



Long Stroke Parallel Gripper Double Acting/Single Acting Types

# HGP Series

● Operating stroke: 56 mm

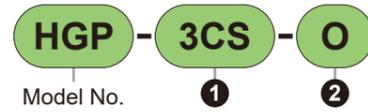


# HGP Series

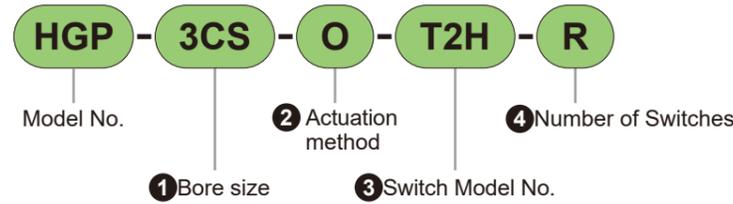
Model No. Notation Method

## Model No. Notation Method

Without Switch  
(Built-in magnet for switch)



With Switch  
(Built-in magnet for switch)



### 1 Bore size

Code	Content
3CS	∅25

### 2 Actuation method

Code	Content
Blank	Standard (Double Acting Type)
O	Single Acting (Normally Open)
C	Single Acting (Normally Closed)

### 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□
	1-Color Flexible 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.

### 4 Number of Switches

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

## Switch Single Unit Model No. Notation Method

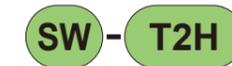
● For switch T□H□

• Switch body + Mounting bracket set \*1



3 Switch Model No.

• Switch body



3 Switch Model No.

• Mounting bracket set \*1



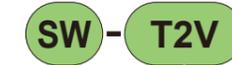
● For switch T□V□

• Switch body + Mounting bracket set \*1



3 Switch Model No.

• Switch body



3 Switch Model No.

• Mounting bracket set \*1



Code	Content
R	Open side
H	Closed side

Code	Content
R	Open side
H	Closed side

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

### \*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 T2H<sup>3</sup>
- 5 m T2H<sup>5</sup>

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

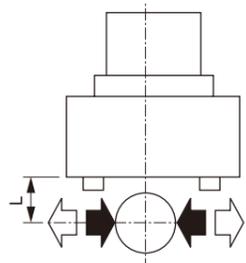
Specifications

Item	HGP-3CS	
Bore size	mm	ø25
Actuation method	Double Acting Type/Single Acting Type	
Operating Fluid	Compressed Air	
Max. Working Pressure	MPa	0.7
Min. Operating Pressure	MPa	0.3
Ambient Temperature	°C	5 to 60
Port Size		M5
Operating stroke	mm	56
Rod diameter	mm	ø10
Internal volume (reciprocating)	cm <sup>3</sup>	11.8
Repeatability	mm	±0.03
Weight	kg	0.85
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)	

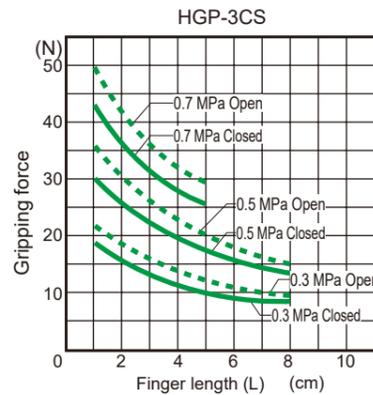
Gripping Force Performance Data

- 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)



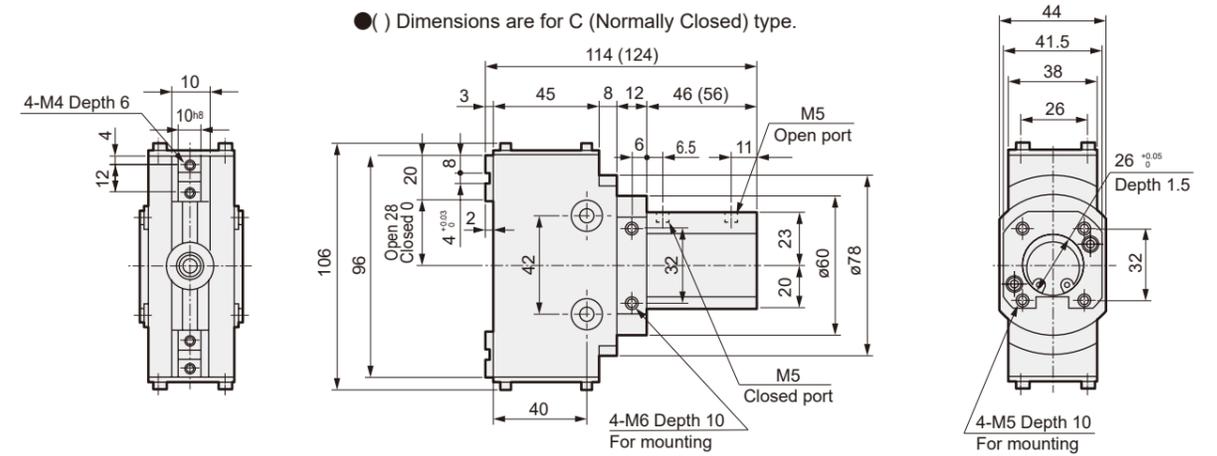
Note) When selecting, check the design and selection precautions on P. 336.



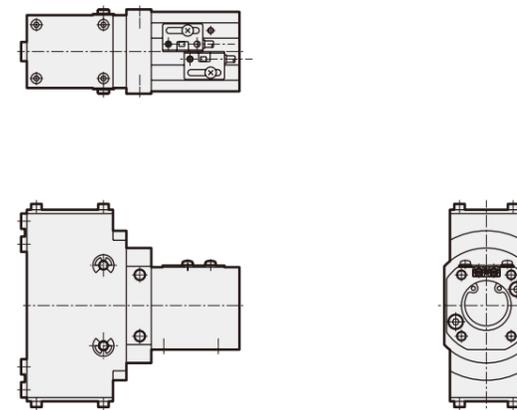
Note) O type gripping force is approx. 20 to 30 % lower in the closing direction compared to the double acting type. C type gripping force is approx. 10 to 20 % lower in the opening direction compared to the double acting type.

Outline Dimension Drawing

● HGP-3CS Standard/O/C



● With Switch



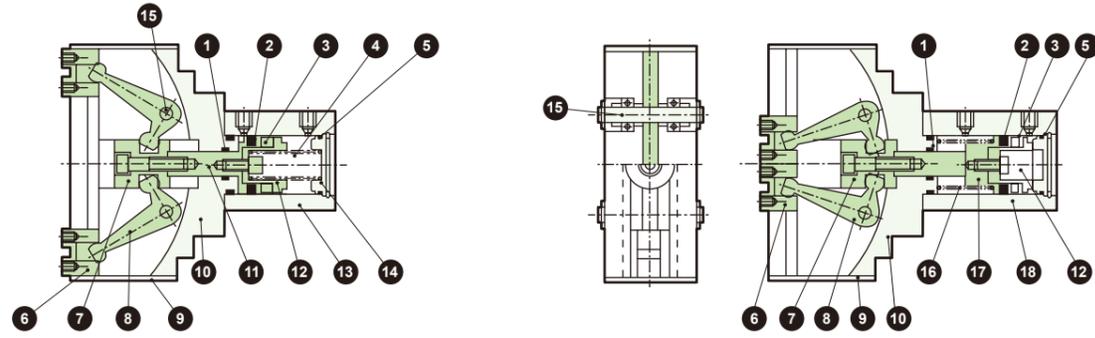
Hand (Gripper)  
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LSH  
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BSA2  
BHA  
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LHA  
LHAG  
HAP-1C  
HAP-2 to 4CS  
HKP  
HCP  
HGP  
LST-HP  
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HLA/HLB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

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HBL  
HJL  
HMD  
HDL  
HJD  
Cylinder Switch  
Ending

# Internal Structure Diagram/Material

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

● C (Normally Closed) Type



**Do not disassemble**

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Rod Packing	Nitrile Rubber		10	Adapter	Aluminum Alloy	
2	Piston Packing	Nitrile Rubber		11	Piston A	Stainless Steel	
3	Magnet			12	Piston B	Polyacetal	
4	Coil Spring	Steel	O type only	13	Body	Aluminum Alloy	
5	Cylinder Gasket	Nitrile Rubber		14	Cover	Polyacetal	
6	Finger	Steel		15	Pivot Shaft	Steel	
7	Operating ring	Steel		16	Coil Spring	Stainless Steel	
8	Arm	Steel		17	Piston	Stainless Steel	
9	Side cover	Stainless Steel		18	Cylinder	Aluminum Alloy	

MEMO

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

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FH100

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BHA

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LST-HP

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Cylinder Switch

Ending