

# Angular Style Air Gripper

## Series MHC2



Standard

- A large amount of gripping force is provided through the use of a double piston mechanism, while maintaining a compact design
- Built-in variable throttle
- A solid state auto switch with an indicator light can be mounted

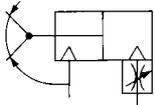


MHC2-16S

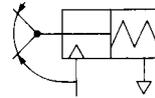
MHC2-10D

### Symbol

#### Double acting



#### Single acting



### ⚠ Caution

Be sure to read before handling. Refer to p.0-20 and 0-21 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-3 to 2.0-4 for precautions on every series.

## Specifications

Fluid		Air	
Operating pressure	Double acting	0.1 to 0.6MPa	
	Single acting	0.25 to 0.6MPa	
Ambient and fluid temperature		-10 to 60°C	
Repeatability		±0.01mm	
Max. operating frequency		180c.p.m	
Lubrication		Not required	
Action		Double acting, Single acting	
Auto switch (Option) <sup>Note)</sup>		Solid state switch (3 wire, 2 wire)	



Note) Refer to p.2.11-1 for further specifications of auto switch.

## Model

Action	Model	Bore size mm	Holding moment (effective value) <sup>(1)</sup>	Opening/closing angle (both sides)	Weight <sup>(2)</sup> g
Double acting	MHC2-10D	10	0.10	30° to -10°	39
	MHC2-16D	16	0.39		91
	MHC2-20D	20	0.70		180
	MHC2-25D	25	1.36		311
Single acting	MHC2-10S	10	0.070	30° to -10°	39
	MHC2-16S	16	0.31		92
	MHC2-20S	20	0.54		183
	MHC2-25S	25	1.08		316



Note1) At pressure 0.5MPa.

Refer to "Effective Holding Force" data on p.2.6-2 for holding point of each holding point.

Note2) Weight except auto switch.

## How to Order

MHC2-20 D-Y59A S

Angular style air gripper

Bore size	
10	10mm
16	16mm
20	20mm
25	25mm

#### Action

D	Double acting
S	Single acting

Number of auto switches

-	2
S	1

#### Auto switch

-	Without auto switch (Built-in)
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#### •Applicable auto switch

Type	Special function	Electrical entry	Wiring (Output)	Load voltage		Auto switch symbol		Lead wire length (m) <sup>*</sup>		Applicable load		
				DC	AC	Perpendicular	In-line	0.5 (-)	3 (L)	IC circuit	Relay, PLC	
Solid state switch	-	Grommet	3 wire (NPN) 2 wire	24V	5V, 12V	-	Y69A	Y59A	●	●	-	-
					12V		Y69B	Y59B	●	●		

\* Lead wire length: 0.5m..... (Example) Y59B

3m.....L (Example) Y59BL

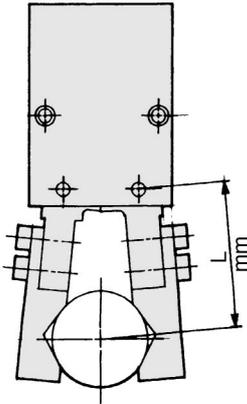


\* Refer to p.2.11-1 for auto switch specifications.

# Angular Style Standard Series **MHC2**

## Holding Point

● Work holding point should be within the range indicated in the graph.

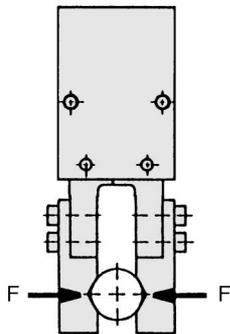


## Guidelines for the selection of the gripper with respect to component weight

- Selection of the correct model depends upon the component weight, the coefficient of friction between the finger attachment and the component, and their respective configurations. A model should be selected with a holding force of 10 to 20 times that of the component weight.
- If high acceleration, deceleration or impact forces are encountered during component transfer a further margin of safety should be considered.

## ● Effective holding force

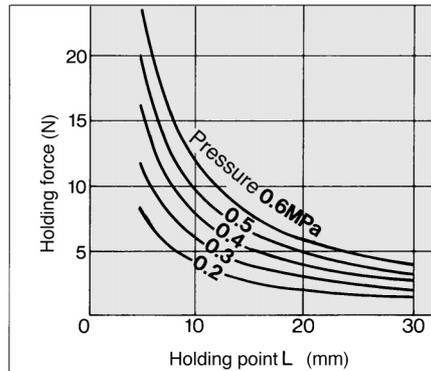
The holding force shown in the tables represents the holding force of one finger when all fingers and attachment are in contact with the work. F = One finger thrust.



## Effective Holding Force

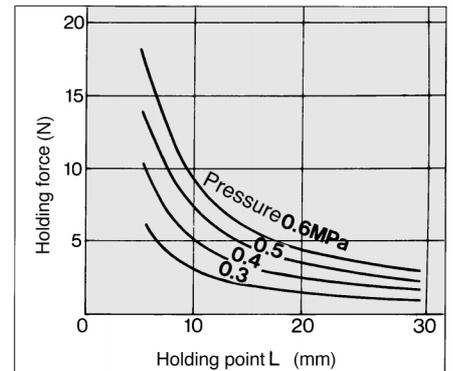
### Double acting

#### MHC2-10D

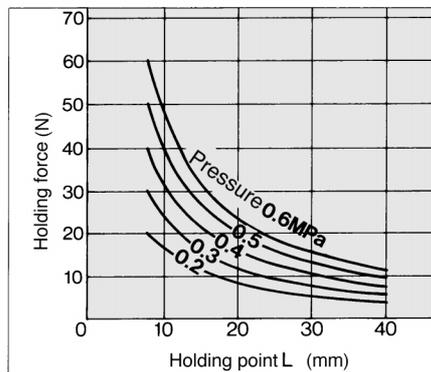


### Single acting

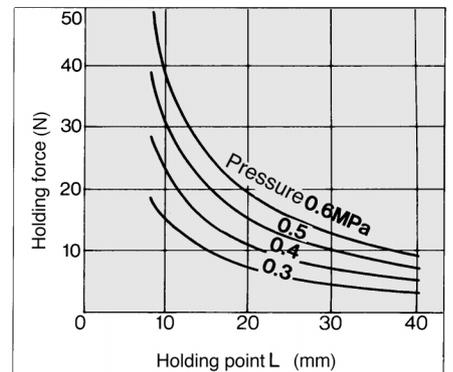
#### MHC2-10S



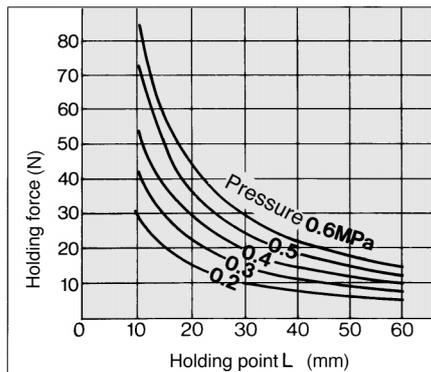
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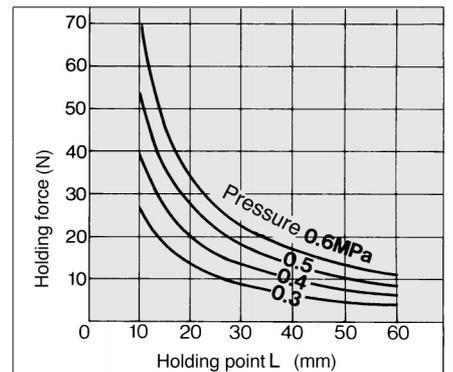
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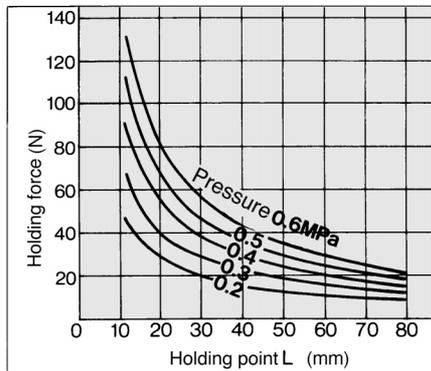
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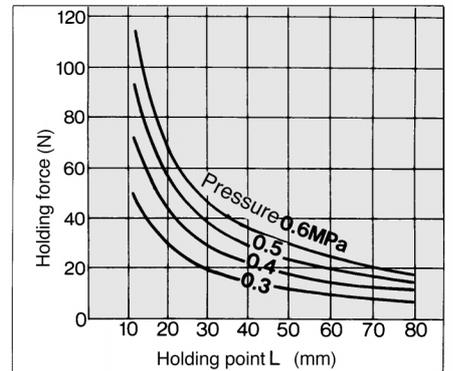
#### MHC2-20S



#### MHC2-25D



#### MHC2-25S



MHZ2

MHZJ2

MHQ

MHL2

MHR

MHK

MHS

**MHC2**

MHT2

MHY2

MHW2

MRHQ

Auto switch

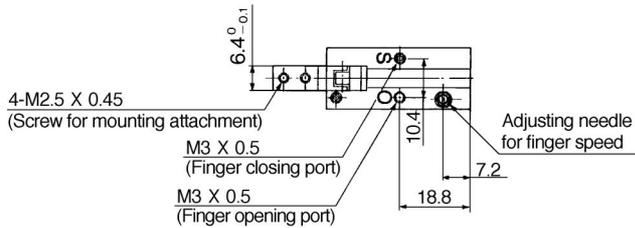
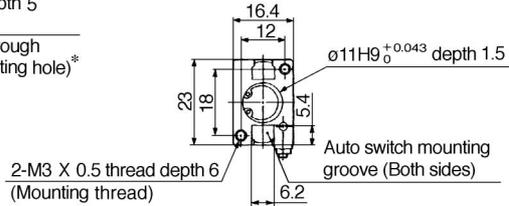
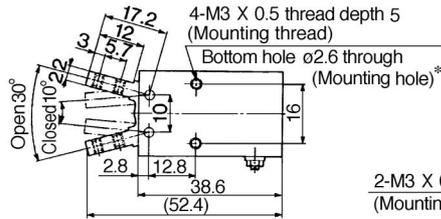
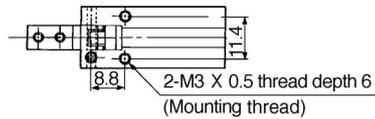
# Series MHC2



Double Acting  $\varnothing 10, \varnothing 16, \varnothing 20, \varnothing 25$



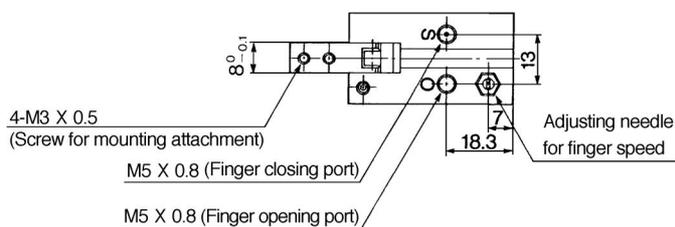
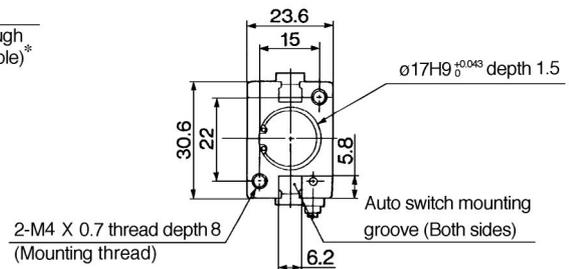
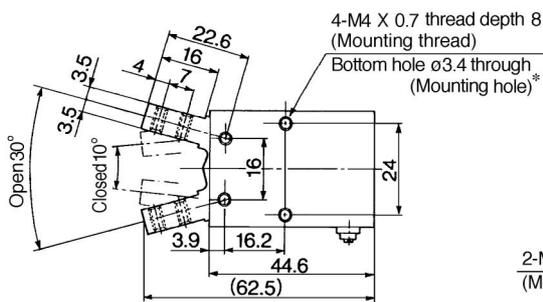
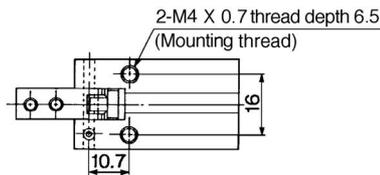
## MHC2-10□



Note) When signal acting type is used, one side port is bleed port and adjusting needle for finger speed is not attached.

\* When auto switch is used, through hole mounting type is not available.

## MHC2-16□



Note) When signal acting type is used, one side port is bleed port and adjusting needle for finger speed is not attached.

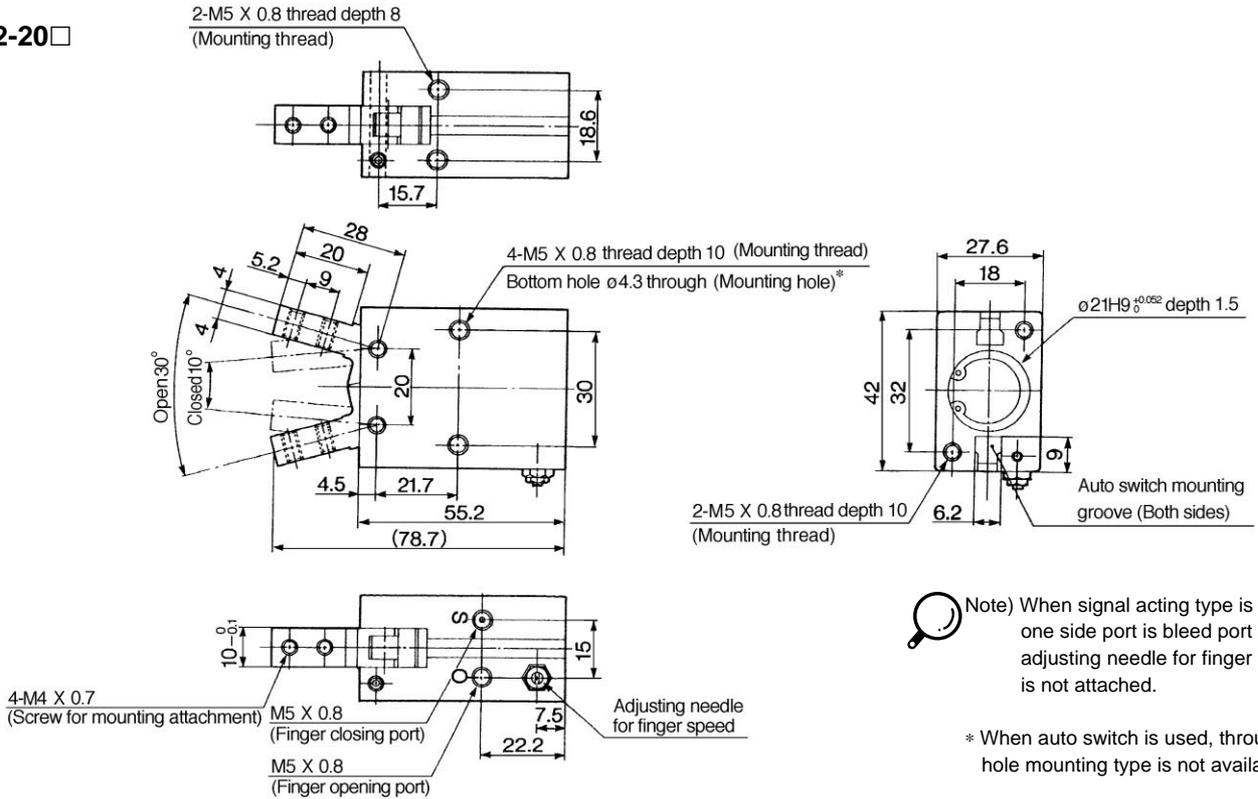
\* When auto switch is used, through hole mounting type is not available.

	MHC2-10□	.....	SMH03, #1 (#1+#9)
	MHC2-16□	.....	SMH03, #2 (#2+#9)

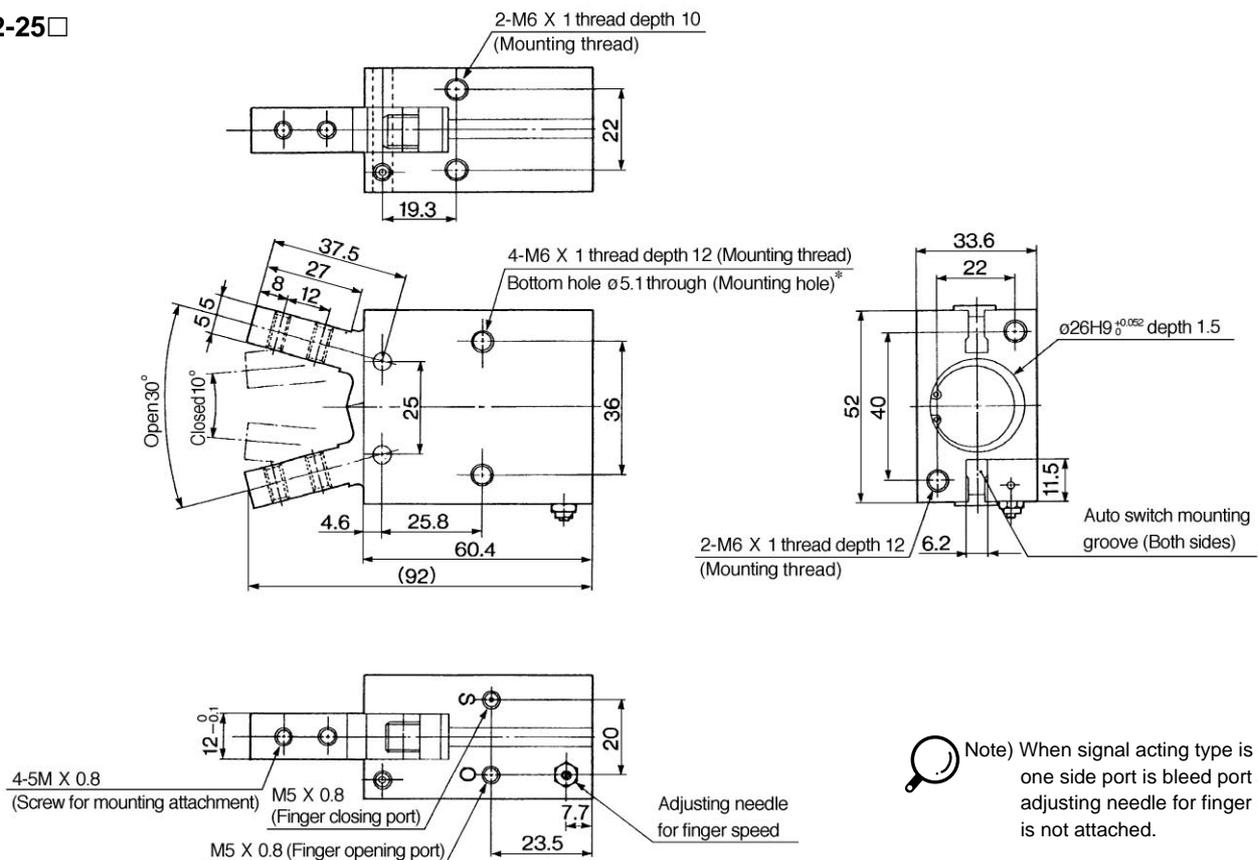
# Angular Style Standard Series **MHC2**



## MHC2-20□



## MHC2-25□



MHC2-20□ ..... SMH03, #3 (#3+#9)  
MHC2-25□ ..... SMH03, #4 (#4+#9)

MHZ2

MHZJ2

MHQ

MHL2

MHR

MHK

MHS

MHC2

MHT2

MHY2

MHW2

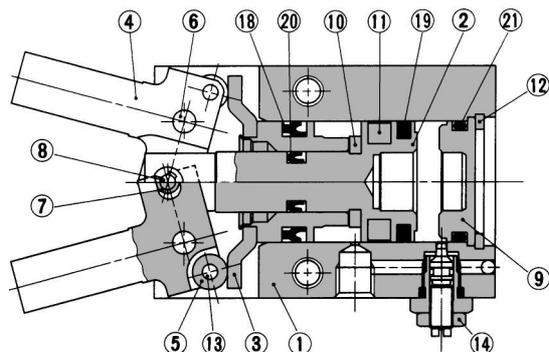
MRHQ

Auto switch

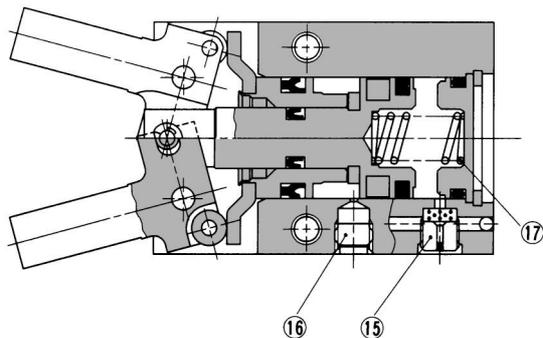
# Series MHC2

## Construction

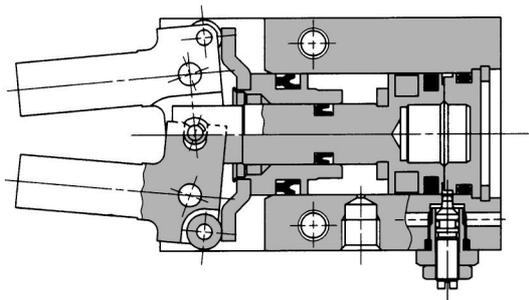
### Double acting/Fingers open



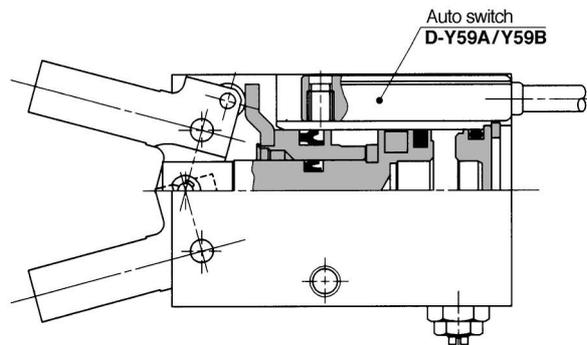
### Single acting



### Double acting/Fingers closed



### With auto switch



### Component Parts

No.	Description	Material	Note
①	Body	Aluminium alloy	Hard anodized
②	Piston A	Aluminium alloy	Hard anodized
③	Piston B Ass'y		
④	Finger	Carbon steel	Heat treated
⑤	Side roller	Carbon steel	Nitriding
⑥	Level shaft	Stainless steel	Nitriding
⑦	Center roller	Carbon steel	Nitriding
⑧	Center pin	Carbon steel	Nitriding
⑨	Cap	Resin	

### Component Parts

No.	Description	Material	Note
⑩	Damper	Urethane rubber	
⑪	Rubber magnet	Synthetic rubber	
⑫	C shape snap ring	Carbon steel	Nickel plated
⑬	Cylindrical roller	High carbon chrome bearing steel	Electroless nickel plated
⑭	Needle Ass'y	Brass	Electroless nickel plated
⑮	Exhaust plug	Brass	Electroless nickel plated
⑯	Plug	Brass	
⑰	Spring	High carbon chrome bearing steel	

### Replacement Parts: Seal Kits

No.	Description	Material	Kit No.			
			MHC2-10	MHC2-16	MHC2-20	MHC2-25
⑱	Seal kit	NBR	MHC10-PS	MHC16-PS	MHC20-PS	MHC25-PS
⑲						
⑳						
㉑						