Mechanical Gripper

Overview

Unlike conventional grippers that require air, the Mechanical Gripper BHA-FC series performs opening and closing operations mechanically. Ideal for systems requiring opening/closing operations at the end, such as shuttle movers (SM-25 series).

Main features

- Ideal for index tables where air piping cannot be used.
- High gripping force in the closing direction due to springs (BHA type: 12 N to 100 N)
- Opening direction is driven by external force, enabling high-speed operation in combination with cams, etc.

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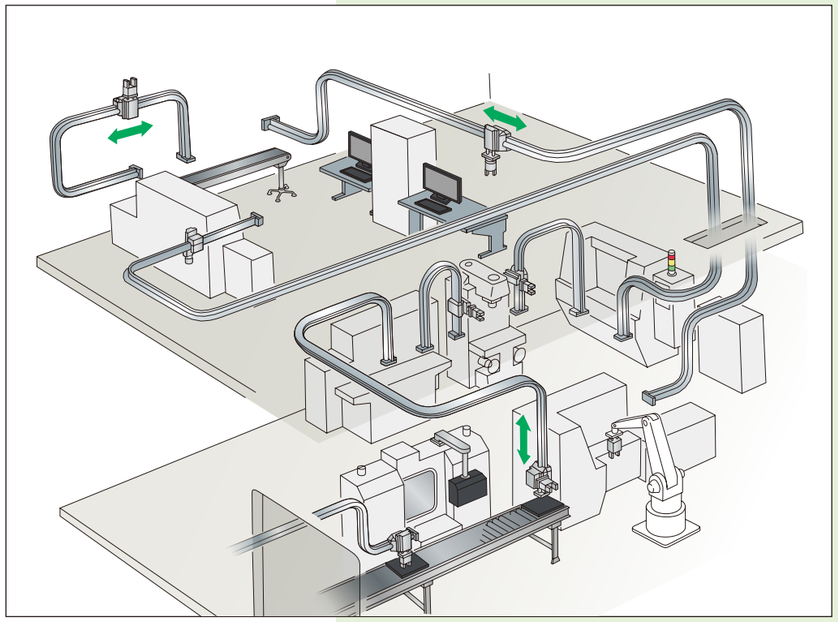


⚠To use this product safely, be sure to check the precautions for use regarding general cylinders on Intro 39 and Grippers on P. 336 before use.

Mechanical Gripper

BHA-FC Series

● Operating stroke: 5, 9, 11, 15, 20 mm

RoHS

Model No. Notation Method

BHA - 01CS - FC

Model No.

1 Bore size

1 Bore Size (mm)

Code	Content
01CS	ø12
03CS	ø16
04CS	ø20
05CS	ø25
06CS	ø32

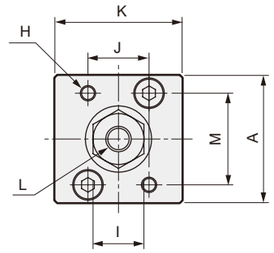
Specifications

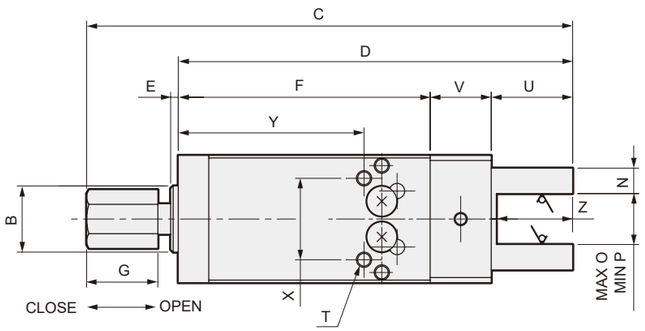
Item		BHA-FC				
Size		01CS	03CS	04CS	05CS	06CS
Cylinder bore	mm	ø12	ø16	ø20	ø25	ø32
Rod diameter	mm	ø6	ø8	ø10	ø12	ø16
Ambient Temperature	°C	5 to 60				
Operating stroke	mm	5	9	11	15	20
Repeatability	mm	±0.01				
Opening side external force	N	60 to 90	120 to 180	185 to 280	230 to 350	400 to 600
Gripping force *3	N	12 to 19	20 to 37	20 to 55	45 to 75	70 to 100
Product Weight	g	142	212	362	594	1342

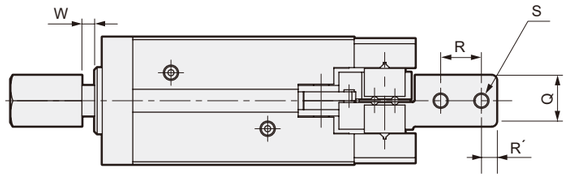
*1: Using in the opening direction will lead to gripper damage, so never do it.
*2: If torque is applied to the stopper rod, internal pistons, etc., may be damaged. When connecting to equipment, be sure to use a wrench on the stopper rod to connect.
*3: Gripping force changes according to stroke position.

Outline Dimension Drawing

●BHA-FC





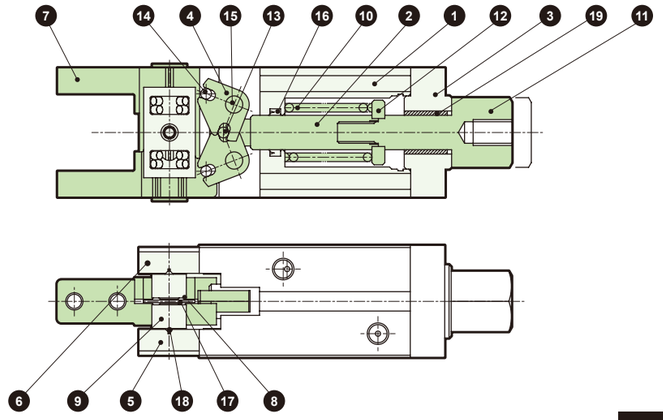


Code / Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M
BHA-01CS-FC	25	ø13	MAX95.5/MIN93	77.5	1.5	49.5	14	2-M3 x 0.5 Depth 6	10	12	25	M5 x 0.8 Depth 8	18
BHA-03CS-FC	30	ø17	MAX110/MIN105.5	90	1.5	57	14	2-M4 x 0.7 Depth 8	14	15	26	M6 x 1.0 Depth 9	22
BHA-04CS-FC	41	ø21	MAX120/MIN114.5	99	1.5	67	14	2-M5 x 0.8 Depth 8	17	18	30	M8 x 1.25 Depth 10	32
BHA-05CS-FC	50	ø26	MAX148/MIN140.5	123	1.5	88	16	2-M6 x 1.0 Depth 12	19	22	35	M8 x 1.25 Depth 12	40
BHA-06CS-FC	60	ø34	MAX199/MIN189	171	2	114	16	2-M6 x 1.0 Depth 12	24	32	47	M10 x 1.5 Depth 15	44

Code / Model No.	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	R´
BHA-01CS-FC	5	15	10	10 $^{0}_{-0.05}$	8	2 x 2-M3 x 0.5	2 x 2-M3 x 0.5 Depth 7	16	12	2.5	16	36.5	15	3
BHA-03CS-FC	6	18	9	10 $^{0}_{-0.05}$	10	2 x 2-M4 x 0.7	2 x 2-M4 x 0.7 Depth 7	19	14	4.5	24	43	18	4
BHA-04CS-FC	8	25	14	10 $^{0}_{-0.05}$	10	2 x 2-M4 x 0.7	2 x 2-M5 x 0.8 Depth 8	19	13	5.5	30	46	18	4
BHA-05CS-FC	10	30	15	10 $^{0}_{-0.05}$	10	2 x 2-M5 x 0.8	2 x 2-M6 x 1.0 Depth 10	22	13	7.5	36	61	21	5
BHA-06CS-FC	10	40	20	16 $^{0}_{-0.05}$	18	2 x 2-M5 x 0.8	2 x 2-M8 x 1.25 Depth 14	36	21	10	44	77	33	5

Internal Structure Diagram/Material

●BHA-FC



Do not disassemble

No.	Part Name	Material	No.	Part Name	Material
1	Body		11	Stopper rod	Stainless Steel
2	Piston Rod	Stainless Steel	12	Washer	Stainless Steel
3	Cover	Aluminum Alloy	13	Pivot Shaft	Steel
4	Arm	Stainless Steel	14	Actuating shaft A	Alloy Steel
5	Bearing guide A	Steel	15	Actuating shaft B	Alloy Steel
6	Bearing guide B	Steel	16	Rod seal	Nitrile Rubber
7	Finger	Steel	17	Cross roller A	Alloy Steel
8	Retainer A	Stainless Steel	18	Cross roller B	Alloy Steel
9	Retainer B	Stainless Steel	19	Bushing	Oil-Impregnated Bearing Alloy
10	Coil Spring	Stainless Steel			

MEMO

Mechanical Gripper
BHA-FC
Cylinder Switch
Ending