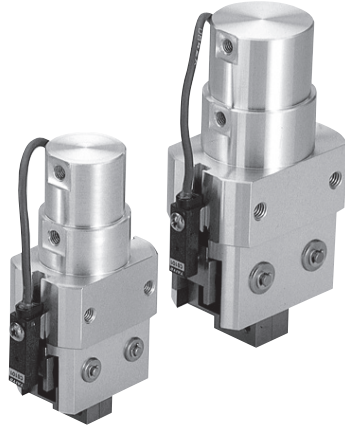


# MEPAC (Parallel air chuck)

## All-purpose type

MEPAC parallel air chuck all-purpose type succeeded excellent functions of MEPAC series, and was designed to be more user-friendly, and compatible to broader range of applications. We received a favorable reception since release in 1986 and we are making an achievement as a chucking parts for general industrial machinery such as automatic assembly machine and carrier devices, including industrial robots.



	Stroke (mm)				
	6	8	10	12	16
Single action Constantly open (NO)	x	x	x	x	x
Single action Constantly closed (NC)	x	x	x	x	x
Reciprocating	x	x	x	x	x
Single action (NO) With sensor	(2)	(2)	(2)	(2)	(2)
Single action (NC) With sensor	(2)	(2)	(2)	(2)	(2)
Reciprocating With sensor	(2)	(2)	(2)	(2)	(2)

\* The figure within ( ) stands for the number of open end detection sensor installations (max).

### Original mechanism with which we are proud of the light operation

In addition to highly efficient swing action lever structure, engaging phenomena was suppressed by adopting ultra-small precision roller to the sliding part and achieving light operation. Excellent high-speed responsiveness, maintain high efficiency and exercise sufficient clamp force.

### The number of sensors can be selected.

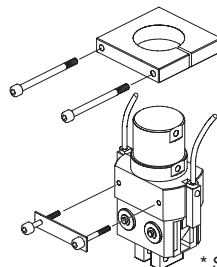
With one sensor or two sensors. The number of sensors to set to the main unit can be selected at ordering. Operation of the chuck uses the method to notify by switching ON and lightening the luminous diode. Operation can be checked, therefore, it is highly reliable design allowing handling at ease.

### Received recognition for always stable clamp performance

MEPAC is parallel open and close motion with the constant contact surface of the chuck. Stable chucking even when there is variation in clamp dimension and with different shape.

### Excellent installation characteristics

By fixing shank part of the body, position adjustment of height and rotation direction is possible. In addition, it is possible to perform side installation by using mounting tap on the side.



\* See A-75 for details.



## ■ Open/Close operation

### Reciprocating

When the air comes in from Port A, the large piston pivots the action lever and [Close] the finger tooling.

When the air comes in from the Port B, the small piston pivots the action lever and [Open] the finger tooling.

### Single action

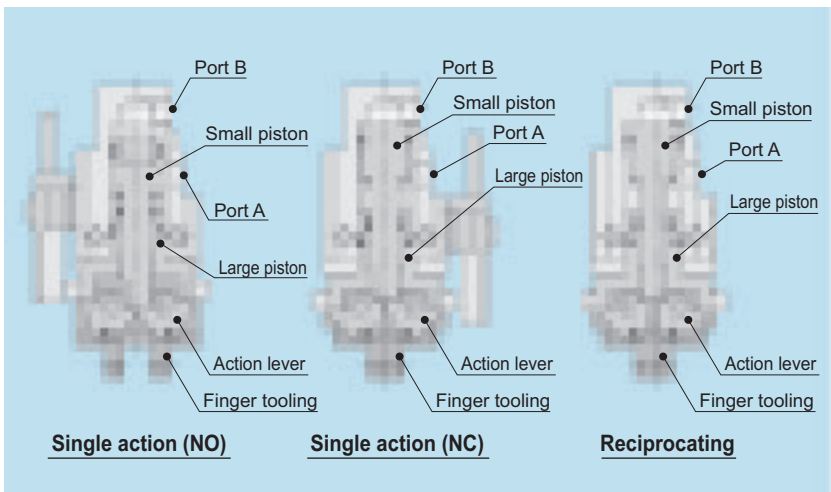
For constantly open (NO), spring is built-in on the upper part of the small piston and open by air OFF.

When the air comes in from Port A, the large piston pivots the action lever to [Close].

For constantly close (NC), spring is built-in between the large piston and the small piston, and close by air OFF.

When the air comes in from Port B, the small piston pivots the action lever and [Open] the finger tooling.

## ■ Structural chart



# HK Series Cross Roller Parallel Hand

## Smooth Motion via Bearings

### Key Features

#### High accuracy and smooth operation with cross roller guide

Cross roller bearing used in the sliding material provides high accuracy and smooth motion

#### Compact body and high rigidity

Telescopic slides and bearing retainers to provide high moments to size ratio

#### Protective rubber cover (option) for use in dusty and harsh environments

Rubber cover for harsh environments to repels chips and other particulates such as dust and mist from internal drive mechanism

#### Oil-resistant sensors (option)

Oil-resistant sensors available (option) for HK-50AS1, 63AS1, and 80AS



HK-40MS

### How To Order

Standard ----- **HK-32MS**

Option ----- **HK - 32MS - ET3 S2 - G** ----- HK-32MS with Rubber cover and 2 of ET3 non-contact reed switches

Size
Symbol
32MS
40MS
50AS1 <sup>*5</sup>
63AS1 <sup>*5</sup>
80AS <sup>*3</sup>

Sensor			
Symbol	Name	Symbol	Name
ET3 <sup>*1</sup>	Non-Contact 3-Lead	E25 <sup>*4</sup>	Contact 2-Lead
ET3L <sup>*4</sup>	Non-Contact 3-Lead	E25L <sup>*4</sup>	Contact 2-Lead
ET2 <sup>*1</sup>	Non-Contact 2-Lead	E40 <sup>*4</sup>	Non-Contact 3-Lead
ET2L <sup>*4</sup>	Non-Contact 2-Lead	E40L <sup>*4</sup>	Non-Contact 3-Lead
E24 <sup>*4</sup>	Contact 2-Lead	E41 <sup>*4</sup>	Non-Contact 2-Lead
E24L <sup>*4</sup>	Contact 2-Lead	E41L <sup>*4</sup>	Non-Contact 2-Lead

Quantity	
Symbol	Name
S1	1 Sensor
S2	2 Sensors

Option	
Symbol	Name
NO <sup>*2</sup>	Normally Open
NC <sup>*2</sup>	Normally Closed
G	Rubber Cover
GH	Oil (Fluororubber) Cover
GT	Heat (Silicon Rubber) Cover

For sensor detail  
▶ 277P

For option detail ▶ 36P

<sup>\*1</sup> Bracket is required to mount this switch (except HK-50AS1, 63AS1, and 80AS)

<sup>\*2</sup> Except HK-80AS

<sup>\*3</sup> There is no 80AS1. HK-80AS is correct model number

<sup>\*4</sup> Available only for HK-50AS1, 63AS1, 80AS

<sup>\*5</sup> There is no 50AS and 63AS. HK-50AS1 and 63AS1 are correct model number

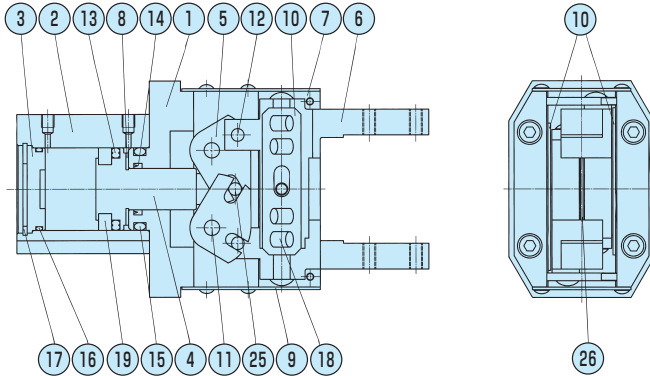
### Specification

Model	HK-32MS For Layout Drawing ▶ 120P	HK-40MS For Layout Drawing ▶ 121P	HK-50AS1 For Layout Drawing ▶ 122P	HK-63AS1 For Layout Drawing ▶ 123P	HK-80AS For Layout Drawing ▶ 124P
Working Pressure	Pneumatic: 0.1 to 0.7 MPa (0.3 to 0.7 MPa for NO & NC types)				Pneumatic: 0.3 to 0.7 MPa
Lubrication	Not Required or Turbine Oil Class 1 (ISOVG32)				
Ambient Temperature (°C)	5 to 60				
Total Jaw Stroke (mm)	24	30	36	40	60
Cylinder Diameter (mm)	dia.32	dia.40	dia.50	dia.63	dia.80
Rod Diameter (mm)	dia.16	dia.20	dia.28	dia.32	dia.16
Internal Volume [Reciprocation] (cm <sup>3</sup> /time)	25.3	49.5	89.4	162.9	354.5
Repeatability (mm)	±0.01				
Weight (kg)	1.36	1.95	4.2	5.4	10.6

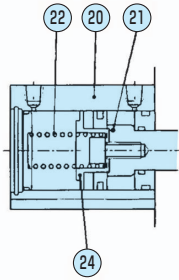
# HK-32MS/40MS/50AS1/63AS1/80AS

## Internal Structure / Parts & Seals

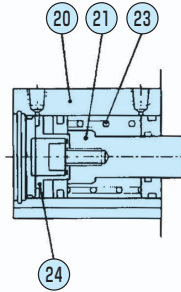
### Standard



### NO (Single Acting - Normally Open)



### NC (Single Acting - Normally Closed)



### Parts List

No.	Name	Material	No.	Name	Material	No.	Name	Material
1	Body	Aluminum	10	Retainer A	Stainless Steel	19	Magnet	
2	Cylinder	Aluminum	11	Fulcrum Shaft	Carbon Steel	20	NO & NC Cylinder	Aluminum
3	Cylinder Cover *	Resin	12	Operating Shaft B	Carbon Steel	21	NO & NC Piston A	Stainless Steel
4	Piston	Aluminum & Stainless Steel	13	Piston Seal		22	NO Spring	Stainless Steel Wire
5	Arm	Carbon Steel	14	Rod Seal		23	NC Spring	Stainless Steel Wire
6	Master(Base) Jaw	Carbon Steel	15	Cylinder Seal A		24	NO & NC Piston B	Aluminum
7	Bearing Guide	Carbon Steel	16	Cylinder Seal B		25	Operating Shaft A	Carbon Steel
8	Cushion	Resin	17	Snap Ring	Stainless Steel	26	Retainer B	Stainless Steel
9	Side Cover	Stainless Steel	18	Roller	High-Carbon Chromium Bearing Steel			

\*Aluminum for 50AS1 and 63AS1

### Seals List

No.	HK-32MS	HK-40MS	HK-50AS1	HK-63AS1	HK-80AS
13	PSD-32	PSD-40	PSD-50	PSD-63	PSD-80
14	MYA-16	MYA-20	PNY-28	PNY-32	MYA-16
15	P-26	G-35	G-45	G-60	G-75
16	S-29	S-36	S-46	S-60	

# HLBG Series Thin Parallel Hand w/ Rubber Cover (Cross Roller Type)

## Thin Parallel Hand with Rubber Cover

### Key Features

#### ■ Cross roller

Cross roller bearing guide provides smooth motion and high accuracy

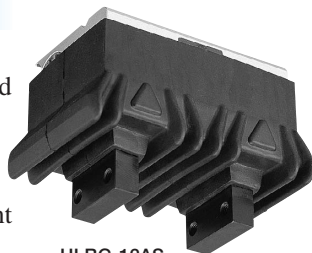
#### ■ Long stroke for compact body

Low profile body design

Long stroke for handling multiple workpieces in different sizes

#### ■ Protective rubber cover for use in dusty and harsh environments

Rubber cover to improve protection from harsh environments to repels chips and other particulates such as dust and mist from internal drive mechanism



HLBG-12AS

### How To Order

Standard ----- **HLBG-12AS**

Option ----- **HLBG - 12AS - E16S2 - GH** ----- HLAG-12AS with oil-resistant (fluororubber) cover) with 2 of E16 non-contact reed switches

Size	
Symbol	
12AS	
15AS	
20AS	

Sensor, Quantity			
Symbol	Name	Symbol	Name
E16	Non-Contact 3-Lead	S2	2 Sensors
E17	Non-Contact 2-Lead		
E26	Contact 2-Lead		
E27	Contact 2-Lead		
S1	1 Sensor		

For sensor detail ▶ 277P

Option			
Symbol	Name	Symbol	Name
GH	Oil (Fluororubber) Cover		
GT	Heat (Silicon Rubber) Cover		

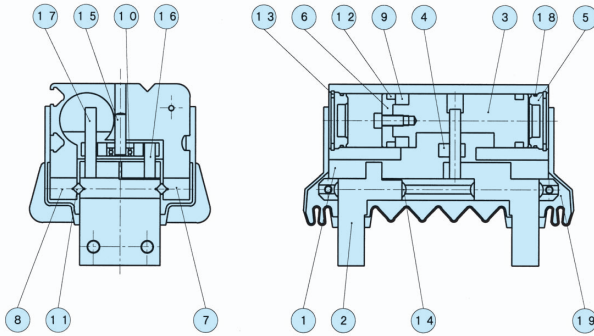
For option detail ▶ 36P

### Specification

Model	HLBG-12AS	HLBG-15AS	HLBG-20AS
	For Layout Drawing ▶ 141P	For Layout Drawing ▶ 141P	For Layout Drawing ▶ 142P
Working Pressure	Pneumatic: 0.1 to 0.7MPa		
Lubrication	Not Required or Turbine Oil Class 1 (ISOVG32)		
Ambient Temperature (°C)	5 to 60		
Total Jaw Stroke (mm)	13	18	23
Cylinder Diameter (mm)	dia.12	dia.15	dia.20
Internal Volume [Reciprocation] (cm <sup>3</sup> /time)	1.47	3.18	7.22
Repeatability (mm)	±0.01		
Weight (g)	240	420	750

Hand (2-law)

## Internal Structure / Parts & Seals



### Parts List

No.	Name	Material	No.	Name	Material	No.	Name	Material
1	Body	Aluminum	8	Bearing Guide B	Carbon Steel	15	Parallel Pin	Carbon Steel
2	Master(Base) Jaw	Carbon Steel	9	Magnet		16	Needle Roller A	High-Carbon Chromium Bearing Steel
3	Piston	Stainless Steel	10	Small Diameter Ball Bearing		17	Needle Roller B	High-Carbon Chromium Bearing Steel
4	Cam	Stainless Steel	11	Cross Roller	High-Carbon Chromium Bearing Steel	18	Cylinder Seal	
5	Cylinder Cover	Resin	12	Piston Seal		19	Rubber Cover	
6	Magnet Holder	Resin	13	Snap Ring	Stainless Steel			
7	Bearing Guide A	Carbon Steel	14	Small Truss Head Screw	Stainless Steel			

### Seals List

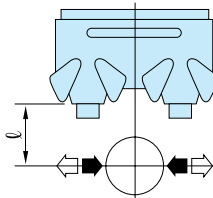
No.	HLBG-12AS	HLBG-15AS	HLBG-20AS
12	MYA-9	MYA-11	MYA-16
18	dia.10×dia.1	dia.14×dia.1	dia.18×dia.1

## Performance Data

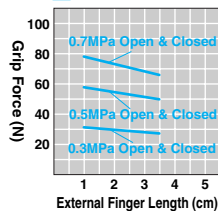
### Grip Force

The graph shows grip force in opening and closing with effective external finger lengths  $l$  from gripper cover surface under different air pressure (MPa)

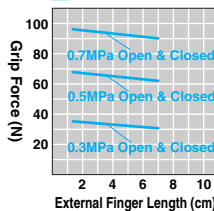
Open (↔) \_\_\_\_\_  
 Closed (→) \_\_\_\_\_



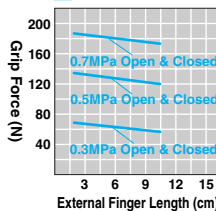
#### HLBG-12AS



#### HLBG-15AS



#### HLBG-20AS



# Air gripper(parallel style)

## HFZ Series



### Specification

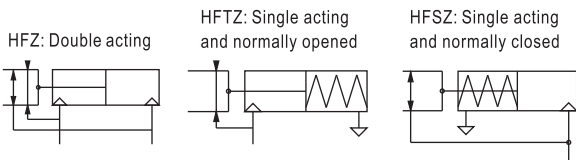
Bore size (mm)		6	10	16	20	25	32	40
Acting type		Double acting			Single acting			
Fluid		Air(to be filtered by 40 μ m filter element)						
Operating pressure	Double acting	Φ6, Φ10	0.2~0.7MPa(28~100psi)(2.0~7.0bar)					
	Others		0.15~0.7MPa(22~100psi)(1.5~7.0bar)					
Single acting	Φ6, Φ10	0.35~0.7MPa(50~100psi)(3.5~7.0bar)						
	Others	0.25~0.7MPa(36~100psi)(2.5~7.0bar)						
Temperature °C		-20~70						
Lubrication		Not required						
Repeatability mm		± 0.01					± 0.02	
Max. frequency		180(c.p.m)					60(c.p.m)	
Sensor switches ①		DS1-H	CS1-G DS1-G	CS1-G, DS1-G, DS1-H				
Port size		M3 × 0.5			M5 × 0.8			

① Sensor switch should be ordered additionally, please refer to P457~480 for detail of sensor switch.

### Ordering code

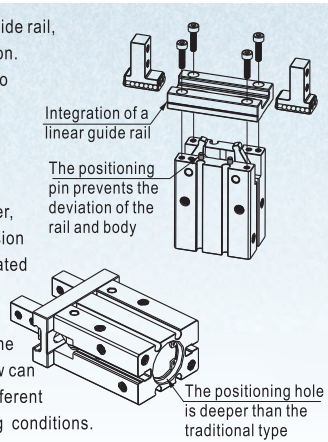
HFZ 20 □	
<b>Model</b>	<ul style="list-style-type: none"> <li>HFZ: Air finger(Double acting)</li> <li>HFSZ: Air finger(Single acting and normally closed)</li> <li>HFTZ: Air finger(Single acting and normally opened)</li> </ul>
<b>Bore size</b>	<ul style="list-style-type: none"> <li>6: Φ6mm</li> <li>10: Φ10mm</li> <li>16: Φ16mm</li> <li>20: Φ20mm</li> <li>25: Φ25mm</li> <li>32: Φ32mm</li> <li>40: Φ40mm</li> </ul>
<b>Finger type</b>	<ul style="list-style-type: none"> <li>Blank:Standard </li> <li>R:Narrow type </li> <li>B:Side mounting type </li> <li>W:Side mounting and narrow type </li> <li>N:Thru.hole mounting type </li> <li>M:Thru.hole mounting and narrow type </li> <li>F:Bottom mounting type </li> </ul>

### Symbol



### Product feature

1. Integrated design of linear guide rail, high rigidity and high precision.
2. A positioning pin is attached to the bottom of the linear guide rail, which can prevent the deviation of the positioning rail and body.
3. The hole of the body is deeper, which can improve the precision and the consistency of repeated dismounting and positioning.
4. According to the actual using requirements of customers, the initial position of clamping jaw can be customized to meet the different needs under different working conditions.



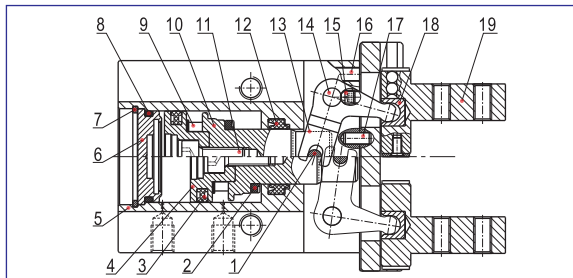
① Φ6, Φ32, Φ40 bore size don't have R, W & M type. Add) HFZ series are all attached with magnet.



# Air gripper(parallel style)

## HFZ Series

### Inner structure and material of major parts



NO.	Item	Material
1	Pin	Stainless steel
2	Bumper	TPU
3	Piston seal	NBR
4	Piston	Aluminum alloy/Stainless steel
5	Body	Aluminum alloy
6	Back cover	Aluminum alloy
7	C clip	Spring steel
8	O-ring	NBR
9	Magnet	Sintered metal(Neodymium-iron-boron)
10	Piston rod	Aluminum alloy/Stainless steel
11	Screw	Carbon steel
12	Rod packing	NBR
13	Curved bar	Stainless steel
14	Pin	Stainless steel
15	Countersink screw	Carbon steel
16	Hexagon screw	Carbon steel
17	Pin	Stainless steel
18	Guide sleeve	Stainless steel
19	Assembly of clamping jaw and guide rail	Stainless steel

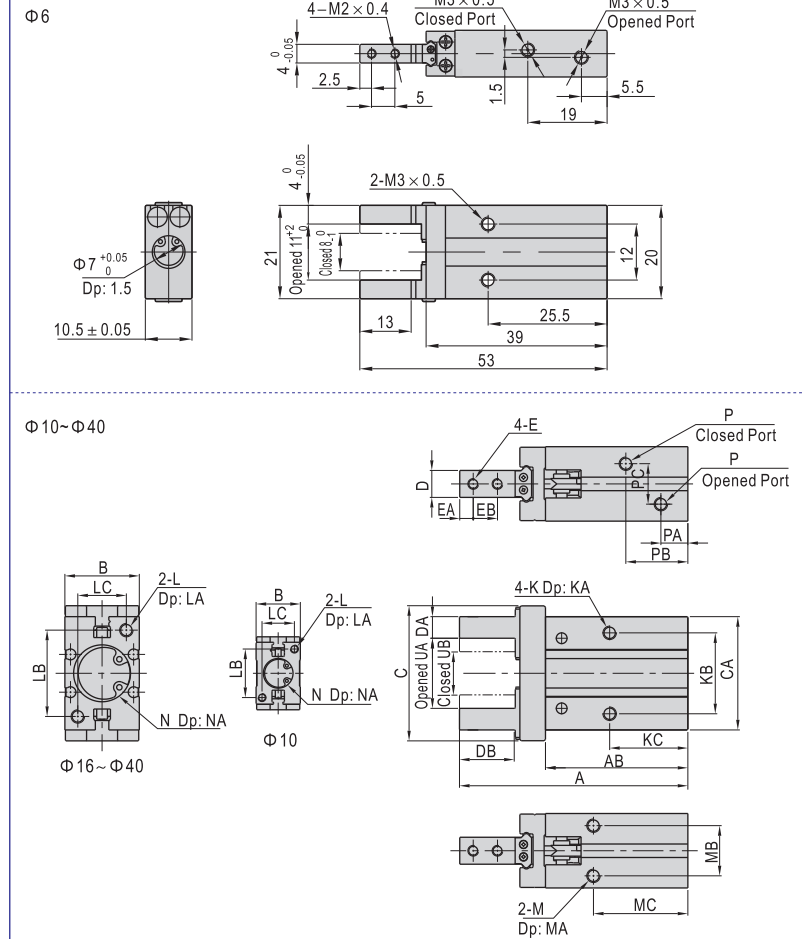
### Gripping force and stroke

Acting	Model	Gripping force per finger Effective valve(N)		Opening/Closing stroke (Both sides)(mm)	Weight (g)		
		External	Internal		F Type	Others	
Double acting	HFZ6	3.3	6.1	4	24	25	
	HFZ10	11	17	4	56	56	
	HFZ16	34	45	6	124	124	
	HFZ20	45	68	10	236	236	
	HFZ25	69	102	14	418	428	
	HFZ32	160	195	22	750	729	
	HFZ40	255	320	30	1340	1268	
	HFTZ6	1.9	-	4	25	26	
Single acting	Normally opened	HFTZ10	-	4	57	57	
		HFTZ16	-	6	125	125	
		HFTZ20	-	10	238	238	
		HFTZ25	-	14	420	430	
		HFTZ32	133	-	22	799	778
		HFTZ40	220	-	30	1437	1365
	Normally closed	HFSZ6	-	3.7	4	25	26
		HFSZ10	-	13	4	57	57
		HFSZ16	-	38	6	125	125
		HFSZ20	-	59	10	238	238
		HFSZ25	-	87	14	420	430
		HFSZ32	-	163	22	799	778
HFSZ40	-	270	30	1437	1365		

Note) The gripping force in the above table is in the working pressure of 0.5MPa, and with a gripping point of L=20mm.  
Add) Please refer to page 391 for the definition of "L".

### Dimensions

#### Standard type



Model\Item	A	AB	B	C	CA	D	DA	DB	E	EA	EB
HFZ10	57	37.5	16.5	30	23	5 <sup>0</sup> <sub>-0.05</sub>	4 <sup>0</sup> <sub>-0.05</sub>	12	M2.5 × 0.45	3	5.7
HFZ16	67.5	42.5	23.5	39	30.5	8 <sup>0</sup> <sub>-0.05</sub>	5 <sup>0</sup> <sub>-0.05</sub>	15	M3 × 0.5	4	7
HFZ20	85	53	27.5	53	42	10 <sup>0</sup> <sub>-0.05</sub>	8 <sup>0</sup> <sub>-0.05</sub>	20	M4 × 0.7	5	9
HFZ25	103	64	33.5	71	52	12 <sup>0</sup> <sub>-0.05</sub>	10 <sup>0</sup> <sub>-0.05</sub>	25	M5 × 0.8	6	12
HFZ32	113(122)	67(76)	40	106	60	15 <sup>0</sup> <sub>-0.05</sub>	12 <sup>0</sup> <sub>-0.05</sub>	29	M6 × 1.0	7	14
HFZ40	139(152)	83(96)	48	132	72	18 <sup>0</sup> <sub>-0.05</sub>	14 <sup>0</sup> <sub>-0.05</sub>	36	M8 × 1.25	9	17

Model\Item	K	KA	KB	KC	L	LA	LB	LC	M	MA	MB	MC
HFZ10	M3 × 0.5	5	16	23	M3 × 0.5	6	18	12	M3 × 0.5	6	11.5	27
HFZ16	M4 × 0.7	7	24	24.5	M4 × 0.7	8	22	15	M4 × 0.7	4.5	16	30
HFZ20	M5 × 0.8	8	30	29	M5 × 0.8	10	32	18	M5 × 0.8	8	18.5	35
HFZ25	M6 × 1.0	10	36	30	M6 × 1.0	12	40	22	M6 × 1.0	10	22	36.5
HFZ32	M6 × 1.0	10	46	40(49)	M6 × 1.0	12	46	26	M6 × 1.0	10	26	48(57)
HFZ40	M8 × 1.25	12	56	49(62)	M8 × 1.25	16	56	32	M8 × 1.25	12	32	58(71)

Model\Item	N	NA	P	PA	PB	PC	UA(Opened)	UB(Closed)
HFZ10	Φ11 <sup>+0.05</sup> <sub>0</sub>	1.5	M3 × 0.5	7	19	10	15.5 <sup>+2</sup> <sub>0</sub>	11.5 <sup>-0</sup> <sub>-1</sub>
HFZ16	Φ17 <sup>+0.05</sup> <sub>0</sub>	1.5	M5 × 0.8	7.5	19	13	21 <sup>+2</sup> <sub>0</sub>	15 <sup>-0</sup> <sub>-1</sub>
HFZ20	Φ21 <sup>+0.05</sup> <sub>0</sub>	2	M5 × 0.8	9.5	23	15	26.5 <sup>+2</sup> <sub>0</sub>	16.5 <sup>-0</sup> <sub>-1</sub>
HFZ25	Φ26 <sup>+0.05</sup> <sub>0</sub>	2	M5 × 0.8	9	24	20	33.5 <sup>+2</sup> <sub>0</sub>	19.5 <sup>-0</sup> <sub>-1</sub>
HFZ32	Φ34 <sup>+0.05</sup> <sub>0</sub>	2.5	M5 × 0.8	9.5	31(40)	24	48 <sup>+2.5</sup> <sub>0</sub>	26 <sup>-0</sup> <sub>-1</sub>
HFZ40	Φ42 <sup>+0.05</sup> <sub>0</sub>	2.5	M5 × 0.8	10.5	38(50)	28	60 <sup>+2.5</sup> <sub>0</sub>	30 <sup>-0</sup> <sub>-1</sub>

Note) The values in "( )" in the above table are single acting type sizes.



HFZ

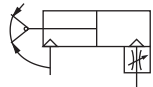


## HFY Series

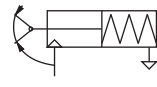


### Symbol

HFY: Double acting



HFTY: Single acting and normally opened



### Product feature

1. Using a single piston structure, large gripping torque.
2. Integrated with variable flow valve, it is easy and convenient to adjust the speed of opening and closing of gripping jaw.
3. Reasonable gripping angle, wide range of actual use.
4. Precise positioning accuracy, it is more accurate and reliable when gripping work-piece.
5. Various types of installation, it is convenient for the use in different occasions.
6. All series are attached with magnet, so that it is easy to control.

### Specification

Bore size (mm)	6	10	16	20	25	32
Acting type	Double acting		Single acting			
Fluid	Air(to be filtered by 40 μ m filter element)					
Operating pressure	Double acting		0.15~0.7MPa(22~100psi)(1.5~7.0bar)			
	Single acting	Φ6	0.3~0.7MPa(45~100psi)(3.0~7.0bar)			
		Φ10~Φ32	0.25~0.7MPa(36~100psi)(2.5~7.0bar)			
Temperature °C	-20~70					
Lubrication	Cylinder: Not required;		Gripper jaws: Lubricate grease			
Cushion type	Bumper					
Max. frequency	180(c.p.m)					
Sensor switches ①	DS1-H		CS1-G、DS1-G			

① Sensor switch should be ordered additionally, please refer to P457-480 for detail of sensor switch.

### Ordering code

HFY 20	
Model	Bore size
HFY: Air finger(Angle style, Double acting)	6: Φ6mm
HFTY: Air finger(Angle style, Single acting and normally opened)	10: Φ10mm
	16: Φ16mm
	20: Φ20mm
	25: Φ25mm
	32: Φ32mm

Add) HFY series are all attached with magnet.

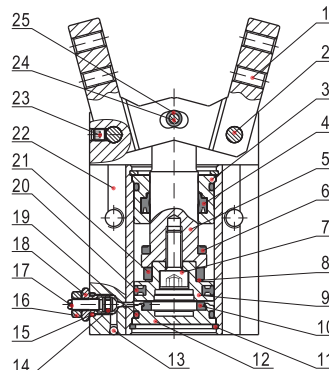
### Gripping force and stroke

Acting	Model	Theoretical gripping torque (N·cm)		Max. length of gripping point (L)(mm)	Opening angle	Closing angle
		Closed	Opened			
Double acting	HFY6	7.4 × P	10.6 × P	30	30 <sup>+3</sup> <sub>0</sub>	-10 <sup>0</sup> <sub>-3</sub>
	HFY10	17.6 × P	29.4 × P	30		
	HFY16	90 × P	129 × P	40		
	HFY20	152 × P	252 × P	60		
	HFY25	304 × P	473 × P	70		
	HFY32	637 × P	904 × P	85		
Single acting Normally opened	HFTY6	5.7 × P	-	30	30 <sup>+3</sup> <sub>0</sub>	-10 <sup>0</sup> <sub>-3</sub>
	HFTY10	11.8 × P	-	30		
	HFTY16	71.2 × P	-	40		
	HFTY20	122.4 × P	-	60		
	HFTY25	252 × P	-	70		
	HFTY32	589 × P	-	85		

Note) The P in the gripping torque shown in the above chart represents the actual use of air pressure.

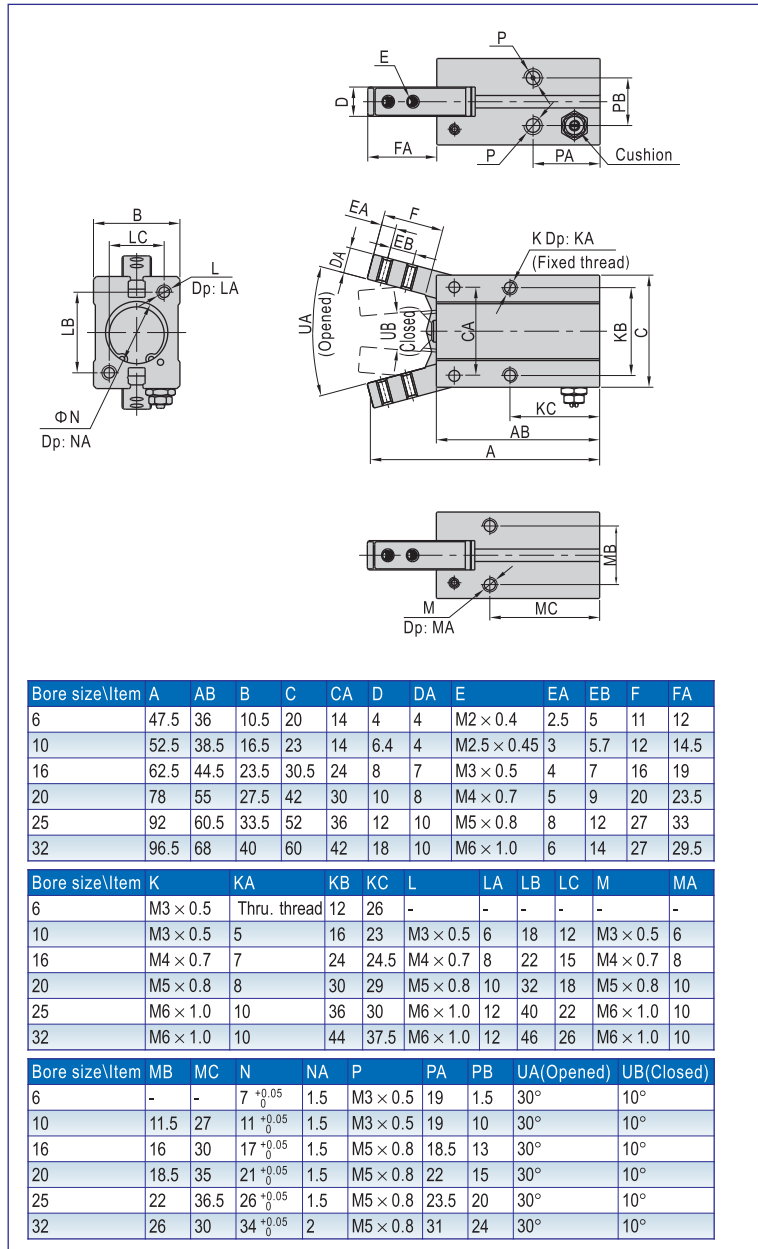
### Inner structure and material of major parts

NO.	Item	Material
1	Gripping jaws	Carbon steel
2	Pin	Stainless steel
3	Front cover	Aluminum alloy
4	Rod packing	NBR
5	Piston rod	Aluminum alloy/Stainless steel
6	Bumper	TPU
7	Countersink screw	Carbon steel
8	Magnet washer	NBR
9	Piston	Aluminum alloy/Stainless steel
10	Bumper	TPU
11	C clip	Spring steel
12	Back cover	Aluminum alloy
13	Steel ball	Stainless steel
14	O-ring	NBR
15	O-ring	NBR
16	Screw cap	Carbon steel
17	Adjustable nut	Brass
18	Fixed nut	Brass
19	O-ring	NBR
20	Piston seal	NBR
21	Magnet	Sintered metal (Neodymium-iron-boron)
22	Body	Aluminum alloy
23	Countersink screw	Carbon steel
24	Pin	Stainless steel
25	Pin sheath	Stainless steel



## HFY Series

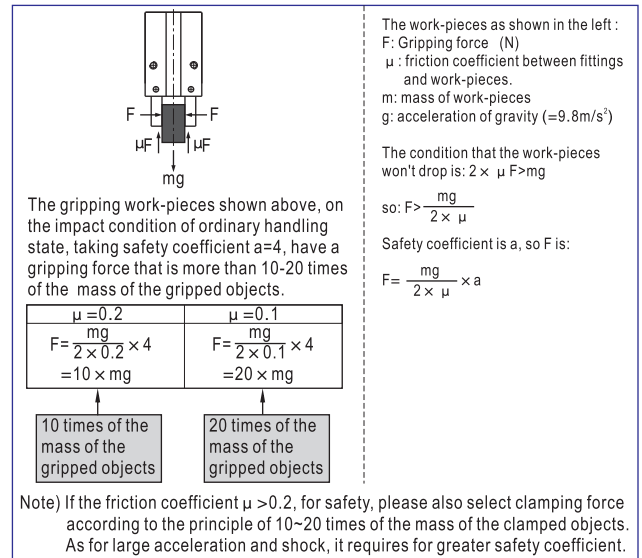
### ■ Dimensions



### ■ How to select product

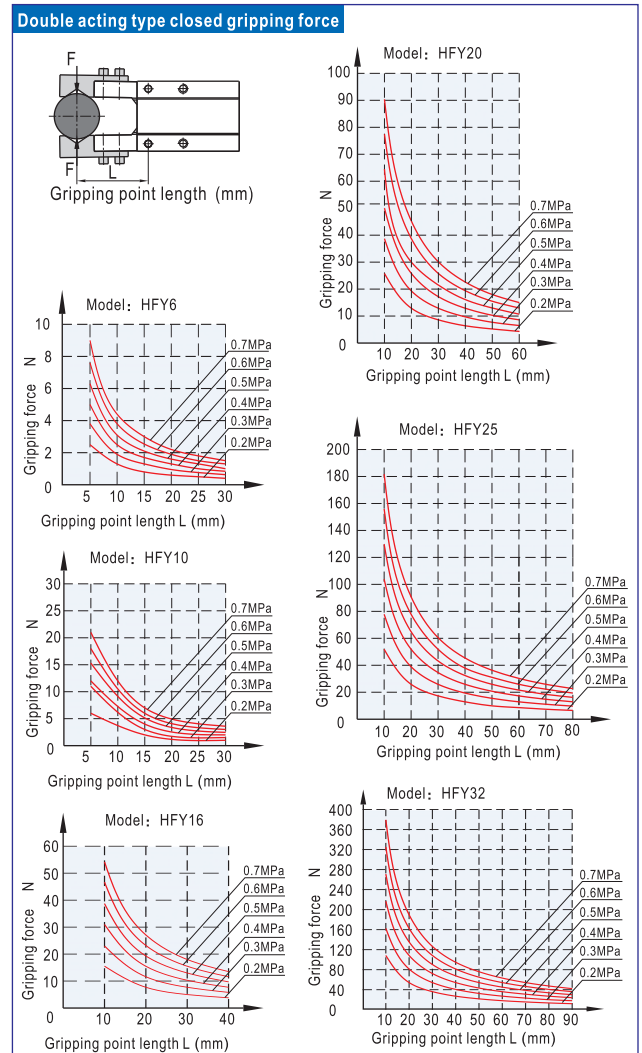
#### 1. The selection of gripping force

Please determine the gripping force according to the below methods.



#### 2. The selection of the gripping point

When the gripping force is determined, select the gripping point according to the limitation ranges shown in the below chart. If the gripping point is over the limit, the gripping jaw will be subjected to excessive moment load, and lead to short life of air gripper.



*Koganei's rubber hand fits like a glove and holds extremely well!*

***Koganei's high function pneumatic type rubber hand is soft in the way it works and firmly grips workpieces with a wide contact area.***

# RUBBER HANDS

For many types of workpieces, these grip wide contact surfaces gently and are a new type of pneumatic holder. Use these for many fields of FA, not just for taking out the workpieces, loading, transferring and inserting the workpieces, but also for sealing and stopping. These are devices you cannot work without.

## Pick type that inflates outward

The hollow cylindrical rubber portion inflates like the doughnut shape and gently and firmly contacts a wide area without damaging the workpiece.

■ Air pressure 0MPa [0psi.]



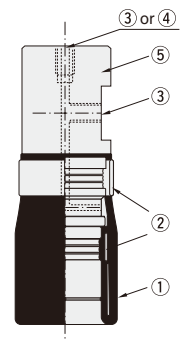
■ Air pressure 0.15MPa [22psi.]



■ Air pressure 0.3MPa [44psi.]



### Inner construction and parts



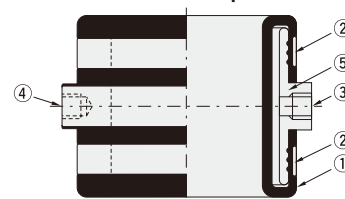
- ① Rubber
- ② Clamping band
- ③ Supply/exhaust port
- ④ Mounting thread
- ⑤ Body

※ The inner construction might be different according to the type.

## Grip type that inflates inward

The hollow doughnut shape rubber portion inflates internally and gently contacts a wide area and firmly holds without damaging the workpiece.

### Inner construction and parts



- ① Rubber
- ② Clamping band
- ③ Supply/exhaust port
- ④ Mounting thread
- ⑤ Body

※ The inner construction might be different according to the type.

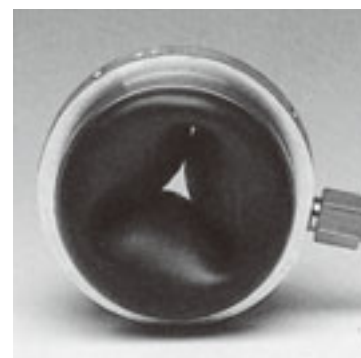
■ Air pressure 0MPa [0psi.]



■ Air pressure 0.05MPa [7psi.]



■ Air pressure 0.1MPa [15psi.]



## Pick Type

### ●RBP□RCA

The rubber portion is reinforced with radial nylon cords.  
This type is suitable for holding or handling the workpiece whose inner diameter is small to medium-size or whose weight is medium.

### ●RBP□TCA

The rubber portion is reinforced with bias nylon cords.  
This type is suitable for holding or handling the workpiece whose inner diameter is large or whose weight is heavy.



## Specifications

Order codes	Applicable inner diameter of the workpiece (mm [in.])	Recommended load mass <sup>Note</sup> (g [oz.])	Media	Maximum operating air pressure (MPa [psi.])	Proof pressure (MPa [psi.])	Operating temperature range (°C [°F])	Lubrication	Construction of the rubber portion	Body materials	Product mass (g [oz.])		
RBP006RCA	φ 8.5~10 [0.335~0.39]	300 [10.6]	Air	0.40 [58]	0.60 [87]	0~50 [32~122]	Prohibited (It is not possible to use under mineral oil atmosphere, etc.)	Radial cords construction (Chloroprene rubber)	Stainless steel	8 [0.28]		
RBP007RCA	φ 10~12 [0.39~0.47]	300 [10.6]								12 [0.42]		
RBP009RCA	φ 12~17 [0.47~0.67]	1300 [45.9]								17 [0.60]		
RBP010RCA	φ 16~21 [0.63~0.83]	2000 [70.5]							Free-cutting steel (Plated)	28 [0.99]		
RBP014RCA	φ 21~27 [0.83~1.06]	2500 [88.2]								60 [2.12]		
RBP017RCA	φ 24~32 [0.94~1.26]	3000 [105.8]		0.50 [73]	0.75 [109]					Bias cords construction (Chloroprene rubber)	Aluminum	85 [3.00]
RBP019RCA	φ 28~36 [1.10~1.42]	3500 [123.5]										105 [3.70]
RBP022RCA	φ 30~44 [1.18~1.73]	6000 [211.6]										160 [5.64]
RBP025RCA	φ 32~52 [1.26~2.05]	9000 [317.5]										245 [8.64]
RBP035TCA	φ 45~65 [1.77~2.56]	12000 [423.3]										180 [6.35]
RBP045TCA	φ 58~85 [2.28~3.35]	22000 [776.0]	370 [13.05]									
RBP055TCA	φ 70~105 [2.76~4.13]	28000 [987.7]	610 [21.52]									

Note: The recommended load mass shows the case where the inner diameter of the application workpiece is the maximum value. (The load mass increases as the inner diameter of the workpiece becomes smaller.)

## Grip Type

### ●RBG□GCA

The workpiece is securely held softly from the outside. This type is best for handling workpiece without an opening, or which has a small opening and is not easily gripped from the inside.



## Specifications

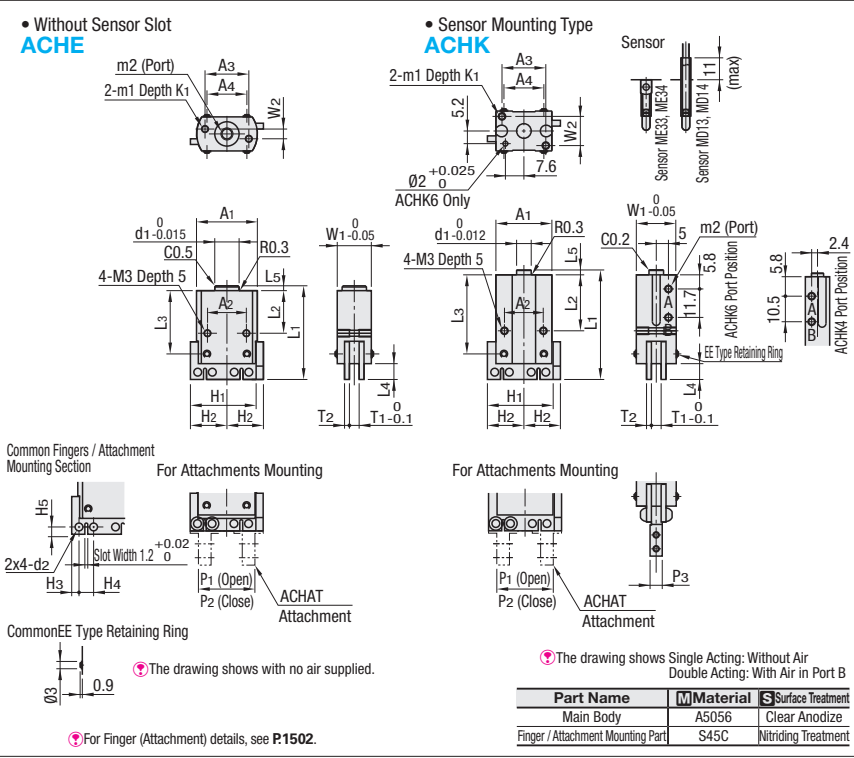
Order codes	Applicable outer diameter of the workpiece (mm [in.])	Recommended load mass <sup>Note</sup> (g [oz.])	Media	Maximum operating air pressure (MPa [psi.])	Proof pressure (MPa [psi.])	Operating temperature range (°C [°F])	Lubrication	Construction of the rubber portion	Body material	Product mass (g [oz.])
RBG020GCA	φ 5~15 [0.20~0.59]	1400 [49.4]	Air	0.15 [22]	0.20 [29]	0~50 [32~122]	Prohibited (It is not possible to use under mineral oil atmosphere, etc.)	Whole rubber (Chloroprene rubber)	Aluminum	60 [2.12]
RBG030GCA	φ 10~25 [0.39~0.98]	3800 [134.0]								145 [5.11]
RBG040GCA	φ 15~35 [0.59~1.38]	9000 [317.5]								210 [7.41]
RBG050GCA	φ 20~45 [0.79~1.77]	9000 [317.5]								285 [10.05]

Note: The recommended load mass shows the case where the outer diameter of the application workpiece is the minimum value. (The load mass increases as the outer diameter of the workpiece becomes larger.)

# Compact Parallel Grippers / Sensors

# Attachments for Pneumatic Grippers/ Fingers for Pneumatic Grippers (Direct Mounting Type)

Flat Shape

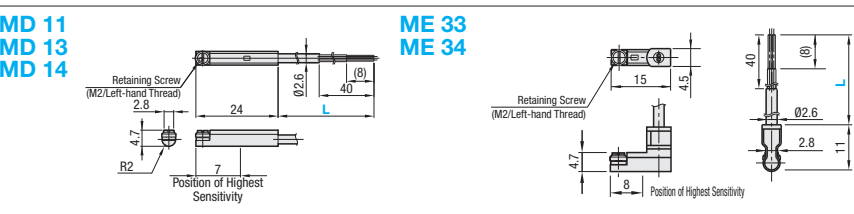


Part Number	Stroke	Selection	A1	A2	A3	A4	L1	L2	L3	L4	L5	H1	H2	H3	H4	H5	W1	W2	T1	T2	d1	d2	m1	m2	K1	P1	P2	P3
ACHE	4	N	22	12	13.6	14.4	33.5	16.5	22.5	5.5	1.5	24	13	2.5	5	2.5	10	4	3.1	1.5	6	2.2	3	3	6	20	16	4
	6	N	25	16	18	16.4	38.5	17.5	26	6.5	2	27	15	3	6	3	14	-	4.1	2	10	3.2	3	5	6	23.2	17.2	5
ACHK	4	N	20	12	10	14.4	40.5	23.5	29.5	5.5	1.5	24	13	2.5	5	2.5	10	6	3.1	1.5	5	2.2	2.6	3	4	20	16	4
	6	N	23	16	18	16.4	45	23	32.5	6.5	2	27	15	3	6	3	16.4	12	4.1	2	6	3.2	3	3	6	23.2	17.2	5

Part Number	Stroke	Selection	Cylinder I.D.	Effective Gripping Force (N)		Allowable Static Load (N)		Mass (g)	Sensor Slot	Unit Price
				Single Acting	Spring Double Acting	F1	F2			
ACHE	4	N	8	4.2(1)	-	5	2.5	17	No	
	6	N	10	7.2(1.3)	-	10	5	31	No	
ACHK	4	N	8	4.2(1)	4.9	5	2.5	19	Yes	
	6	N	12	10.4(1.9)	12.2	10	5	37	Yes	

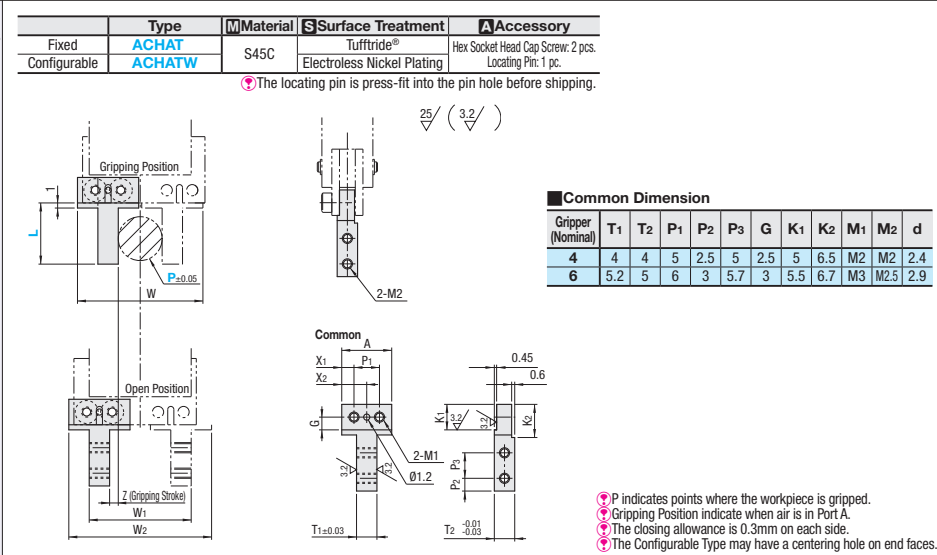
For the Specifications and Gripping Point Data, see Overview Page P1500. The Allowable Static Load values are for reference only, not guaranteed. The directions of the Allowable Static Load are shown in F1 and F2 on the right.

Ordering Example: Part Number - Single / Double Acting  
ACHK4 - N



Part Number	Load Voltage	Load Current	Indicator Light	Sensor Type	Line	Wire Exit	Unit Price	
							L1 (1m)	L3 (3m)
MD11	24VDC 110VAC	DC24V 5~40mA AC110V 5~20mA	LED (Lights when ON)	Contact	2-Line	Rear		
MD13	28VDC or Less	0.1~40mA	LED (Lights when ON)	No Contact	3-Line	Rear		
MD14	10~28VDC	5~20mA	LED (Lights when ON)	No Contact	2-Line	Top		
ME33	28VDC or Less	0.1~40mA	LED (Lights when ON)	No Contact	3-Line	Top		
ME34	10~28VDC	5~20mA	LED (Lights when ON)	No Contact	2-Line	Top		

Ordering Example: Part Number MD14L1



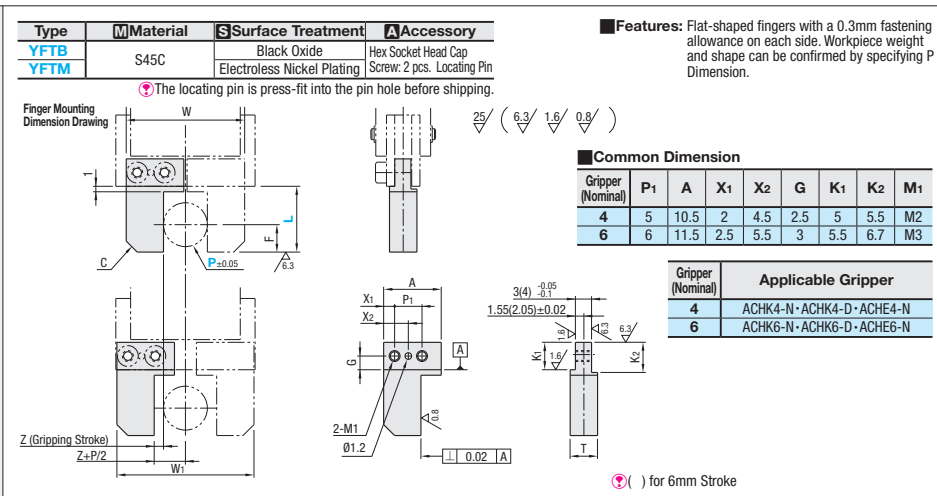
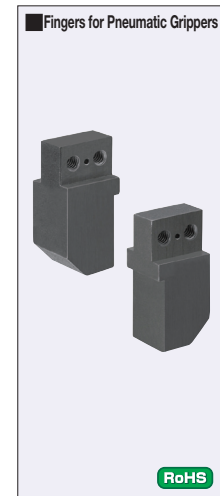
Fixed Part Number Table:

Part Number	L	P	W	W1	W2	Z	A	X1	X2	Applicable Gripper	Unit Price
ACHAT	4	12	8.6	22.4	20	25.8	1.7	9.8	2.4	ACHK4-□	
	6	14	7.4	24.4	23.2	29.8	2.7	11.8	2.9	ACHK6-□	

Configurable Part Number Table:

Part Number	L 1mm Increment	P Selection	W	W1	W2	Z	A	X1	X2	Applicable Gripper	Unit Price
ACHATW	4	12-18	0.6 8.6 16.6	24.6	P+11.4	28	1.7	12	3.5	ACHK4-□ ACHE4-N	
	6	14-25	0.6 7.4 14.2	24.6	P+15.8	30	2.7	12	3	ACHK6-□ ACHE6-N	

Ordering Example: Part Number - L - P  
ACHAT4 ACHATW4 - L13 - P8.6



Gripper Body: 4mm Stroke (One-sided Stroke: 2mm)

Part Number	P Reference Pin 0.1mm Increment	L 1mm Increment	F	C	T	Z	W	W1
YFTB YFTM	3.0~4.0	8~29	2					
	4.1~5.0	8~30	2.5					
	5.1~6.0	9~30	3					
	6.1~7.0	9~31	3.5					
	7.1~8.0	10~31	4					
	8.1~9.0	11~32	4.5					
	9.1~10.0	12~32	5					

Gripper Body: 6mm Stroke (One-sided Stroke: 3mm)

Part Number	P Reference Pin 0.1mm Increment	L 1mm Increment	F	C	T	Z	W	W1
YFTB YFTM	3.0~4.0	8~44	2					
	4.1~5.0	8~45	2.5					
	5.1~6.0	9~45	3					
	6.1~7.0	9~46	3.5					
	7.1~8.0	10~46	4					
	8.1~9.0	11~47	4.5					
	9.1~10.0	12~47	5					

