

ROBOTICS

POWA™ CRB 1910

Engineered for powerful performance



Redefining industrial excellence with unmatched speed and performance.

Introducing PoWa

Meet the powerhouse of performance. PoWa cobot is engineered for high-speed industrial environments, delivering the perfect fusion of collaborative safety and industrial-grade performance, offering the best of both worlds in one powerful solution.

Unmatched speed and Industrial Performance

With speed exceeding 5.8 m/s, PoWa is the fastest cobot in its class, setting a new benchmark for collaborative robots in the 10 kg and 13 kg payload range.

Effortless set-up and operations

PoWa cobots offer exceptional ease of use with the Wizard Easy Programming app, pre-installed on the FlexPendant for rapid setup and configuration. Industrial-grade features are paired with full collaborative functionality, such as arm-side programmable buttons and intuitive, no-code block-based programming through Wizard easy programming app. Seamless integration with ABB's advanced software suite, including RobotStudio®, RobotStudio® AI Assistant, AppStudio™, and AI-powered analytics, enables fast deployment, intuitive programming, and maximum uptime.

Seamless Tool-Integration in minutes

Featuring a powerful and versatile interface that supports simultaneous connection of grippers and vision systems, delivering more power and higher productivity. Designed for industrial demands, the interface enables seamless plug-and-play integration with a wide range of tools in under five minutes. This eliminates the need for multiple connectors and external cable routing, streamlining setup and maximizing performance.

Maximize Efficiency in Tight Spaces

The PoWa family offers a compact and lightweight design in its class, ideal for space-constrained production environments. With a minimal footprint and no need for physical fencing, the CRB 1910 paired with the ultra-compact E10 controller maximizes workspace efficiency while enabling fast, flexible deployment and easy installation.

Key features

Productivity

- With a top speed of up to 5.8 m/s, PoWa is fastest cobot on the market

Adaptability

- Complete dust protection and water resistance with IP65(body) and IP67(wrist)
- Extensive fieldbus/protocols incl. Modbus TCP/RTU supported by controller/CPCS
- 32% improved path repeatability than comparable cobots
- Allows 7kg load on Axis 3 and lower arm
- Maximum of 88Nm torque suitable for screwdriving applications
- At least 11% longer reach than comparable robots in its class

Ease of use

- From unboxing to operations – possible within 1 hour*
- Enhanced interaction with programmable buttons on the arm side interface
- No-code, block-based programming with Wizard easy

programming and AppStudio

- Plug and play cameras and grippers simultaneously via high-power CPCS, eliminating external cable routing to save space and reduce installation time
- SafeMove configurator App on the FlexPendant

**Tested on pick and place application*

Flexibility

- Lightweight cobot design powered by the compact E10 controller

Applications

Suitable for all industrial applications including:

- Machine tending
- Material Loading and unloading
- Welding
- Palletizing
- Assembly
- Screwdriving
- And many more

Specifications	PoWa 13	PoWa 10
Robot version	CRB 1910-13/1.34	CRB 1910-10/1.52
TCP Reach (m)	1.34(wrist) 1.49(flange)	1.52(wrist) 1.67(flange)
Payload (kg)	up to 14 kg*	up to 11 kg*
Number of axes	6	
Protection	IP65 (body) and IP67 (wrist)	
ISO 14644-1 Cleanroom	ISO class 4 cleanroom at 50% rated speed and 100% rated load, ISO Class 5 cleanroom at 100% rated speed and 100% rated load	
Mounting	Any angle, including Floor/Wall/Ceiling	
Customer Power on flange	24V, 1.5A per pin, 4 pins, 4A in total with OmniCore E10	
Customer Signal on flange	C1: 8DI/6DO/4AI C2: 100Mbit/s Ethernet	
Communication on flange	C1: Modbus RTU, RS485, IO-link** C2: Modbus TCP, TCP/IP	
Tool flange interface	ISO 9409-1-50-4-M6	
Arm load	Lower arm and Elbow together up to 7 kg	
Controller	OmniCore E10, OmniCore C30 CRB 1910, OmniCore 90XT**	
Floor cable(m)	2m / 5m / 15m	
Safety	ISO 10218-1. ISO 13849-1 PL d Ca t3	
Noise	<60dB(A)	
Working temperature	5°C - 45°C	
Storage temperature	-40°C - 55°C	
Humidity	<95% at constant temperature (not intended to operate with condensation)	

*Wrist down configuration

** Coming soon

Performance	PoWa 13	PoWa 10
Performance (according to ISO 9283)		
Pose repeatability, RP		0.03mm
Path repeatability, RT		0.1mm
Max TCP speed	5.8m/s with rated payload, 8.3m/s with 1kg payload	5.8m/s with rated payload, 7.8m/s with 1kg payload
Cycle Time (400-900-400)	1.91s with rated payload, 1.13s with 1kg payload	2.29s with rated payload, 1.42s with 1kg payload
Physical and movement		
Robot Base	184x184mm	184x184mm
Robot weight	41kg	42kg
Working range		
Axis 1 (rotation)		±360°
Axis 2 (arm)		±180°
Axis 3 (arm)	-248° to +74°	-248° to +77°
Axis 4 (wrist)		±360°
Axis 5 (bend)		+/-180deg (default) +/-270deg (max)***
Axis 6 (turn)		±400°
Axis max. speed		
Axis 1 (rotation)		230 deg/s
Axis 2 (arm)		230 deg/s
Axis 3 (arm)		230 deg/s
Axis 4 (wrist)		300 deg/s
Axis 5 (bend)		300 deg/s
Axis 6 (turn)		300 deg/s

*** RW configuration

Omnicores E10 controller	Omnicores E10 controller	Omnicores C30 controller
Dimensions (W x D x H)	445 x 340 x 89mm	440 x 133 x 340 mm
Weight	12 kg	25 kg
IP Level	IP20	IP20
Available Communication Fieldbuses	PROFINET Controller, PROFINET Device, PROFIsafe Controller, PROFIsafe Device, CC-Link IE MASTER, CC-Link IE Device, CC – Link Safety Master**, CC – Link Safety Device**, EtherCAT device, EtherCAT Master**, EtherCAT FSoE device, EtherCAT FSoE Master**, Ethernet/IP Adapter, Ethernet/IP Scanner, CIP Safety Adapter**, CIP Safety Scanner** ** Coming soon	PROFINET Controller, PROFINET Device, EtherNet/IP Scanner, EtherNet/IP Adapter, CC-Link IE FB Master, CC-Link IE FB Device, EtherCAT Device, EtherCAT Master, PROFlenergy, DeviceNet Single channel, PROFIsafe Controller, PROFIsafe Device, CIP Safety Adapter, EtherCAT FSoE Device
Interface	Built in16DI/8DO	Built in 16I 16O
Cable length to Flexpendant	5m	3m/10m
Flexpendant		
Screen	8” color touch screen	
Resolution	1024x768	
Protection	IP65	
Weight	1.2kg	