


# Series 11-22-MHR3

3 finger rotary actuated air gripper  
Size: 10, 15

## How to Order



**Clean series**

11	Vacuum suction type
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**11 - M D H R 3 - 10 R - M9B S**

**22 - M D H R 3 - 10 R - M9B S**

**Copper, fluorine and silicon-free + Low particle generation**

22	Vacuum suction type
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**Number of fingers**

3	3 fingers
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**Nominal size**

10	
15	

**Auto switch**

M9B  
M9N

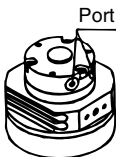
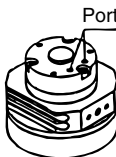
**Number of auto switches**

Nil	2 pcs.
S	1 pc.

**Built-in magnet**

Nil	No
D	With magnet (For auto switch)

**Connecting port**

R: Body side	E: Axial side
	

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

## Model

Vacuum suction type	Model	Nominal size	Port size	Lubrication	Action	Gripping force N (Effective value at 0.5 MPa) *		Opening / Closing stroke (Diameter)		
						External gripping force	Internal gripping force	Finger closing width (mm)	Finger opening width (mm)	Stroke (mm)
11-22	MHR3-10	10	M3 x 0.5	Non-lube	Double acting	7	6.5	16	22	6
	MDHR3-10									
11-22	MHR3-15	15	M3 x 0.5	Non-lube	Double acting	13	12	19	27	8
	MDHR3-15									

\* Refer to Best Pneumatics catalog for details of gripping force at each gripping point.  
Value of effective gripping force is measured at the middle of opening / closing stroke.

## Specifications

Item	Nominal size	
	10	15
Operating pressure	0.2 to 0.6MPa	0.15 to 0.6MPa
Ambient and fluid temperature	0 to 60°C	
Repeatability	±0.01mm	
Maximum operating frequency	180 c.p.m.	
Grease	11-: Fluorine grease 22-: Lithium soap based grease	
Particle generation grade (Refer to front matter pages 13 to 22 for details.)	11-/22-: Grade 1	

## Suction flow rate of vacuum suction type (Reference values)

Size	Suction flow rate l/min (ANR)
10/15	10

**Auto switch specifications (Refer to Best Pneumatics catalog for further information on auto switches.)**

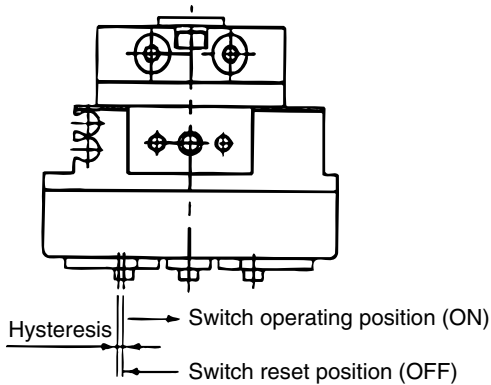
Type	Auto switch model	Load voltage	Load current range	Indicator light	Applicable load
Solid state switch	2-wire <b>D-M9B(V)</b>	24 VDC (10 to 28 VDC)	5 to 30 mA	Yes	24 VDC relay, PLC
	3-wire <b>D-M9N(V)</b>	28 VDC or less	50 mA or less	Yes	

Refer to page 235 for a list of applicable auto switches.

PLC: Programmable Logic Controller

**Auto switch hysteresis**

11-22-**MDHR3**



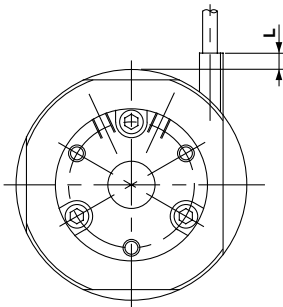
**Please refer to the table as a guide when setting auto switch positions.**

Model	Hysteresis (Max. value) (mm)
11-22- <b>MDHR3-10</b>	0.3
11-22- <b>MDHR3-15</b>	0.5

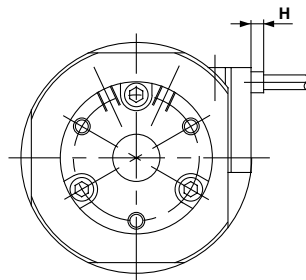
**Protrusion of auto switch from edge of body**

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

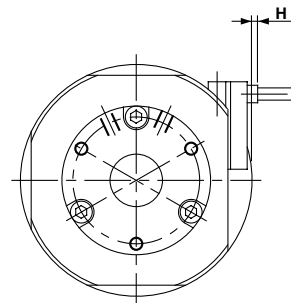


When auto switch D-M9□V is used

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

Auto switch model	D-M9□	D-M9□V
<b>L</b>	—	—
<b>H</b>	—	2.3

11-22-**MDHR3-15**



When auto switch D-M9□V is used

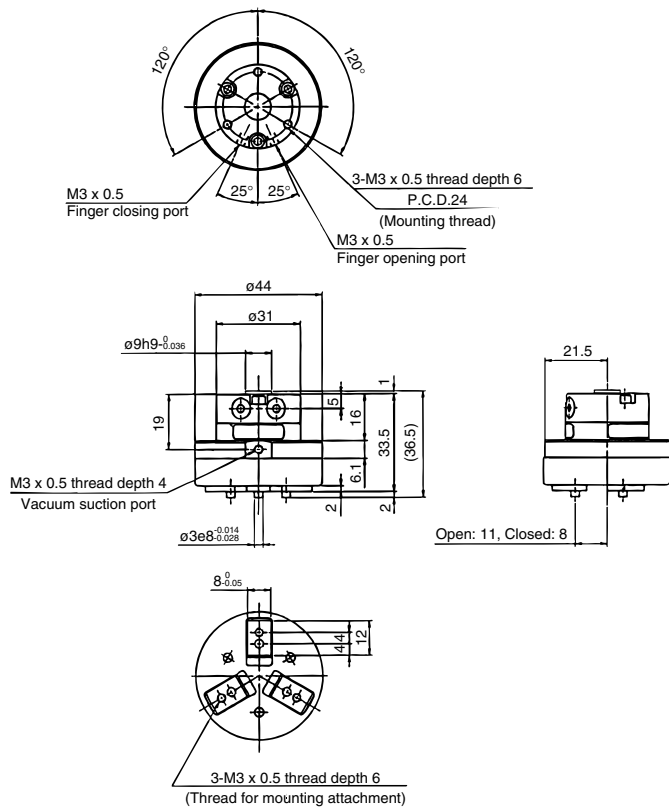
**Max. protrusion of auto switch from edge of body: H (mm)**

Auto switch model	D-M9□V
<b>H</b>	1.3

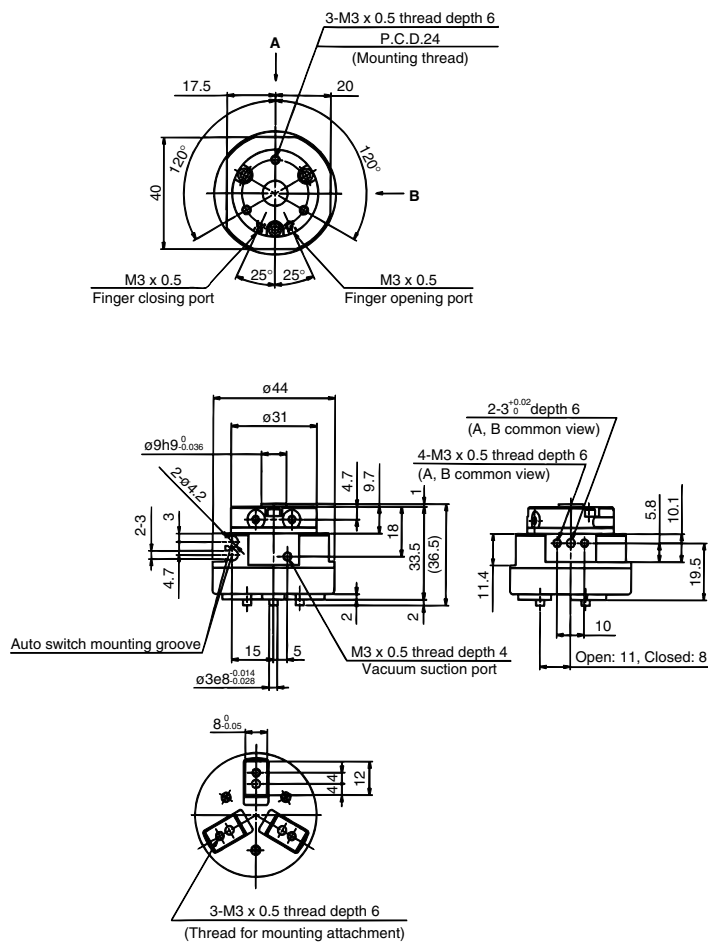
The auto switch will not protrude in the case of D-M9□.

Rotary actuated air gripper **11-22-MHR3**

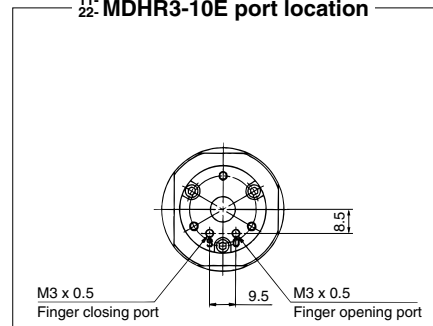
Without auto switch: **11-22-MHR3-10R**



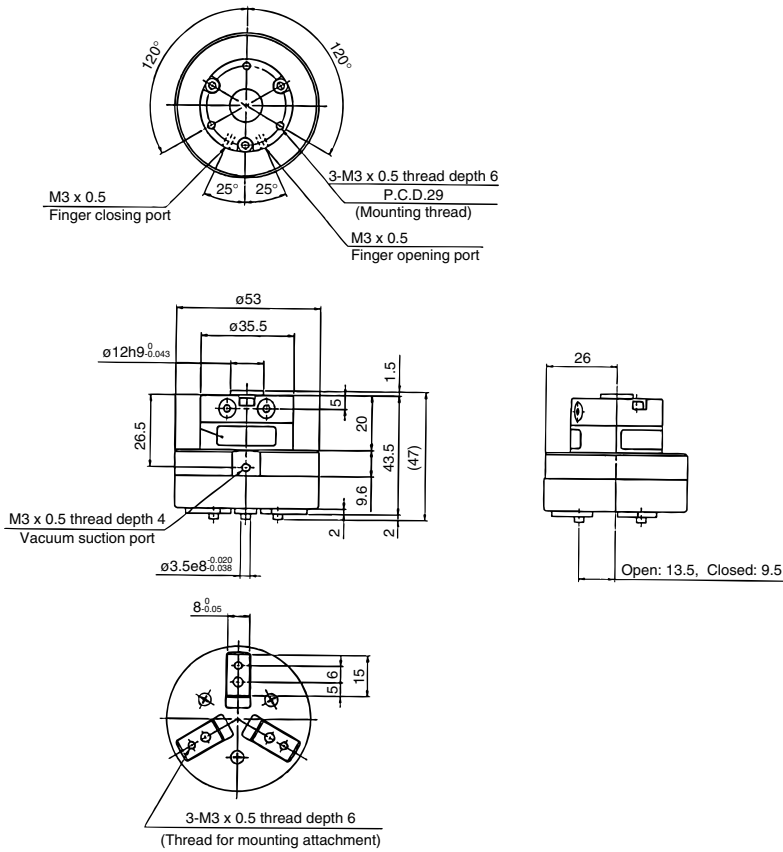
With auto switch: **11-22-MDHR3-10R**



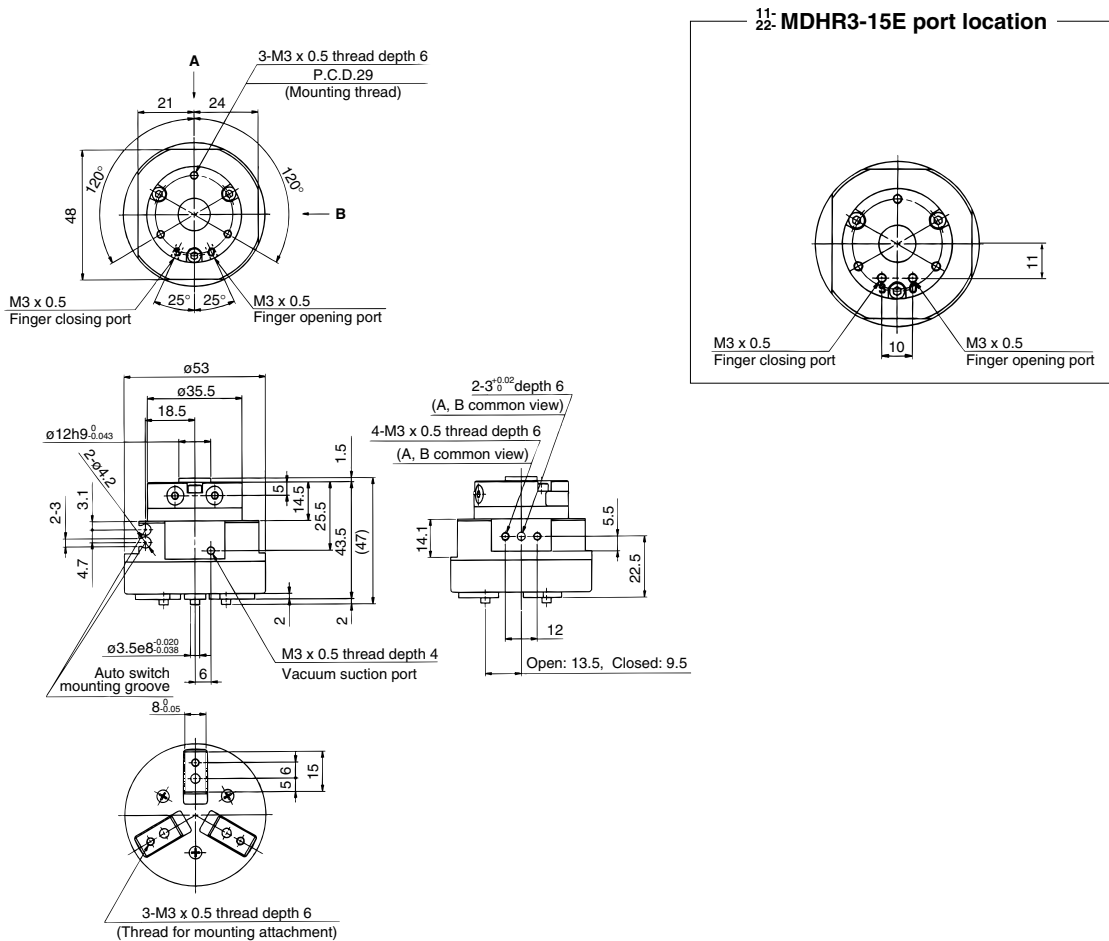
**11-22-MDHR3-10E port location**



Without auto switch: 11-22-**MHR3-15R**



With auto switch: 11-22-**MDHR3-15R**



Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter