NC Servo Wrist  Flips and Rotates End-of-Arm Tools

- Servo-powered axes means the EOAT may be flipped or rotated to precise user-set angles.
- Equipped with this wrist unit, a take-out robot can have as many as 7 total numerically-controlled axes, giving it a range of motion comparable to an articulated robot.
- Motions for undercut molds and fixed platen take-out may be programmed quickly just by teaching.

EOAT Quick-Change Unit

- Greatly reduces set-up times by allowing instant attachment/detachment of end-of-arm tool and its pneumatic and wiring connections.
- Connect pneumatics and control wiring at the touch of a button!
- Eliminates need for hand tools.
- Check valve (on robot arm side) guards against air leaks.

Safety information

- These products are industrial robots as defined in the labor safety rules. Always take great care when operating any robots.
- 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.
- 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.

Yushin Precision Equipment Co., Ltd.

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Subsidiaries
- Yushin America, Inc. (U.S.A.)
- Yushin Korea Co., Ltd. (South Korea)
- Yushin Precision Equipment (Singapore) Pte. Ltd.
- Yushin Precision Equipment Sdn. Bhd. (Malaysia)
- Yushin Precision Equipment (Taiwan) Co., Ltd.
- Yushin Precision Equipment (Thailand) Co., Ltd.
- Yushin Automation Ltd. (U.K.)
- Yushin Precision Equipment Trading (Shanghai) Co., Ltd.
- Yushin Precision Equipment Trading (Shanghai) Co., Ltd.
- Yushin Precision Equipment (Shenzhen) Co., Ltd.
- Yushin Precision Equipment (Indonesia) Pte. Ltd.
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Representative Offices
- Taiwan Representative Office
- Philippine Representative Office
- Vietnam Representative Office (in Hanoi & Ho Chi Minh)
- Indonesia Representative Office

Agents
- En-Pac, Inc. (Canada)
- Polymac-Yushin B.V. (The Netherlands)
**Speed, Reliability, and Savings are Standard Equipment**

### Speed

**Elevating Productivity to New Heights**

A Stock Unit that Does High-Speed Take-Out

Fully upgraded vertical and kick axis units provide a huge jump in part extraction speed!

**Take-Out Time Comparison**

<table>
<thead>
<tr>
<th>Target molding machine clamping force</th>
<th>150-ton class</th>
<th>13% faster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target molding machine clamping force</td>
<td>400-ton class</td>
<td>12% faster</td>
</tr>
<tr>
<td>Target molding machine clamping force</td>
<td>600-ton class</td>
<td>13% faster</td>
</tr>
<tr>
<td>Target molding machine clamping force</td>
<td>800-ton class</td>
<td>14% faster</td>
</tr>
<tr>
<td>Target molding machine clamping force</td>
<td>1300-ton class</td>
<td>14% faster</td>
</tr>
</tbody>
</table>

*As compared to previous model under controlled conditions.

### Savings

**Lower Running Costs**

**ECO Vacuum**  PAT. P  Compressed Air Economizing Tool

Monitors air pressure while robot suction-grips parts and only turns on air lines when necessary.

**Lowers Electricity Cost for Air Compressors**

(Real-Life Results)

<table>
<thead>
<tr>
<th>Test Conditions</th>
<th>Test Description</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Consumption</td>
<td>75% Down</td>
<td></td>
</tr>
</tbody>
</table>

**Reduces Equipment Cost**

Helps Protect the Environment

*Test Condition:
- 75% Air Consumption
- 75% Down

### Reliability

**Boost your Production Floor Efficiency**

**Vibration-free, Precise Picking and Placing of Products**

The RCII series features even more rigid, robust construction and new arm-end vibration suppression!

**Easy-to-Use E-Touch II Controller**

- Large, Highly Visible Monitor
  - 10.4 inch, full-color touch panel
- Extra Tough Construction
  - Rubber shock panels on each side of the controller help cushion accidental drops.
- IP44* Rating for Dust and Moisture Resistance
- Easy Operation
  - Directional pad makes navigating easy.
  - Settings and menus are icon-based.
  - Audio Guidance gives vocal cues to support complex operations.

*International IP (Ingress Protection) Rating
  - Solid: Rating 4 (protection from tools, small wires, etc. with a diameter or thickness greater than 1.0mm)
  - Moisture: Rating 4 (all-around protection from splashed water)

**Easy Operation**

- Operator “Easy Screen” allows simple standard operation.
- Lead Through Teaching allows the user to simulate and check newly-programmed motions on a 3D screen on the controller or another PC.
- Teaching is a Breeze
  - New Motion Chart Screen combines position, speed, and timer settings into one intuitive 3D interface.
- Improved Safety
  - Operator may easily set additional motion prohibit zones.
- Other Features
  - Troubleshooting Mode enables users to personally track down problems.
  - Auto Slow-down Mode decreases motion speed just before part placement to ensure a vibration-free release.

**Other Features**

- Rubber shock panels on each side of the controller help cushion accidental drops.
- IP44* Rating for Dust and Moisture Resistance
- Easy Operation
  - Directional pad makes navigating easy.
- Settings and menus are icon-based.
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### Specification and Dimensions (mm)

<table>
<thead>
<tr>
<th>Model</th>
<th>Drive Method</th>
<th>Control Method</th>
<th>Air Pressure</th>
<th>Max. Air Pressure</th>
<th>Wrist Flip Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCII-600</td>
<td>3/5 axes</td>
<td>Digital Servo Motor</td>
<td>0.49MPa</td>
<td>0.79MPa</td>
<td>90°</td>
</tr>
<tr>
<td>RCII-800</td>
<td>3/5 axes</td>
<td>Digital Servo Motor</td>
<td>0.49MPa</td>
<td>0.79MPa</td>
<td>90°</td>
</tr>
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<td>RCII-1300</td>
<td>3/5 axes</td>
<td>Digital Servo Motor</td>
<td>0.49MPa</td>
<td>0.79MPa</td>
<td>90°</td>
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</table>

#### Additional Notes:
- *Equipped with Increased Payload option:
  - S: Equipped with main arm only; for 2-plate molds
  - D: Equipped with main and sub arms; compatible with 3-plate molds

### Options

**A Full Lineup of Value-Adding Features**

<table>
<thead>
<tr>
<th>Options</th>
<th>Explanation of each option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Analog Valve Circuit</td>
<td>Up to 3 additional ECO vacuum-equipped analog circuits may be added to the single, standard-equipped circuit.</td>
</tr>
<tr>
<td>Additional Port Chuck Pressure Circuit</td>
<td>1 or 2 additional pressure circuits may be added to the single, standard-equipped port circuit.</td>
</tr>
<tr>
<td>Digital Servo Wrist Flip Mechanism*</td>
<td>Adds 3 servo-powered axes to the wrist flip mechanism.</td>
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### Additional Notes:
- *Multilingual Display:
- *Flexible Teaching Software kit which allows users to create robot motion programs on their PC or on their E-touch II controller.
- *Assign Limit Product Verification* After product take-out, product presence is verified at the assigned limit position by a remote-mounted limit switch.
- *Increased Maximum Payload* Power along the vertical axis is increased, enabling the robot to handle heavier payloads.
- *Increased Wrist Flip Torque* 1.4 times more wrist flip torque, for applications where the end-of-arm tool is heavy or attached off-center.
- *External Beam-Mounted Nipper Unit* After removal from the mold, gated products may be inserted into this beam-mounted external nipper unit which separates the gate from the product.
- *Signal Light / Signal Tower* Colored lights indicate status of the robot.
- *Metal connector which allows robot to interface with Yushin-made stocker unit.
- *Increased Wrist Flip Torque* 1.4 times more wrist flip torque, for applications where the end-of-arm tool is heavy or attached off-center.
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