

Lateral parallel hand Double acting

# HCP Series

● Operating stroke length: 20, 30, 40 mm

Double acting



## Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	HCP		
	2CS	3CS	4CS
Size	2CS	3CS	4CS
Bore size mm	ø12	ø20	ø32
Actuation	Double acting		
Working fluid	Compressed air		
Max. working pressure MPa	0.7 (≈101 psi, 7 bar)		
Min. working pressure MPa	0.3 (≈44 psi, 3 bar)		
Ambient temperature °C	5 (41°F) to 60 (140°F)		
Port size	M5		Rc1/8
Operating stroke length mm	20	30	40
Rod diameter mm	ø10	ø12	ø16
Volumetric capacity (reciprocating) cm <sup>3</sup>	2.3	9.4	32.1
Repeatability mm	±0.05		
Weight kg	0.52	0.98	1.90
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)		

## Switch specifications

Item	Proximity 2-wire	Proximity 3-wire
	T2H, T2V	T3H, T3V
Applications	Dedicated for programmable controller	For programmable controller, relay
Output method	-	NPN output
Power supply voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20 mA (*1)	30 VDC or less, 100 mA or less
Display lamp	LED (Lit when ON)	
Leakage current	1 mA or less	10 µA or less
Weight	1 m: 18 g 3 m: 49 g 5 m: 80 g	

\*1: The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

\*2: Refer to Ending Page 1 for detailed switch specifications and dimensions.

- LCM
- LCR
- LCG
- LCW
- LCX
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK\*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- UB
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCS2
- RCC2
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3\*
- NHS
- HRL
- LN
- Hand**
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending
- LSH-HP
- LSH
- FH100
- BSA2
- BHA/BHG
- LHA
- LHAG
- HAP
- HKP
- HCP**
- HGP
- HLF2
- HLA/HLB
- HLAG/HLBG
- HLC
- HLD
- HMF
- HMF-G
- HMFB
- HFP
- FH500
- HBL
- HJL
- HMD
- HDL
- HJD
- BHE

## How to order

Without switch (built-in magnet for switch)

**HCP - 2CS - Y1**

With switch (built-in magnet for switch)

**HCP - 2CS - Y1 - T2H - R**

**A** Size

**B** Option  
\*1, \*2

**C** Switch model No.

**D** Switch quantity

Code	Description					
<b>A Size</b>						
2CS						
3CS						
4CS						
<b>B Option</b>						
Blank	Standard (double acting)					
Y1	With attachment (S50C)					
Y2	With attachment (MC nylon)					
<b>C Switch model No.</b>						
Lead wire	Lead wire	Contact	Voltage		Display	Lead wire
Straight	Radial		AC	DC		
T2H*	T2V*	Proximity	●	1-color	2-wire	3-wire
T3H*	T3V*		●	display		
<b>* Lead wire length</b>						
Blank	1 m (standard)					
3	3 m (option)					
5	5 m (option)					
<b>D Switch quantity</b>						
R	1 on open side					
H	1 on closed side					
D	2					

### ⚠ Precautions for model No. selection

\*1: Refer to pages 1762 and 1763 for the dimensions and compatible models of the attachment. When ordered as an option, two are included at shipment.

[Example of model No.]

**HCP-2CS-Y1-T2H-R**

Model: Lateral parallel hand

- A** Size : 2CS
- B** Option : With attachment, material S50C
- C** Switch model No.: Proximity T2H switch, lead wire 1 m
- D** Switch quantity : One on open side

### How to order switch

- For switch T\*H\*
  - Switch body + mounting bracket set

**HCP - T2H**

Switch model No.  
(Item © above)

- Switch body

**SW - T2H**

Switch model No.  
(Item © above)

- Mounting bracket set

**HCP - T**

- For switch T\*V\*
  - Switch body + mounting bracket set

**HCP - T2V - \***

Switch model No.  
(Item © above)

- Switch body

**SW - T2V**

Switch model No.  
(Item © above)

- Mounting bracket set

**HCP - TV - \***

(Select either R (open side) or H (closed side) for sections marked with an asterisk (\*).)

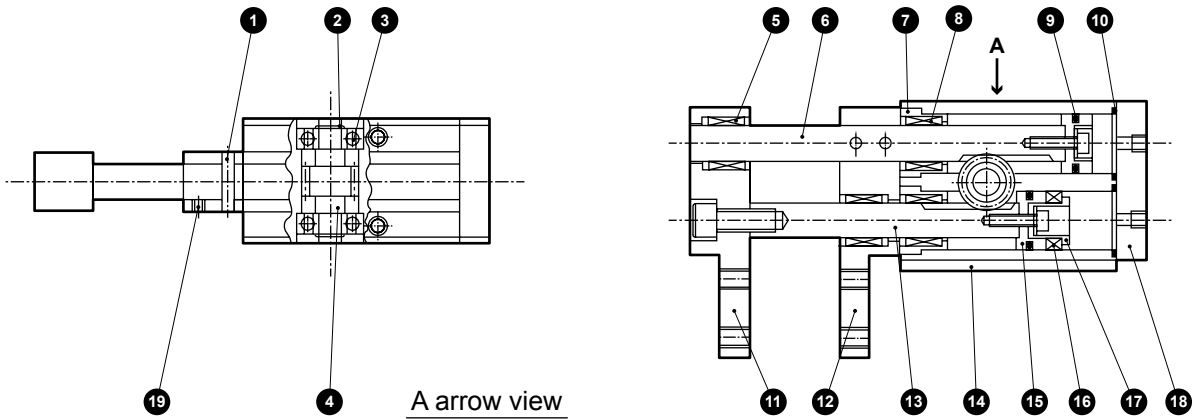
### Specifications for rechargeable battery (Catalog No. CC-1226A)

**HCP - ... - P4\*** ● Design compatible with rechargeable battery manufacturing process.

\* Contact CKD for details.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
<b>Hand</b>
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending
LSH-HP
LSH
FH100
BSA2
BHA/BHG
LHA
LHAG
HAP
HKP
<b>HCP</b>
HGP
HLF2
HLA/HLB
HLAG/HLBG
HLC
HLD
HMF
HMF-G
HMFB
HFP
FH500
HBL
HJL
HMD
HDL
HJD
BHE

## Internal structure and parts list

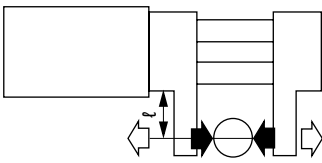


**Cannot be disassembled**

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Spring pin	Steel		10	Cylinder gasket	Nitrile rubber	
2	Grip snap ring	Steel		11	Finger B	Steel	
3	Bearing	Steel		12	Finger A	Steel	
4	Pinion gear	Stainless steel		13	Piston rod B	Stainless steel	
5	Needle bearing	Steel		14	Body	Aluminum alloy	
6	Piston rod A	Stainless steel		15	Piston A	Aluminum alloy	
7	Rod cover	Aluminum alloy		16	Magnet		
8	Needle bearing	Steel		17	Piston B	Acetal resin	
9	Piston packing	Nitrile rubber		18	Head cover	Aluminum alloy	
				19	Hexagon socket set screw	Steel alloy	

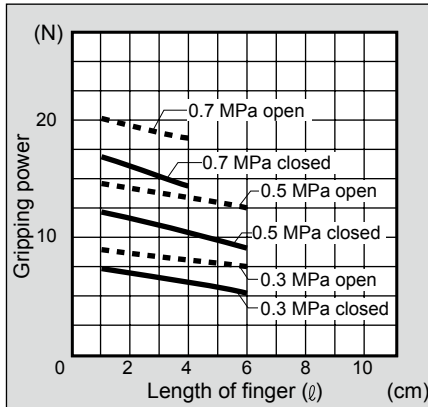
## Gripping power performance data

- Gripping power represents the thrust (per one finger) in the arrow direction shown in the figure.
- The gripping power in the opening/closing directions with finger length  $l$  of the hand with a supply pressure of 0.3, 0.5 and 0.7 MPa is shown.
- Open direction (↔)----- (shown with broken line)
- Closed direction (→)————— (shown with continuous line)

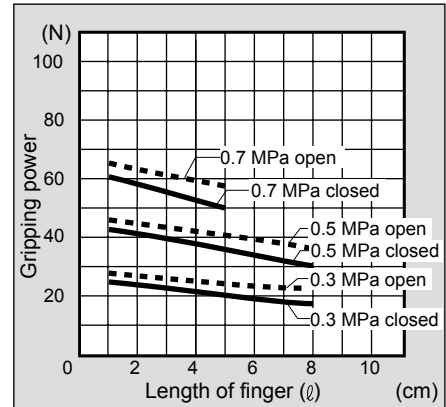


(Note) For selection, see page 1764 for design and selection precautions.

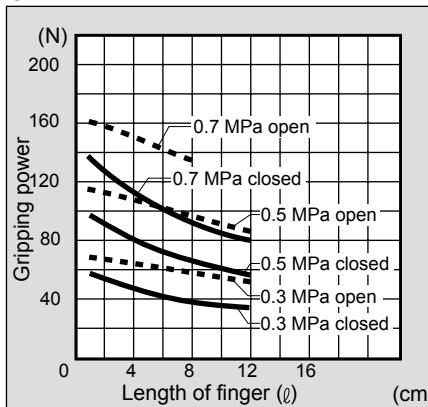
### ● HCP-2CS



### ● HCP-3CS

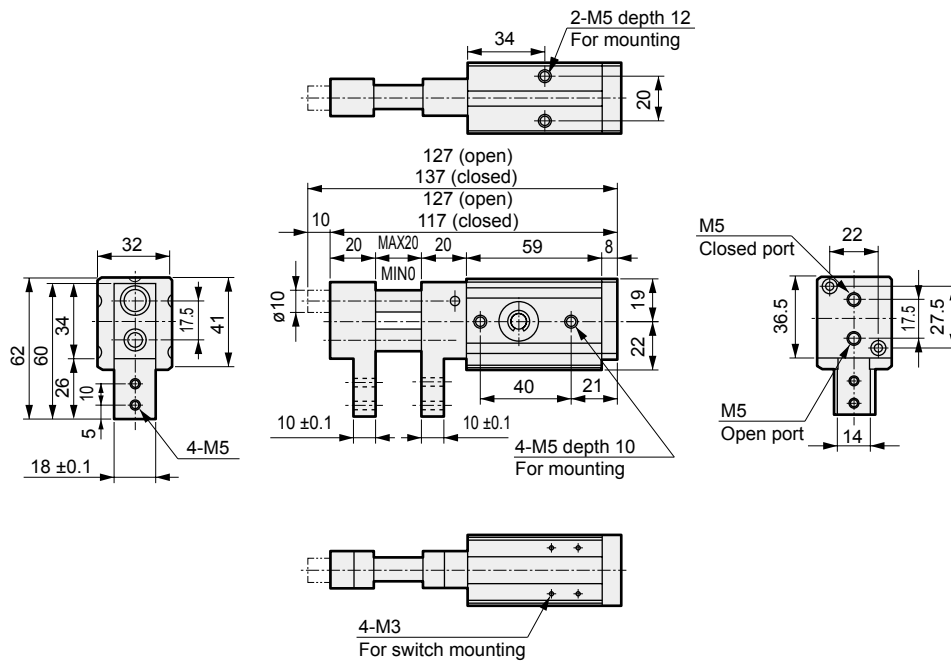


### ● HCP-4CS

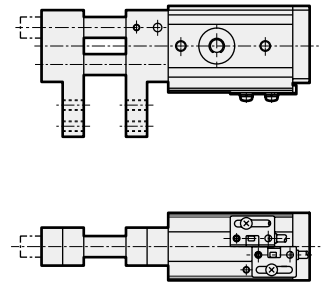


## Dimensions

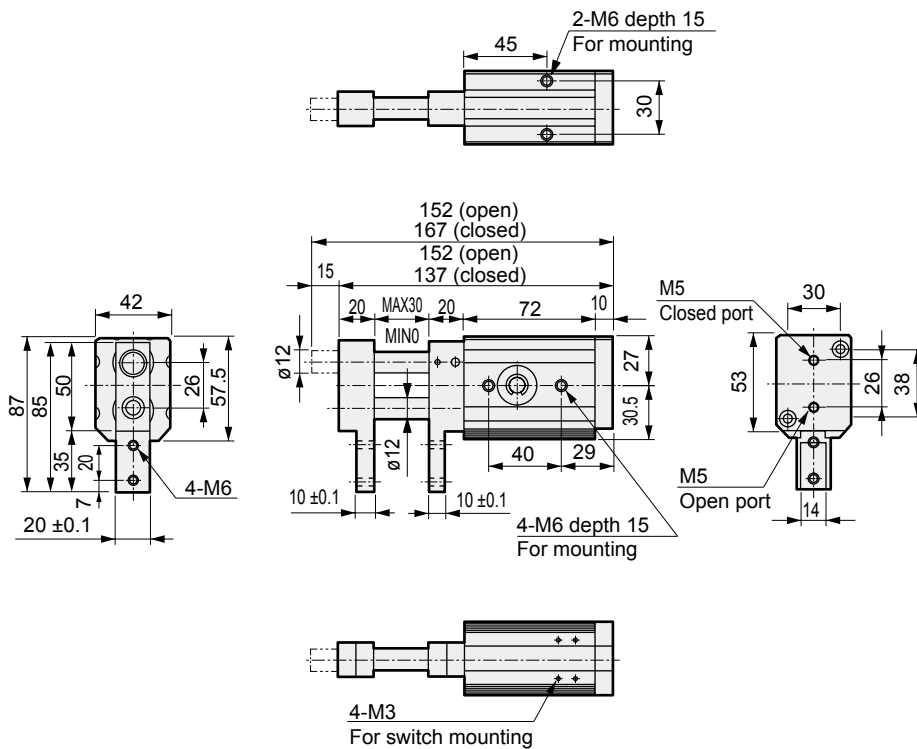
### ● HCP-2CS Standard



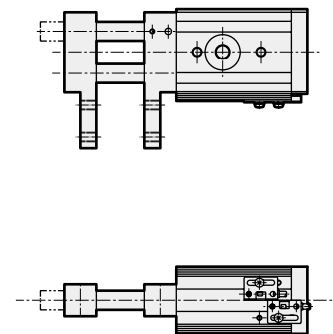
### ● With switch



### ● HCP-3CS Standard



### ● With switch



LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN

<b>Hand</b>
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr

### Ending

LSH-HP
LSH
FH100
BSA2
BHA/BHG
LHA
LHAG
HAP
HKP
<b>HCP</b>
HGP
HLF2
HLA/HLB
HLAG/HLBG
HLC
HLD
HMF
HMF-G
HMFB
HFP
FH500
HBL
HJL
HMD
HDL
HJD
BHE

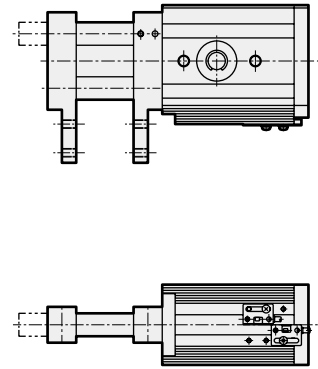
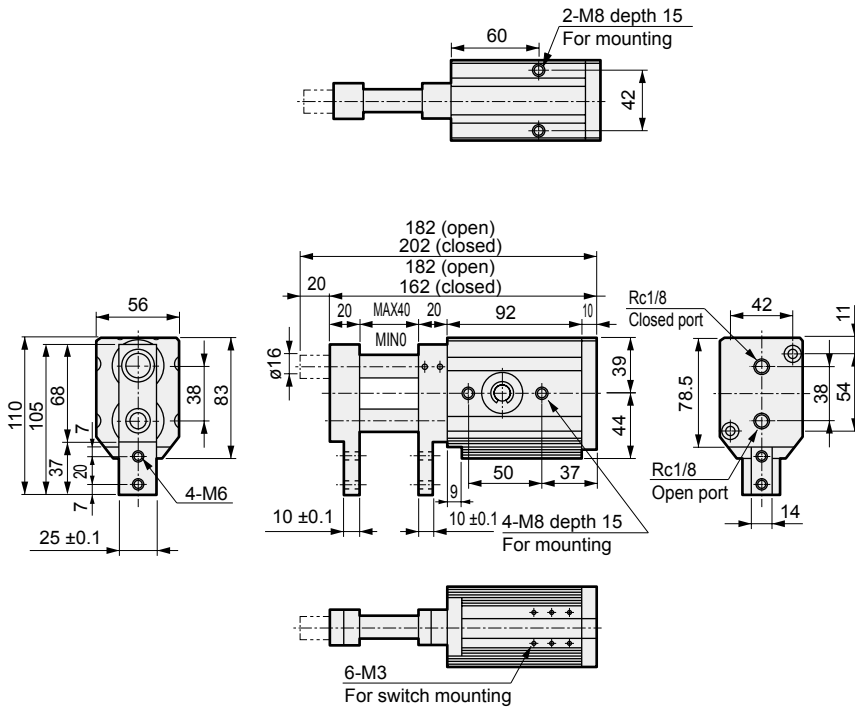
# HCP Series

## Dimensions



● HCP-4CS Standard

● With switch



LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
<b>Hand</b>
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LSH-HP
LSH
FH100
BSA2
BHA/BHG
LHA
LHAG
HAP
HKP
<b>HCP</b>
HGP
HLF2
HLA/HLB
HLAG/HLBG
HLC
HLD
HMF
HMF-G
HMFB
HFP
FH500
HBL
HJL
HMD
HDL
HJD
BHE