



Centering hand

BHE Series

- Operating stroke length: 7, 10, 14, 16, 22 mm

Double acting



Specifications

Item	BHE-01CS	BHE-03CS	BHE-04CS	BHE-05CS	BHE-06CS
Bore size mm	ø12	ø16	ø20	ø25	ø32
Working fluid	Compressed air				
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)				
Min. working pressure MPa	0.2 (≈29 psi, 2 bar)				
Ambient temperature °C	5 (41°F) to 60 (140°F)				
Port size	M3			M5	
Operating stroke length mm	7	10	14	16	22
Rod diameter mm	ø6	ø8	ø10	ø12	ø16
Repeatability mm	±0.01				
Centering precision mm	±0.05 (*1)(*2)				
Weight kg	0.108	0.154	0.260	0.438	1.040
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)				

*1 : Centering precision is the hand edge mounting part spigot center reference.

*2 : The initial value is listed.

Switch specifications

Item	Proximity 2-wire	Proximity 3-wire
	T2H/V	T3H/V
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
Indicator 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.

* The BHE-LN Series with length measuring function (length measuring sensor) is also available. Refer to page 1465 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
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
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SpdContr
Ending
LSH-HP
LSH
FH100
BSA2
BHA/BHG
LHA
LHAG
HAP
HKP
HCP
HGP
HLF2
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HDL
HJD
BHE

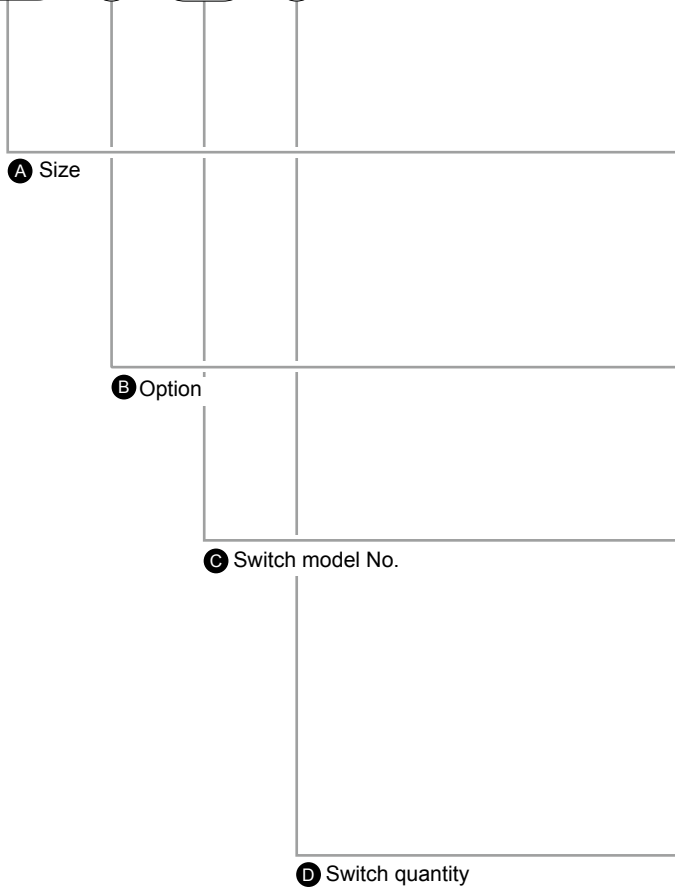
How to order

Without switch (built-in magnet for switch)

BHE - **03CS** - **D**

With switch (built-in magnet for switch)

BHE - **03CS** - **D** - **T2H** - **R**



Code	Description					
A Size						
01CS						
03CS						
04CS						
05CS						
06CS						
B Option						
Blank	Standard					
D	Open stroke adjustment mechanism					
E	Close stroke adjustment mechanism					
DE	Open and close stroke adjustment mechanism					
C Switch model No.						
Axial lead wire	Radial lead wire	Proximity Contact	Voltage		Display	Lead wire
			AC	DC		
T2H*	T2V*			●	1-color	2-wire
T3H*	T3V*			●	display	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					

[Example of model No.]

BHE-03CS-D-T2H-R

- A** Size : 03CS
- B** Option : Open stroke adjustment mechanism
- C** Switch model No.: Proximity T2H switch, lead wire 1 m
- D** Switch quantity : 1 on open side

How to order switch

SW - **T2H**

Switch model No.
(Item **C** above)

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

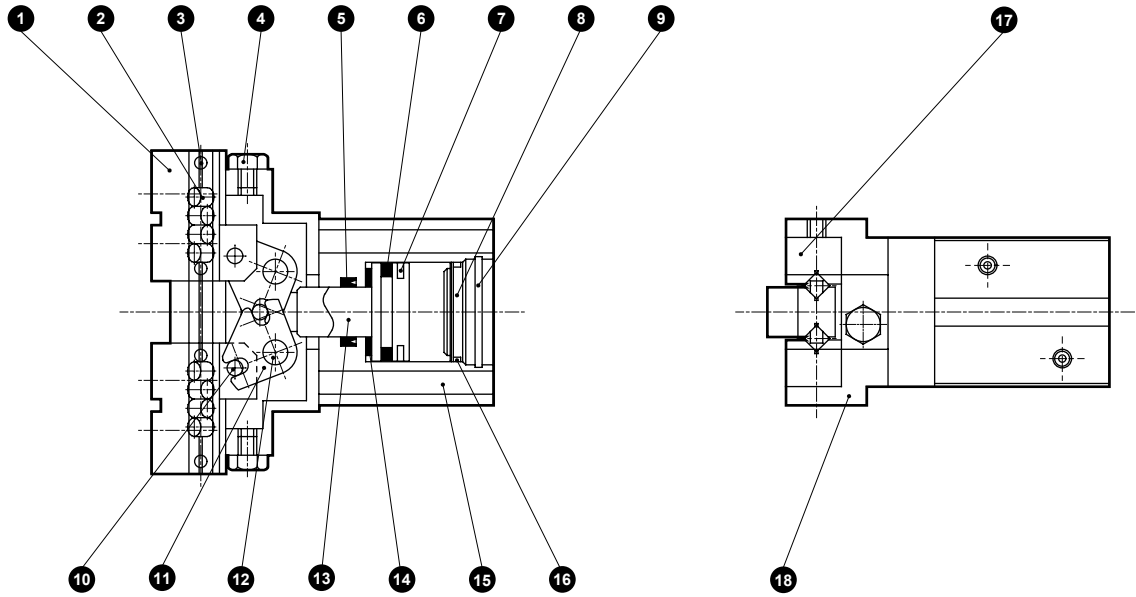
BHE - ... - **P4*** ● Design compatible with rechargeable battery manufacturing process.

* 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
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Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending
LSH-HP
LSH
FH100
BSA2
BHA/BHG
LHA
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HLF2
HLA/HLB
HLAG/HLBG
HLC
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HMFB
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FH500
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HJL
HMD
HDL
HJD
BHE

Internal structure and parts list

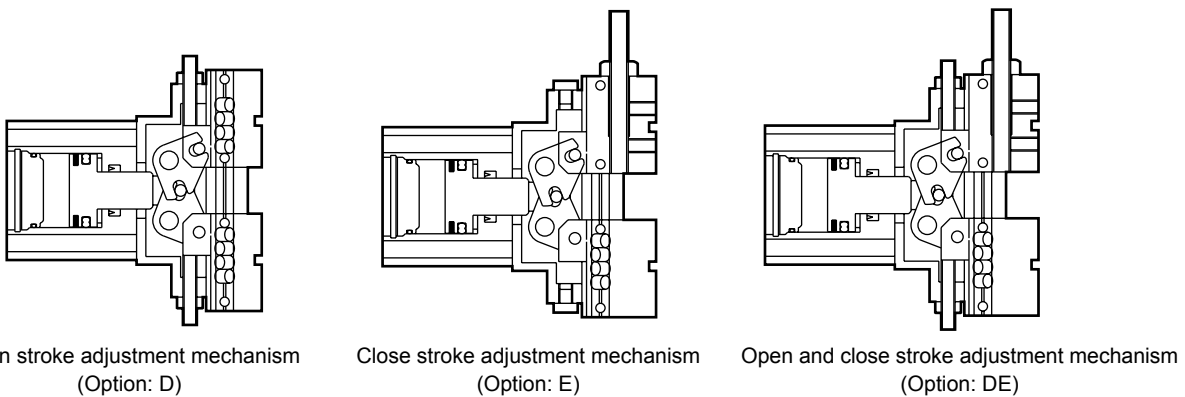
● BHE-01CS to 06CS



Cannot be disassembled

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Finger	Stainless steel		10	Operation shaft	High carbon chrome bearing steel	
2	Cross roller	High carbon chrome bearing steel		11	Arm	Stainless steel	
3	Spring pin	Stainless steel		12	Fulcrum axis	High carbon chrome bearing steel	
4	Plug	Copper alloy		13	Piston	Stainless steel	
5	Rod packing	Nitrile rubber		14	Cushion	Urethane rubber	
6	Piston packing	Nitrile rubber		15	Cylinder	Aluminum alloy	
7	Magnet			16	Cylinder gasket	Nitrile rubber	
8	Cylinder guard	Resin		17	Bearing guide	Stainless steel	
9	Snap ring	Stainless steel		18	Body	Aluminum alloy	

Option internal structure



Open stroke adjustment mechanism
(Option: D)

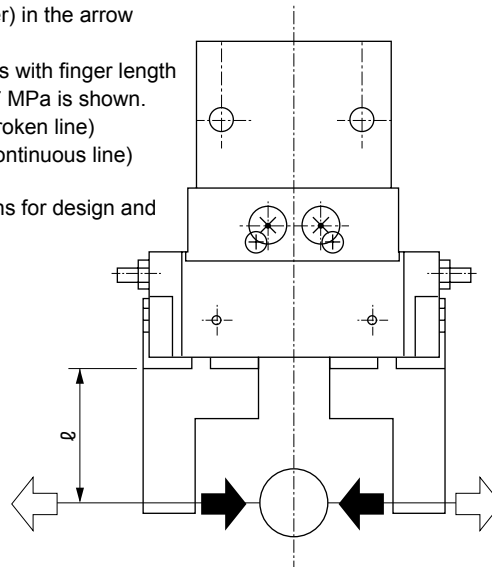
Close stroke adjustment mechanism
(Option: E)

Open and close stroke adjustment mechanism
(Option: DE)

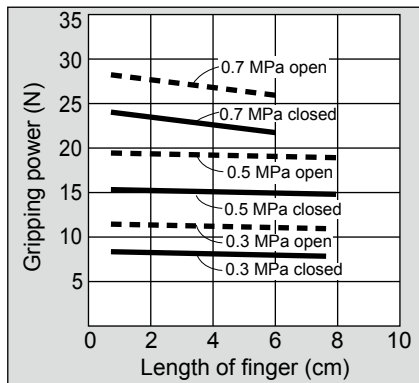
Gripping power performance data

- 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 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)

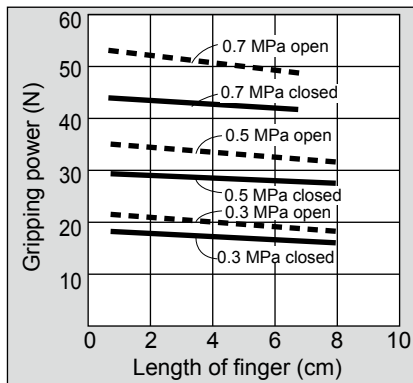
(Note) When making a selection, read the precautions for design and selection on page 1764.



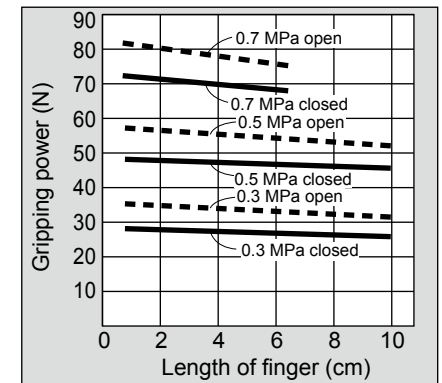
● BHE-01CS



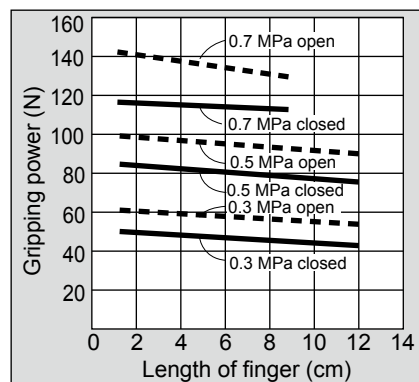
● BHE-03CS



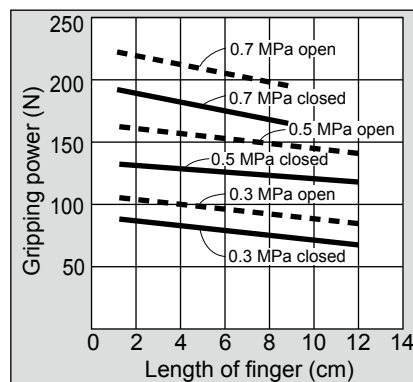
● BHE-04CS



● BHE-05CS



● BHE-06CS

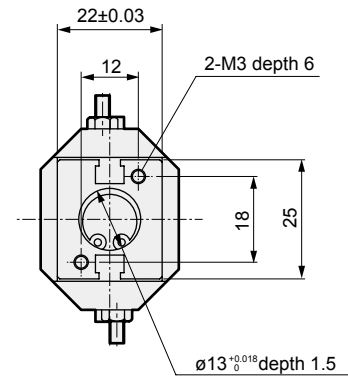
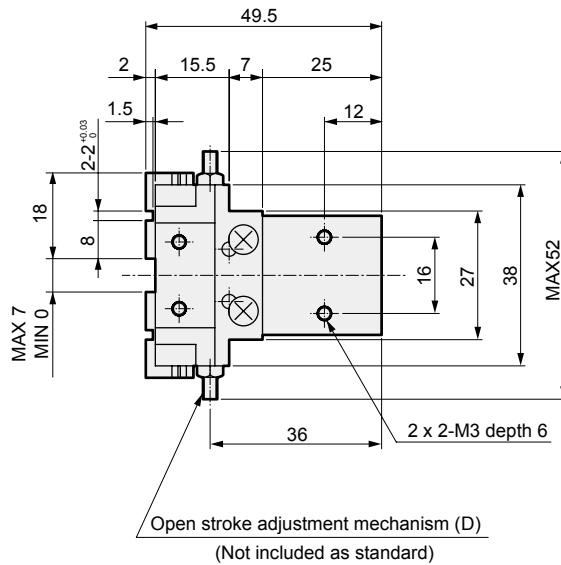
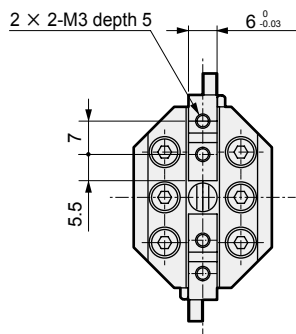
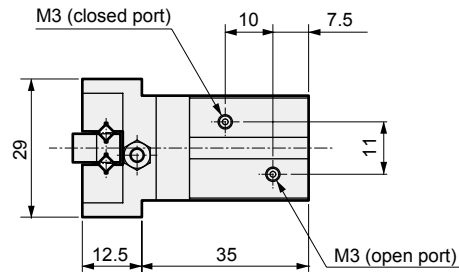


LCM
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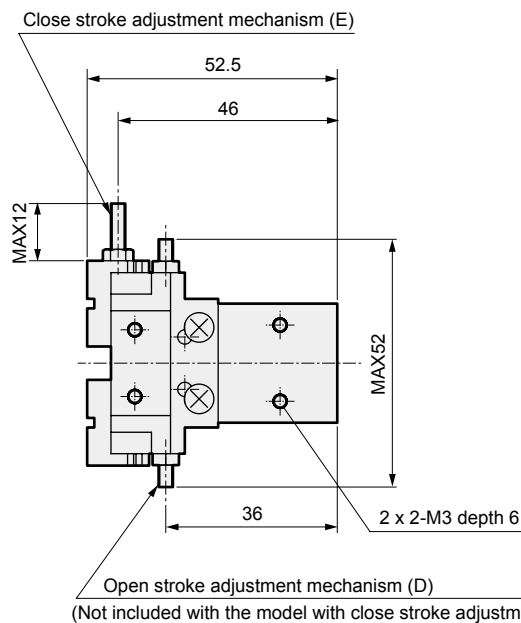
Dimensions



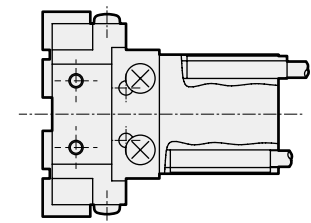
- BHE-01CS (Standard)
- BHE-01CS-D (Open stroke adjustment mechanism)



- BHE-01CS-E (Close stroke adjustment mechanism)
- BHE-01CS-DE (Open and close stroke adjustment mechanism)



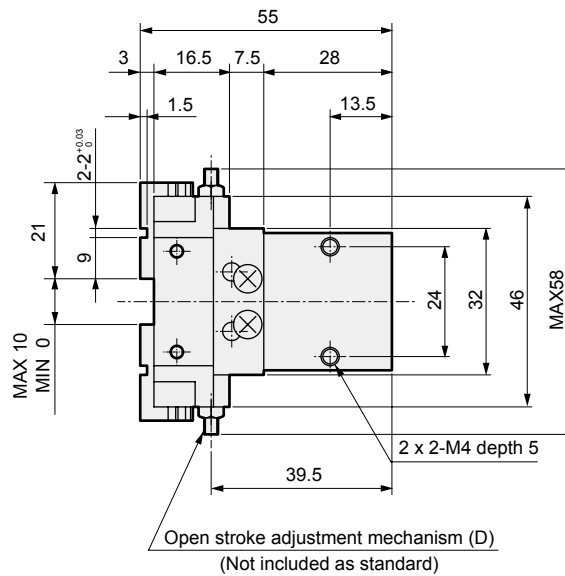
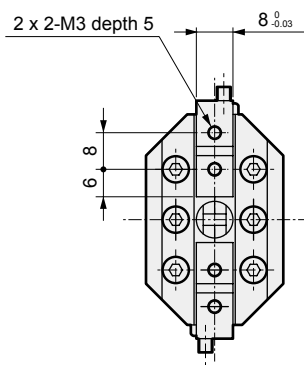
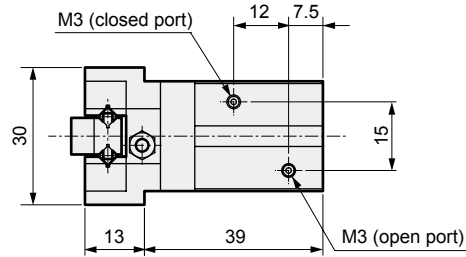
● With switch



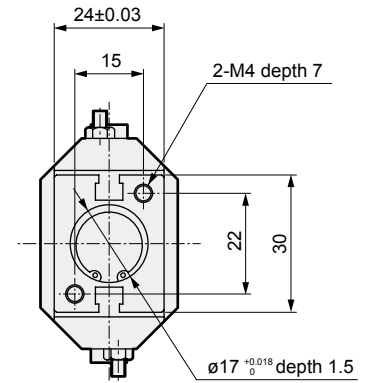
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CAC4
UCAC2
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UCAC-N
RCS2
RCC2
PCC
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Dimensions

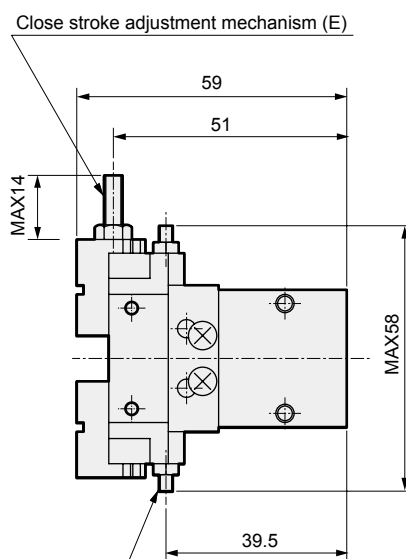
- BHE-03CS (Standard)
- BHE-03CS-D (Open stroke adjustment mechanism)



- With switch

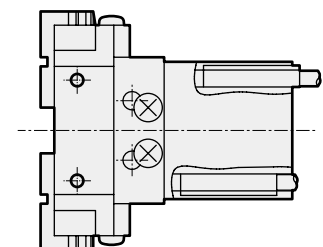


- BHE-03CS-E (Close stroke adjustment mechanism)
- BHE-03CS-DE (Open and close stroke adjustment mechanism)



Open stroke adjustment mechanism (D)
(Not included with the model with close stroke adjustment mechanism only.)

- With switch

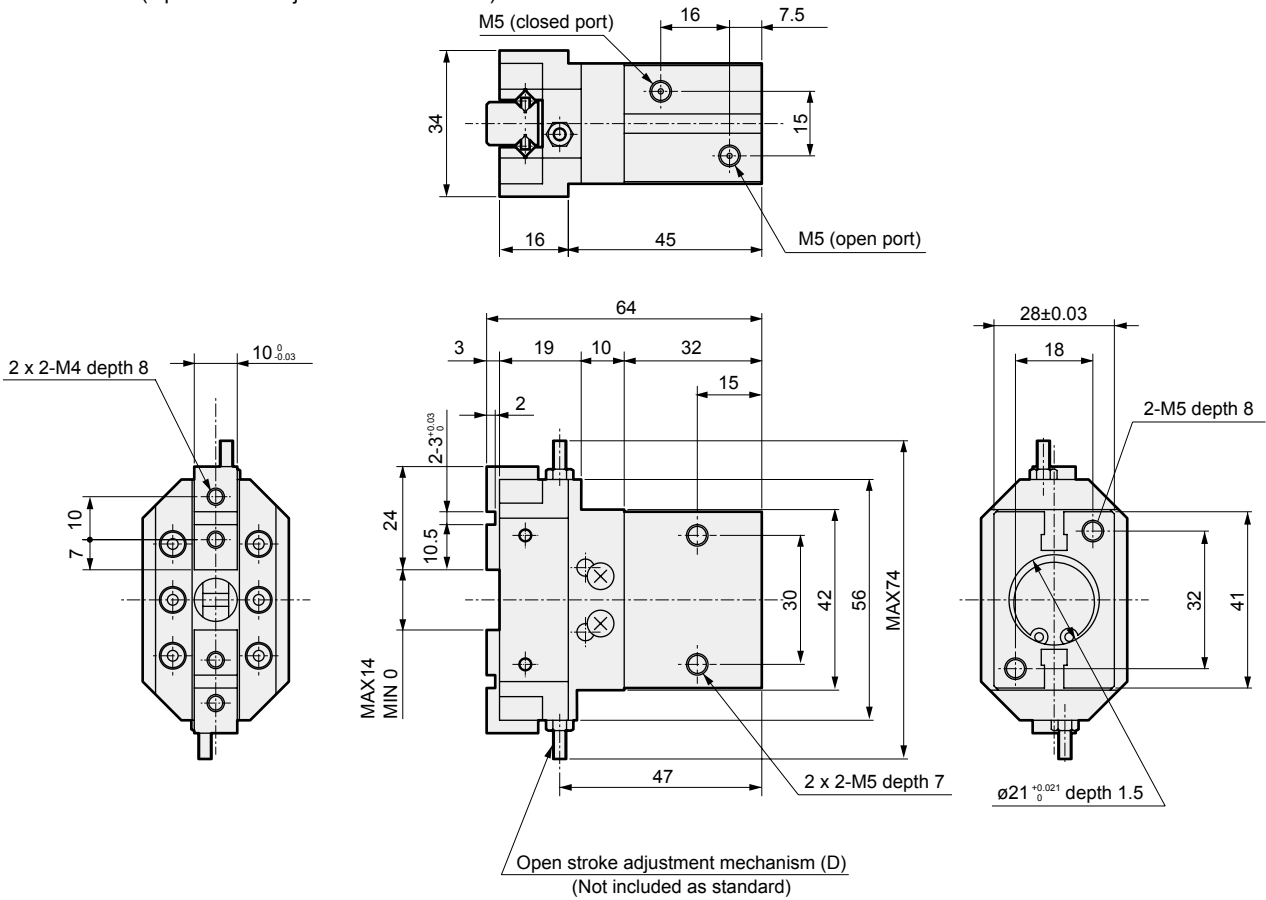


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UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
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HCM
HCA
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CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
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Hand
Chuk
MechHnd/Chuk
ShkAbs
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SpdContr
Ending
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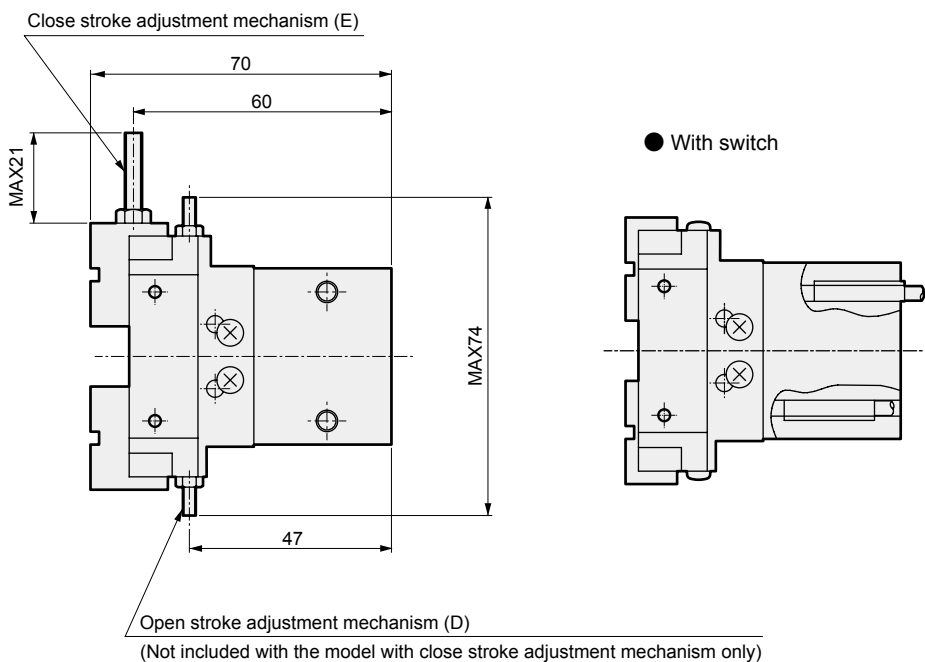
Dimensions



- BHE-04CS (Standard)
- BHE-04CS-D (Open stroke adjustment mechanism)



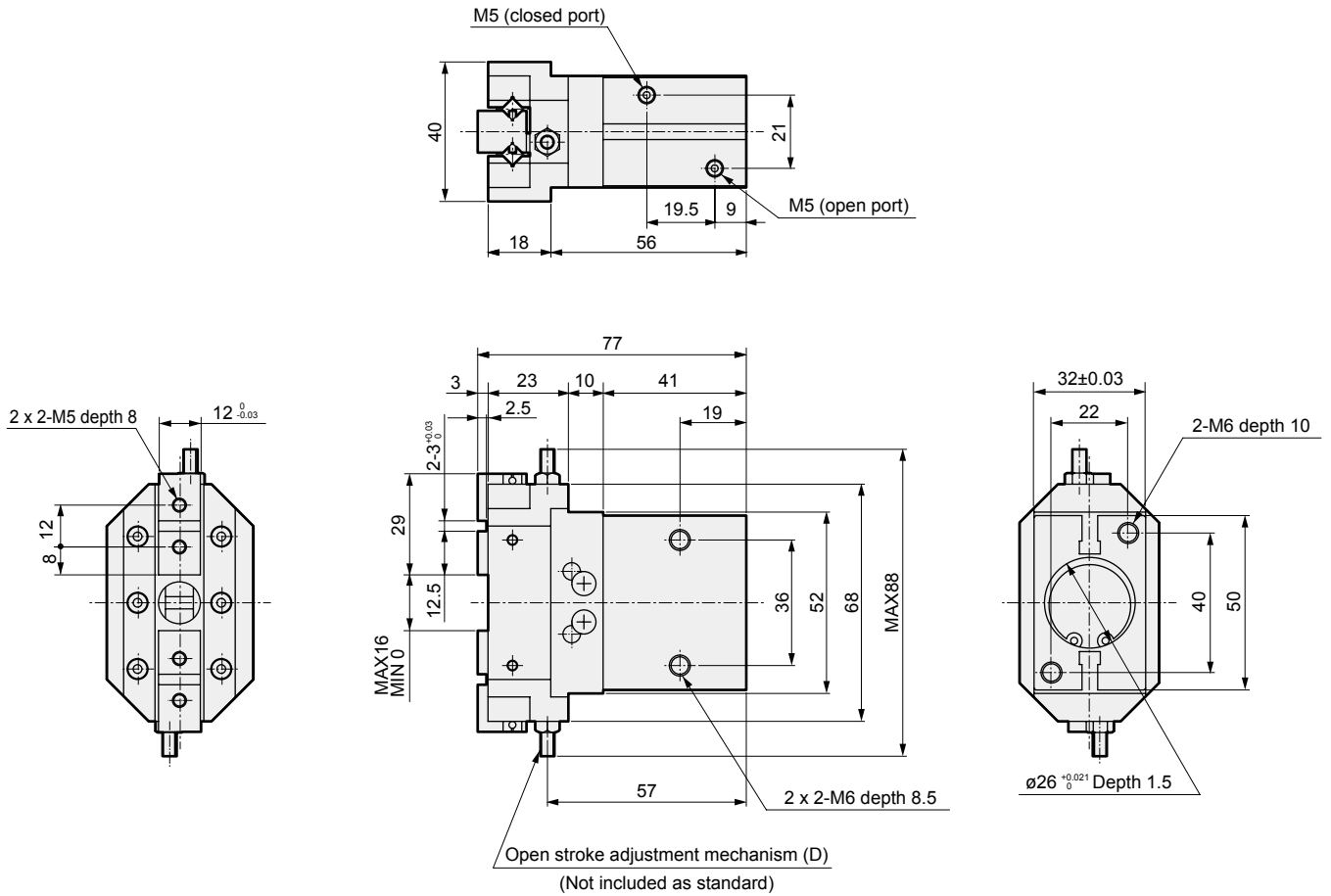
- BHE-04CS-E (Close stroke adjustment mechanism)
- BHE-04CS-DE (Open and close stroke adjustment mechanism)



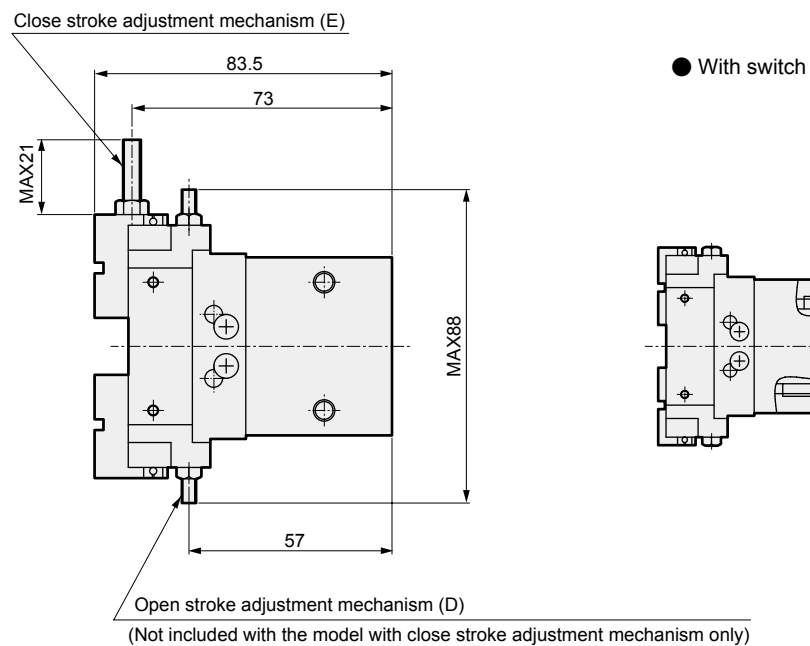
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USSD
UFCD
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RCS2
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MCP
GLC
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RRC
GRC
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Ending
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HLAG/HLBG
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HMF-G
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HMD
HDL
HJD
BHE

Dimensions

- BHE-05CS (Standard)
- BHE-05CS-D (Open stroke adjustment mechanism)



- BHE-05CS-E (Close stroke adjustment mechanism)
- BHE-05CS-DE (Open and close stroke adjustment mechanism)

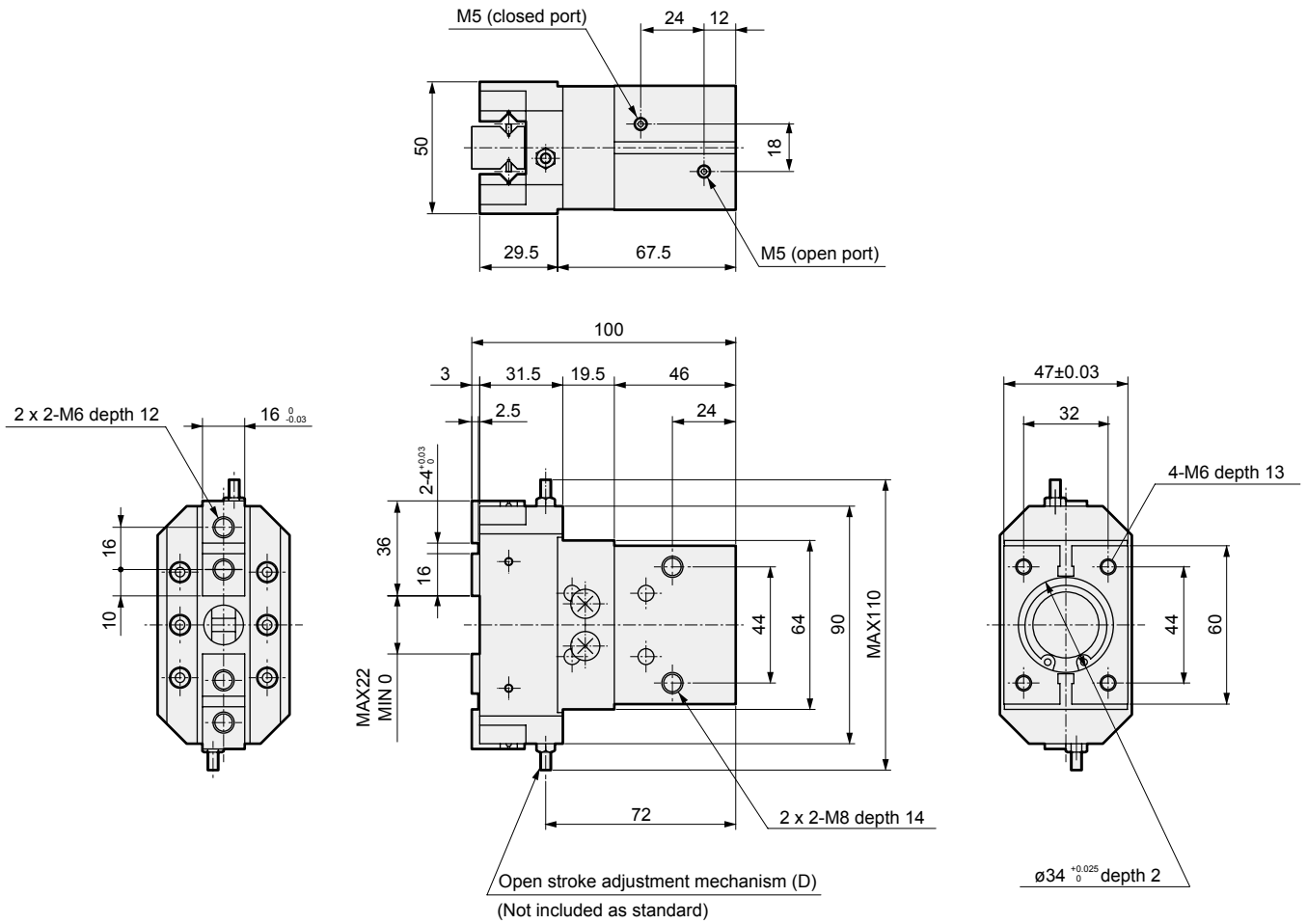


LCM
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UCA2
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JSK/M2
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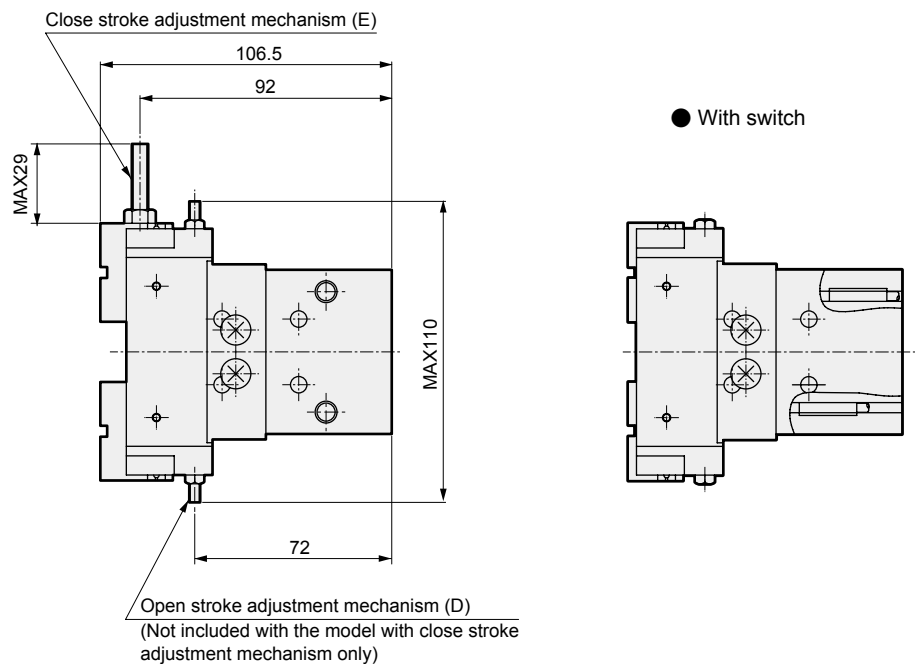
Dimensions



- BHE-06CS (Standard)
- BHE-06CS-D (Open stroke adjustment mechanism)



- BHE-06CS-E (Close stroke adjustment mechanism)
- BHE-06CS-DE (Open and close stroke adjustment mechanism)



LCM
LCR
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LCW
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STM
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STS/STL
STR2
UCA2
ULK*
JSK/M2
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JSC3/JSC4
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