

PreciseFlex c8A Collaborative Robot

6-Axis Articulation with Vertical Column Work Envelope

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, most energy efficient** cobots available.

Wide Range of Applications

The PreciseFlex c8A robot is well suited for machine feeding (load/upload), small parts handling, kitting, storage and retrieval, and mobile applications.

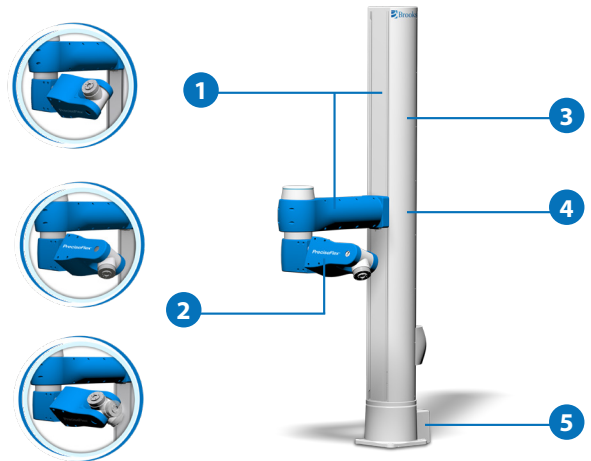
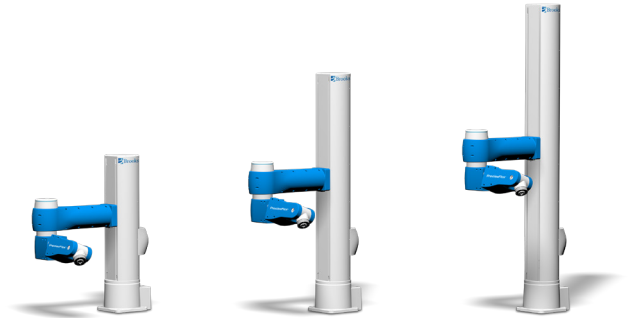
Lowest power consumption

Reduced energy usage and extended runtime in mobile applications.

Highest Workspace Density

The PreciseFlex c8A robot 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.



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 and embedded controller 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.

1. Highest Workspace Density

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

2. 6-Axis Articulation

When 4-Axes are not enough

3. Range of Motion

(Horizontal Reach) 896 mm with Joint 5 at 90°
(Horizontal Reach) 985 mm with Joint 5 at 0°

4. Highest Throughput

Low collision forces enable without sacrificing safety

5. Save Valuable Floorspace

With compact footprint and embedded controller



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Technical Specifications

Performance

Payload	8 kg
Max Cartesian Speed	500 mm/sec in horizontal plane 600 mm/sec in z-direction
Max Joint Speed	
J1	200°/sec
J2	600 mm/sec
J3	360°/sec
J4	360°/sec
J5	200°/sec
J6	360°/sec
Max Acceleration	5000 mm/sec ² with 6 kg payload
Repeatability	±0.020 mm at tool flange center

Range of Motion

Joint 1 (Base)	±168°
Joint 2 (Z-Axis)	500, 1000, 1420 mm
Joint 3 (Elbow)	+12° to +348°
Joint 4	+100° to -120°
Joint 5	±110°
Joint 6	±295°
Horizontal Reach	(Horizontal Reach) 896 mm with Joint 5 at 90° (Horizontal Reach) 985 mm with Joint 5 at 0°

Communications

General	100 Mb Ethernet, TCP/IP EtherNet/IP Modbus/TCP
Operator Interface	Web-based operator interface
Digital I/O	12 inputs, 8 outputs at base of robot optically isolated, 24V @ 100mA 2 in, 4 out for end-of-arm-tooling Remote I/O available

Facilities

Power	90 to 264 VAC Auto selecting, 50-60 Hz 100-250 watts typical operation
Pneumatics	Two 3.2 mm OD (1.7 mm ID) airlines provided for end-of-arm-tooling. 4.9 bar max (71 PSI)
Controller Mounting	Embedded into robot base
Weight	46 kg (500 mm Z-axis) 55 kg (1000 mm Z-axis) 65 kg (1420 mm Z-axis)

Software

Programming	Programming via Guidance Development Studio (GDS) Guidance Programming Language (GPL) TCS API
Enhanced Functions	Hand-Guided Teaching

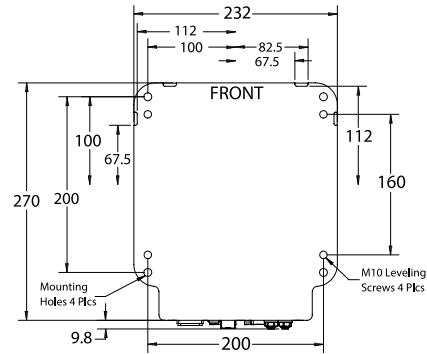
Peripherals and Accessories

General	Remote I/O (RIO)
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Certifications

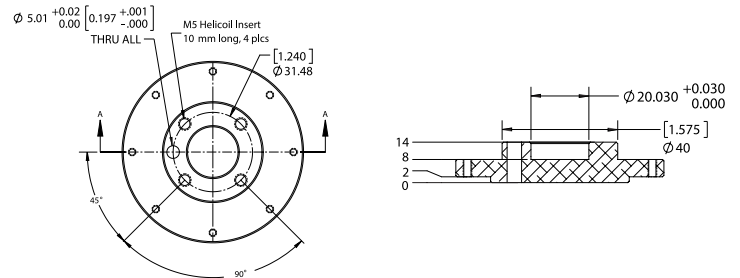
- ISO 10218, ISO/TS 15066, EN 61326-1, CE

Robot Mounting

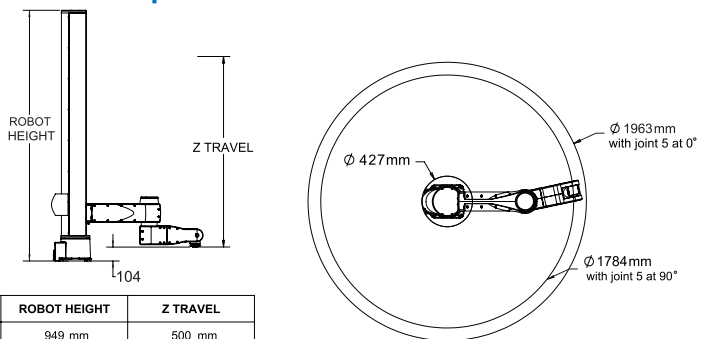


ISO Flange for End-of-Arm Tooling

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



Work Envelope



ROBOT HEIGHT	Z TRAVEL
949 mm	500 mm
1449 mm	1000 mm
1869 mm	1420 mm