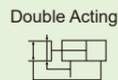




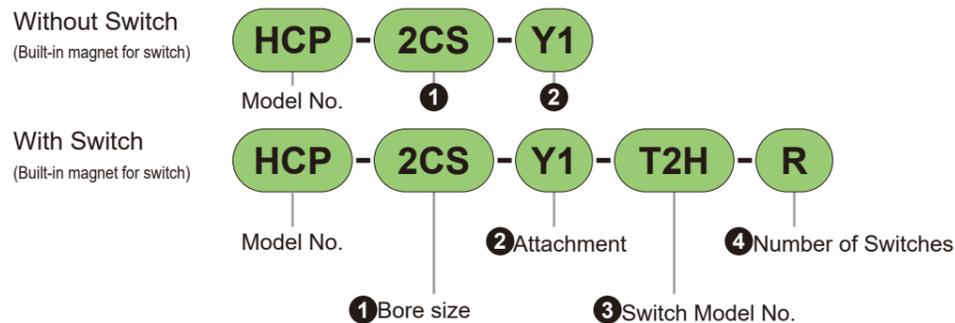
Horizontal Parallel Gripper Double Acting Type

HCP Series

● Operating stroke: 20, 30, 40 mm



Model No. Notation Method



① Bore Size (mm)

Code	Content
2CS	ø12
3CS	ø20
4CS	ø32

② Attachment

Code	Content
Blank	Without attachments
Y1	With attachments: Material (S50C)
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.

③ 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□
							T2HR3	T2VR3
	1-Color Flexible Lead Wire	2-wire	-	10 to 30	-	5 to 20 *2	T3H□	T3V□
							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

④ Number of Switches

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

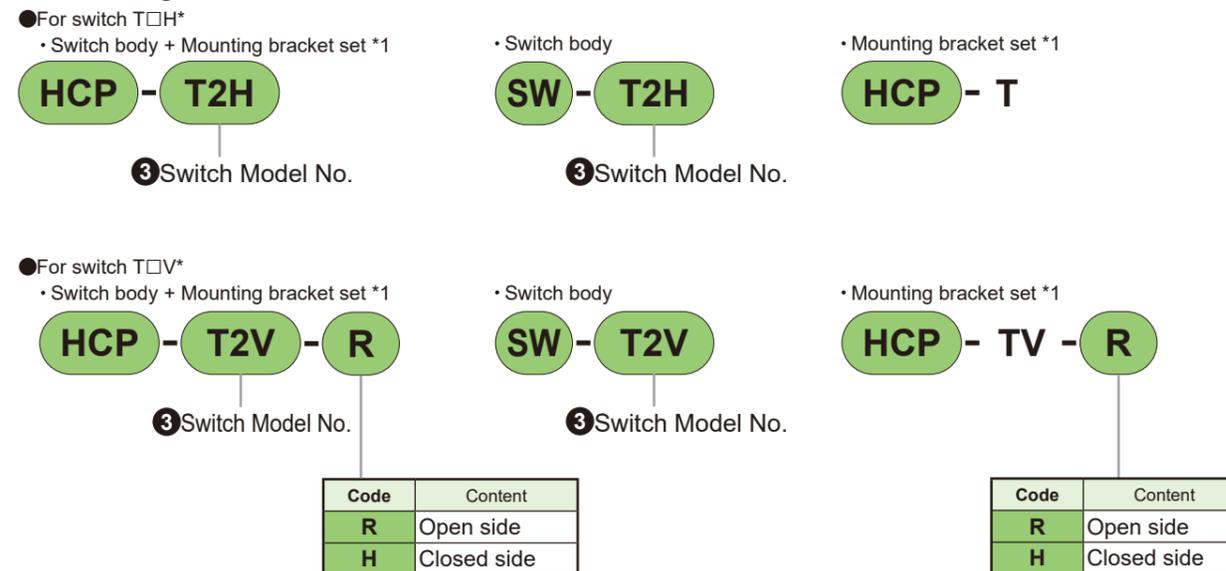
Rechargeable Battery Compatible Specification (Catalog No. CC-1226AA)

● Design compatible with rechargeable battery manufacturing process

HCP- ... - P4□

*Please contact us for details.

Switch Single Unit Model No. Notation Method



*1 The weight of the switch mounting bracket is 1.5 g.

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
HMFB
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
HMFB
HFP
FH500
HBL
HJL
HMD
HDL
HJD
Cylinder Switch
Ending

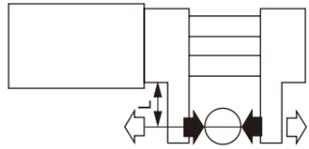
Specifications

Item	HCP-2CS	HCP-3CS	HCP-4CS
Bore size	mm $\phi 12$	$\phi 20$	$\phi 32$
Actuation method	Double Acting Type		
Operating Fluid	Compressed Air		
Max. Working Pressure	MPa 0.7		
Min. Operating Pressure	MPa 0.3		
Ambient Temperature	$^{\circ}\text{C}$ 5 to 60		
Port Size	M5		Rc1/8
Operating stroke	mm 20	30	40
Rod diameter	mm $\phi 10$	$\phi 12$	$\phi 16$
Internal volume (reciprocating)	cm ³ 2.3	9.4	32.1
Repeatability	mm	± 0.05	
Weight	kg 0.52	0.98	1.90
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)		

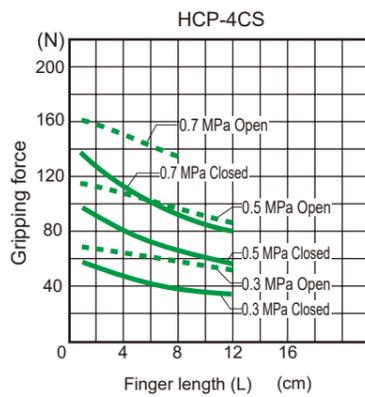
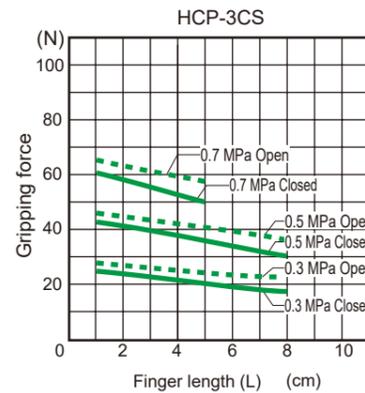
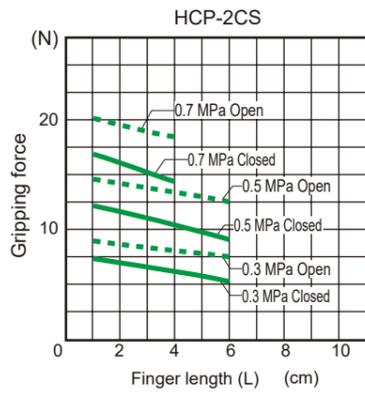
Gripping Force Performance Data

- Gripping force represents the thrust (for one finger) in the direction of the arrow shown in the figure.
- The gripping force in the opening/closing directions with finger length L of hand with a supply pressure of 0.3, 0.5 and 0.7 MPa is shown.

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

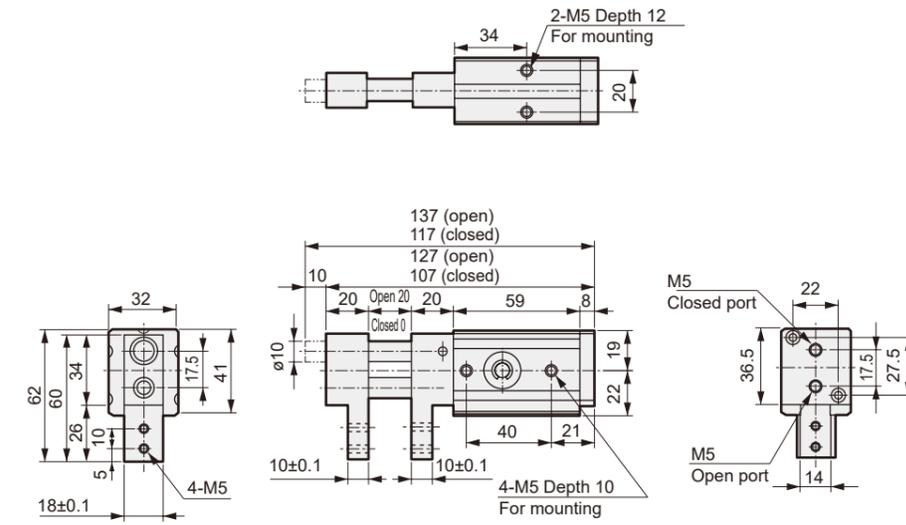


Note) When selecting, check the design and selection precautions on P. 336.

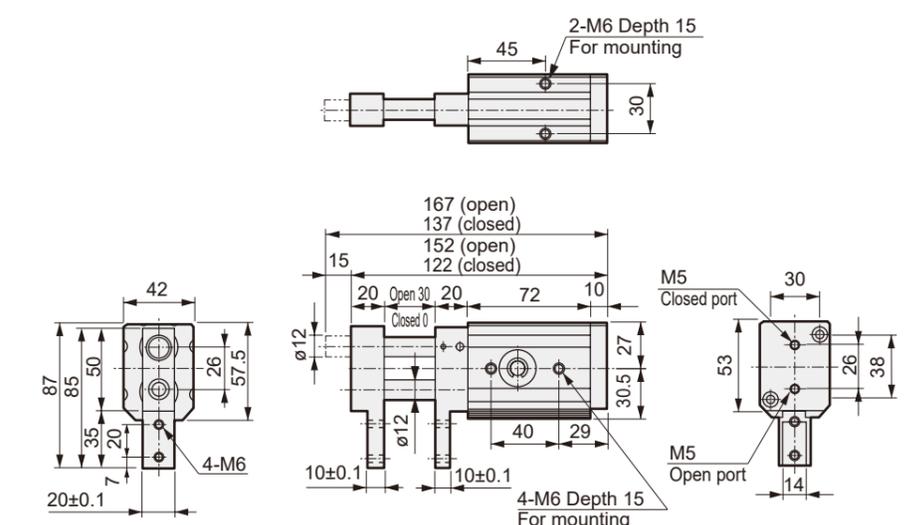


Outline Dimension Drawing

● HCP-2CS Standard



● HCP-3CS Standard



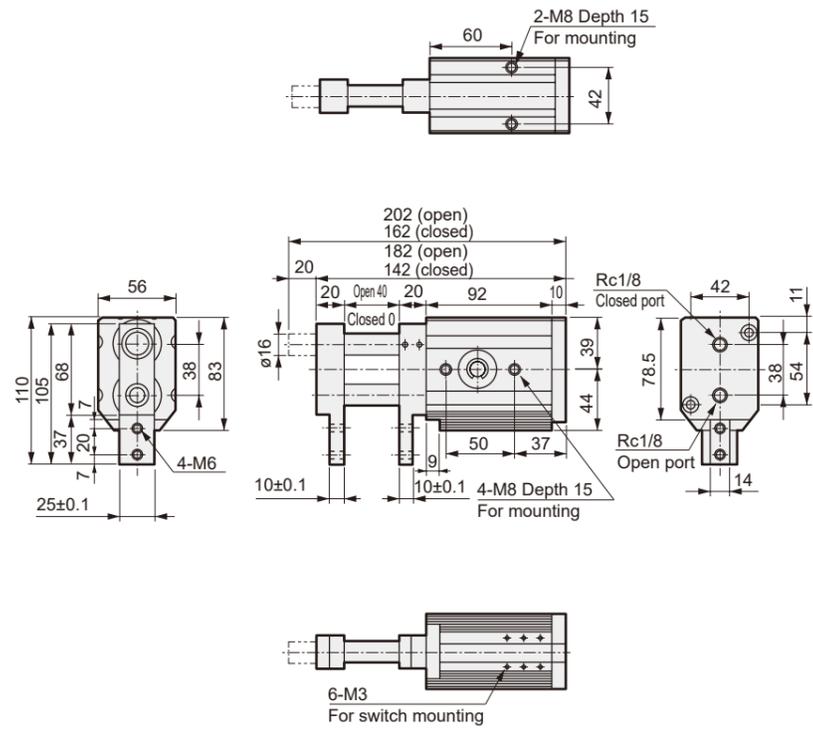
Hand (Gripper)

LSH-HP
LSH
FH100
BSA2
BHA
BHG
BHE
LHA
LHAG
HAP-1C
HAP-2 to 4CS
HKP

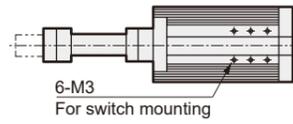
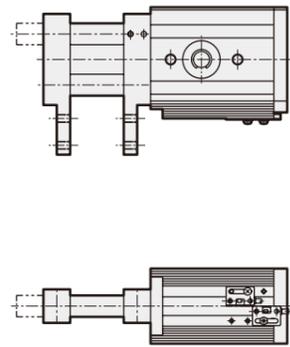
HCP
HGP
LST-HP
HLF2
HLA/HLB
HLAG/HLBG
HLC
HLD
HMC-HP
HMF
HMF-G
HMF-B
HFP
FH500
HBL
HJL
HMD
HDL
HJD
Cylinder Switch
Ending

Outline Dimension Drawing

●HCP-4CS Standard

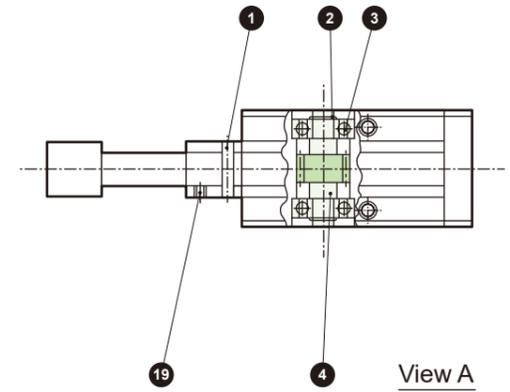
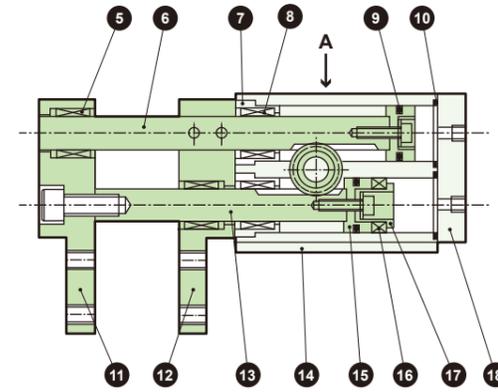


●With Switch



Internal Structure Diagram/Material

Internal Structure Diagram/Material



Do not disassemble

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Spring Pin	Steel		11	Finger B	Steel	
2	Grip retaining ring	Steel		12	Finger A	Steel	
3	Bearing	Steel		13	Piston Rod B	Stainless Steel	
4	Pinion gear	Stainless Steel		14	Body	Aluminum Alloy	
5	Needle bearing	Steel		15	Piston A	Aluminum Alloy	
6	Piston Rod A	Stainless Steel		16	Magnet		
7	Rod Cover	Aluminum Alloy		17	Piston B	Polyacetal	
8	Needle bearing	Steel		18	Head Cover	Aluminum Alloy	
9	Piston Packing	Nitrile Rubber		19	Hexagon socket head set screw	Alloy Steel	
10	Gasket	Nitrile Rubber					

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