Flexible Smart Programming

Smart Programming

- Easy program edition on site.
- Program creation in process of operating robot.
- Program edition — easily adding outputs and points.
- New program creation by completing operation list — readily adding interlock and error settings.

Edition of Mold Data
- Changing from a single placement to multi-row placement
- Adding air blow motions
- Adding under-cut motions

Creation of New Mold Data
- Insertion and takeout with insert work feeder
Ergonomic design and light weight

8.4 XGA (1024x768) high definition LCD with 260,000 colors.

Colorful LED for high visibility

Voice guidance under development

Ergonomic design and light weight

8.4 XGA (1024x768) high definition LCD with 260,000 colors.

Colorful LED for high visibility

Voice guidance under development

Three-position safety switch for easy operation and safety.

Membrane manual operation switches for good touch feeling.

Earphone jack in noisy environment under development

Pendant and control box

Scroll & Push Harma original jog dial for speedy operation.
Digital Servo Traverse Robot

Model
HRX-80SWi
HRX-80GWi

Standard
- A vacuum ejector circuit
- A part gripper circuit
- A main sprue grip circuit
- Palletizing (99 points per axis)
- Internal mold memory for 100 molds
- Fine position adjustment during auto operation
- Home positions (above mold, on traverse beam, 1st entry)
- Smart programming
- Screen customization

Features
- Digital servo telescopic traverse robot for 40 to 80 ton IMMs.
- New i(intelligent) controller.
- Compact and slim robot for small size presses.
- Low profile of 1000 mm lower than our sprue picker.

Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>Vertical stroke (mm)</th>
<th>Strip stroke (mm)</th>
<th>Traverse stroke (mm)</th>
<th>Max. payload (kg)</th>
<th>Machine weight (kg)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Main</td>
<td>Sub</td>
<td>Main</td>
<td>Sub</td>
<td>Main (Sub)</td>
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<tr>
<td>HRX-80SWi</td>
<td>650 (750)</td>
<td>700 (800)</td>
<td>425</td>
<td>265</td>
<td>1200 (1600)</td>
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<td>HRX-80GWi</td>
<td>650 (750)</td>
<td>700 (800)</td>
<td>425</td>
<td>265</td>
<td>1200 (1600)</td>
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<table>
<thead>
<tr>
<th>Model</th>
<th>Working air pressure (Mpa)</th>
<th>Air consumption (Nl/min)</th>
<th>Drive system</th>
<th>Control method</th>
<th>Power supply (V)</th>
<th>Power consumption (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRX-80SWi</td>
<td>0.6</td>
<td>0.7</td>
<td>Digital AC servo motor (3/6 axes)</td>
<td>PTP·CP</td>
<td>3P 200ACV+10%~15% (50Hz/60Hz)</td>
<td>1350</td>
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<tr>
<td>HRX-80GWi</td>
<td>0.6</td>
<td>0.8</td>
<td>Digital AC servo motor (3/6 axes)</td>
<td>PTP·CP</td>
<td>3P 200ACV+10%~15% (50Hz/60Hz)</td>
<td>1950</td>
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</table>

Additional 63N·l/min is consumed for each vacuum ejector.

Dimension (mm)
Digital Servo Traverse Robot

Model
HRX-150/200SWi
HRX-150/200GWi

Features
- Digital servo telescopic traverse robot for 100 to 350 ton IMMs.
- New (intelligent) controller.
- Compact and slim robot for small and medium size presses.
- Low profile.

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<td>Sub</td>
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<td>552</td>
<td>552</td>
<td>5 (including EIAJ)</td>
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<td>HRX-200SWi</td>
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<td>900</td>
<td>705</td>
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<td>1600 (1800,2000)</td>
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<td>HRX-200SWi</td>
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<th>Working air pressure (Mpa)</th>
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<th>Control method</th>
<th>Power supply (V)</th>
<th>Power consumption (W)</th>
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<td>0.6</td>
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<td>Digital AC servo motor (3/5 axes)</td>
<td>PTP-CP</td>
<td>3P 200ACV(+10%/-15%) (50Hz/60Hz)</td>
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<tr>
<td>HRX-150SWi</td>
<td>0.6</td>
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<tr>
<td>HRX-200SWi</td>
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<td>2.9</td>
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<td></td>
<td>1700</td>
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<tr>
<td>HRX-200SWi</td>
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<td>2.9</td>
<td></td>
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<td></td>
<td>2300</td>
</tr>
</tbody>
</table>

Dimension (mm)

* Additional 63N/min is consumed for each vacuum ejector.
HRX-f SERIES

Reliable RCA-2600 Controller

User-friendly key select switch on pendant.

Unique jog dial for speedy operation.

Deliberately placed AUTO, HOME, PAUSE, STOP switches.

Membrane switches with good touch feeling.

Wider screen for excellent visibility.
(6.5 to 7.5 inches)

- Larger 3-position safety switch for easy operation.
- USB flash memory available.
- Some market flash memories unstable.

Two Half Screens (patent pending)

Two half screen view allows inputs and outputs to be monitored simultaneously.

Password Function

Password can be used to protect mold memories.

Quick Language Change

Language is changeable simply by touching a button.

Grouped Mold Data (patent pending)

Mold data can be grouped by users, products, and so on for easy retrieval of needed data. The data can be easily moved, copied and edited.

User-friendly Help

Easy-to-understand help with illustrations and lists is provided for each screen.

Point Stop

Each axis can be moved individually until a desired point is reached.
Digital Servo Traverse Robot

Model

HRX-80Sf
HRX-80Gf

Standard

- A vacuum ejector circuit
- A part gripper circuit
- A main sprue grip circuit
- Palletizing (99 points per axis)
- En-route wrist flip
- Internal mold memory for 100 molds
- Counters for initial reject and sampling
- Fine position adjustment during auto operation
- Takeout from moveable or fixed half
- Pass motion (short-cut)
- Home positions (above mold, on traverse beam, 1st entry, horizontal above mold, backward)

Features

- Digital servo traverse robot for 40 to 80 ton IMMs.
- Developed RCA-2600 controller (on robot).
- Compact and slim robot for small size presses.

Specification

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<td></td>
<td>Main</td>
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<td>Sub</td>
<td>Main</td>
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<tr>
<td>HRX-80Sf</td>
<td>650</td>
<td>750</td>
<td>425</td>
<td>700</td>
<td>300</td>
</tr>
<tr>
<td>HRX-80Gf</td>
<td>650</td>
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<table>
<thead>
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<th>Model</th>
<th>Working air pressure (Mpa)</th>
<th>Air consumption (N/A)</th>
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<th>Power supply (V)</th>
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<td>0.7</td>
<td>Digital AC servo motor (315 axes)</td>
<td>PTP-CP</td>
<td>3P200ACV+10%/−15%, (50Hz/60Hz)</td>
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<td>0.6</td>
<td>0.8</td>
<td>Digital AC servo motor (315 axes)</td>
<td>PTP-CP</td>
<td>3P200ACV+10%/−15%, (50Hz/60Hz)</td>
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Dimension (mm)

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*1 Additional 63N/min is consumed for each vacuum ejector.
Digital Servo Traverse Robot

Model
HRX-150/200Sf
HRX-150/200Gf

Standard
- A vacuum ejector circuit
- A part gripper circuit
- A main sprue grip circuit
- Palletizing (99 points per axis)
- En-route wrist flip
- Internal mold memory for 100 molds
- Counters for initial reject and sampling
- Fine position adjustment during auto operation
- Takeout from moveable or fixed half
- Pass motion (short-cut)
- Home positions (above mold, on traverse beam, 1st entry, horizontal above mold, backward)

Features
- Digital servo traverse robot for 100 to 350 ton IMMs.
- Developed RCA-2600 controller (on robot).
- Compact and slim robot for small and medium size presses.

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<td>Sub</td>
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<td>HRX-15001T</td>
<td>800 (680)</td>
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<td>705</td>
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<td>1400 (1800, 2000)</td>
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<td>HRX-15002T</td>
<td>850 (730)</td>
<td>584</td>
<td>586</td>
<td>1600 (1800, 2000)</td>
<td></td>
</tr>
<tr>
<td>HRX-20001T</td>
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<td>586</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRX-20002T</td>
<td>960 (1050)</td>
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<td>586</td>
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<tr>
<th>Model</th>
<th>Working air pressure (Mpa)</th>
<th>Air consumption (N2l/min)</th>
<th>Drive system</th>
<th>Control method</th>
<th>Power supply (V)</th>
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<tbody>
<tr>
<td>HRX-15001T</td>
<td>0.6</td>
<td>2.7</td>
<td>Digital AC servo motor (3/5 axes)</td>
<td>PTP+CP</td>
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<tr>
<td>HRX-15002T</td>
<td>0.6</td>
<td>2.9</td>
<td>Digital AC servo motor (3/5 axes)</td>
<td>PTP+CP</td>
<td>2500</td>
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<td>Digital AC servo motor (3/5 axes)</td>
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<tr>
<td>HRX-20002T</td>
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<td>2.9</td>
<td>Digital AC servo motor (3/5 axes)</td>
<td>PTP+CP</td>
<td>2300</td>
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</tbody>
</table>

Dimension (mm)

※1 Additional 53N/m is consumed for each vacuum ejector.
Digital Servo Traverse Robot

Model

HRX-300SWf
HRX-300GWf

Standard
- A vacuum ejector circuit
- A part gripper circuit
- A main sprue grip circuit
- Palletizing (99 points per axis)
- En-route wrist flip
- Internal mold memory for 100 molds
- Counters for initial reject and sampling
- Fine position adjustment during auto operation
- Takeout from moveable or fixed half
- Pass motion (short-cut)
- Home positions (above mold, on traverse beam, 1st entry, horizontal above mold, backward)

Features
- Digital servo telescopic traverse robot for 260 to 450 ton IMMs.
- Developed RCA-2600 controller (on robot).
- Compact and slim robot for medium size presses.
- Ninety mm lower than conventional HASII-F model.

Specification

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<td>Main</td>
<td>Sub</td>
<td>Main</td>
<td>Sub</td>
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<tr>
<td>HRX-300SWf</td>
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<td>1150</td>
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<th>Model</th>
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<th>Air consumption (Nl/min)</th>
<th>Drive system</th>
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<th>Power supply (V)</th>
<th>Power consumption (W)</th>
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<tr>
<td>HRX-300SWf</td>
<td>0.6</td>
<td>2.7</td>
<td>Digital AC servo motor (3/6 axes)</td>
<td>PTP-CP</td>
<td>3P 200ACV+10%/−15% (50Hz/60Hz)</td>
<td>1700</td>
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<tr>
<td>HRX-300GWf</td>
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<td>2.9</td>
<td></td>
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<td>2300</td>
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</tbody>
</table>

Dimension (mm)

*1 Additional 63Nl/min is consumed for each vacuum ejector.
Digital Servo Traverse Robot

Model
HAS II f-30S
HAS II f-30G-V

Standard
- A vacuum ejector circuit
- A part gripper circuit
- A main sprue gripper circuit
- Palletizing (99 points per axis)
- En-route wrist flip
- Internal mold memory for 100 molds
- Counters for initial reject and sampling
- Fine position adjustment during auto operation
- Takeout from moveable or fixed half
- Pass motion (short-cut)
- Home positions (above mold, on traverse beam, 1st entry, horizontal above mold, backward)

Features
- Digital servo traverse robot for 15 to 40 ton IMMs.
- Reliable and proven RCA-2500 controller (on robot).
- Compact and high precision robot for micro molding.

Specification

<table>
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<th>Model</th>
<th>Vertical stroke (mm)</th>
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<tr>
<th>Model</th>
<th>Working air pressure (Mpa)</th>
<th>Air consumption (Nl/cycle)</th>
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<th>Power consumption (W)</th>
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<tr>
<td>HAS II f-30S</td>
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<td>0.7</td>
<td>Digital AC servo motor (3/6 axis)</td>
<td>PTP•CP</td>
<td>3P 200ACV+10%/-15% (50Hz/60Hz)</td>
<td>1350</td>
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<td>HAS II f-30G-V</td>
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<td>0.8</td>
<td>Digital AC servo motor (3/6 axis)</td>
<td>PTP•CP</td>
<td>3P 200ACV+10%/-15% (50Hz/60Hz)</td>
<td>1950</td>
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Dimension (mm)

Using global standard open network (DeviceNet) assures a huge number of input and output devices and communicate with molding machines and peripherals.