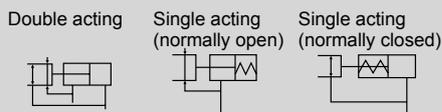




Bearing parallel hand Double acting/single acting

HEP Series

● Operational stroke length: 24, 36, 40, 50, 60 mm



Specifications

Descriptions	HEP				
Size	3.5CS	4CS	5CS	6CS	7CS
Bore size mm	φ 32	φ 50	φ 63	φ 80	φ 100
Actuation	Double acting/single acting				
Working fluid	Compressed air				
Max. working pressure MPa	0.7		0.5		
Min. working pressure MPa	0.3				
Ambient temperature °C	5 to 60				
Port size	M5	Rc1/8		Rc1/4	
Operational stroke length mm	24	36	40	50	60
Rod diameter mm	φ 14	φ 20	φ 24	φ 28	φ 30
Capacity of reciprocating cm ³	17.5	65.0	115.6	236	450
Repeatability mm	± 0.03				
Product weight kg	1.2	3.2	4.7	7.8	11.7
Lubrication	Not required (use turbine oil type 1 ISO VG32 if necessary)				

Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H, T2V	T3H, T3V
Applications	Programmable controller	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 (Note 1)	30 VDC or less, 100 mA or less
Light	LED (ON lighting)	
Leakage current	1 mA or less	10 μA or less
Shock resistance	980 m/s ²	
Lead wire	Standard 1 m (oil resistant vinyl cabtyre cable 2-conductor 0.2 mm ²)	Standard 1 m (oil resistant vinyl cabtyre cable 2-conductor 0.2 mm ²)
Weight	1 m: 18 g 3 m: 49 g 5 m: 80 g	

Note 1: The max. load current above is the value at 25°C for 20 mA.

The current will be lower than 20 mA if operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

Note 2: Refer to Ending 1 for other switch specifications.

Note 3: The weight of switch mounting bracket is 1.5 g.

- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuck
- Mechanical hand and chuck
- Shock absorber
- FJ
- FK
- Speed controller
- Ending
- FH100
- HAP
- BSA2
- BHA/BHG
- LHA
- LHAG
- HKP
- HLA/HLB
- HLAG/HLBG
- HLD
- HEP**
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJD
- HJL
- BHE

How to order

Without switch

HEP - 3.5CS - C

With switch

HEP - 3.5CS - C - T2H - R

A Size

B Option
Note 1
Note 2

C Switch model no.

D Switch quantity

⚠ Note on model no. selection

Note 1: Refer to pages 948 to 949 for the dimensions and applicable model of the small jaw. These are attached at shipment. (When ordered as an option, 2 are included)
Note 2: 6CS and 7CS have no small jaw.

<Example of model number>

HEP-3.5CS-O-T2H-R

Model: Bearing parallel hand

- A Size : 3.5CS
- B Option : Single acting, normally open type
- C Switch model no. : Proximity T2H switch, lead wire 1 m
- D Switch quantity : 1 (on open side)

How to order switch

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

HEP - T2H

Switch model no.
(Section C above)

- Switch body

SW - T2H

Switch model no.
(Section C above)

- Mounting bracket set

HEP - T

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

HEP - T2V - *

Switch model no.
(Section C above)

- Switch body

SW - T2V

Switch model no.
(Section C above)

- Mounting bracket set

HEP - TV - *

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

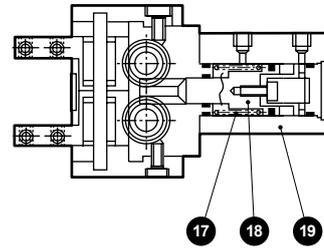
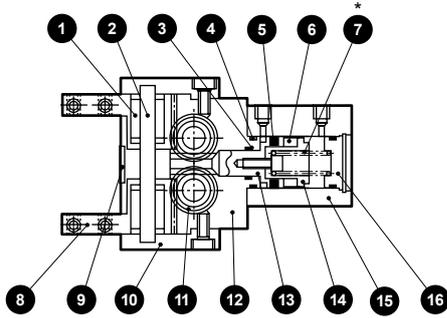
Symbol	Descriptions				
A Size					
3.5CS					
4CS					
5CS					
6CS					
7CS					
B Option					
Blank	Standard (double acting)				
O	Single acting (normally open)				
C	Single acting (normally closed)				
Y1	With small jaw material (S50C)				
Y2	With small jaw material (MC nylon)				
C Switch model no.					
Lead wire straight type	Lead wire L-shaped type	Contact	Voltage AC DC	Display	Lead wire
T2H*	T2V*	Proximity	●	1 color	2 wire
T3H*	T3V*		●	display type	3 wire
* Lead wire length					
Blank	1 m (standard)				
3	3 m (option)				
5	5 m (option)				
D Switch quantity					
R	1 (on open side)				
H	1 (on closed side)				
D	2				

ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuck
Mechanical hand and chuck
Shock absorber
FJ
FK
Speed controller
Ending
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAGHLBG
HLD
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJD
HJL
BHE

Internal structure and parts list

Standard (double acting)/O (normally open) type

C (normally closed) type



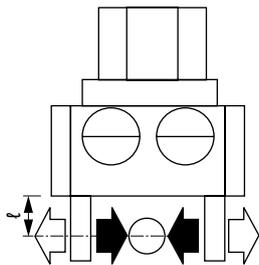
* Spring of (7) is not contained in standard (double acting) type.

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Bearing	Steel		11	Pinion gear	Steel	
2	Guide rod	Alloy steel		12	Body	Aluminum alloy	
3	Rod packing	Nitrile rubber		13	Piston A	Stainless steel	
4	Cylinder gasket	Nitrile rubber		14	Piston B	Stainless steel (4 to 7CS) Acetal resin (3.5CS)	
5	Piston packing	Nitrile rubber		15	Cylinder	Aluminum alloy	
6	Magnet			16	Cylinder cover	Aluminum alloy	
7	Spring	Steel	Only O type	17	Spring	Stainless steel	
8	Master key	Steel		18	Piston	Stainless steel	
9	Center guard	Steel		19	Cylinder	Aluminum alloy	
10	Side cover	Aluminum alloy					

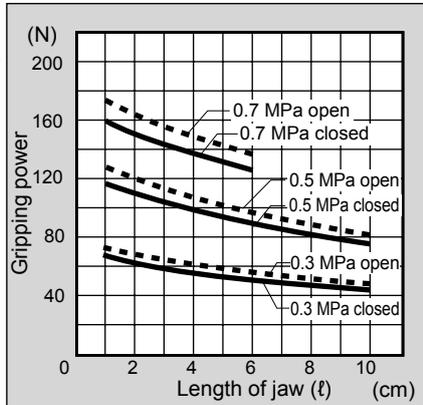
Gripping power performance data

Gripping power that functions to open and closed directions with jaw length of hand at supply pressure 0.3, 0.5 and 0.7 MPa is shown.

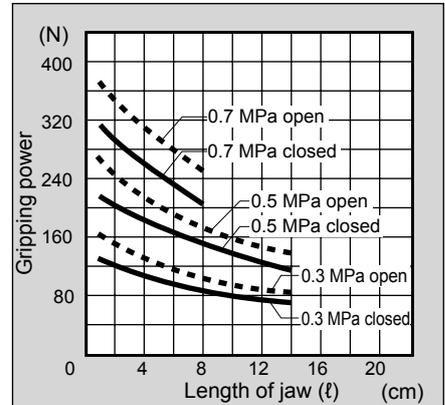
- Open direction (↔) - - - - (shown with broken line)
- Closed direction (→) ——— (shown with continuous line)



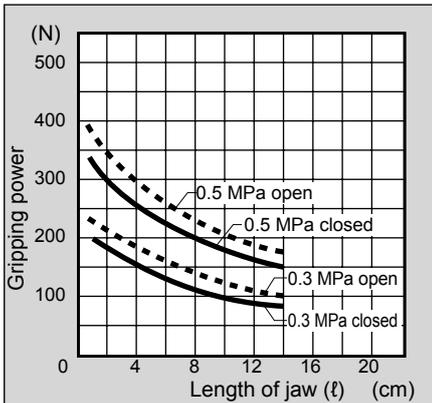
● HEP-3.5CS



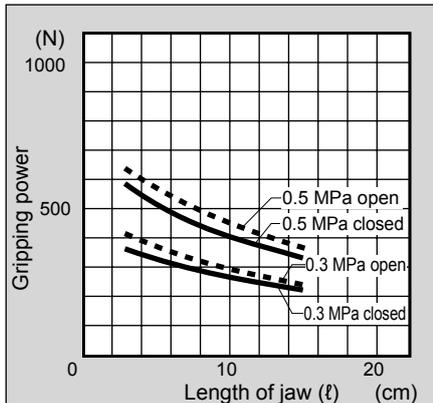
● HEP-4CS



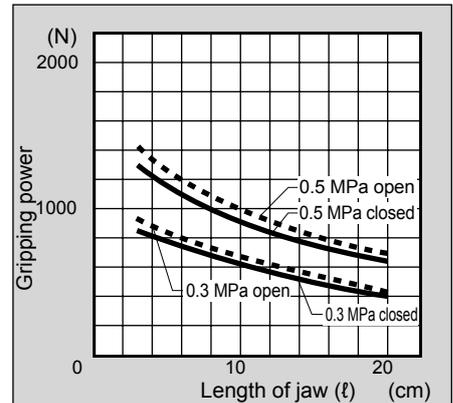
● HEP-5CS



● HEP-6CS



● HEP-7CS



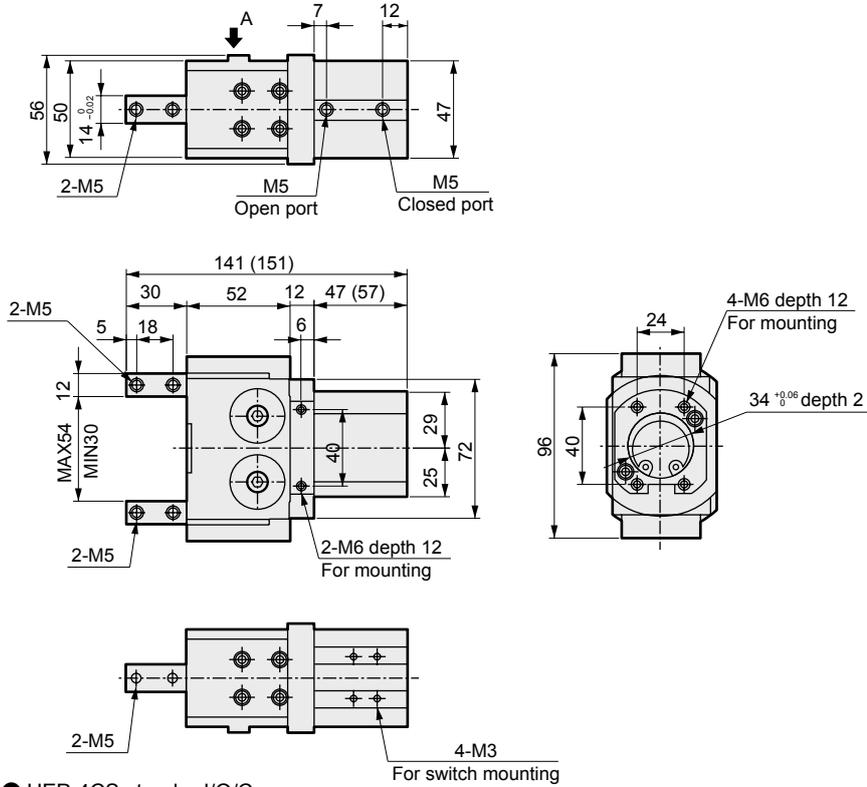
(Note) O type gripping power decreases approximately 20 to 30% in the closed direction compared to double acting type. C type gripping power decreases approximately 10 to 20% in the open direction compared to double acting type.

When selecting, read the precautions for design and selection on page 950.

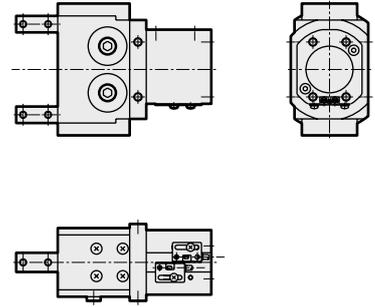
Dimensions

● HEP-3.5CS standard/O/C

● Dimension in () for C (normally closed) specifications

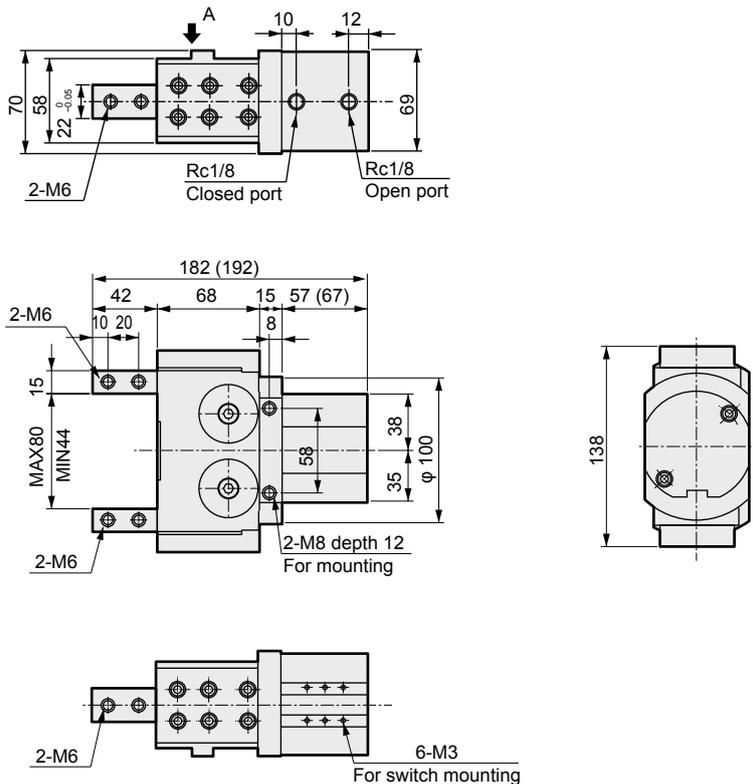


● With switch

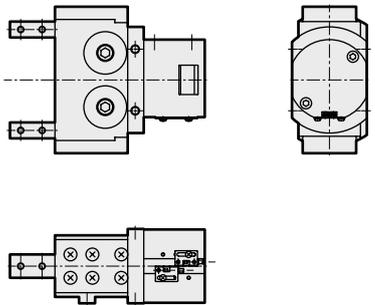


● HEP-4CS standard/O/C

● Dimension in () for C (normally closed) specifications



● With switch



ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuck
Mechanical hand and chuck
Shock absorber
FJ
FK
Speed controller
Ending
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAGHLBG
HLD
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HMFB
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HLC
HGP
FH500
HBL
HDL
HMD
HJD
HJL
BHE

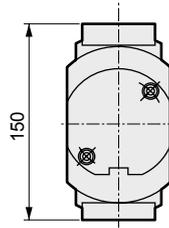
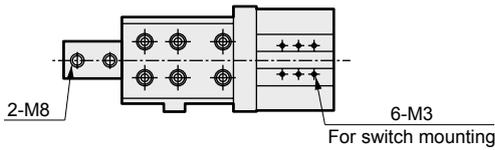
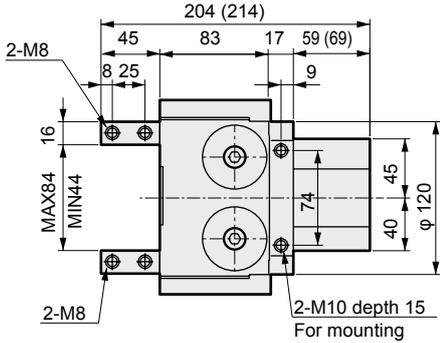
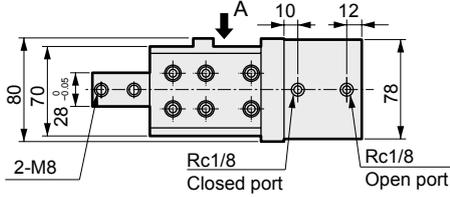
HEP Series

Dimensions

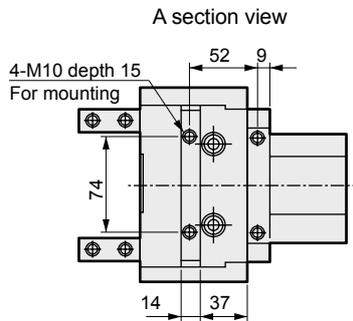
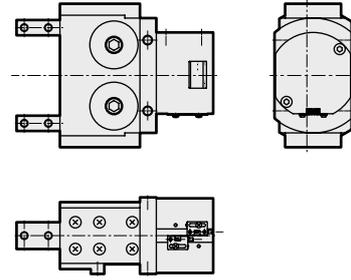


● HEP-5CS standard/O/C

● Dimension in () for C (normally closed) specifications

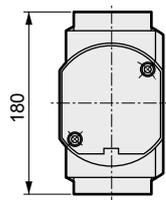
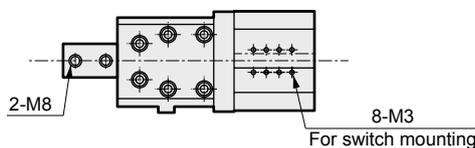
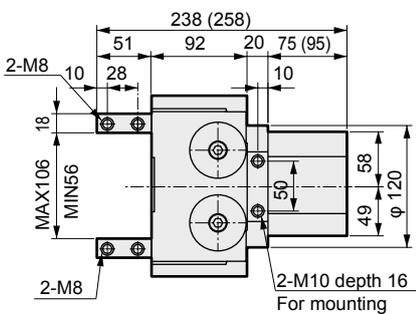
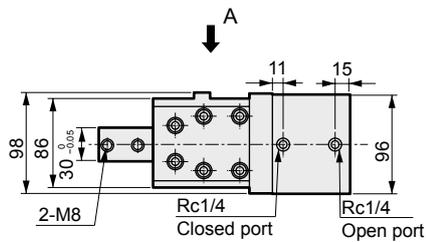


● With switch

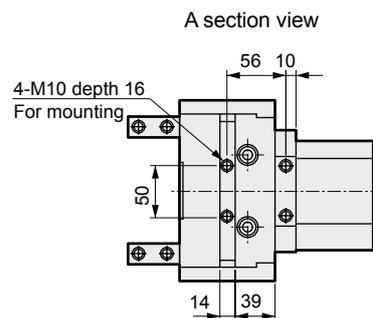
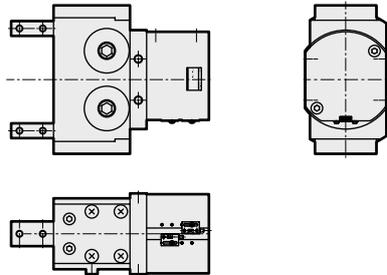


● HEP-6CS standard/O/C

● Dimension in () for C (normally closed) specifications



● With switch



ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN

Hand

Chuck

Mechanical hand and chuck

Shock absorber

FJ

FK

Speed controller

Ending

FH100

HAP

BSA2

BHA/BHG

LHA

LHAG

HKP

HLA/HLB

HLAG/HLBG

HLD

HEP

HCP

HMF

HMFB

HFP

HLC

HGP

FH500

HBL

HDL

HMD

HJD

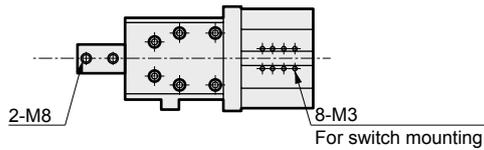
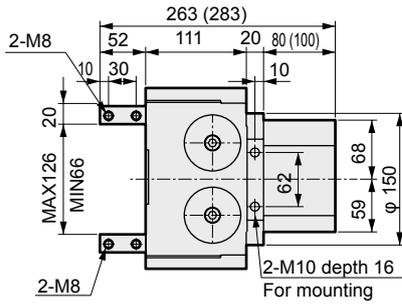
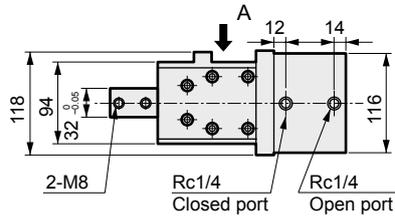
HJL

BHE

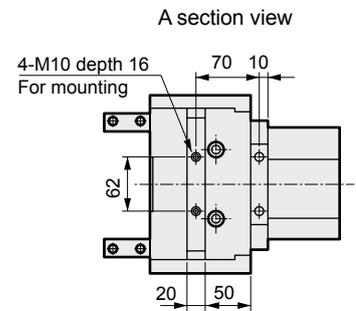
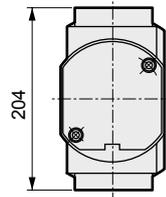
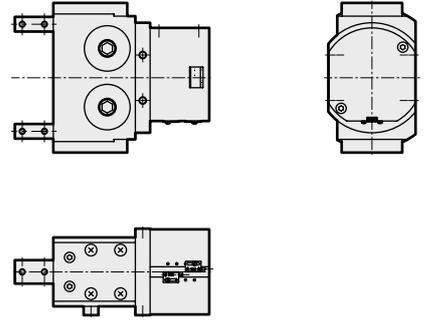
Dimensions

● HEP-7CS standard/O/C

● Dimension in () for C (normally closed) specifications



● With switch



ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuck
Mechanical hand and chuck
Shock absorber
FJ
FK
Speed controller
Ending
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAGHLBG
HLD
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJD
HJL
BHE