

HDP series Parallel Type Air Gripper

Product features/ Code of order

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Feature

- Piston and lever all-in-one
- Grippe acting by bearing mechanism
- Mounting brackets in option



Specification

Item	Bore size (mm)	Ø10	Ø16	Ø20	Ø25	Ø32
Action		Double acting				
Fluid		Air				
Pressure range	kgf / cm ² (kPa)	1.5 ~ 7 (150 ~ 700)				
Ambient and fluid temperature	° C	0 ~ 60				
Max. operation frequency	time/min	100				
Lubrication	Cylinder	Lubrication free type				
	Lever section	Lubrication required				
Theoretical gripping force(M) kgf·cm	Closed side	0.8	2.4	4.7	7.5	10
	Opened side	0.5	1.8	3.5	6.0	8.5
Max. gripper point length (L)	mm	30	40	60	70	85
Gripper stroke	mm	4	8	12	14	16
Port size	mm	M3 X 0.5P	M5 X 0.8P			
Sensing device		With magnet				

Note 1: P: operating pressure kgf/cm², L: the gripping point length is 30mm

Code of order **HDP 20 - HM - 15T 2**

1 — 2 — 3 — 4 —

1	Mark	Bore size (mm)
	10	Ø10
	16	Ø16
	20	Ø20
	25	Ø25
	32	Ø32

2	Mark	Mounting bracket	Mark	Mounting bracket	Mark	Mounting bracket
	None	Without Mounting bracket	HM		HB	

● HM: Internal mounting HB: External mounting

3	Mark	Sensor switch	Applicable Type
	None	Without sensor switch	—
	5G	CS-5G	10, 16, 20 25, 32
	5GN	CS-5GN	
	5GP	CS-5GP	
	15T	CS-15T	16, 20 25, 32
	15B	CS-15B	

Image	
 Please refer to P.8-2.8 CS-15B	 Please refer to P.8-2.8 CS-15T
 Please refer to P.8-2.1 CS-5G, CS-5GN, CS-5GP	

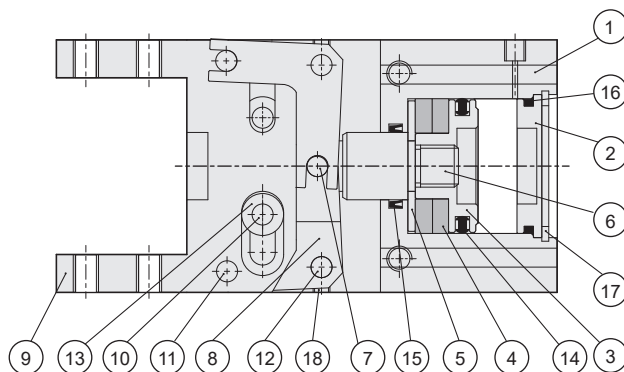
4	Mark	Sensor quantity
	1	With 1 sensor switch
	2	With 2 sensor switches

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Product features

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Internal structure



Components and material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	10	Gripper rotating shaft	Bearing steel
02	Rear cover	Aluminum alloy	11	Finger pin	Bearing steel
03	Piston	Copper alloy	12	Action lever pin	Bearing steel
04	Magnet	Magnet	13	Bearing	Alloy steel
05	Magnet cap	Copper alloy	14	Piston packing	NBR
06	Shaft	Stainless steel	15	Shaft packing	NBR
07	Shaft pin	Bearing steel	16	Rear cover O-ring	NBR
08	Action lever	Alloy steel	17	Clip	Spring steel
09	Gripper fingers	Alloy steel	18	Hexagon socket screw	Alloy steel

Packing and O-ring material list

Unit: mm

Item	Piston packing	Shaft packing	Rear cover O-ring
Model \ Quantity	1	1	1
HDP Ø10	COP - 10	DYR - 6	Ø8 x Ø1.5
HDP Ø16	COP - 16	DYR - 8K	Ø13.2 x Ø1.5
HDP Ø20	COP - 20	DYR - 10SK	Ø17.5 x Ø1.5
HDP Ø25	COP - 25	DYR - 12	Ø22 x Ø1.5
HDP Ø32	COP - 32	DYR - 16	Ø28.5 x Ø2.0

Note: The piston packing and shaft packing are from MITSUBISHI, SAKAGAMI or the same good level of quality material.

Product weight

Model	Weight (kg)
HDP Ø10	0.12
HDP Ø16	0.16
HDP Ø20	0.55
HDP Ø25	0.75
HDP Ø32	1.23

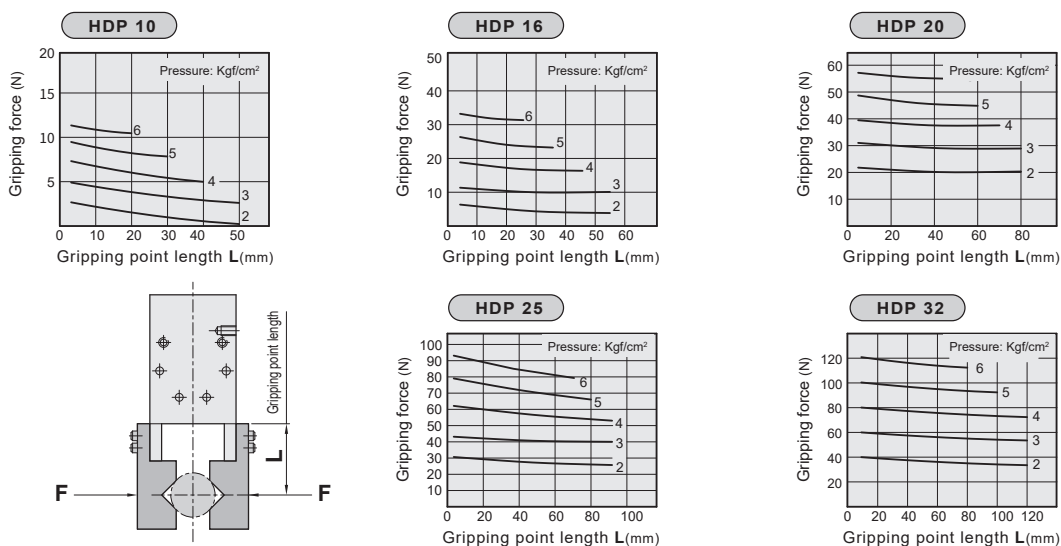
Note: All of above are theoretical data. Weight tolerance about ±5%

HDP series Parallel Type Air Gripper

Characteristics graph, Operating type and data, Mounting type

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Gripping force characteristic



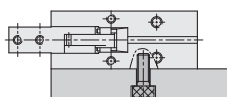
Operating type and data

Action	Model	Bore size (mm)	The smallest operating pressure (kgf/cm²)	Thread port (mm)	Effective gripping force (N)	
Double acting	HDP 10	10	2.2	4-M3x0.5P	Open	4.9
					Close	7.8
	HDP 16	16	1	4-M3x0.5P	Open	17.6
					Close	23.5
	HDP 20	20	1	4-M4x0.7P	Open	34.3
					Close	46
	HDP 25	25	1	4-M5x0.8P	Open	58.8
					Close	73.5
	HDP 32	32	1	4-M6x1.0P	Open	83.3
					Close	98

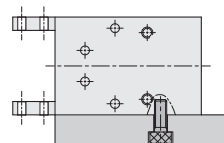
Note: The gripping force is the force of open and close gripper which in the length of gripping point is 30mm and acting pressure is 5 kgf/cm².

Mounting type

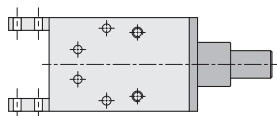
1. Thread in the bottom



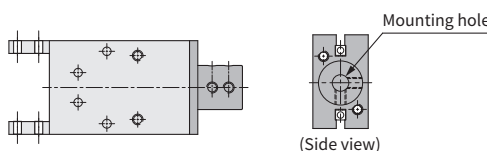
2. Thread in the side of body



3. Apply HM mounting bracket in the bottom



4. Apply HM mounting bracket in the bottom

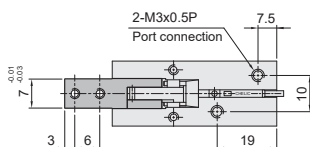
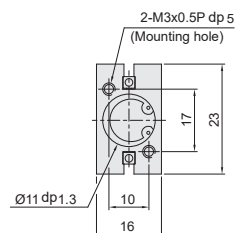
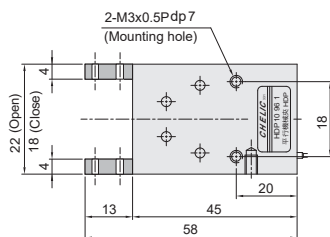
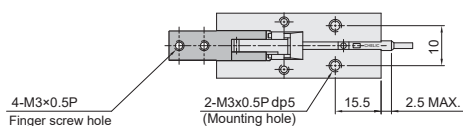


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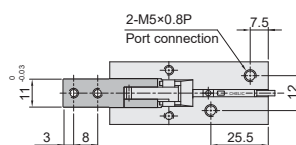
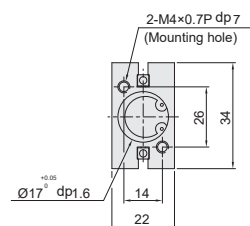
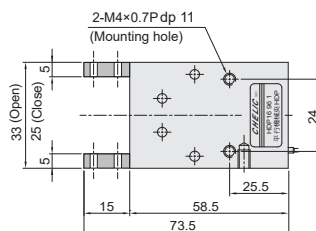
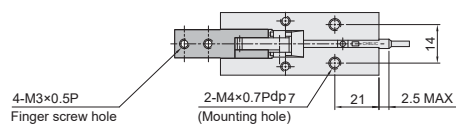
Dimensions

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HDP 10



HDP 16



HDD

HDS

HDM

HDP

HDPM

HDZ

HDZL

HDZM

HDW

HDWM

HMW

HMG

HMY

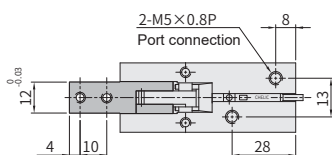
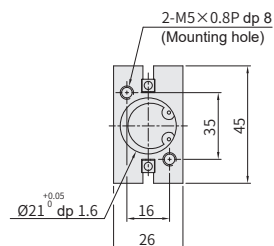
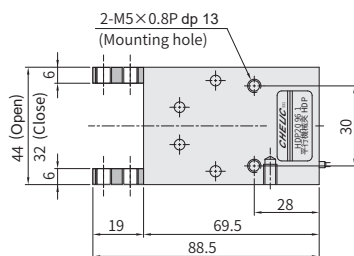
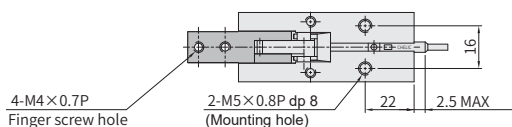
HDU

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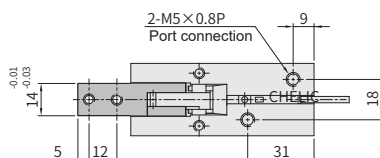
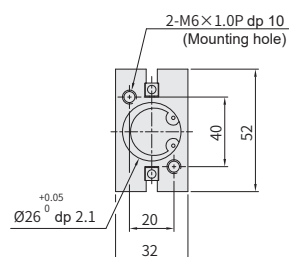
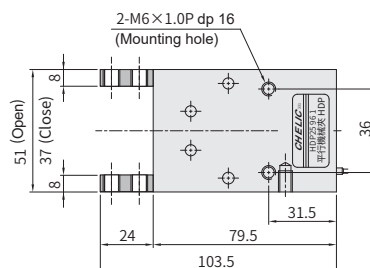
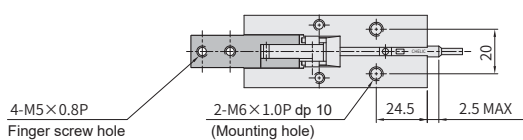
Dimensions

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HDP 20



HDP 25

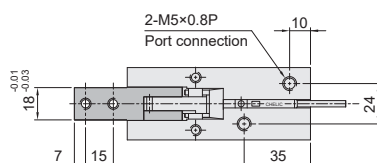
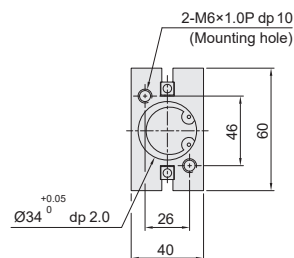
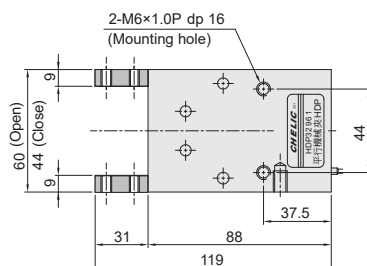
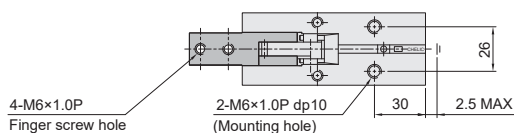


HDP series Parallel Type Air Gripper

Dimensions, Mounting bracket

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HDP 32

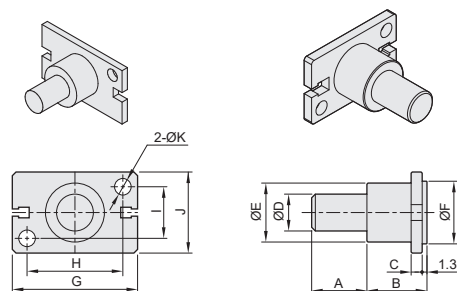


Mounting bracket (Applicable to HDS, HRS, HDP, HDM series)

HM type mounting bracket (Available to internal mounting)

Unit: mm

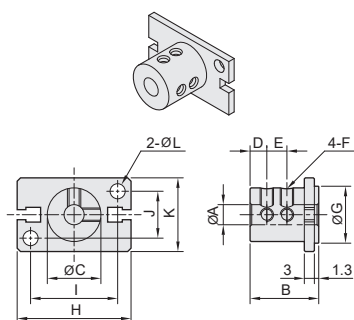
Model \ Mark	A	B	C	D	E	F	G	H	I	J	K
HM 10	10	10	2	8	12	13	27	17	10	16	3.5
HM 16	15	15	3	10	16	17	34	26	14	22	4.5
HM 20	15	15	3	10	18	21	45	35	16	26	5.5
HM 25	25	17	5	14	26	26	52	40	20	32	6.6
HM 32	25	20	6	16	30	34	60	46	26	40	6.6



HB type mounting bracket (Available to external mounting)

Unit: mm

Model \ Mark	A	B	C	D	E	F	G	H	I	J	K	L
HB 16	6	20.5	16	5	6	M4 x 0.7p	17	34	26	14	22	4.5
HB 20	8	20.5	20	7	7	M4 x 0.7p	21	45	35	16	26	5.5
HB 25	10	30.5	25	8	10	M4 x 0.7p	26	52	40	20	32	6.5
HB 32	12	40.5	32	10	15	M4 x 0.7p	34	60	46	26	40	6.5

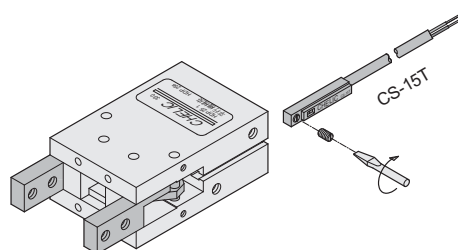
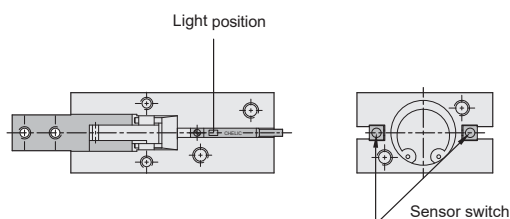


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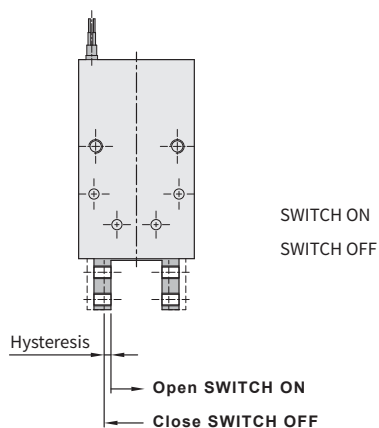
Mounting type and operation of sensor switch

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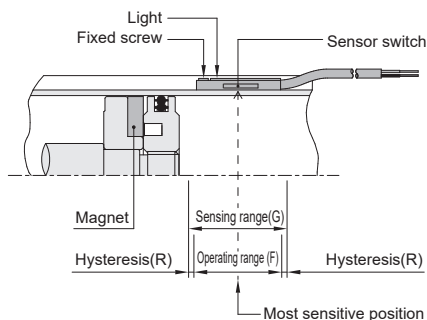
■ Sensor switch installation



● Hysteresis and position adjustment



● Sensor switch setting and operating range



■ Sensing range

Sensor switch is fixed on the cylinder body. The magnetic piston head will activate the sensor switch when it enters the operating range. It has 0.5mm differential.

■ Operating range

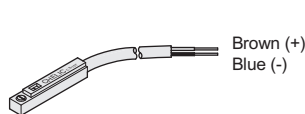
When piston head moves the switch setting and adjustment will be based on the responding range generated by the magnetic field and the switch. (Please refer to the below table)

Unit: mm

Model	CS-15T(B)	
Bore size	Operating range (F)	Hysteresis(R)
10	3	1
16	5	1
20	8.5	1
25	10	1.8
32	10	2

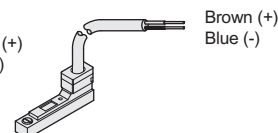
■ Sensor switch introduction

CS-15T



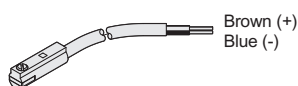
Voltage: DC 5~120V
AC 5~120V

CS-15B



Voltage: DC 5~120V
AC 5~120V

CS-5G



Voltage: DC 5~30V