

Standard Type Basic Model Series WHC2

WHC2 Series / Specification

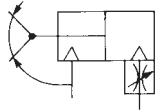


Fluid	Air	
Operating pressure	Double acting	0.1 to 0.6MPa
	Single acting	0.25 to 0.6MPa
Ambient and fluid temperature	-10 to 60°C	
Repeatability	±0.01mm	
Max. operating frequency	180c.p.m	
Lubrication	Not required	
Action	Double acting, Single acting	
Auto switch (Option) ^{Note)}	Solid state switch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

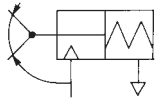
Note) Refer to Auto Switch Guide for further specifications of auto switch.

Symbol

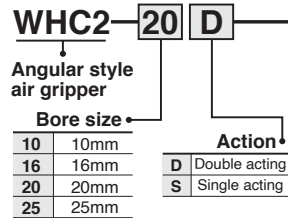
Double acting



Single acting



Ordering Code



Product Feature

- 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.

Model

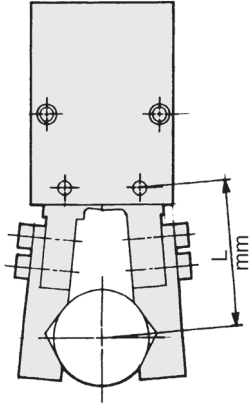
Action	Model	Bore size mm	Holding moment (effective value) ⁽¹⁾	Opening/closing angle (both sides)	Weight ⁽²⁾ g
Double acting	WHC2-10D	10	0.10	30° to -10°	39
	WHC2-16D	16	0.39		91
	WHC2-20D	20	0.70		180
	WHC2-25D	25	1.36		311
Single acting	WHC2-10S	10	0.070	30° to -10°	39
	WHC2-16S	16	0.31		92
	WHC2-20S	20	0.54		183
	WHC2-25S	25	1.08		316

Note1) At pressure 0.5MPa.

Note2) Weight except auto switch.

Holding Point

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



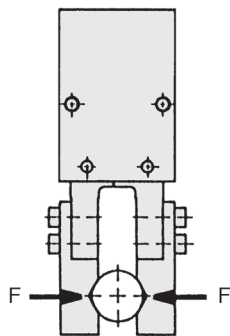
Guidelines for the selection of the gripper with respect to component weight

● 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

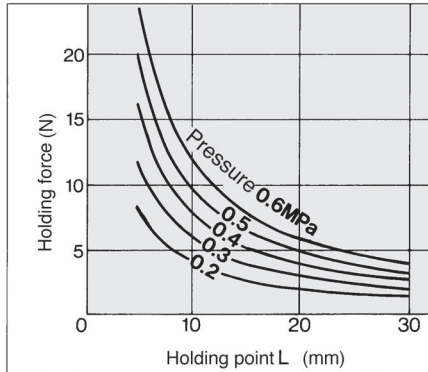
The holding force shown in the tables represents the holding force of one finger when all fingers and attachment are in contact with the work. F = One finger thrust.



Effective Holding Force

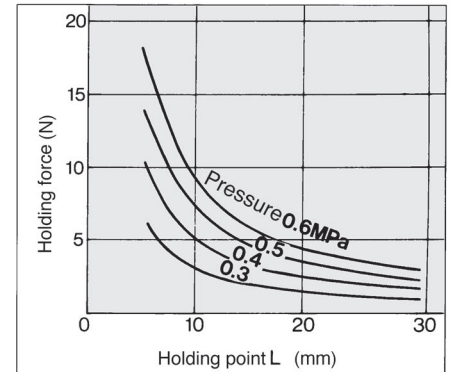
Double acting

WHC2-10D

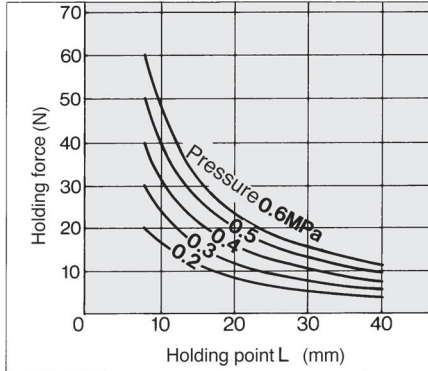


Single acting

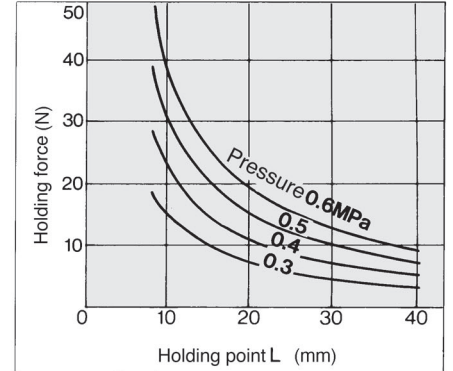
WHC2-10S



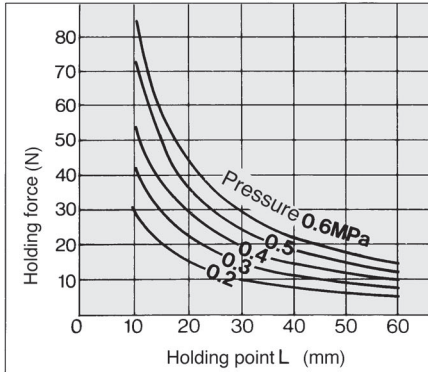
WHC2-16D



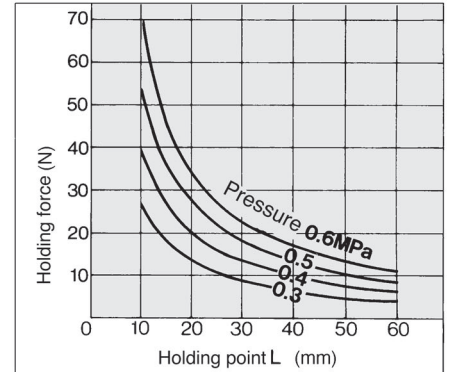
WHC2-16S



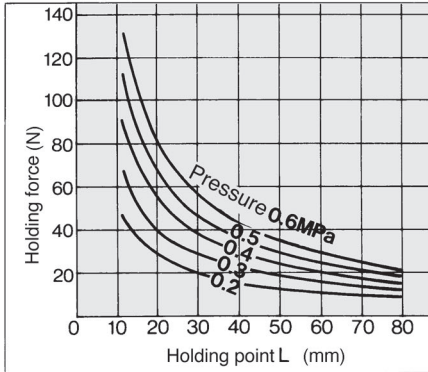
WHC2-20D



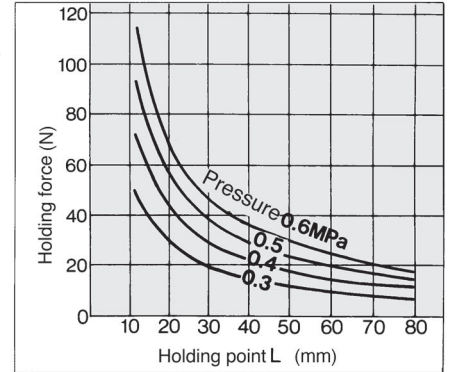
WHC2-20S



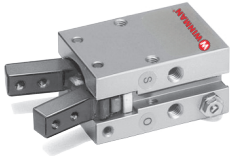
WHC2-25D



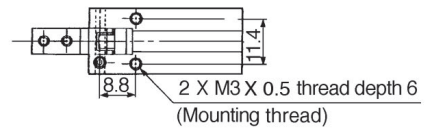
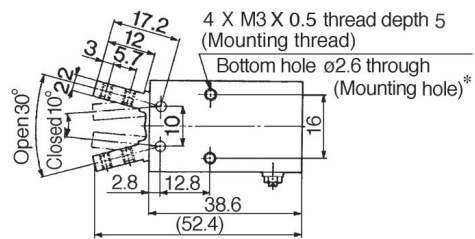
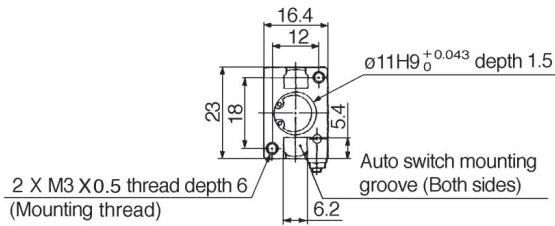
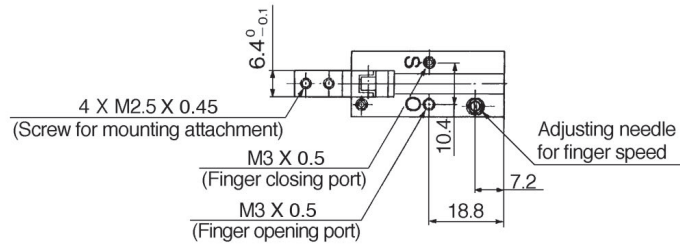
WHC2-25S



Double Acting $\phi 10, \phi 16$,



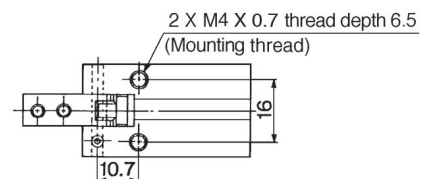
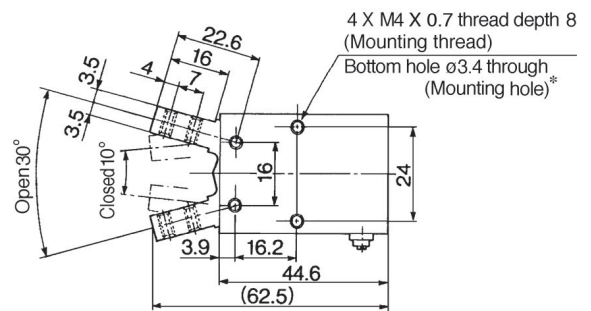
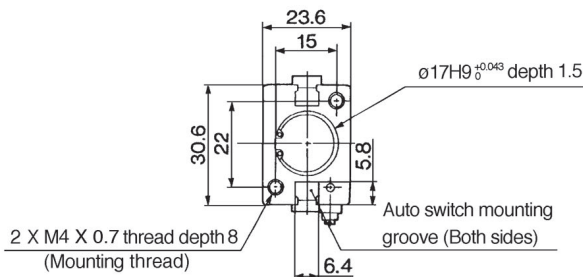
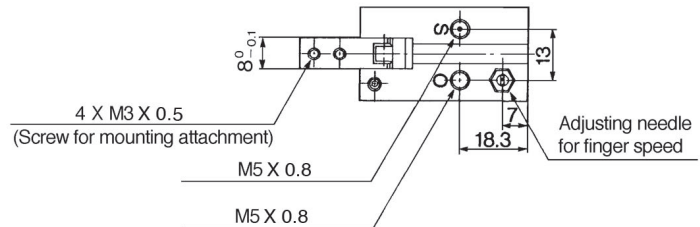
WHC2-10



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.

WHC2-16

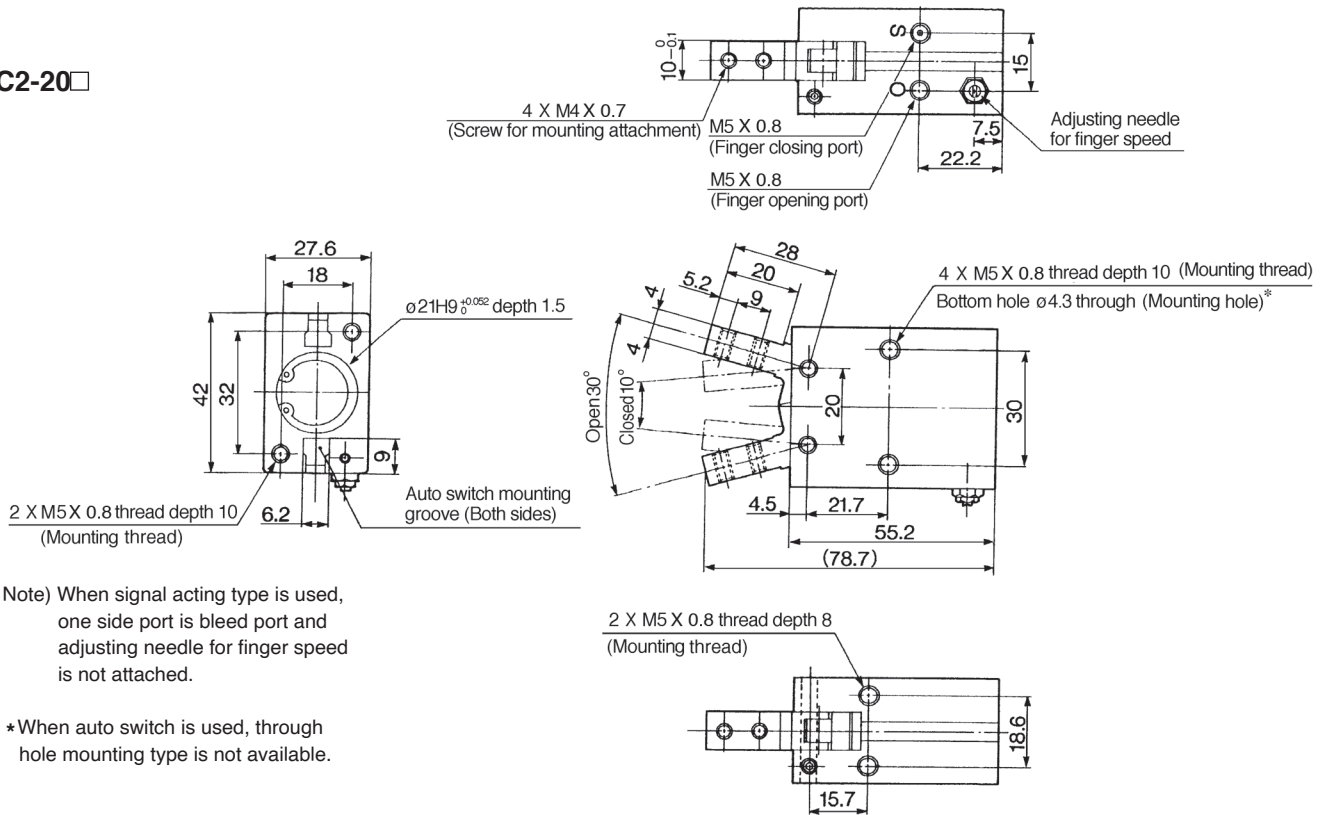


Note) When signal acting type is used, one side port is bleed port and adjusting needle for finger speed is not attached.

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

Double Acting $\phi 20, \phi 25$,

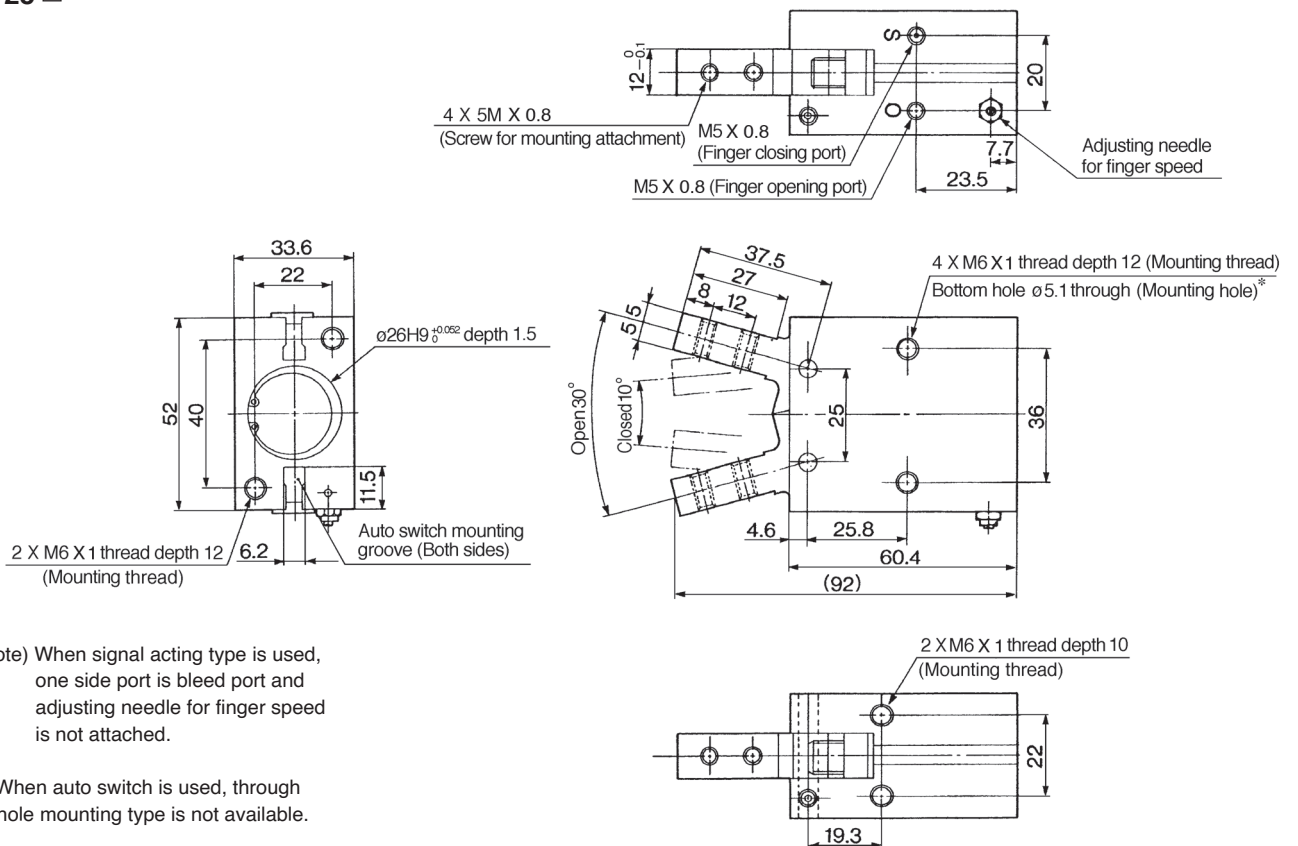
WHC2-20 □



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.

WHC2-25 □

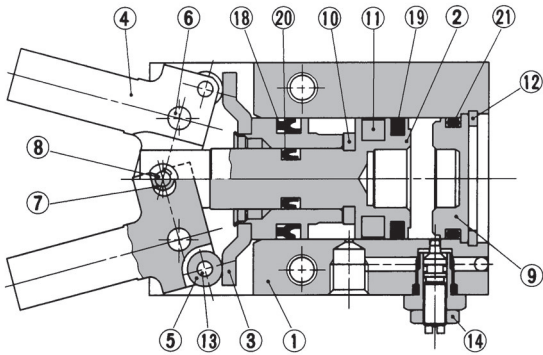


Note) When signal acting type is used, one side port is bleed port and adjusting needle for finger speed is not attached.

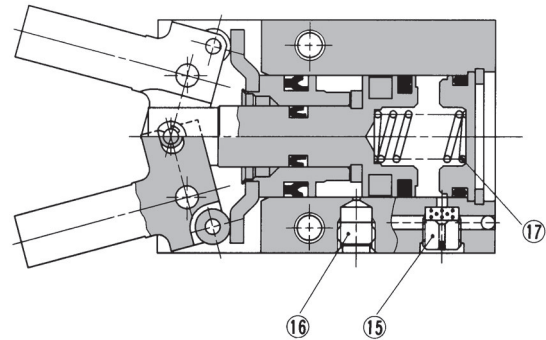
* When auto switch is used, through hole mounting type is not available.

Construction

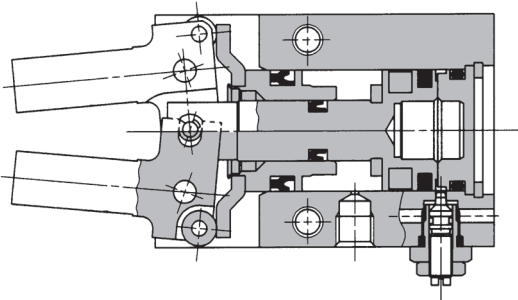
Double acting/Fingers open



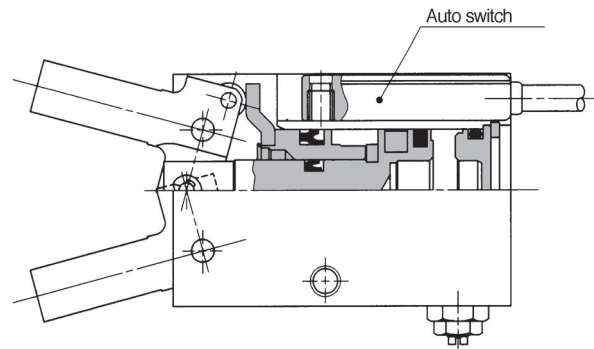
Single acting



Double acting/Fingers closed



With auto switch



Component Parts

No.	Description	Material	Note
1	Body	Aluminum alloy	Hard anodized
2	Piston A	Aluminum alloy	Hard anodized
3	Piston B assembly		
4	Finger	Carbon steel	Heat treated
5	Side roller	Carbon steel	Nitriding
6	Lever shaft	Stainless steel	Nitriding
7	Center roller	Carbon steel	Nitriding
8	Center pin	Carbon steel	Nitriding
9	Cap	Resin	
10	Bumper	Urethane rubber	
11	Rubber magnet	Synthetic rubber	

Component Parts

No.	Description	Material	Note
12	Type C retaining ring	Carbon steel	Phosphate coated
13	Needle roller	High carbon chrome bearing steel	
14	Needle assembly	Brass	Electroless nickel plated
15	Exhaust plug	Brass	Electroless nickel plated
16	Plug	Brass	Electroless nickel plated
17	Spring	Stainless steel spring wire	
18	Piston seal	NBR	
19	Piston seal	NBR	
20	Piston seal	NBR	
21	Gasket	NBR	

Replacement Parts

Description	WHC2-10□	WHC2-16□	WHC2-20□	WHC2-25□	Main parts
Seal kit	WHC10-PS	WHC16-PS	WHC20-PS	WHC25-PS	(18) (19) (20) (21)
Finger assembly	WHC-A1003	WHC-A1603	WHC-A2003	WHC-A2503	(4) (5) (6) (7) (8) (13)
Piston assembly set	WHC-A1002	WHC-A1602	WHC-A2002	WHC-A2502	(2) (3) (7) (8) (10) (11) (18) (19) (20)
Piston A assembly	WHC-A1001	WHC-A1601	WHC-A2001	WHC-A2501	(2) (10) (11)
Piston B assembly	P3311145B	P3311245B	P3311345B	P3311445C	(3)
Needle assembly	WH-A1006		WH-A1606		(14)

* Order 1 piece finger assembly per one unit.

Replacement part/Grease pack part no.: GR-S-010 (10 g)