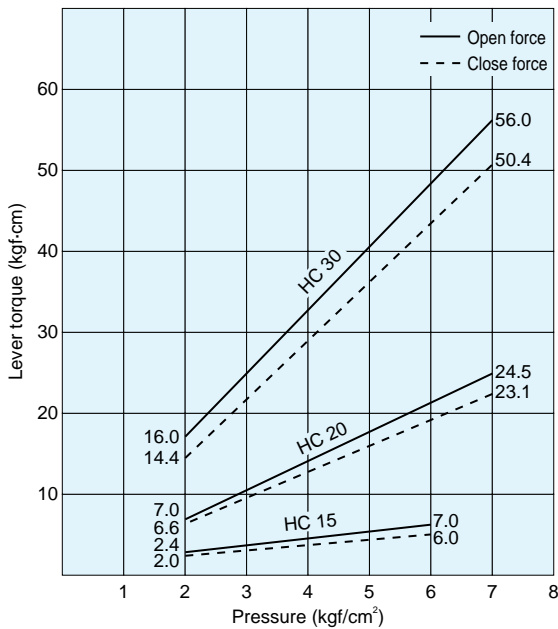




## Selection



Lever torque (theoretical value)

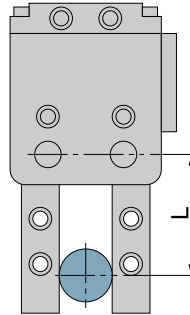
Theoretical grip force can be calculated by the following formula.

$$F = \frac{M}{L}$$

F : Theoretical grip force (kgf)

M : Lever torque(kgf-cm)

L : Distance between jaw fulcrum to grip point (cm)



Caution) The graph represents theoretical calculations. Actual grip force varies according to the material and shapes of work pieces and fingers. The standard grip force is 40 to 60% of the theoretical value.

## Model designation (Example)

HC 15 A P -S

(1) (2) (3) (4)

(1) Cylinder cross sectional area

Code	15	20	30
Cylinder cross sectional area	0.33in. <sup>2</sup> (2.1cm <sup>2</sup> )	0.67in. <sup>2</sup> (4.3cm <sup>2</sup> )	1.36in. <sup>2</sup> (8.8cm <sup>2</sup> )

(2) Operation type

Code	A	B	C
Operation type	Double acting	Single acting normally open	Single acting normally closed

(3) Body material

Code	P	D
Body material	Plastic	Die casting

(4) Option

Code	B	S
Option	With bracket	With sensor

\*Enter only when necessary.

## Model designation of finger tool type (Example)

HC 20B P × -S

(1) (2)

(1) Body material

Code	P	D
Body material	Plastic	Die casting

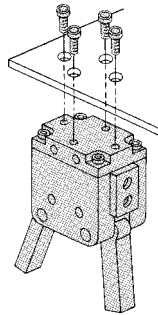
(2) Option

Code	B	S
Option	With bracket	With sensor

\*Enter only when necessary.

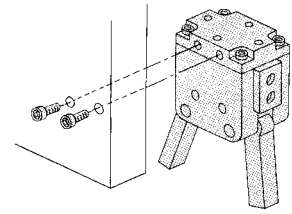
## Mounting of gripper

(1) Mount on the top of gripper



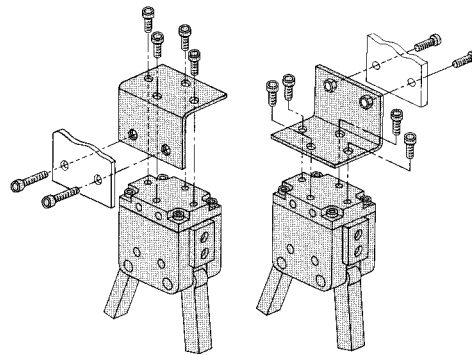
possible for all types

(2) Mount from the side of plastic body type gripper



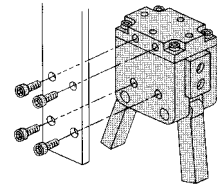
HC 15□P-HC 20□P

(3) Use of mounting bracket (option)



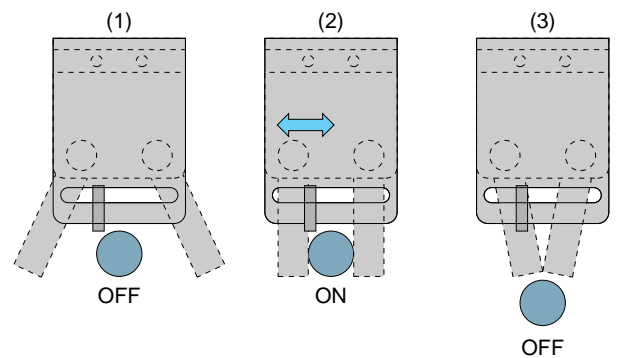
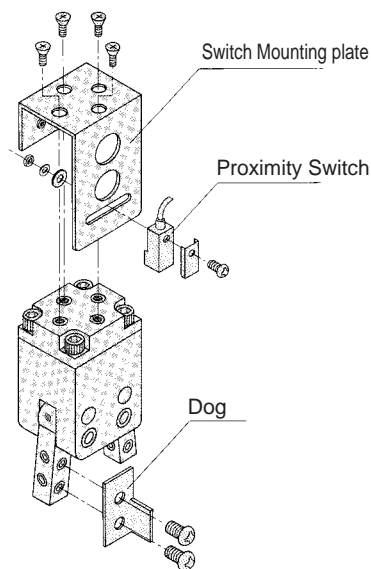
HC 15□P-HC 20□P

(4) Mount from the side of die casting body type gripper



HC 20□D-HC 30□D

## Mounting and adjustment of sensor



The sensor can be slid in the direction of the arrow. Adjust the location of the sensor so that the sensor is turned OFF in the state (1) and (3) and turned ON in the state (2)

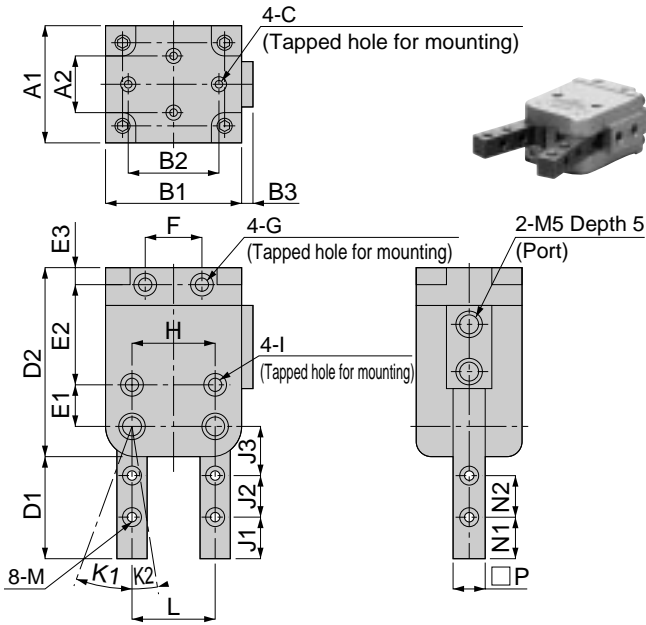
## ⚠ Safety instruction

1. Use clean and low moisture air as supply air to the grippers.
2. Making clamping of gripper as slow and gentle as possible yields accurate motion and stable cycling.
3. Avoid lateral loading to the jaw during operation.
4. Attach light-weight and short finger tool to the jaw.

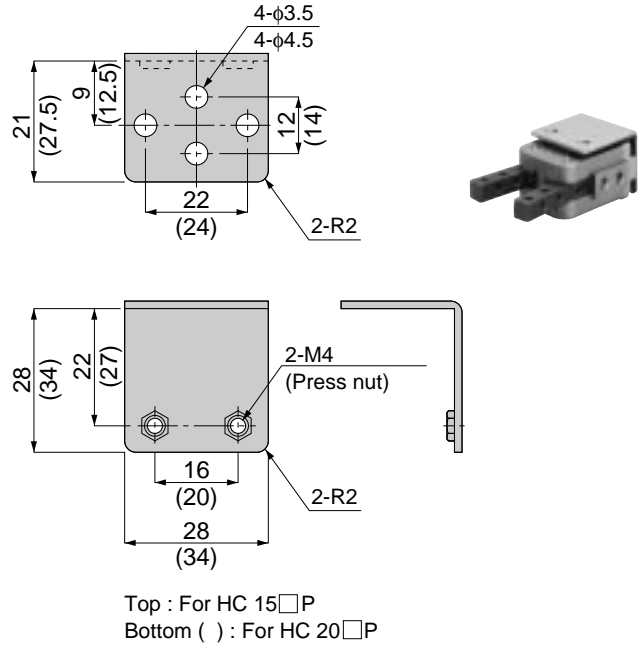
## HC 15-20-30

### Lever Type Gripper

#### Main body



#### Bracket

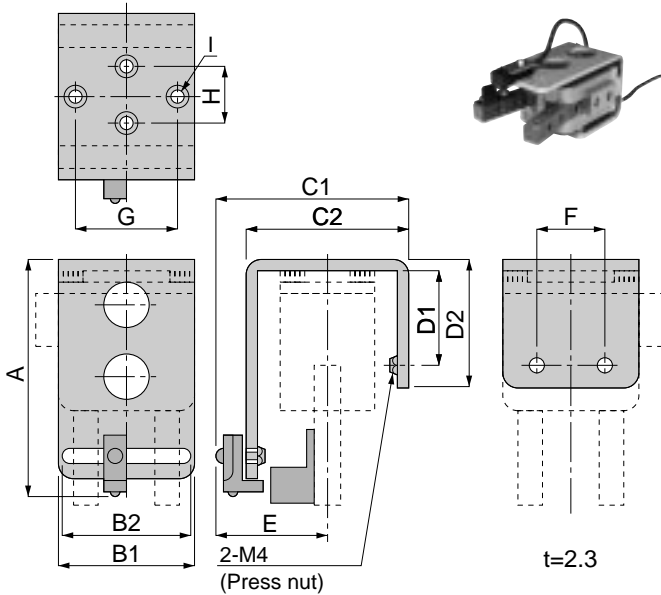


unit:mm

Model	A1	A2	B1	B2	B3	C	D1	D2	E1	E2	E3	F	G	H	I	J1	J2	J3	K1	K2	L	M	N1	N2	□P	Mass (g)
HC 15□P	19	12	28	22	5	M3(Depth5)	20	35.5	8.5	19	3	12	M3(Depth8)	16	-	3	8	14	15°	10°	16	M3(Through)	7	8	6 <sup>-0.05</sup> <sub>-0.10</sub>	50
HC 20□P	25	14	34	24	3	M4(Depth6)	24.5	45	10	23.5	4	14	M4(Depth8)	20	-	5	10	17	8°	8°	23	M4(Through)	10	10	8 <sup>-0.05</sup> <sub>-0.10</sub>	105
HC 20□D	24														M4(Depth15)											180
HC 30□D	32	22	52	42	2	M5(Depth6.5)	34	55	12	28	4	22	M5(Depth15)	30	M5(Depth6)	6	16	23	19°	10°	30	M6(Through)	12	16	12 <sup>-0.05</sup> <sub>-0.10</sub>	450

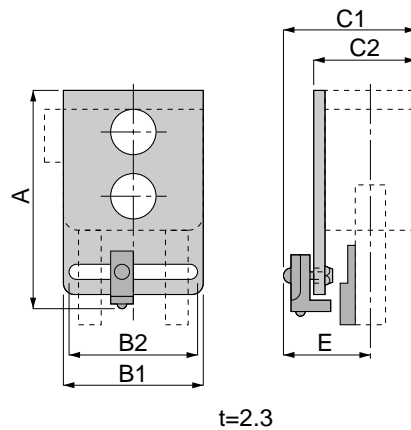
## HC 15-20

### Lever Type Gripper with Sensor 15-20 Type



## HC 30

### Lever Type Gripper with Sensor 30 Type



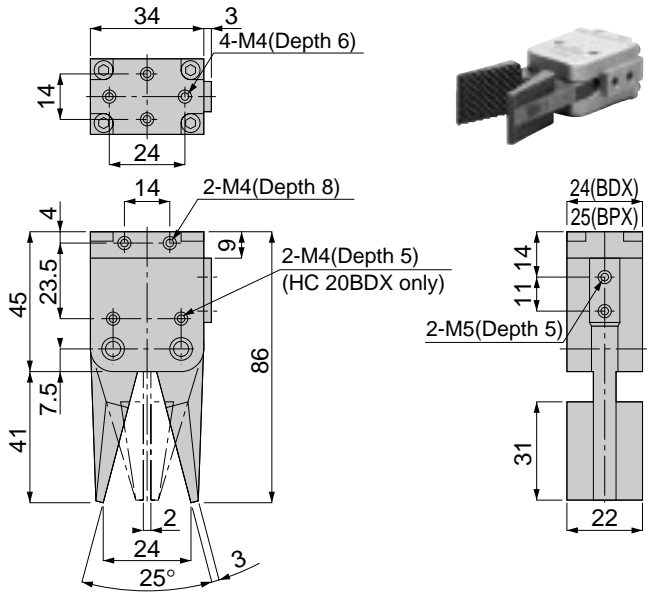
unit:mm

Model	A	B1	B2	C1	C2	D1	D2	E	F	G	H	I
HC 15□P-S	59	28	21	37	30	22	30	22	16	22	12	4-φ3.2 φ6 Counter sinking
HC 20□P-S	70	34	25	43	36	27	35	25	20	24	14	4-φ4.2 φ8 Counter sinking
HC 20□D-S	68			33	26	-	-					
HC 30□D-S	86	52	45	51	34	-	-	26	-	-	-	-

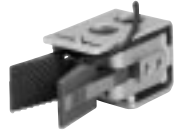
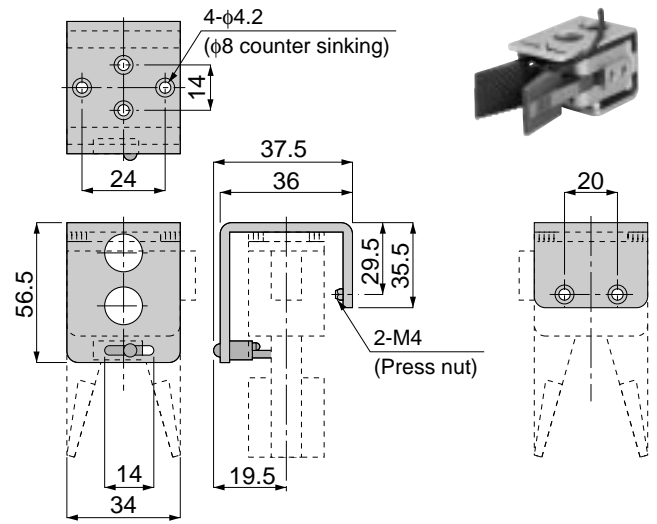
**HC**  
20

Lever Type Gripper  
with Figer Tool 20 Type

**Main body**



**With Sensor**



Note 1. Mounting bracket is available for only HC20BPX as option.

Note 2. Weight: HC20BPX 150g, HC20BPX 225g

Note 3. The specifications, the internal structure, and the measure with the sensor are the same as those of HC20BP and HC20BD.