

PreciseFlex 400 Sample Handler

The Industry Standard for Lab Automation



1. Highest Instrument Density

Reach into instruments, hotels, and nests with tall Z-axis and slim arm design

2. Fully-Integrated Servo Gripper

For handling SBS Plates, Tubes, and Vials

3. Range of Motion

(Standard Horiz Reach, with included Servo Gripper) 579 mm
(Extended Horiz Reach, with included Servo Gripper) 734 mm

4. Highest Throughput

Low collision forces enable without sacrificing safety

5. Save Valuable Floorspace

With compact footprint and embedded controller

6. Extend Robot's Reach

With a fully-integrated Collaborative Linear Rail (optional)

7. Highest Reliability

With MTBF of 125,000 hours

Key Benefits

- Fast and easy deployment unlocks the best ROI
- Augments workforce and overcomes labor shortages
- Automates complex workflows and assays, freeing lab technicians for more meaningful work
- Increases lab throughput while improving quality
- Highest workspace density saves valuable floor space
- Most reliable sample handler with MTBF of 125,000 hours and design life of 40,000 hours

Always perform a risk assessment before putting any robot into production.

Whether in Drug Discovery, Genomics, Agriculture, Veterinary, or Bio Banking, Brooks has automation products to meet the application. PreciseFlex cobots are the robot of choice for sample handling.

The PreciseFlex 400 sample handler was developed specifically for bench-top applications where throughput, work volume, ease of use, and safety are critical. It has been adopted by nearly every major life science/laboratory automation company and is designed into a wide range of OEM systems.

Handles a Wide Range of Samples

The PreciseFlex 400 sample handler is designed to handle SBS plates, tubes, vials. SBS plates can be picked in landscape and portrait orientation.

Easy Control of the LIMS

An extensive library of functions is available to direct the robot via our standard TCP Command Server (TCS).

Lowest Power Consumption

Reduced energy usage and extended runtime in mobile applications.

Highest Workspace Density

The PreciseFlex 400 sample handler has a unique configuration with horizontal articulation for the major axes, and a tall Z-axis (up to 1,160 mm). The Vertical Column work envelope enables the sample handler to reach into racks, hotels, and stacked instruments.



With the vertical column work envelope and embedded controls, PreciseFlex sample handlers offer the highest workspace density, saving valuable floorspace.



PreciseFlex 400 Sample Handler Specifications

Performance

Payload	0.5 kg with Servo Gripper
Typical Speed at TCP	500 mm/sec
Max Acceleration	2000 mm/sec ²
Repeatability	±0.090 mm

Range of Motion

Joint 1 (Z-axis)	400, 750, 1160 mm
Joint 2	±93°
Joint 3	±168°
Joint 4	±960° with Servo Gripper
Horizontal Reach	(Standard Horizontal Reach, with included Servo Gripper) 579 mm (Extended Horizontal Reach, with included Servo Gripper) 734 mm

Communications

General	100 Mb Ethernet, TCP/IP EtherNet/IP
Operator Interface	Web-based operator interface
Digital I/O	12 inputs, 8 outputs at base of robot optically isolated, 24V @ 100ma Remote I/O available

Facilities

Power	90 to 264 VAC, auto selecting, 50-60 Hz 100-250 watts typical operation
Controller Mounting	Embedded into robot base
Weight	Standard Reach/Extended Reach 20 kg / 25 kg (400 mm Z-axis) 25 kg / 30 kg (750 mm Z-axis) 65 kg / 35 kg (1160 mm Z-axis)

Software

Programming	Guidance Motion (web interface) Guidance Programming Language (GPL) TCP Command Server (TCS)
Enhanced Functions	Hand Guiding (standard) Horizontal Compensation (compliant insertion) Z-Height Detection

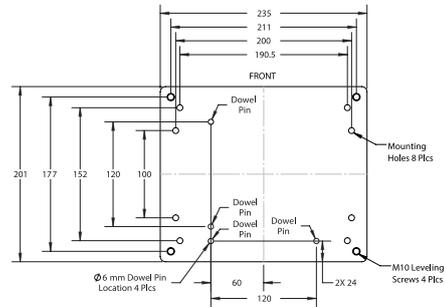
Peripherals and Accessories

General	23N Servo Gripper (included) Gripper fingers for SBS plates, tubes, vials... Remote I/O (RIO)
Linear Rail	1.0, 1.5 and 2.0M Travel Speed up to 700 mm/sec Repeatability: ±0.05 mm
Vision	PreciseVision Gripper, 23N

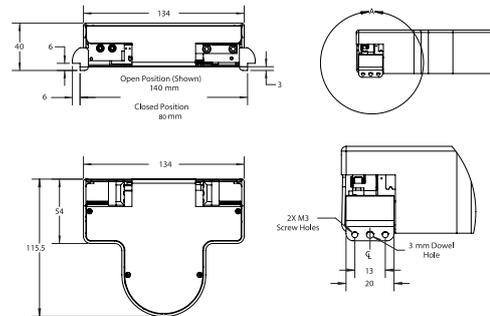
Certifications

- EN 61326-1:2013
- CAN/CSA-C22.2 No. 61010-1-12 UPD1:2015, UPD2:2016, AMD1:2018
- CSA-C22.2 No. 61010-2-081:19
- UL 61010-1 (3rd Ed.), AMD1(2018)
- UL 61010-2-081 (3rd Ed.)

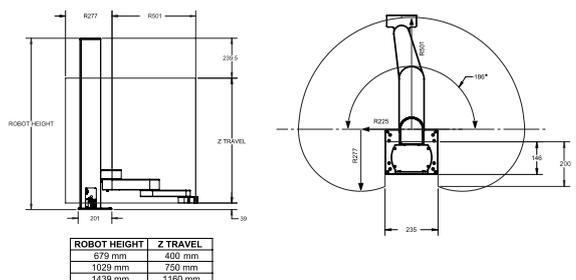
Robot Mounting



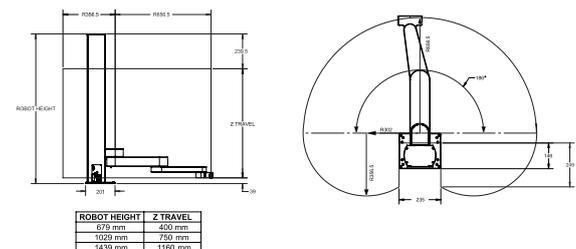
23N Servo Gripper Interface



Standard Reach Work Envelope



Extended Reach Work Envelope



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