

Heartful Technology

Yushin

HOP SERIES



● HOP Five

● TWINHOP-G

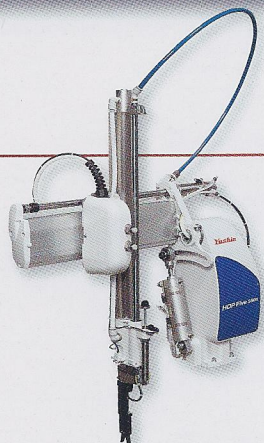
● miniHOP-G

● V-HOP

● N-HOP-G

YUSHIN PRECISION EQUIPMENT CO.,LTD.

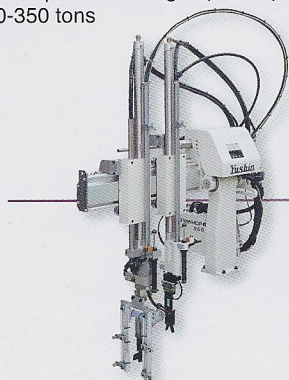
HOP SERIES



HOP Five 450~1000

3 axis pneumatic high-speed sprue pickers for horizontal molding machines from 30-350 tons

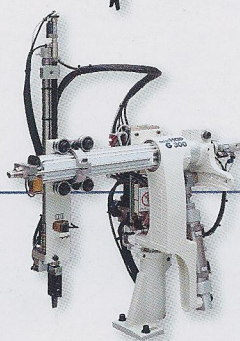
G II-type controller



TWINHOP-G 450/550

3 axis pneumatic sprue and product pickers for horizontal molding machines from 30-100 tons

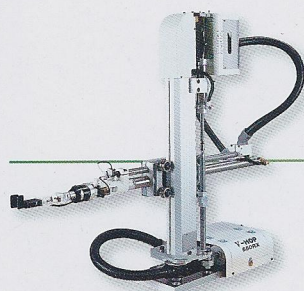
G-type controller



miniHOP-G 300

3 axis pneumatic sprue pickers for horizontal molding machines under 30 tons

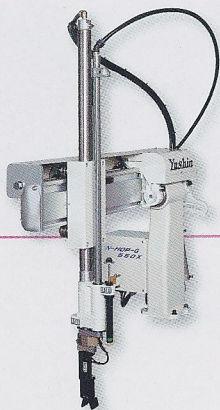
G-type controller



V-HOP 350~550

2 axis pneumatic sprue pickers for vertical molding machines from 20-100 tons

G-type controller



N-HOP-G 450~900

2 axis pneumatic and 1 axis servo sprue pickers for horizontal molding machines from 30-350 tons

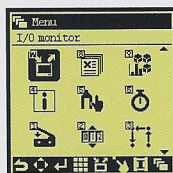
G-type controller



G II-type controller

Next generation G-type controller offering higher performance and features

- Equipped with eye-friendly large LCD.
- Icon selection is possible on the menu panel.
- The user-friendly raised silicone keys are featured on the pendant.
- Up to 30 mold set ups storage is possible.
- Data backup is possible with SD card.



G II-type controller panel



G-type controller

- Multilingual display function(optional)
- Easy operation by LCD
- Light-weight handheld controller
- Up to 15 mold set ups storage is possible.
- Production count memory

3 axis pneumatic high-speed sprue pickers for horizontal molding machines from 30-350 tons

HOP Five 450~1000

The "HOP Five" is the product of many years of research, development and experience with swing-type take-out robots.

It offers a space saving design with integration of robot body and control mechanism including transformer and control circuit board. Furthermore, it also offers efficient operation as its design enables operators to do all of the main adjusting operations at the operator side of molding machines.

It is equipped with new type handheld controller, "GII-type controller" offering excellent operability with vastly improved functions over the "G-type controller".

As for appearance, it adopts a housing cover painted Yushin corporate blue, color-coded piping and user-friendly shape composed of curved surfaces and lines.

Equipped with ample functions in its compact body.

The robust construction supports the stable high-speed take-out operation.

Yushin linear rail

G II-type controller



HOP Five 550X

Standard specification

Power source

AC200V 0.25A (50/60Hz)

Control method

Micro-computer

Air Pressure

0.4~0.5MPa

Max. Air Pressure

0.8MPa

Model	HOP Five 450	HOP Five 550	HOP Five 650	HOP Five 750	HOP Five 900	HOP Five 1000
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Stroke

Vertical(mm)	450	550	650	750	900	1000
Kick(mm)		90			150	
Swing	Min.50°~ Max.90°					

Chuck position(mm)

Waiting position adjustable 150

Air consumption (ℓ (normal) /cycle)

10	11	17	19	21	22
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Max. payload(*)

2kg

Robot weight(kg)

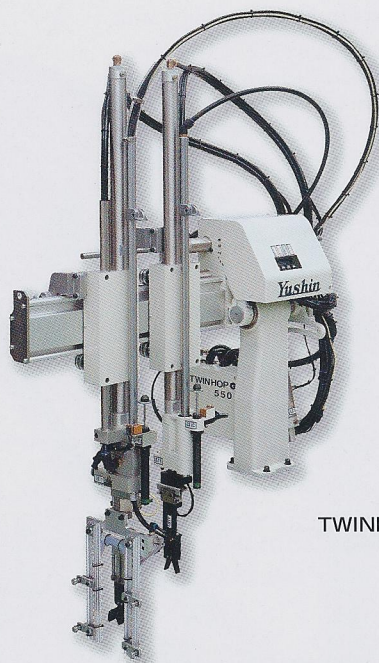
29	30	31	33	34	35
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* Max. payload includes the weight of chuck and/or EOAT. X-, XC-, and XN-Types are also available.

3 axis pneumatic sprue and product pickers for horizontal molding machines from 30-100 tons

TWINHOP-G 450/550

In addition to being a sprue picker, the TWINHOP-G has both a main arm and a sub arm and supports 3 plate molds. The TWINHOP-G is provided standard with an adjustable 4 cup end-of-arm tool, wrist flipping, vacuum circuit, and is capable of taking out products using suction.



TWINHOP-G 550

3 plate mold capability

End of arm tool mounting capability

Wrist flipping/vacuum/adjustable end of arm tool are standard.

Yushin linear rail

G-type controller

Standard specification

Power source
AC200V 0.25A (50/60Hz)

Control method
Sequence stored program

Air Pressure
0.4~0.5MPa

Max. Air Pressure
0.8MPa

Model	TWINHOP-G 450	TWINHOP-G 550
Stroke		
Vertical(mm)	450	550
Kick(mm)	90	
Swing	Min.50°~ Max.90°	

Chuck position(mm)
Waiting position adjustable 100

Air consumption (ℓ (normal) /cycle)		
	16	18

Max. payload(*)
2kg

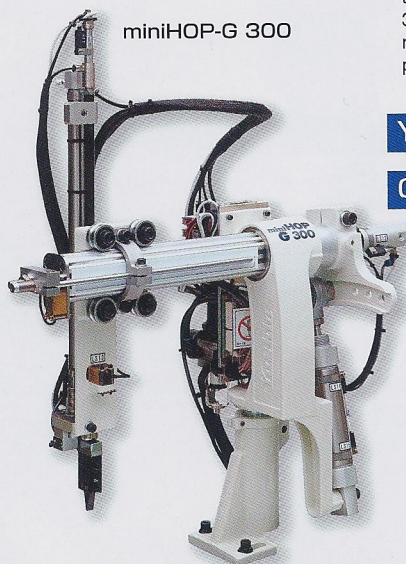
Robot weight(kg)		
	47	48

* Max. payload includes the weight of chuck and/or EOAT.

3 axis pneumatic sprue pickers for horizontal molding machines under 30 tons

miniHOP-G 300

The miniHOP-G300 was developed to support miniature molding machines made by various injection molding machine manufacturers. Although it is small, the use of Yushin linear rails provides high-speed stability and virtually maintenance free qualities.



miniHOP-G 300

Adjustable chuck waiting position

The chuck waiting position can be adjusted within a 65-mm range in the vertical direction and between 30 to 205 mm from the mold mounting surface of the stationary platen in the horizontal direction.

Yushin linear rail

G-type controller

Standard specification

Power source
AC200V 0.25A (50/60Hz)

Control method
Sequence stored program

Air Pressure
0.4~0.5MPa

Max. Air Pressure
0.8MPa

Model
miniHOP-G 300

Stroke	
Vertical(mm)	300(Extended type 350)
Kick(mm)	15~30(Extended type 35~50)
Swing	50°60°80° (3 position changable)

Chuck position(mm)
Waiting position adjustable 65

Air consumption (ℓ (normal) /cycle)
4

Max. payload(*)
1kg

Robot weight(kg)
18

* Max. payload includes the weight of chuck and/or EOAT.

2 axis pneumatic sprue pickers for vertical molding machines from 20-100 tons

V-HOP 350~550

The Vertical HOP is a sprue picker robot made specifically for vertical molding machines. In addition to upper mold extraction, the robot can be set to accommodate to bottom mold extraction simply by controller and mechanical settings.

Chuck capable of a 180-degree flip motion to ensure runners can fall freely (X Specification)

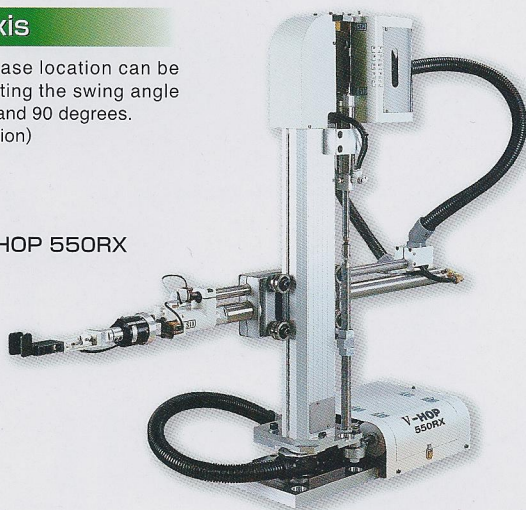
Yushin linear rail

G-type controller

Swing axis

Runner release location can be set by adjusting the swing angle between 60 and 90 degrees. (R Specification)

V-HOP 550RX



Standard specification

Power source

AC200V 0.25A (50/60Hz)

Control method

Sequence stored program

Air Pressure

0.4~0.5MPa

Max. Air Pressure

0.8MPa

Model

V-HOP 350

V-HOP 450

V-HOP 550

Stroke

Traverse(mm) 350 450 550

Kick(mm) 90

Swing Min.60° ~ Max.90°

Chuck position(mm)

Waiting position adjustable 100

Air consumption (ℓ (normal) /cycle)

No reversal 8 10 11

Reversal possible 12 14 16

Max. payload(*)

1.5kg

Robot weight(kg)

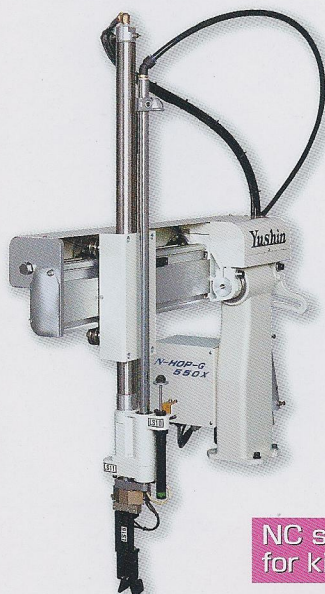
37 38 39

* Max. payload includes the weight of chuck and/or EOAT. X-and R-Types are also available.

2 axis pneumatic and 1 axis servo sprue pickers for horizontal molding machines from 30-350 tons

N-HOP-G 450~900

In a swing type robot, the item that requires the most frequent adjustment in connection with mold changes is the kick stroke. The kick axis of the N-HOP-G is driven with a numerically controlled servomotor, which allows the adjustment to be executed safely and accurately without climbing on top of the molding machine. The servomotor also provides a fast and stable runner take-out motion that can only be achieved with servomotor drive.



N-HOP-G 550X

NC servomotor for kick axis

Yushin linear rail

G-type controller

Standard specification

Power source

AC200V 3.0A (50/60Hz)

Control method

Micro-computer

Air Pressure

0.4~0.5MPa

Max. Air Pressure

0.8MPa

Model

N-HOP-G 450

N-HOP-G 550

N-HOP-G 650

N-HOP-G 750

N-HOP-G 900

Stroke

Vertical(mm) 450 550 650 750 900

Kick(mm) 350 620

Swing Min.50° ~ Max.90°

Chuck position(mm)

Waiting position adjustable 100

Air consumption (ℓ (normal) /cycle)

11 13 15 17 19

Max. payload(*)

2kg

Robot weight(kg)

28 29 30 32 33

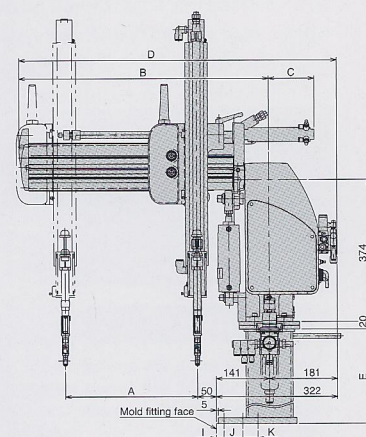
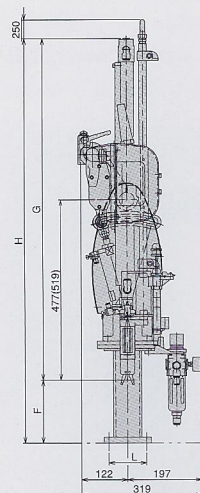
* Max. payload included the weight of chuck and/or EOAT. X-, XC- and XN-Types are also available.

HOP Five 450~1000

Model	A	B	C	D	E	F	G
HOP Five 450							803 (845)
HOP Five 550	350	661.5	120.5	842.5	250 (350)	167 (225)	903 (945)
HOP Five 650							1003 (1045)
HOP Five 750							1103 (1145)
HOP Five 900	620	991.5	180.5	1172.5	350 (450)	267 (325)	1253 (1295)
HOP Five 1000							1353 (1395)

Model	H	I	J	K	L
HOP Five 450	970 (1070)				
HOP Five 550	1070 (1170)	20	50	40	100
HOP Five 650	1170 (1270)				
HOP Five 750	1370 (1470)				
HOP Five 900	1520 (1620)	25	60	60	128
HOP Five 1000	1620 (1720)				

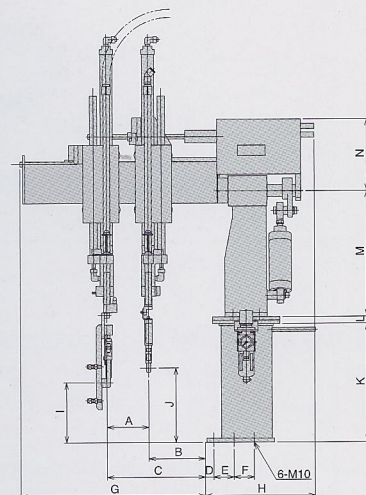
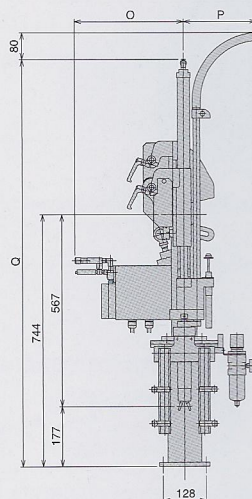
※Dimensions in () are for the X(flip) type.



TWINHOP-G 450/550

Model	A	B	C	D	E	F	G	H
TWINHOP-G 450	Min.85	44	129	25	60	60	546	325
TWINHOP-G 550		~285	~413					

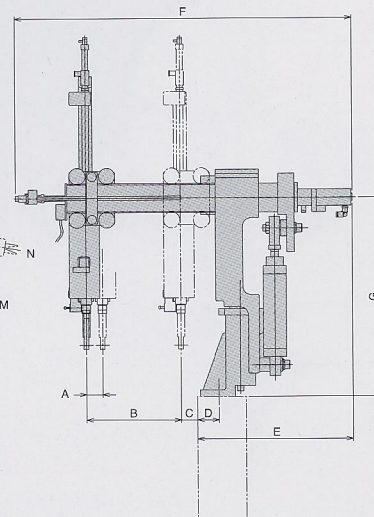
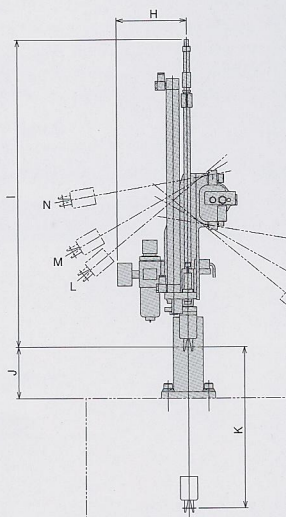
Model	I	J	K	L	M	N	O	P	Q
TWINHOP-G 450	177	220	350	20	374	211	324	217	1200
TWINHOP-G 550									1300



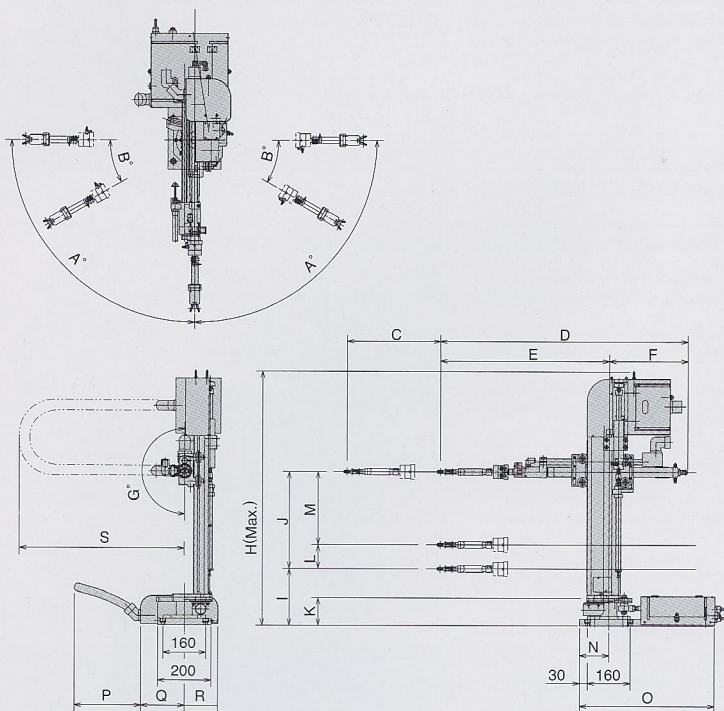
miniHOP-G 300

Model	A	B	C	D	E	F	G	H
miniHOP-G 300	15~30st	175	30	40	288	623	368~433	130

Model	I	J	K	L	M	N
miniHOP-G 300	571	95~160	0~300st	50°	60°	80°



V-HOP 350~550



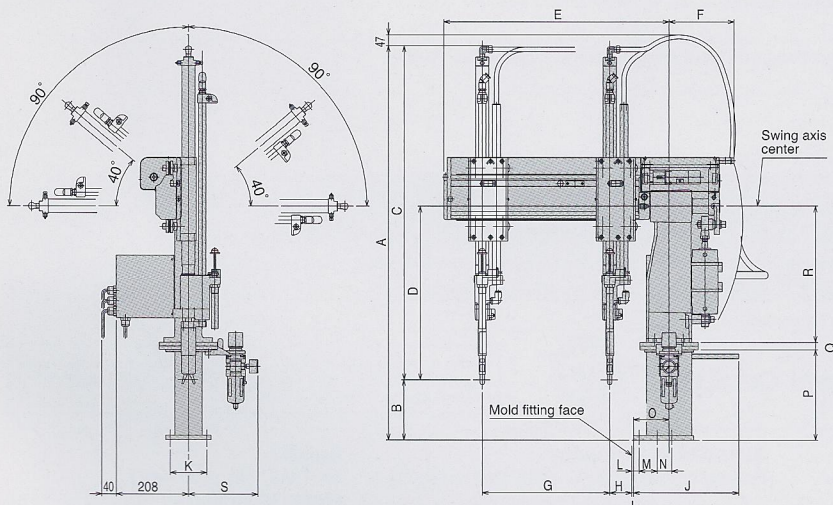
Model	A	B	C	D	E	F	G	H	I
V-HOP (w/o Swivel w/o Wrist)	—	—	—	817 (917) [1017]	522	—	—	—	—
V-HOP-X (w/o Swivel w Wrist)	—	—	350 (450) [550]	929 (1029) [1129]	634	295 (395) [495]	180	952	212
V-HOP-R (w Swivel w/o Wrist)	90	30	—	817 (917) [1017]	522	—	—	—	—
V-HOP-RX (w Swivel w Wrist)	90	30	—	929 (1029) [1129]	634	—	180	—	—

Model	J	K	L	M	N	O	P	Q	R	S
V-HOP (w/o Swivel w/o Wrist)	—	—	—	—	—	330	—	100	100	—
V-HOP-X (w/o Swivel w Wrist)	361	104	90	271	110	—	—	—	—	400
V-HOP-R (w Swivel w/o Wrist)	—	—	—	—	—	505	137	163	125	—
V-HOP-RX (w Swivel w Wrist)	—	—	—	—	—	—	—	—	—	—

() is 450 model, [] is 550 model.

* The B dimension shows the adjustable range of the swivel angle.

N-HOP-G 450~900



Model	A	B	C	D	E	F	G
N-HOP-G 450	1084	—	917	—	—	—	—
N-HOP-G 550	1184	167	1017	—	586	—	350
N-HOP-G 650	1284	—	1117	477	—	178	—
N-HOP-G 750	1484	—	1217	—	—	—	—
N-HOP-G 900	1634	267	1367	—	856	—	620

Model	H	I	J	K	L	M	N	O
N-HOP-G 450	—	—	—	—	—	—	—	—
N-HOP-G 550	5	289	100	20	50	40	98	—
N-HOP-G 650	60	—	—	—	—	—	—	—
N-HOP-G 750	4	400	128	25	60	60	99	—
N-HOP-G 900	—	—	—	—	—	—	—	—

Model	P	Q	R	S
N-HOP-G 450	—	—	—	—
N-HOP-G 550	250	—	191	—
N-HOP-G 650	—	20	374	—
N-HOP-G 750	350	—	—	217
N-HOP-G 900	—	—	—	—

HOP series Option List

Option	Explanation	Target Models
X Specification	When molded products are released onto a conveyor or a chute, the chuck unit rotates 90 degrees to release the products without damaging them. ※V-HOP chuck rotates 180 degrees.	HOP Five/V-HOP/N-HOP-G
XC Specification	With vacuum suction, the model can take out molded products that cannot be gripped with chuck or that are molded with multi-cavity mold. When the products are released, an end-of-arm tool rotates 90 degrees. (The vacuum suction circuit is included.)	HOP Five/N-HOP-G
XN Specification	Sprues of a side-gate or direct-gate mold can be cut by nipper chuck. In releasing the products, 90 degree wrist flip is also applicable.	HOP Five/N-HOP-G
R Specification	The runner release position is set at will by adjusting horizontal flip angle from 60 to 90 degree.	V-HOP
Conveyor interlock	By attaching the optional metal connector, it interlocks with a flat belt conveyor and becomes capable of stocking molded products by shot.	All Models ※Standard function for TWINHOP-G
Reject circuit	When a molding machine gives reject signal, the defective product is released at a different position from that for good products.	HOP Five/TWINHOP-G/miniHOP-G/N-HOP-G
Special color	The main body, frame covers, control box and operation box can be painted with the color specified by customers.	All Models (Not applicable for plastic cover)
Ejector interlock	The ejector goes forward after the robot moves to the take-out position. This is useful when the timing of ejector motion and robot take-out motion are to be synchronized.	All Models ※Standard function for TWINHOP-G
Air blow circuit	When a runner is gripped and the arm ascends, fragments of the molded products that are adhering to the mold are blown away by using air.	HOP Five/TWINHOP-G/V-HOP/N-HOP-G
Nipper half-grip circuit	A pressure-reducing valve is added to the product chuck circuit in order to secure the products when extracting them from the mold.	HOP Five/N-HOP-G
Vacuum blow off valve	When it is difficult to release products that stick to the vacuum suction pads, the robot can release the products by replacing the vacuum with pressurized air.	HOP Five/TWINHOP-G/N-HOP-G
Swing limit waiting	When the robot arm cannot stay at the normal waiting position while molds closed, it can stay at swing limit position.	HOP Five/TWINHOP-G/N-HOP-G
Safety door closed signal	This signal is input to the robot when the safety door of a molding machine is closed. Robot does not start without this signal under auto operation.	All Models
Auto injection signal	Take-out robot does not start its operation without auto injection signal of a molding machine. With this function, the take-out robot starts its operation only when real molding is done.	All Models ※Standard function for V-HOP
Multilingual display	Displayed language on the controller can be changed by selecting from multilingual choices.	All Models ※ HOP Five : Up to 3 languages out of Japanese, English, Korean and Chinese miniHOP-G : One combination out of Japanese·English·Chinese, Japanese·English·Korean and Japanese·English·Thai TWINHOP-G, N-HOP-G : Japanese, English and Chinese V-HOP : Japanese and English
Lead Through Teaching	Operators can easily add and change output and input signals, and timer with this software by themselves.	HOP Five
Dead man's switch	Valve operation is possible only while the operator is pushing this switch.	HOP Five (3 positions) TWINHOP-G/miniHOP-G/V-HOP/N-HOP-G (2 positions)
High speed specification	High speed operation is possible.	HOP Five
Specification for low ceiling plants	It reduces the overall height by changing the direction of a joint of the vertical guide axis.	HOP Five
Mount for horizontal extraction I	This is a mount on which a take-out robot is fixed when there is no space for the take-out robot on the molding machine's bed.	V-HOP
Mount for horizontal extraction II	This is a mount to be set on the molding machine's bed on which a take-out robot is fixed when the take-out robot cannot be installed on it directly.	V-HOP
Mount for horizontal extraction III	When the space of the molding machine's bed is not enough for "Mount for horizontal extraction II", a supporting column is to be added.	V-HOP



Safety information

- Before using any product introduced in this literature, all operators must read and understand the instruction manual and other related documents for proper and safe equipment operation.
- To improve visual clarity, these robots may be shown without the safety guards that are identified in the safety rules.
- Never operate the robots without all safety guards in place. These products are industrial robots as defined in the labor safety rules. Always take great care when operating any robots.

● Specifications on the robot are subject to change without notice to improve the product.

Heartful Technology
Yushin

Yushin Precision Equipment Co., Ltd.



Head office & Factory

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Head office & Factory

11-260 Kogahonmachi, Fushimi-ku, Kyoto, 612-8492 Japan
TEL 81(75)933-9555 FAX 81(75)934-4033

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