Swing Type Take-Out Robot

N-HOP-GⅡ450, N-HOP-GⅡ550, N-HOP-GⅡ650, N-HOP-GⅡ750, N-HOP-GⅡ900

■Features

- Clamping force: 30–350 t f
- Number of servo axes: Single-axis (Kick axis)
- Swing angle 50°–90°
- Adjustable stroke
- Adjustable chuck waiting position
- Controller: GⅡB-type controller

Servo/Air Hybrid Sprue Pickers

Unique among Yushin's HOP series sprue pickers, the N-HOP-GⅡ has a servo-powered kick axis for fast and stable take-out motions and extra versatility. The servo drive also allows for quick and accurate kick-stroke adjustment or instant settings recall through the GⅡB-type controller, with no need to climb atop the molding machine to physically adjust settings. This advantage is especially helpful when operators must change molds and the robot kick stroke frequently.

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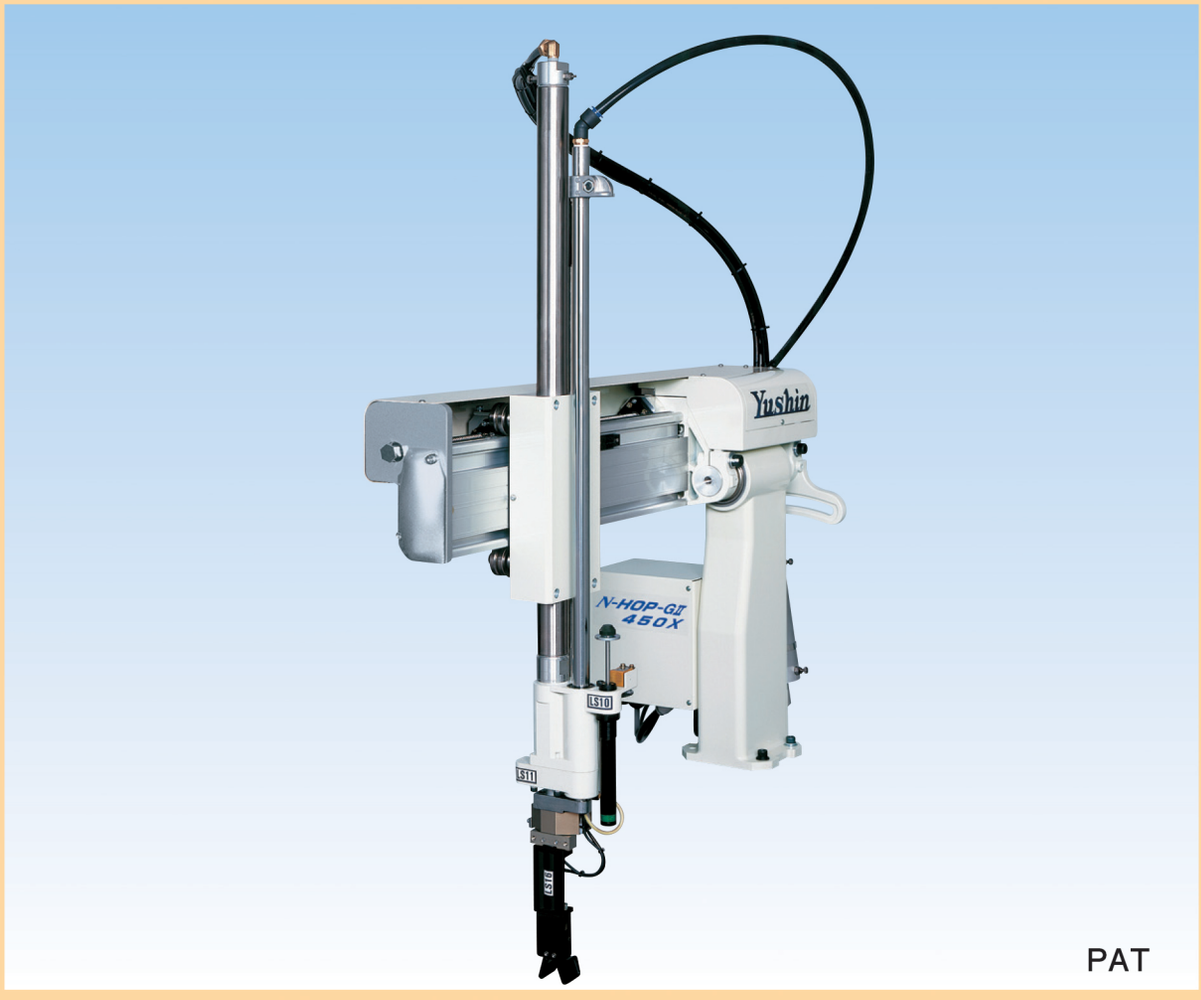

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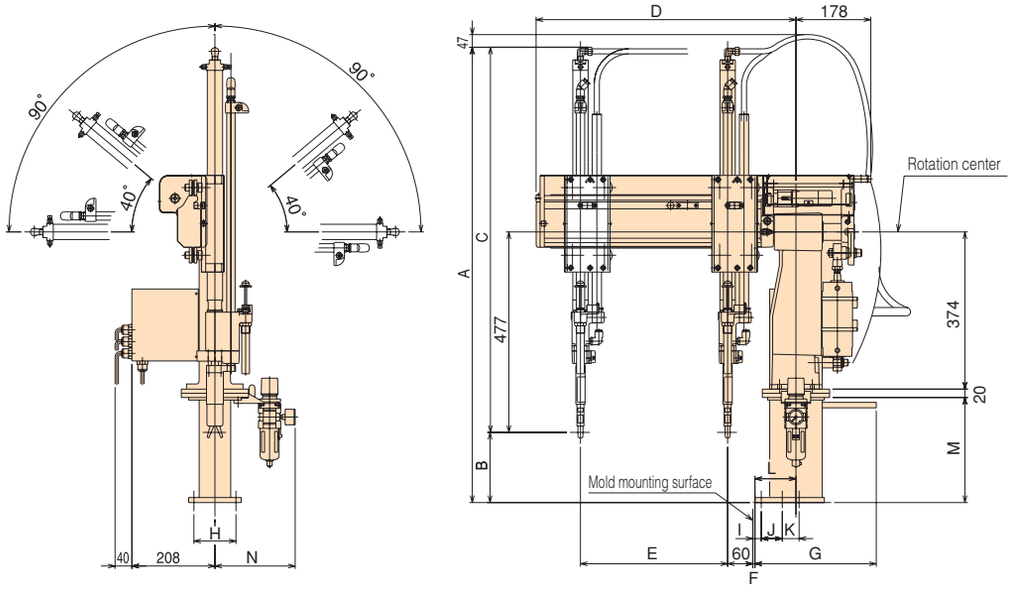
■Standard Specifications

Power source	Control method	Air pressure	Maximum air pressure
AC200V 3.0A 50/60Hz	Sequence stored program	0.49MPa	0.70MPa

Model	Stroke			Chuck position (mm)	Air consumption (N ℓ /cycle)	Maximum payload (kg)	Main unit weight (kg)
	Vertical (mm)	Kick (mm)	Swing (Both rear-side/operator-side)				
N-HOP-G Ⅱ 450	450	350	Min. 50°—Max. 90°	Waiting position adjustable 60	11	2	28
N-HOP-G Ⅱ 550	550				13		29
N-HOP-G Ⅱ 650	650				15		30
N-HOP-G Ⅱ 750	750	620			17		32
N-HOP-G Ⅱ 900	900				19		33

Maximum payload includes the end-of-arm tool.

■Dimensions (mm)



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
N-HOP-G Ⅱ 450	1084	167	917	586	350	5	289	100	20	50	40	98	250	191
N-HOP-G Ⅱ 550	1184		1017											
N-HOP-G Ⅱ 650	1284		1117											
N-HOP-G Ⅱ 750	1484	267	1217	856	620	4	400	128	25	60	60	99	350	217
N-HOP-G Ⅱ 900	1634		1367											

List of Options

HOP series

Options	Explanation of each option	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. See Photo 1.	HOP Five/N-HOP-G Ⅱ
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.) See Photo 2.	HOP Five/N-HOP-G Ⅱ Standard equipped for the TWINHOP-G (main arm side)
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 Ⅱ (Only sizes 450, 550, and 650 for both models)
Conveyor Interface	Adds a metal plug so that robot can interface with flat belt conveyor and stock molded products by shot.	All robot types * Standard equipped for the TWINHOP-G
Reject Circuit	After receiving a “defect product” signal from the molding machine, robot releases the defective part at a position separate from the ordinary parts.	HOP Five/TWINHOP-G/miniHOP-G/ N-HOP-G Ⅱ
Custom Color	The main body, frame covers, control box and operation box can be painted with the color specified by customers.	All robot types (Not applicable for plastic cover)
Ejector Interlock	The ejector goes forward after the robot moves to the take-out position. This is usual when the timing of ejector motion and robot take-out motion are to be synchronized.	All robot types * Standard equipped for the 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/N-HOP-G Ⅱ
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 Ⅱ
Vacuum Blow Off Valve	When molded products tend to remain stuck to suction pads, the robot uses pressurized air to break the vacuum.	HOP Five/TWINHOP-G/miniHOP-G/ N-HOP-G Ⅱ
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 Ⅱ
Safety Door Closed Signal	This signal is input to the robot when the safety door of a molding machine is closed. Robot will not start without this signal under auto operation.	All robot types
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 robot types
Multilingual Display	Controller display is multilingual. Users may select from several languages: ● HOP Five is available with any 2 languages: Japanese, English, Korean, Chinese, Indonesian, Finnish. (CE certified models available with any 2 languages: Japanese, English, German, Dutch, Slovak, Czechoslovakian, Polish, Chinese, Korean.) ● miniHOP-G is available in the following 3-language combinations: Japanese/English/Chinese, Japanese/English/Korean, Japanese/ English/Thai. ● TWINHOP-G and N-HOP-G Ⅱ is equipped with 3 languages: Japanese/English/Chinese.	All robot types
Lead Through Teaching	Operators can easily add and change output and input signals and timers with this software.	HOP Five G Ⅱ B
Operator Safety Switch on Controller	Valve operation is possible only while the operator is pushing this switch.	HOP Five (3-position) TWINHOP-G/miniHOP-G/N-HOP-G Ⅱ (2-position)
High Speed Specification	High speed operation is possible.	HOP Five (Only sizes 450, 450X, 550, 550X. Not available for the XC and XN)
Low-Clearance Specification	It reduces the overall height by changing the direction of a joint of the vertical guide axis.	HOP Five/TWINHOP-G
Reinforced Main Arm Guide Shaft	Reinforced main arm guide shaft prevents twisting motion of the main arm shaft. (Applied mainly to long arm specifications).	HOP Five/TWINHOP-G/N-HOP-G Ⅱ

■ Photo 1: X specification

■ Photo 2: XC specification