



Scalable, single-process robotic & semi-automatic final assembly

The Polaris® Junior Assembly Cell offers efficient, single-process final assembly for low-end robotic and semi-automatic processes. It features a scalable cell width with common controls, side covers, and frame structure for a low-cost solution with faster lead times than custom cells. An innovative design allows for easy installation and relocation, as well as compatibility with most conveyors. A standard interface and a large portfolio of existing tool modules enable a wide range of applications on a common platform.

Polaris Junior facilitates economical production, providing exactly the right amount of functionality for your specific requirements by automating:

- Dispensing
- Driving screws
- Pick and place
- Labeling
- Inkjet marking
- Test handling
- Many other operations

Dispensing

| | |
|-------------------|--|
| Application Types | To create a seal or gasket Passivation/potting (to protect and stabilize) Die and/or surface mount component attach Thermal conductivity |
| Methods | Single needle on/off with time/pressure dispense Pneumatic or motorized rod positive displacement pump Auger pump (especially good for filled materials) |

Driving Screws

| | |
|-------------------|---|
| Screwdriver Types | Pneumatic drive Servo drive |
| Methods | Vibratory bowl feeder or sword feeder Presented via a feed hose or track |
| Options | Torque control Angle control Height control Underside screwdriving |

Pick and Place

| | |
|-------------------|---|
| Application Types | Mechanical piece parts and assemblies Covers or lids Labels |
| Methods | Vacuum Gripper |

Labeling

| | |
|-------------------|--|
| Application Types | Traceability (bar codes) Masking Branding/graphics Identification (e.g., rejected product) Sealing (e.g., for warranty purposes) |
| Methods | Label feed and apply Label print and apply (print-on-demand or preset graphic) |

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MC-3805 01/04

A  COMPANY

X-Y Cartesian Gantry*

| | X-Axis | Y-Axis | Z-Axis |
|---------------|--------------------|--------------------|--------------------|
| Travel | | | |
| 500mm cell | 224mm (8.82") | 600mm (23.62") | 100mm (3.94") |
| 750mm cell | 464mm (18.27") | 600mm (23.62") | 100mm (3.94") |
| 1000mm cell | 653mm (25.71") | 600mm (23.62") | 100mm (3.94") |
| 1250mm cell | 791mm (31.14") | 600mm (23.62") | 100mm (3.94") |
| 1500mm cell | 1041mm (40.98") | 600mm (23.62") | 100mm (3.94") |
| Repeatability | ±0.02mm (±0.0008") | ±0.01mm (±0.0004") | ±0.02mm (±0.0008") |
| Velocity | 1200mm/sec (47.2") | 1200mm/sec (47.2") | 1200mm/sec (47.2") |

Machine Dimensions

| | Width | Depth | Height |
|-------------|----------------|----------------|----------------|
| 500mm cell | 500mm (19.7") | 2058mm (81.0") | 1750mm (68.9") |
| 750mm cell | 750mm (29.5") | 2058mm (81.0") | 1750mm (68.9") |
| 1000mm cell | 1000mm (39.4") | 2058mm (81.0") | 1750mm (68.9") |
| 1250mm cell | 1250mm (49.2") | 2058mm (81.0") | 1750mm (68.9") |
| 1500mm cell | 1500mm (59.1") | 2058mm (81.0") | 1750mm (68.9") |

Software

PLC Controlled
Motion card for circular or linear interpolation
10" Touch Screen Graphical User Interface

Service Requirements

Electrical 184 - 264 VAC single-phase, 50/60 Hz
Pneumatics 169.9 liters/minute @ 6.21 bar (6cfm @ 90psi)

