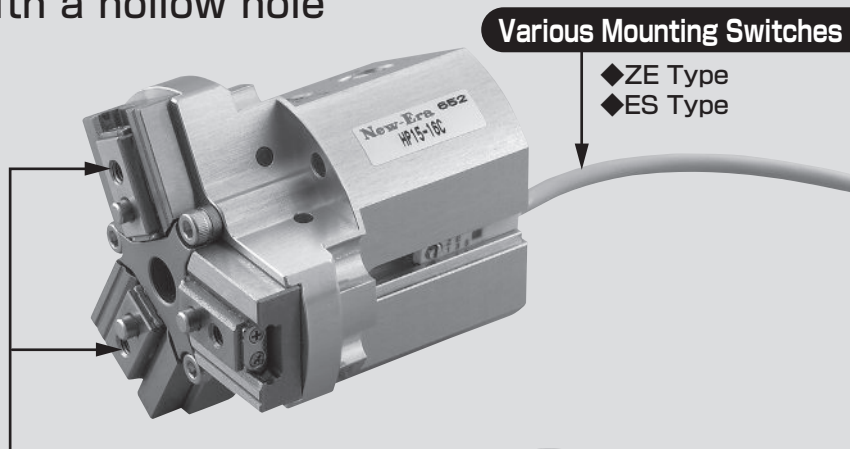


- Air Gripper
- High rigidity and high accuracy realized by the use of the linear guide
- Gripping at the long point is available.
- With a hollow hole

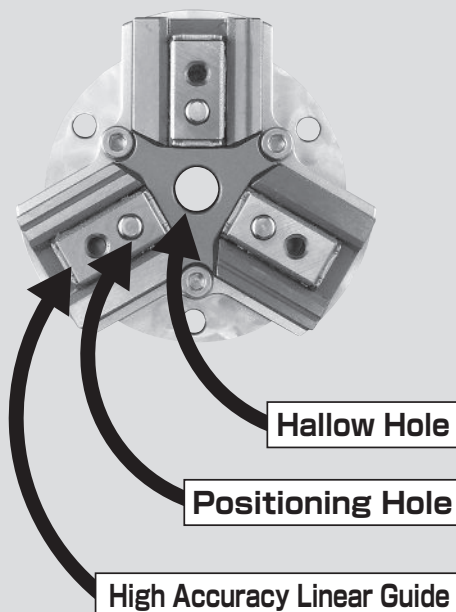


Various Mounting Switches

- ◆ ZE Type
- ◆ ES Type

Positioning Hole

- Centering Accuracy ± 0.05 mm or less
- Repeat Accuracy ± 0.01 mm or less
- Withstand Load, Withstand Moment



Hallow Hole

Positioning Hole

High Accuracy Linear Guide

Model Code No.

HP15 - 16 C ※ ZE135 A 2

Series Name

Bore Size

16:16mm
20:20mm
25:25mm

Action Type

C : Double Acting

Number of Switches

1:1 Switch
2:2 Switches

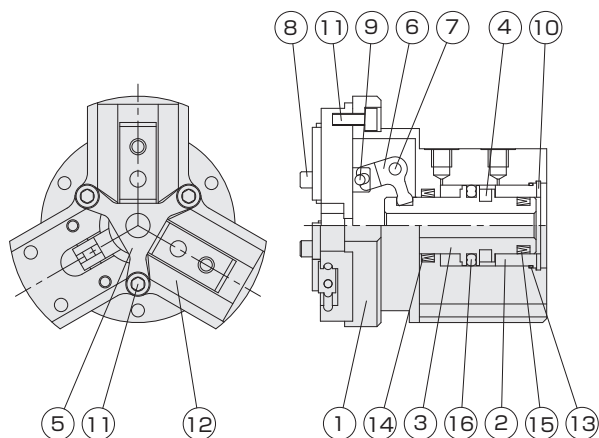
Switch Lead Wire Length

A:1m
B:3m

●Switch Type No Code: No Switch	
ZE135 ES13	ZE235 ES23
2 Wire System Solid State Switch, Straight Type	2 Wire System Solid State Switch, L-shaped
ZE155 ES(P)15	ZE255 ES(P)25
3 Wire System Solid State Switch, Straight Type	3 Wire System Solid State Switch, L-shaped
	

●Switch details→P.521~528

Internal Structure Diagram



Parts List

NO	Name	Material
1	Main Body	Aluminum Alloy
2	Head Cover	Aluminum Alloy
3	Piston Rod	Stainless Steel
4	Magnet	Rubber
5	Pressure Cover	Stainless Steel
6	Action Lever	Carbon Steel
7	Fulcrum Pin	Carbon Tool Steel
8	Knuckle	Stainless Steel
9	Roller	Carbon Steel
10	Locating Snap Ring	Carbon Tool Steel
11	Hexagon Socket Head Bolt	Stainless Steel
12	Bearing	Stainless Steel
13	O Ring	NBR
14	Packing	NBR
15	Packing	NBR
16	Packing	NBR

Specifications

Fluid	Air
Maximum Operating Pressure [MPa]	0.7
Proof Pressure [MPa]	1.05
Operating Temperature [°C]	0~60 (No Freezing)
Lubrication	Not Required (Required for sliding parts of the machine)
Pipe Bore	M5×0.8
Maximum Operating Cycle [Cycle/min]	180
Centering Accuracy [mm]	±0.05
Repeat Accuracy [mm]	±0.01
Applicable Switch	ZE, ES Type (Solid State Switch)

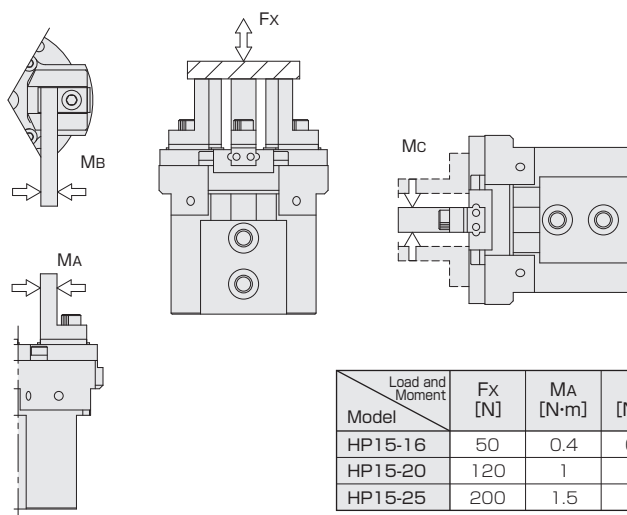
Action Type	Model	Bore Size [mm]	Minimum Operating Pressure [MPa]	Opening/Closing Stroke [mm] ^{Note)3}	Gripping Force [N] ^{Note)1}	Outside Dimensions (D x L) [mm] ^{Note)2}	Product Mass [g]
Double Acting	HP15-16C	16	0.25	³ (3.1~4.4)	8	48×48	170
	HP15-20C	20	0.2	⁵ (5.1~6.7)	16	64×58	306
	HP15-25C	25	0.15	⁷ (6.1~8)	29	80×72	580

Note 1) The grip force is an effective value when the grip point L is 30 mm and the pressure is 0.5 MPa.

Note 2) The outside dimensions indicate the main body dimensions. (Excluding the lever)

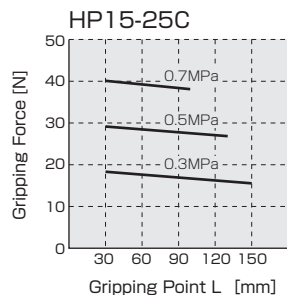
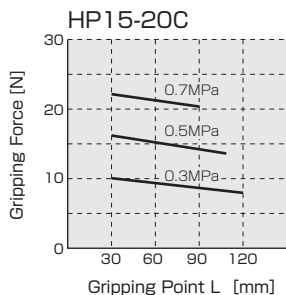
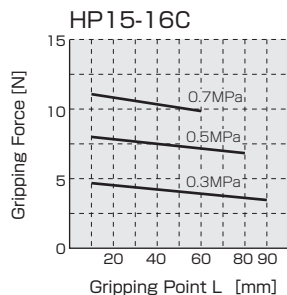
Note 3) The opening/closing stroke is a reference value. Values in the parentheses are measured values.

Allowable Load and Allowable Moment

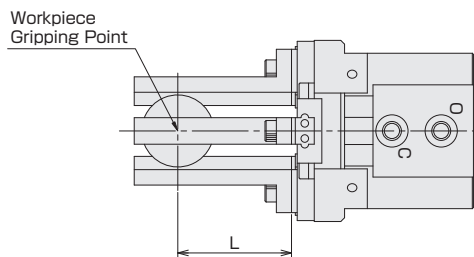
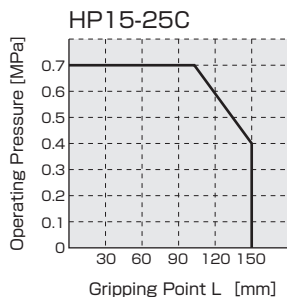
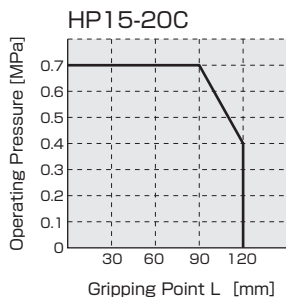
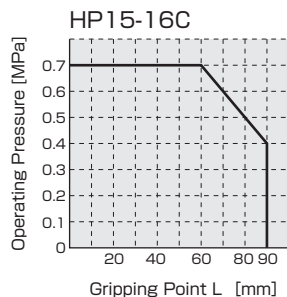


Load and Moment Model	Fx [N]	MA [N·m]	MB [N·m]	Mc [N·m]
HP15-16	50	0.4	0.4	0.8
HP15-20	120	1	1	2
HP15-25	200	1.5	1.5	3

Effective Gripping Force



Gripping Point Limit Range



Gripper Attachment Method

Pipe

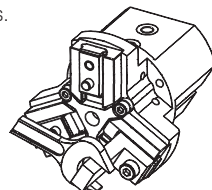
When you screw in a joint or the like into the pipe port, tighten it with the following torque.

Pipe Port	Maximum Tightening Torque [N·m]
M3×0.5	0.59
M5×0.8	1.57

Attachment Mounting

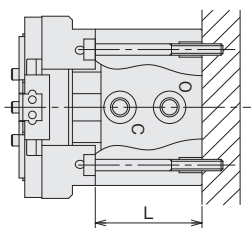
When you mount the attachment, support it with a spanner or the like so that the levers are not rattled. See the following table for the tightening torque of the mounting bolts.

Model	Bolt to be Used	Maximum Tightening Torque [N·m]
HP15-16	M3×0.5	1.14
HP15-20	M4×0.7	2.7
HP15-25	M5×0.8	5.4



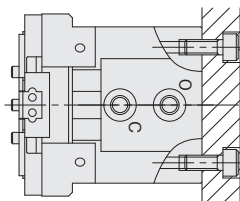
Main Body Mounting Method

1 When the through-hole of the main body is used



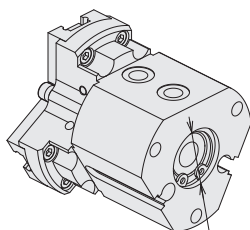
Model	Bolt to be Used	Maximum Tightening Torque [N·m]	L [mm]
φ16	M3×0.5	0.59	28
φ20	M3×0.5	0.59	34
φ25	M4×0.7	1.37	40

2 When the mounting screw on the back side of the through-hole is used



Model	Bolt to be Used	Maximum Tightening Torque [N·m]
φ16	M4×0.7	1.37
φ20	M4×0.7	1.37
φ25	M5×0.8	2.84

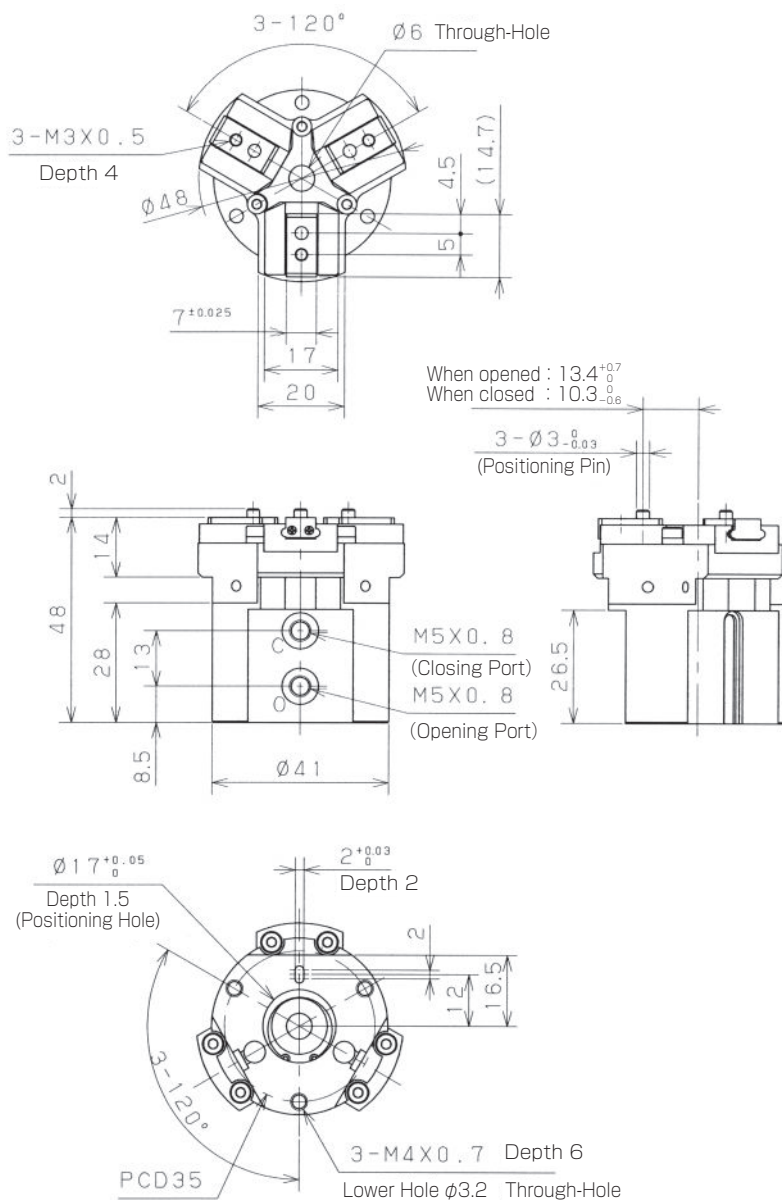
Positioning Hole (Use this hole to determine the position in mounting.)



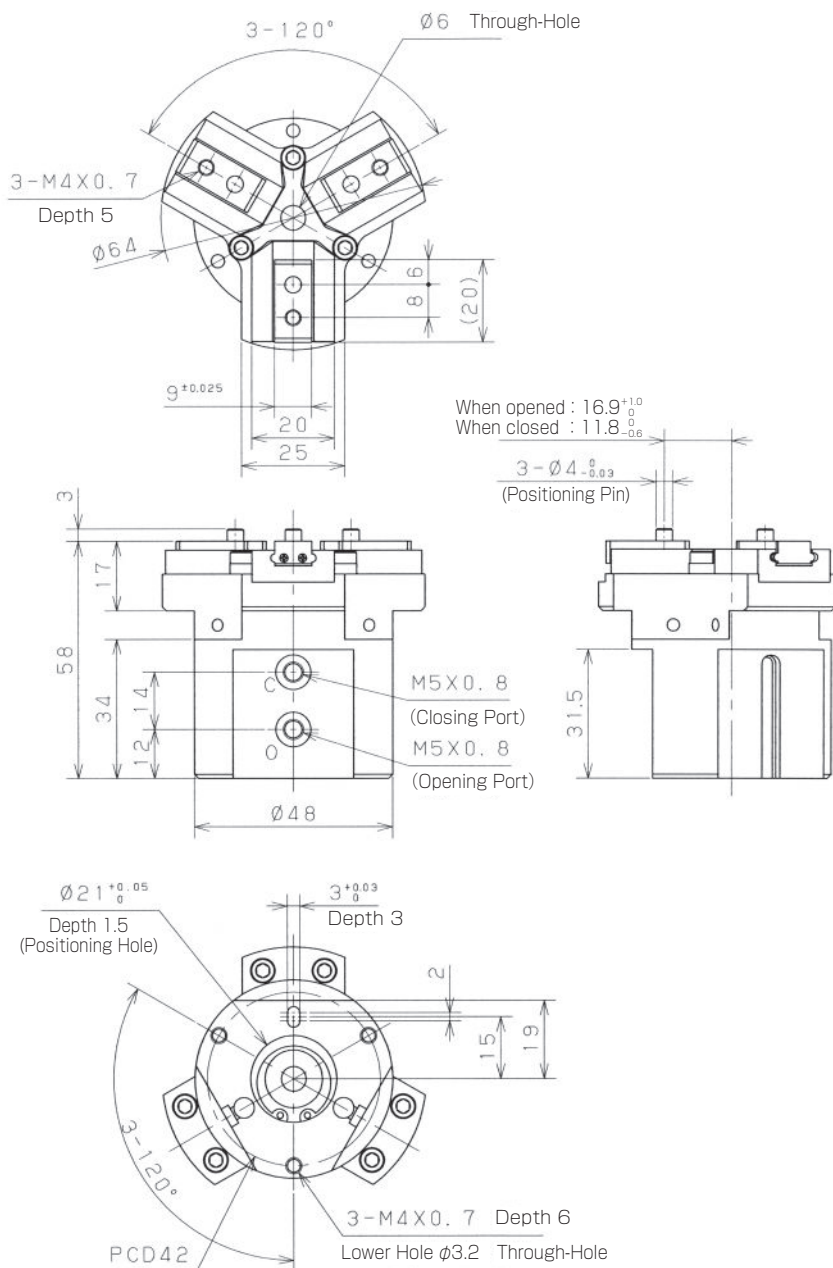
Positioning Hole

Model	Positioning Hole
φ16	φ17 ^{+0.05} ₀ depth 1.5
φ20	φ21 ^{+0.05} ₀ depth 1.5
φ25	φ26 ^{+0.05} ₀ depth 1.5

Dimensions HP15-16C



Dimensions HP15-20C



Dimensions HP15-25C

