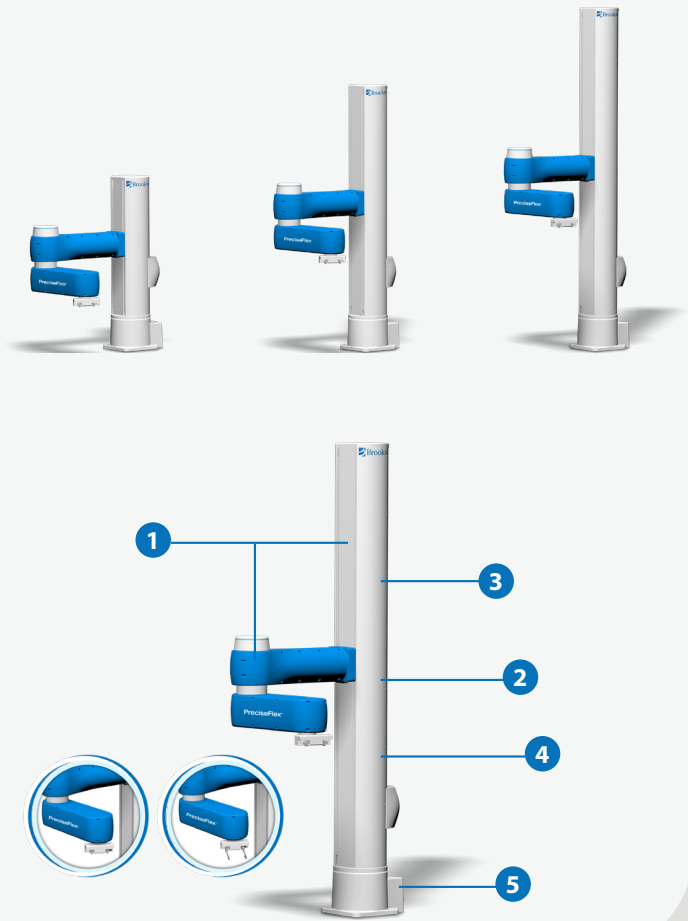


# PreciseFlex DD 4-Axis Cobots

Energy Efficiency while Maximizing Workspace



Collaborative robots working alongside people make automation accessible for a wide range of applications. However, accessibility has often come at the cost of reduced speed, reduced precision, higher prices for special sensors, and, in some cases substandard reliability.

PreciseFlex collaborative robots provide an unmatched return on investment (ROI) with the **highest throughput, highest workspace density,** and the **most reliable,** and **most energy-efficient** cobots available.

## Wide Range of Applications

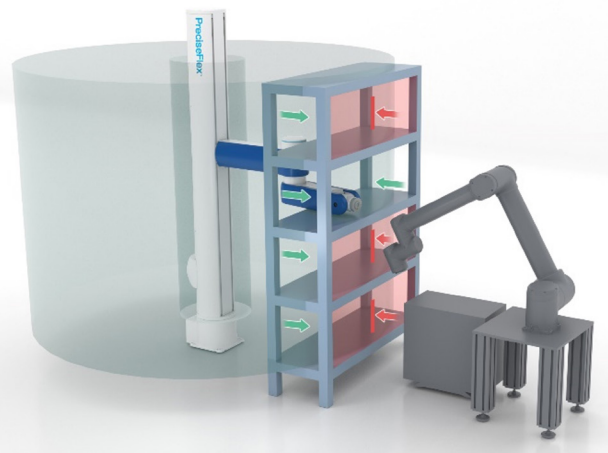
The PreciseFlex DD 4-axis cobot is well suited for Machine Feeding (load/upload), Small Parts Handling, Kitting, Storage and Retrieval, Sample Handling, and Mobile applications.

## Lowest Power Consumption

Reduced energy usage and extended runtime in mobile applications.

## Highest Workspace Density

The PreciseFlex DD 4-axis cobot has a unique configuration with horizontal articulation for the major axes, and a tall Z-axis (up to 1,420 mm). The Vertical Column work envelope enables the robot to reach into racks, shelves, or stacked machines. The Vertical Column work envelope is much more efficient than the spherical work envelope used by most traditional cobots.



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

## 1. Highest Workspace Density

Reach into machines and shelves with tall Z-axis and slim arm design

## 2. Highest Reliability

With an MTBF of 125,000 hours

## 3. Range of Motion

Z-Axis: 500, 1000, and 1420 mm  
(Horizontal Reach) 896 mm

## 4. Highest Throughput

Low collision forces enable without sacrificing safety

## 5. Save Valuable Floorspace

With a compact footprint and embedded controller

## Key Benefits

- Fast and easy deployment unlocks the best ROI
- Augments workforce and overcomes labor shortages
- Reduces repetitive stress injuries and frees employees for more meaningful work
- Highest workspace density saves valuable floor space
- Most reliable cobots with MTBF of 125,000 hours and design life of 100,000 hours
- Highest performance increases throughput
- Low maintenance

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



# PreciseFlex DD 4-Axis Specifications

## Performance

<b>Payload</b>	8 kg
<b>Max Cartesian Speed</b>	X/Y Direction, 500 mm/sec Z Direction, 600 mm/sec
<b>Max Joint Speed</b>	
<b>J1</b>	200°/sec
<b>J2</b>	600 mm/sec
<b>J3</b>	360°/sec
<b>J4</b>	540°/sec
<b>Max Acceleration</b>	5000 mm/sec <sup>2</sup> with 6 kg payload
<b>Repeatability</b>	±0.020 mm at tool flange center

## Range of Motion

<b>Joint 1 (Base)</b>	±168°
<b>Joint 2 (Z-axis)</b>	500, 1000, 1420 mm
<b>Joint 3 (Elbow)</b>	+12° to +348°
<b>Joint 4</b>	±240°
<b>Horizontal Reach</b>	896 mm

## Communications

<b>General</b>	100 Mb Ethernet, TCP/IP EtherNet/IP RS232 Modbus/TCP
<b>Operator Interface</b>	Web-based operator interface
<b>Digital I/O</b>	12 inputs, 8 outputs at base of robot optically isolated, 24V @ 100ma Remote I/O available

## Facilities

<b>Power</b>	90 to 264 VAC, auto selecting, 50-60 Hz 70-175 watts typical operation DC Power Option Available
<b>Pneumatics</b>	Two 3.2 mm OD (1.7 mm ID) airlines provided for end-of-arm-tooling. 4.9 bar max (71 PSI)
<b>E-Stop</b>	Dual Channel
<b>Controller Mounting</b>	Embedded into robot base
<b>Air Lines</b>	Two, 3.2 mm OD, 1.6 mm ID Max pressure 500 kpa (75 PSI)
<b>Weight</b>	44 kg (500 mm Z-axis) 53 kg (1000 mm Z-axis) 63 kg (1420 mm Z-axis)
<b>Noise Level</b>	< 50 dB(A)

## Software

<b>Programming</b>	Guidance Motion (web interface) Guidance Programming Language (GPL) TCP Command Server (TCS)
<b>Enhanced Functions</b>	Hand Guiding (standard)

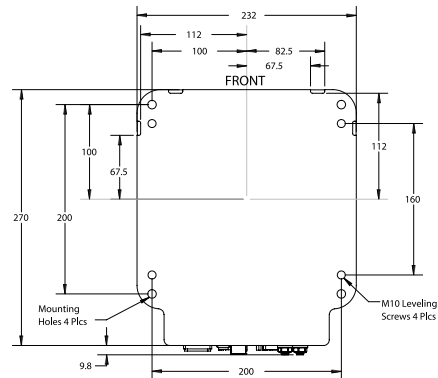
## Peripherals and Accessories

<b>General</b>	23N Servo Gripper Dual 23N Servo Gripper 60N Servo Gripper Remote I/O (RIO)
<b>Vision</b>	PreciseVision Gripper, 23N PreciseVision Gripper, 60N

## Certifications

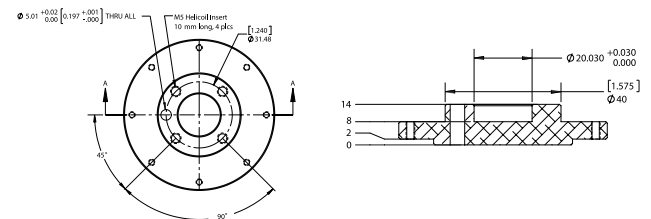
- ISO/TS 15066 / RIA TR R15.806

## Robot Mounting

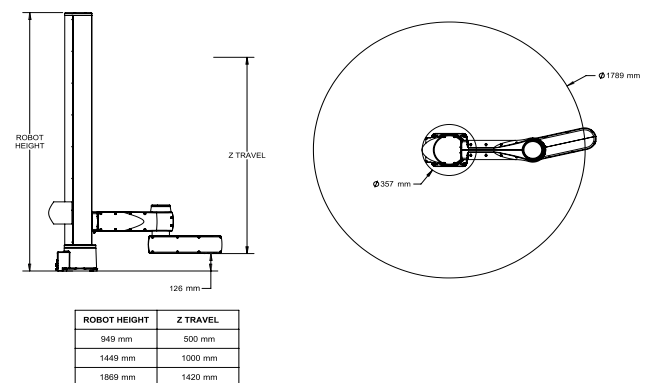


## ISO Flange for End-of-Arm Tooling

- ISO-9409-1-31.5-4-M5



## Work Envelope



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