# HARMO Robot Parts

# Angular Lever Gripper

## Characteristics

 The elliptic cylinder, which assures large cylinder area, has realized both compact size and large gripping power. The Angular Lever Gripper is also light in weight thanks to the employment of a special engineering plastic. (Plastic: HC15, and 20 only)

#### **Specifications**

Model		HC15 P	HC20 P	HC20 D	HC30 D		
Act	tuating method	Double acting type, Single acting type					
Flu	id medium	Compressed air (oilless)					
Ope	rating pressure range	29 ~ 87psi (0.2 ~ 0.6MPa) 29 ~ 102psi (0.2 ~ 0.7MPa)			<b>).2 ~ 0.7</b> MPa)		
Ope	erating temp. range	14 ~ 140°F (-10 ~ 60°C) (no freezing)					
Po	rt size	M5×0.8mm					
Cylinder sectional area		2.1cm <sup>2</sup>	4.3cm <sup>2</sup>		8.8cm <sup>2</sup>		
Repeated accuracy		±0.1mm (at the center of the jaws)					
Су	cle per minute		100C.P.M				
UseWith bracket (B)With Sensor (S)		0	0	-	-		
Opt	With Sensor (S)	0	0	0	0		

# Model Designation (Example)



Code	15	20	30
/linder area	2.1cm <sup>2</sup>	4.3cm <sup>2</sup>	8.8cm <sup>2</sup>

(2) Opening-close mode

Ĩ	Code	А	В	С	
	Mode	Double-acting	Single-acting normally open	Single-acting normally closed	

### (3) Body material

Code (material)	Р	D
Lever Type Gripper Code	(plastic)	(die cast)
HC15	0	-
HC20	0	0
HC30	-	0

\* Finger tool type: Please add "X" in the end of model code of HP20B. Otherwise, please enter PX or DX.

#### (4) Option

Code (material)	-В	-S	No code
Lever Type Gripper Code	(with bracket)	(with sensor (with bracket))	(without option)
HC15 P	0	0	
HC20 P(X)	0	0	
HC20 D	-	0	
HC30 D	-	0	

## Sensor Specification

Power voltage	12 ~ 24VDC		
Power consumption	Max. 15mA		
	NPN transistor open collector		
Output	Max. current: 100mA		
	Applied voltage: 30VDC max.		
Operation indicator lamp	Red LED (Lights when turned on)		
Ambient	14 ~ 131°F (-10 ~ +55°C)		
Cable	0.08SQ 3 cores, 1m		

## Construction

(4)	(5)	No	Parts	Material
╧╹╤╹		(1)	Rack	chromium-molybdenum steel
(3)	(6)	(2)	Cylinder	polyamide resin or zinc die casting
(10)		(3)	Piston	POM
(2)		(4)	Spring	S.W.P. single acting normally open type
$(1) \left( \begin{array}{c} \phi \\ \end{array} \right) \left( \begin{array}{c} \phi \end{array} \right$	(8)	(5)	Top cover	aluminium die casting
		(6)	Piston packing	NBR
	(9)	(7)	Rod packing	NBR
\$  \\$	∖ ⊢i-i	(8)	Fulcrum shaft	stainless steel
		(9)	Jaw	chromium-molybdenum steel
		(10)	Spring	S.W.P. single acting normally close type

#### Caution

1. Use clear and dry air as supply air to Gripper.

2. By grabbing as softly as possible, Gripper works accurately and repeat accuracy is stable.

3. Avoid use having lateral load on jaws part.

4. Use lightest and shortest possible finger tool attached to jaws part.

The products listed in this page are ECO-friendly products. • Please refer to page 4 for the details of ECO-friendly products.

Model HC20BPX HC20BDX HC20BDX
HC20BDX HC20BDX
HC20BDX
inger and Bracket HC20BPX-B
HC20BDX-B
2 2 2 V
Model
inger and Sensor HC20BPX-S
HC20BDX-S
13 to 1

\*1. For 2, please select an o \*2. Build-to-order production

Package specification

1 pc. in a bag



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# Option Parts

Model of Sensor Set (*1)			Model of Sensor only (*1)			
Model	Gripper type	Note	Model	Gripper type	Note	
D0002	HC15P	Set Item	D000907	All types	Sensor 1 pc. + Fixing Screw 1 pc.	
D0102	HC20P	Sensor, Sensor Fixing Screw,			•	
D0132	HC20D	Limit Dog, Dog Fixing Screw,	Model of Lin	nit Dog Fixing	Screw for Sensor	
D0202	HC30D	Sensor Bracket, Sensor	Model	Gripper type	Note	
D0162	HC20BPX	Bracket Fixing Screw	/100613	HC15P		
D0162	HC20BDX		/100813	HC20P	For fixing, 2 pcs. required.	
			1/100813	HC20D	For fixing, 2 pcs. required.	
Model of Li	mit Dog for Se	nsor (Dog only)	/101015	HC30D		
Model	Gripper type	Note				
D000903	HC15P		Model of Sei	nsor Bracket o	only	
D010903	HC20P		Model	Gripper type	Note	
D013903	HC20D		D000902	HC15P		
/080205	HC20BPX	Both required	D010902	HC20P		
/080808	HC20BDX	Bourrequired	D013902	HC20D	Bracket with sensor mount	
D020903	HC30D		D020902	HC30D	only	
			D.0.40000	HC20BPX		
Model of Se	ensor Fixing Pl	ain Washer	D016902	HC20BDX		
Model	Gripper type	Note				
/500715	HC20BPX	For fixing 1 pc. required.	Model of Sensor Bracket Fixing Screw			
/500/15	HC20BDX	ror inxing i pc. required.	Model	Gripper type	Note	
			/110613	HC15P	For fiving 4 neg required	
Model of Br	Model of Bracket only (not a sensor mount type) (*2)		/110815	HC20P HC30D	For fixing, 4 pcs. required.	

			/ 110010	110101	For fixing, 4 pcs. required.
Model of Bra	cket only (not	a sensor mount type) (*2)	/110815	HC20P, HC30D	i or inning, 4 pcs. required.
Model Gripper type Note		/000304	HC20D	For fixing, 2 pcs. required.	
D000901 HC15P Fixing Screw Size: M3x0.5, Depth 5mm, 4 holes		/110815	HC20BPX	For fixing, 2 pcs. required.	
D010901	HC20P	Fixing Screw Size: M4x0.7, Depth 6mm, 4 holes	/110815	HC20BDX	i ol lixing, 2 pcs. required.

Cautions

\*1. The sensor is NPN Open collector output.

\*2. No screw is induded. Please prepare

#### Package specifications

Fixing Screw by yourself.

1 pc. in a bag: Limit Dog Fixing Screw for Sensor Limit Dog for Sensor (Dog only)

Sensor Fixing Plain Washer

Sensor Bracket only

Sensor Bracket Fixing Screw Bracket only (not a sensor mount type)

1 set / bag: Sensor Set

Sensor only

