Precise Robots ™ Preciseflex 1000

Precise Automation, Inc.

PRECISE AUTOMATION The Precise Robots™

PreciseFlex robots feature the powerful Guidance vision-guided controller, kinematics for Cartesian motion and quiet, high performance servo motors. These features enable simple, yet powerful programming, reduced cycle times and the most efficient station to station motions possible. A vertically mounted gripper allows the robot to reach down to assemble parts, while a horizontally mounted gripper can service a row of equipment that is not directly in-line with the robot's base. Precise's machine vision software integrates seamlessly with the PreciseFlex. A graphical user interface makes camera calibration and programming easy and intuitive.

Features

- Available in a three or four axis configuration
- Easily adaptable gripper can be mounted vertically to reach down to assemble parts and horizontally to service a row of equipment that is not directly in-line with the robot base.
- J1 Axis rotation ranges +/- 176 degrees
- Z Axis has configurations from 300mm (standard) to 600mm (optional)
- J3 Axis rotation ranges +/- 162 degrees
- Maximum acceleration of 2G with 2kg payload, 1.3 with 4kg payload

Powerful Motion Control

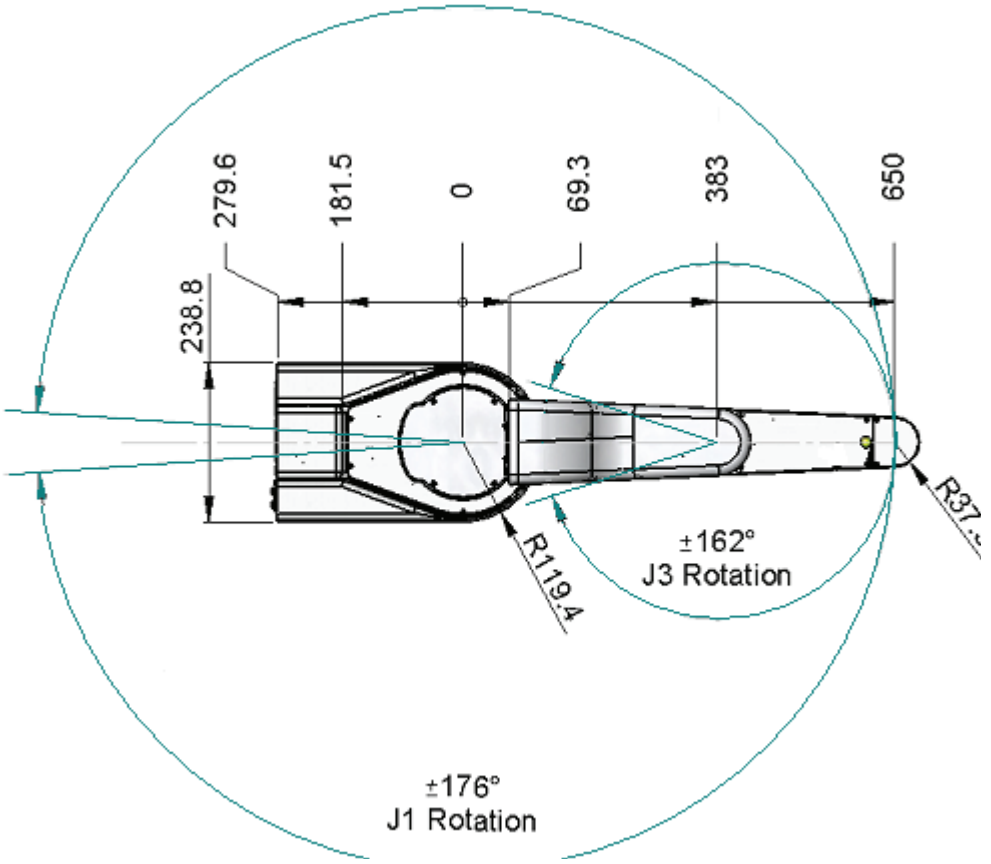
Preciseflex robot works along the vision-guided Guidance Controller, Cartesian coordinate motion, and quiet, high performance servo motors with absolute encoders. The delicate arrangement of the features enables simple, yet powerful programming, reduced cycle times and very efficient station-to-station motion.

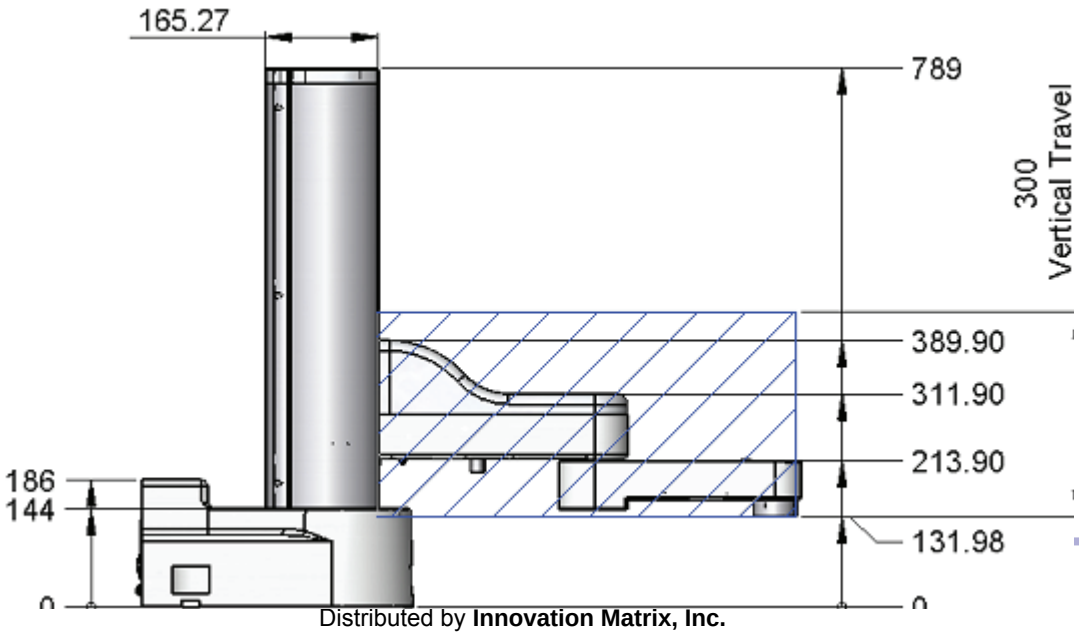
Easy Set up

This fully assembled robot is ready to use by just plugging it into an AC outlet and Ethernet port. The pneumatic lines, controller, and harness are all built in and further controller integration, harness or thread purchasing, and extra controller cabinets are not necessary due to the well equipped robot. This results to minimum setup time and much smaller equipment footprint.

Preciseflex 1000 SCARA robots are available in a three or four axis configuration compatible to the Precise Guidance 3000 series controllers. This geometry permits these robots to be easily adaptive to a number of different applications. Extremely efficient station-to-station motions reduce cycle times to a minimum. The SCARA robots include Advanced Kinematics License for simple Cartesian manual and program control.

PRECISEFLEX 1300 DIMENSIONS:





PRECISEFLEX 1000 SPECIFICATIONS:

General Specifications	*Range & Features*
Range of Motion & Resolution	
J1 Axis	+/- 176 degrees
Z Axis	Configurations from 300 mm (standard) to 600 mm (optional)
J3 Axis	+/- 162 degrees
Optional: J4/Theta Axis	+/- 270 degrees
Resolution	+/- 0.005 mm in x-y plane
Repeatability	+/- 0.050 mm, 68-78 degrees F, limited by aluminum structure expansion
Performance and Payload	
Maximum Acceleration	2G with 2 kg payload; 1.3G with 4 kg payload
Maximum Speed	1,000 mm/sec with 4 kg payload
Payload	PreciseFlex 1300 – 5 kg PreciseFlex 1400 – 4 kg
Z Force	Maximum Z down force – 200N
Controller	AVAILABLE GUIDANCE CONTROLLERS: Guidance 2410C (G2X0-EA-C2410), Guidance 2410B (G2XD-EA-B2410) Guidance 2414B (G2XD-EA-B2414), Guidance 2416B (G2XD-EA-B2416)
Interfaces	
General Communications	RS-232 channel, Ethernet port, remote front panel
Digital I/O Channels	12 optically isolated digital inputs, 8 optically isolated digital outputs available on J1-Axis housing Facilities Panel. Additional 8 isolated digital inputs, 8 isolated digital outputs provided on the Outer Link. All outputs rated at 100 mA maximum per channel, except for channel 1 in Facilities Panel, which is rated at 500 mA. Additional remote I/O available via Precise RIO modules or 3rd party MODBUS/TCP devices
Analog I/O Channels	Two analog inputs optionally available on controller. Four or six analog outputs optionally available on controller.
Pneumatic Lines	Two air lines, each 75 PSI maximum, provided at Outer Link and routed internally to fittings on J1-Axis housing Facilities Panel.
Operator Interface	Web based operator interface supports local or remote control via browser connected to embedded web server
Programming Interface	Three methods available: DIO MotionBlocks (PLC), embedded Guidance Programming Language (standalone, modeled after Visual Basic.Net), PC controlled over Ethernet using TCP/IP
Required Power	Input range: 90 to 264 VAC single phase, 50-60 Hz, 500 watts maximum
Weight	34 kg typical, will vary with size

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