Angular Style Air Gripper

Series MHC2

Standard

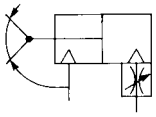
- **A large amount of gripping force is provided through the use of a double piston mechanism, while maintaining a compact design**
- **Built-in variable throttle**
- **A solid state auto switch with an indicator light can be mounted**

MHC2-16S

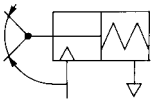
MHC2-10D

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 catalogue, 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)Note)		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) (1)	Opening/closing angle (both sides)	Weight (2) 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

Auto switch

–	Without auto switch (Built-in)

Number of auto switches

–	2
S	1

•Applicable auto switch

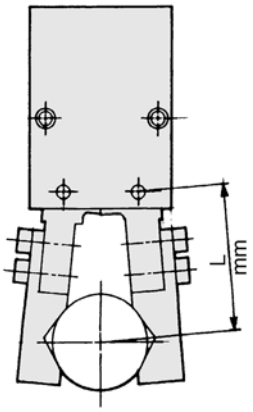
Type	Special function	Electrical entry	Indication light	Wiring (Output)	Load voltage DC		AC	Auto switch symbol Perpendicular	In-line	Lead wire length (m)* 0.5 (–)	3 (L)	Applicable load	
Solid state switch	—	Grommet	With	3 wire (NPN)	24V	5V, 12V	—	Y69A	Y59A	●	●	IC circuit	Relay, PLC
				2 wire		12V		Y69B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

* Lead wire length: 0.5m·····– (Example) Y59B
3m·····L (Example) Y59BL

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

Holding Point

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



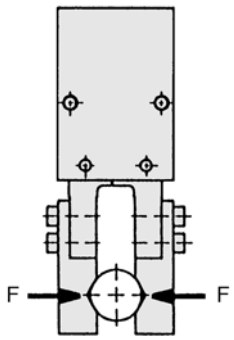
Guidelines for the selection of the gripper with respect to component weight

●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 accelleration, decelleration or impact forces are encountered during component transfer a further margin of safety should be considered.

●Effective holding force

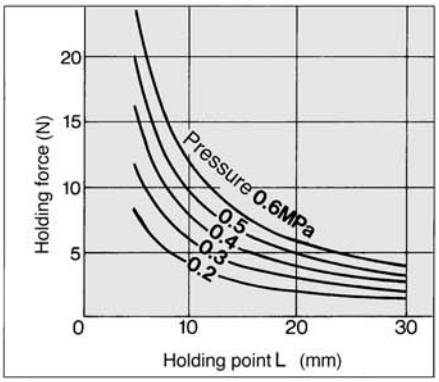
The holding force shown in the tables represents the holding force of one finger when all fingers and attachment are in contact with the work. F = One finger thrust.



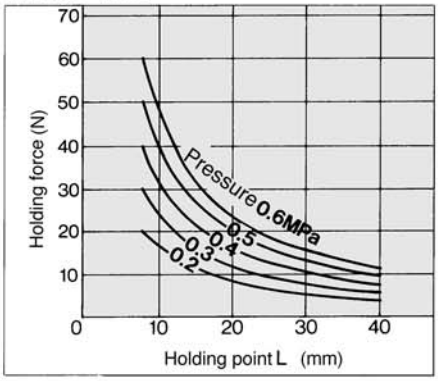
Effective Holding Force

Double acting

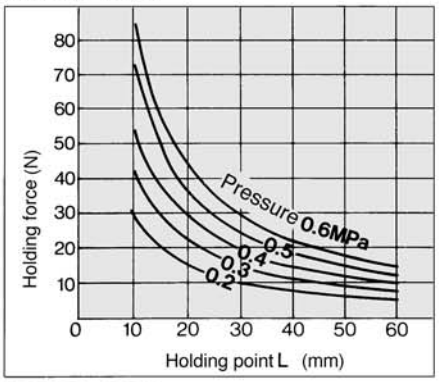
MHC2-10D



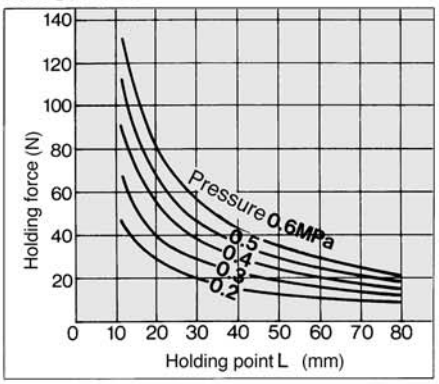
MHC2-16D



MHC2-20D

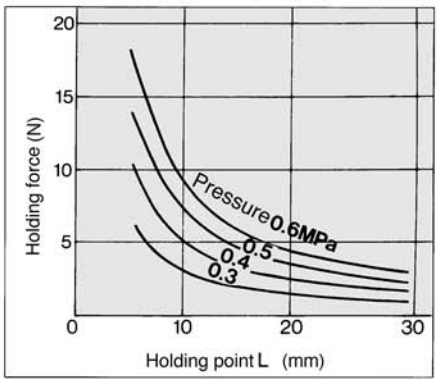


MHC2-25D

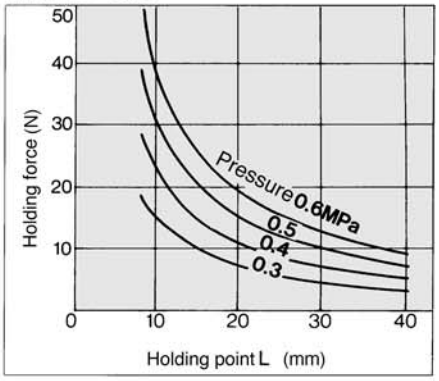


Single acting

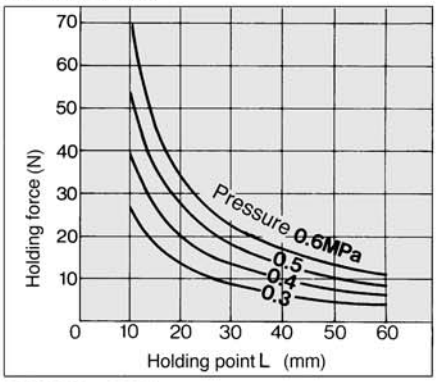
MHC2-10S



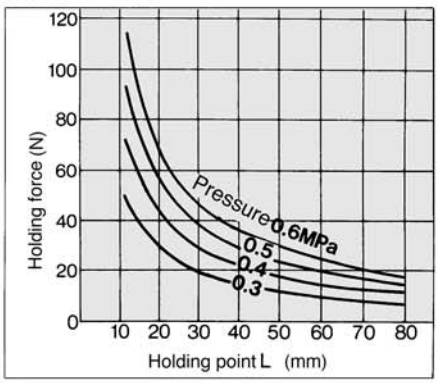
MHC2-16S



MHC2-20S

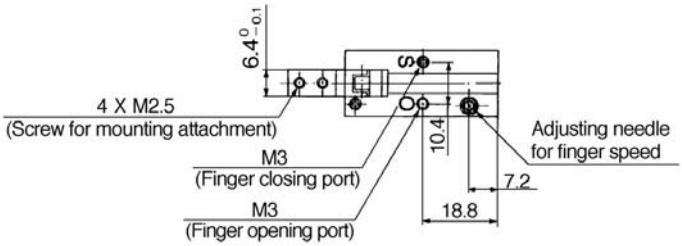


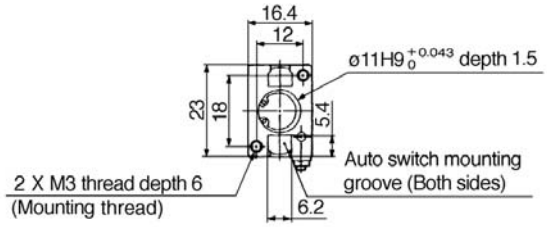
MHC2-25S

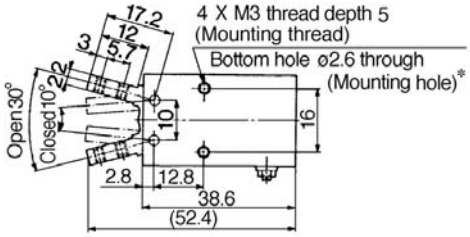


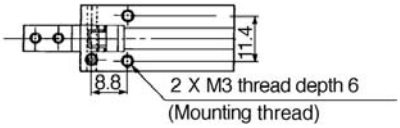
Double Acting ø10, ø16,

MHC2-10□





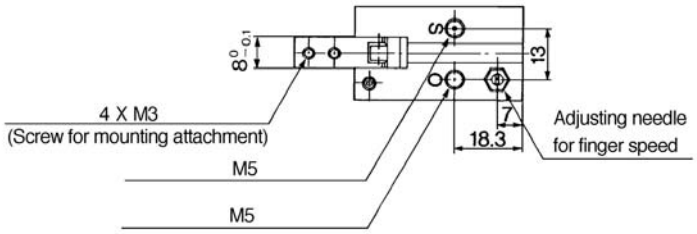


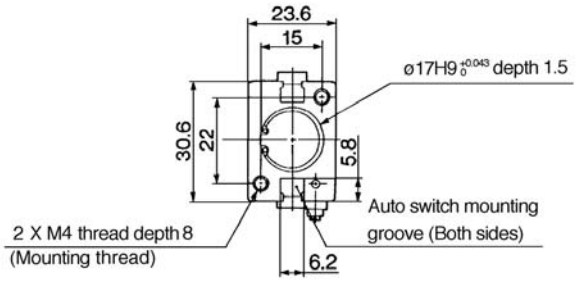


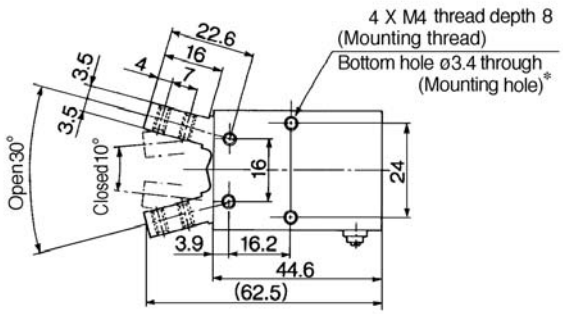
Note) When signal acting type is used, one side port is bleed port and adjusting needle for finger speed is not attached.

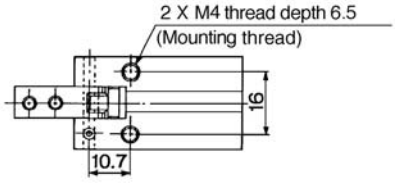
* When auto switch is used, through hole mounting type is not available.

MHC2-16□









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

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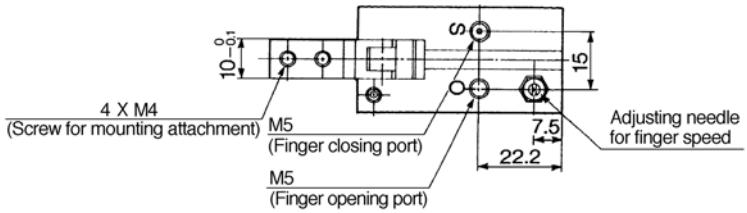
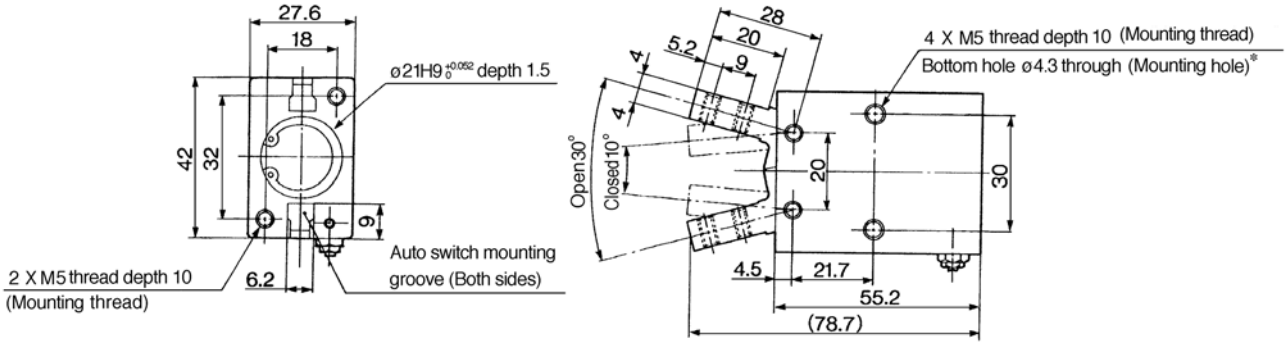
MHZ
MHQ
MHL2
MHR
MHK
MHS
MHC2
MHT2
MHY2
MHW2
MRHQ
Auto Switch

Double Acting ø20, ø25,

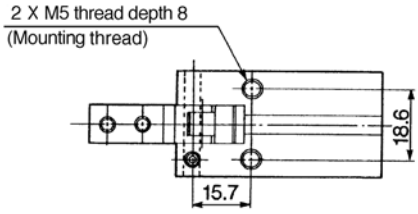
MHC2-20□



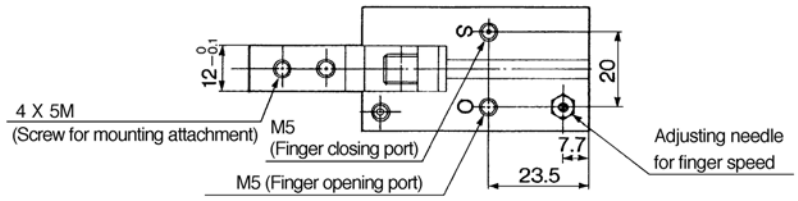


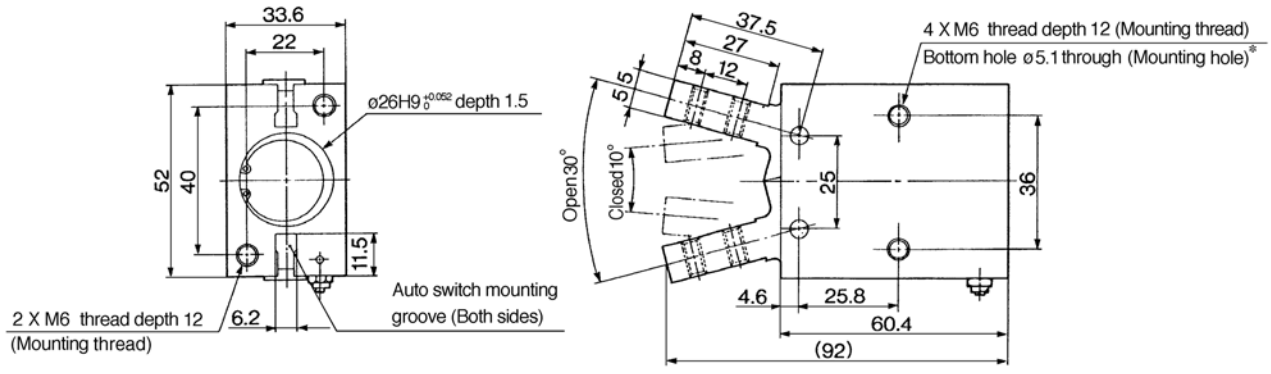
Note) When signal acting type is used, one side port is bleed port and adjusting needle for finger speed is not attached.

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



MHC2-25□





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

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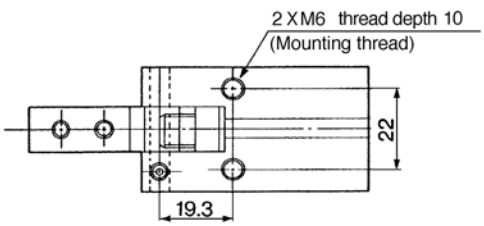
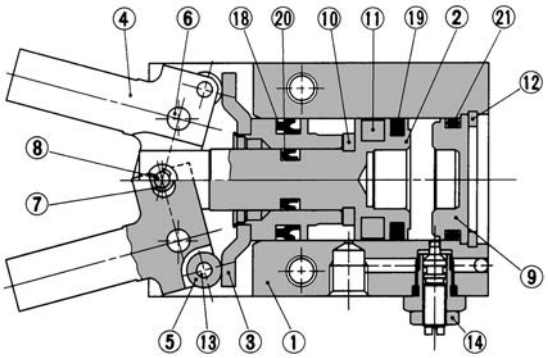
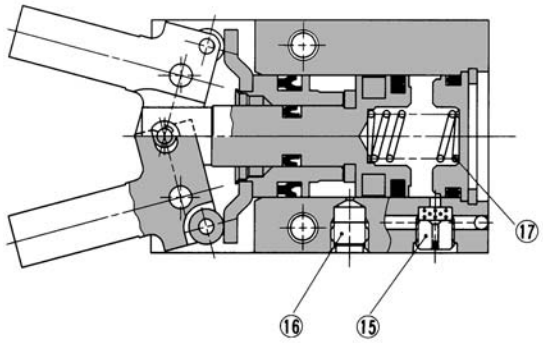


Construction

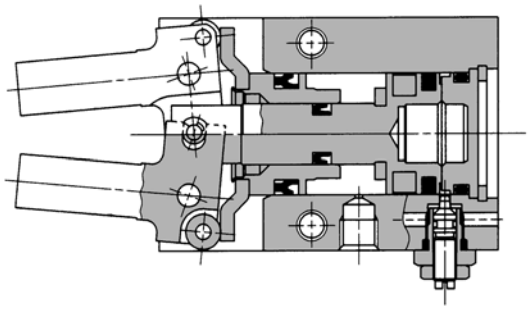
Double acting/Fingers open



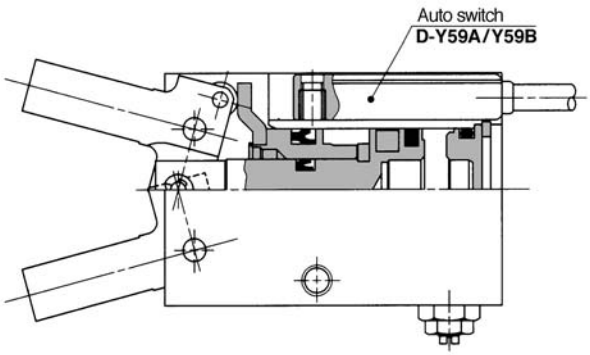
Single acting



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	centre roller	Carbon steel	Nitriding
⑧	centre 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 ⑲ ⑳ ㉑	Seal kit	NBR	MHC10-PS	MHC16-PS	MHC20-PS	MHC25-PS