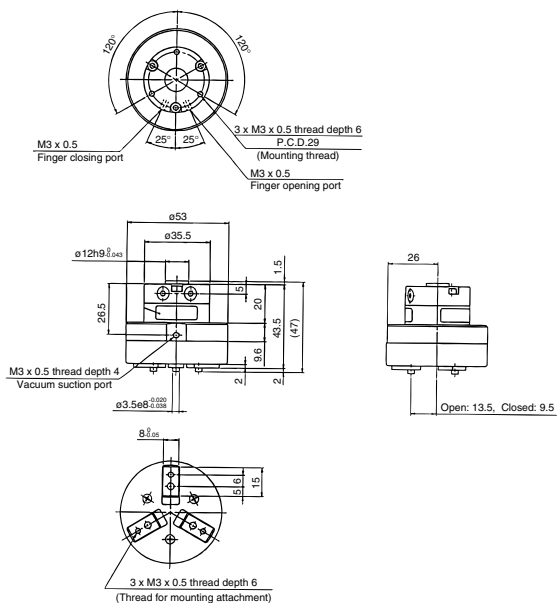
Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/Pressure Sensors

Without Auto Switch: 11-22-MHR3-15R



With Auto Switch: 11-22-MDHR3-15R

