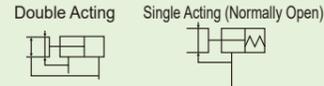




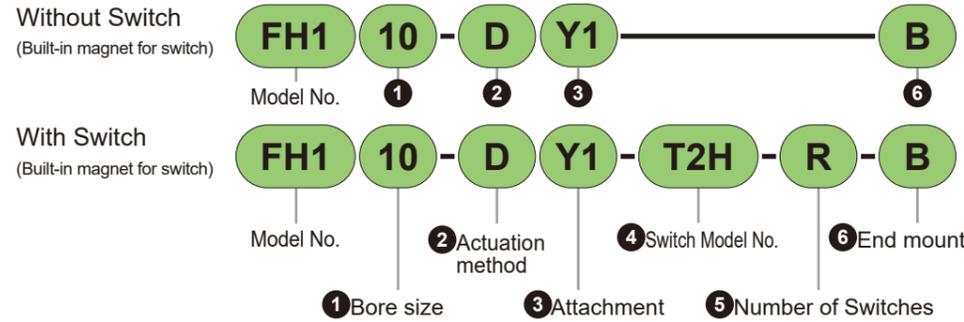
Feather Gripper (Mini Parallel Gripper) Double Acting Type/Single Acting Type

FH100 Series

● Operating stroke: 8, 11, 15, 18, 20 mm



Model No. Notation Method



① Bore Size (mm)

Code	Content
10	φ10
12	φ12
16	φ16
20	φ20
25	φ25

② Actuation method

Code	Content
D	Standard (Double Acting Type)
O	Single Acting (Normally Open)
Z	Double Acting Type with Built-in Speed Controller

③ Attachment

Code	Content
Blank	Without attachments
Y1	With attachments: Material (Steel)
Y2	With attachments: Material (MC Nylon)

Note) For the outline dimensions and compatible models of the attachments, refer to P. 334 and 335. When ordered as an option, it will be shipped pre-assembled with a quantity of 2.

④ Switch Model No.

For switch details, please refer to P. 573. Switches are included with the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead Wire *1	
			AC	DC	AC	DC	Straight	L-shape
Solid State	1-Color	2-wire	-	10 to 30	-	5 to 20 *2	T2H□	T2V□
	1-Color Flex-Resistant Lead Wire	2-wire	-	10 to 30	-	5 to 20 *2	T2HR3	T2VR3
	1-Color	3-wire (NPN)	-	30 or less	-	100 or less	T3H□	T3V□
		3-wire (PNP)	-		T3PH□		T3PV□	

*1: For "□" in the switch model No., enter the code selected from the "Lead wire length" table.

*2: The maximum load current value above, 20 mA, is at 25 °C. If the switch operating ambient temperature is higher than 25 °C, it will be lower than 20 mA. (At 60 °C, it will be 5 to 10 mA.)

*3: Switches other than the model No.s listed above are also available. (Custom Product) For details, see P. 573.

*Lead wire length

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

Example) Lead wire length
1 m T2H
3 m T2H³
5 m T2H⁵

⑤ Number of Switches

Code	Content
R	With 1 pc. on Open Side
D	With 2 pcs

⑥ End mount

Code	Content
Blank	Without end mount
B	With end mount

Note) For end mount (Model No. B), select the L-shaped lead wire type switch (Model No. T□V). The end mount will be shipped included.

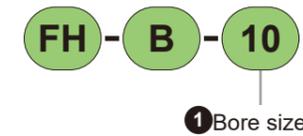
Food Manufacturing Process Compatible Specification

(Catalog No. CC-1271AA)

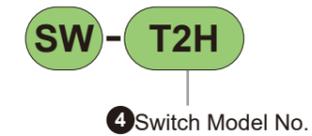
● Uses food grade grease that can be used in food manufacturing processes

FH100- ... - FP1

End Mount Single Item Model No. Notation Method



Switch Single Unit Model No. Notation Method



Hand (Gripper)

LSH-HP

LSH

FH100

BSA2

BHA

BHG

BHE

LHA

LHAG

HAP-1C

HAP-2 to 4CS

HKP

HCP

HGP

LST-HP

HLF2

HLA/HLB

HLAG/HLBG

HLC

HLD

HMC-HP

HMF

HMF-G

HMF-B

HFP

FH500

HBL

HJL

HMD

HDL

HJD

Cylinder Switch

Ending

Hand (Gripper)

LSH-HP

LSH

FH100

BSA2

BHA

BHG

BHE

LHA

LHAG

HAP-1C

HAP-2 to 4CS

HKP

HCP

HGP

LST-HP

HLF2

HLA/HLB

HLAG/HLBG

HLC

HLD

HMC-HP

HMF

HMF-G

HMF-B

HFP

FH500

HBL

HJL

HMD

HDL

HJD

Cylinder Switch

Ending

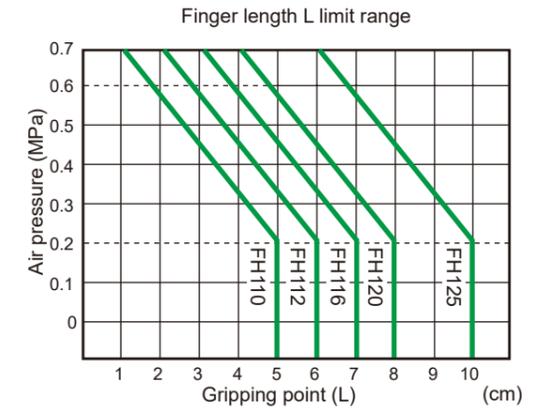
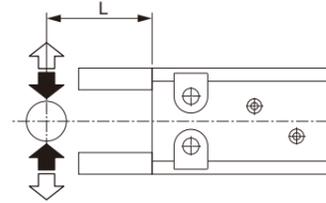
Specifications

Item	FH100									
	FH110-D	FH112-D	FH116-D	FH120-D	FH125-D	FH110-0	FH112-0	FH116-0	FH120-0	FH125-0
Actuation method	Double Acting Type					Single acting type				
Operating Fluid	Compressed Air									
Max. Working Pressure MPa	0.7									
Min. Operating Pressure MPa	0.15					0.25				
Proof Pressure MPa	1.05									
Ambient Temperature °C	5 to 60									
Port Size	M3 x 0.5		M5 x 0.8			M3 x 0.5		M5 x 0.8		
Operating stroke mm	8	11	15	18	20	8	11	15	18	20
Weight g	51	71	124	176	284	51	71	124	177	286
Repeatability mm	±0.03									
Max. operating frequency cycles/sec	3									
Cushion	Open side rubber cushion									

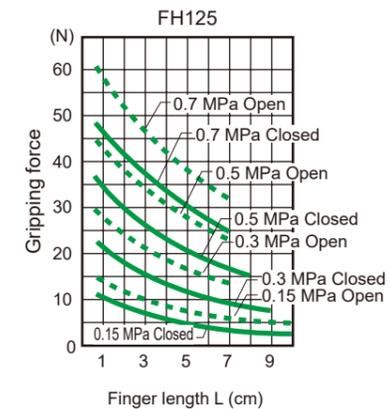
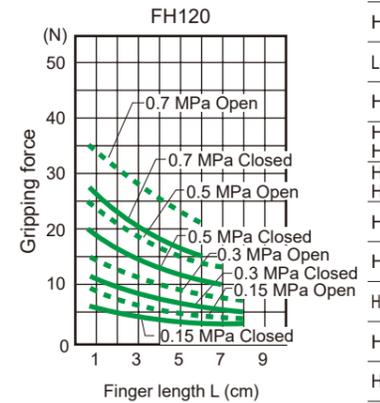
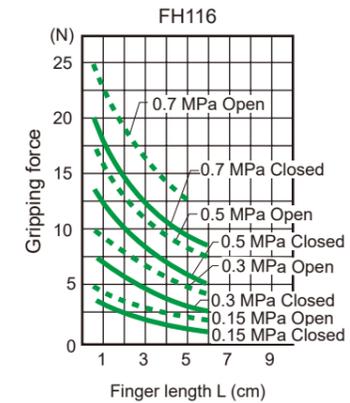
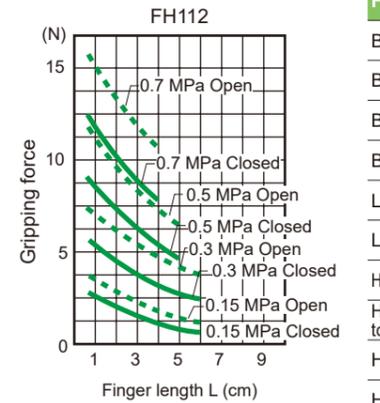
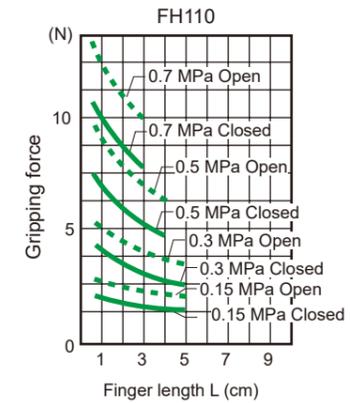
Gripping Force Performance Data

- Gripping force represents the thrust (for one finger) in the direction of the arrow shown in the figure.
- Indicates the gripping force acting in the opening and closing directions at finger length L of the gripper when the supply pressure is 0.15 to 0.7 MPa.

- Open direction (←) - - - (broken line)
- Closing direction (→) — (solid line)



Note) The closing gripping force of the single acting type is 25 to 30 % lower than that of the double acting type. When selecting, check the design and selection precautions on P. 336.

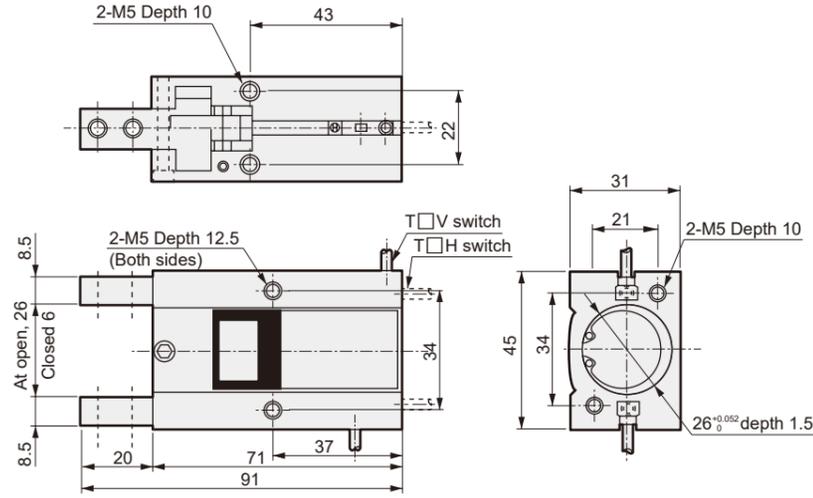


Hand (Gripper)
LSH-HP
LSH
FH100
BSA2
BHA
BHG
BHE
LHA
LHAG
HAP-1C
HAP-2 to 4CS
HKP
HCP
HGP
LST-HP
HLF2
HLA/HLB
HLAG/HLBG
HLC
HLD
HMC-HP
HMF
HMF-G
HMF-B
HFP
FH500
HBL
HJL
HMD
HDL
HJD
Cylinder Switch
Ending

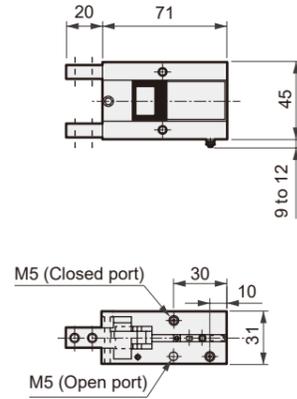
Hand (Gripper)
LSH-HP
LSH
FH100
BSA2
BHA
BHG
BHE
LHA
LHAG
HAP-1C
HAP-2 to 4CS
HKP
HCP
HGP
LST-HP
HLF2
HLA/HLB
HLAG/HLBG
HLC
HLD
HMC-HP
HMF
HMF-G
HMF-B
HFP
FH500
HBL
HJL
HMD
HDL
HJD
Cylinder Switch
Ending

Outline Dimension Drawing

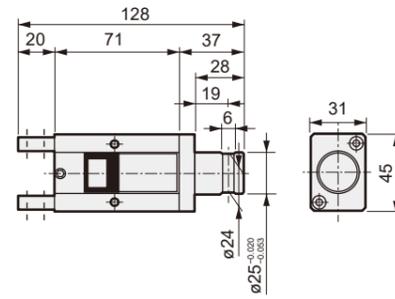
●FH125-D, FH125-O



●With Speed Controller (FH125-Z)



●With end mount

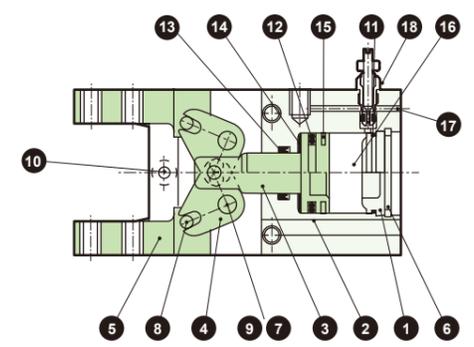
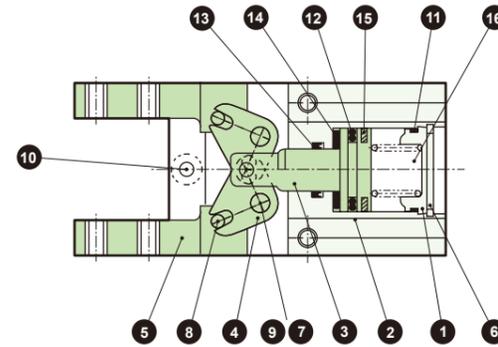


Internal Structure Diagram/Material

Internal Structure Diagram/Material

●Standard (double acting), O (normally open) type

●With Speed Controller



Do not disassemble

No.	Part Name	Material	Remarks	No.	Part Name	Material	Remarks
1	Cover	Polyacetal Resin		10	Hexagon Socket Head Cap Screw	Alloy Steel	
2	Body	Aluminum Alloy	Lubricated Alumite	11	Gasket	Nitrile Rubber	
3	Piston	Stainless Steel		12	Piston Packing	Nitrile Rubber	
4	Arm	Stainless Steel	Heat treatment	13	Rod Packing	Nitrile Rubber	
5	Finger	Stainless Steel		14	Cushion	Urethane Rubber	
6	Retaining ring	Stainless Steel		15	Magnet		
7	Pivot Shaft	Alloy Steel	Heat treatment	16	Coil Spring	Stainless Steel	O type only
8	Operating Shaft	Alloy Steel	Heat treatment	17	Steel ball	Stainless Steel	
9	Hexagon socket head set screw	Alloy Steel		18	Speed Controller		

Hand (Gripper)
LSH-HP
LSH
FH100
BSA2
BHA
BHG
BHE
LHA
LHAG
HAP-1C
HAP-2 to 4CS
HKP
HCP
HGP
LST-HP
HLF2
HLA/HLB
HLAG/HLBG
HLC
HLD
HMC-HP
HMF
HMF-G
HMF-B
HFP
FH500
HBL
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HMD
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HJD
Cylinder Switch
Ending

Hand (Gripper)
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Cylinder Switch
Ending