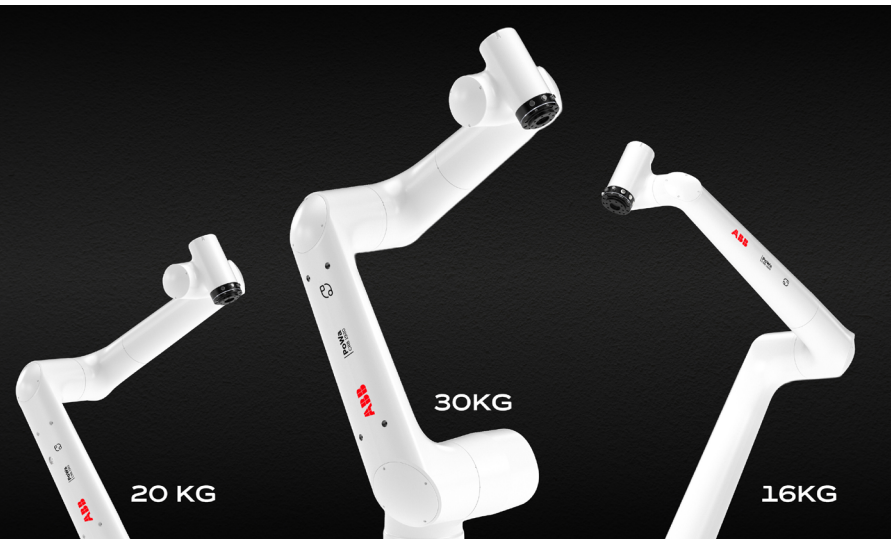


ROBOTICS

POWA™ CRB 1920

Designed for powerful performance



Redefining industrial excellence with unmatched speed and performance.

PoWa – The high speed powerful cobot family

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 upto 7.2 m/s, PoWa is the fastest cobot in its class, setting a new benchmark for collaborative robots in the higher payload category.

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 program-ming, 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 CRB1920 paired with the ultra-compact E10 controller maximizes workspace efficiency while enabling fast, flexible deployment and easy installation.

KEY FEATURES



Productivity

PoWa 1920 offers class leading speed of up to 7 m/s



Adaptability

- Complete dust protection and water resistance with IP67
- Extensive fieldbus/protocols incl. Modbus TCP/RTU supported by controller/CPCS
- 32% improved path repeatability than comparable cobots
- Allows upto 10kg arm load on Axis 3 and lower arm
- More than 100Nm torque suitable for screwdriving applications
- Up to 13% longer reach than comparable robots in its class



Flexibility

Lightweight cobot design powered by the compact E10 controller



Ease of use

- 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 highpower CPCS, eliminating external cable routing to save space and reduce installation time
- SafeMove configurator App on the FlexPendant



Applications

Suitable for all industrial applications including:

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

| Specifications | PoWa 16 | PoWa 20 | PoWa 30 |
|---------------------------|---|-----------------------------------|---------------------------------------|
| Robot variant | CRB1920 – 16/1.96 | CRB1920 – 20/1.67 | CRB1920 – 30/1.35 |
| Reach (m) | 1.96 m (wrist) 2.1 m (flange) | 1.67 m (wrist) 1.82 m (flange) | WCP 1.35 m (wrist) 1.52 m (flange) |
| Payload (kg) | up to 17 kg* | up to 22 kg* | up to 32 kg* |
| Rated payload (kg) | 16 kg | 20 kg | 30 kg |
| Number of axes | 6 | | |
| Protection | IP67 | | |
| ISO 14644-1 Cleanroom | ISO 4 | | |
| Mounting | Any angle, including Floor/Wall/Ceiling | | |
| Customer Power on flange | C1+C2: 24V, 1.5A per pin pair, integrated power, 4A total with OmniCore E10, 5.5A total with OmniCore C30 | | |
| Customer Signal on flange | C1: integrated 8DI/6DO/4AI C2: integrated 100Mbit/s Ethernet | | |

*wrist down configuration

| Specifications | PoWa 16 | PoWa 20 | PoWa 30 |
|---|--|---|---|
| Communication on flange | C1: Modbus RTU, RS485 C2: Modbus TCP, TCP/IP | | |
| Tool flange interface | ISO 9409-1-50-6-M6 | | |
| Arm load | 10kg on axis 3 or lower arm | | |
| Controller | OmniCore E10, OmniCore C30, OmniCore 90XT** | | |
| Floor cable(m) | 2m / 5m | | |
| Safety | ISO 10218-1:2025, ISO 13849-1:2023 PL d Cat 3 | | |
| Noise | <65 dB(A) | | |
| Working temperature | +5°C to +45°C | | |
| Storage temperature | -25°C to 55°C | | |
| Humidity | <95% at constant temperature (not intended to operate with condensation) | | |
| Performance(400-900-400, pick-place cycle) | | | |
| Cycle Time(with E10 Type A) | 1.92s with rated payload, 1.71s with 1kg payload | 2.00s with rated payload, 1.77s with 1kg payload | 2.44s with rated payload, 1.96s with 1kg payload |
| Cycle Time(with C30 Type B) | 1.87s with rated payload, 1.65s with 1kg payload | 1.92s with rated payload, 1.67s with 1kg payload | 2.36s with rated payload, 1.80s with 1kg payload |
| Performance (according to ISO 9283) | | | |
| Pose repeatability, RP | 0.03 mm | 0.03 mm | 0.03 mm |
| Path repeatability, RT | 0.1 mm | 0.1 mm | 0.1 mm |
| Max TCP speed @rated payload with E10 | 5.2 m/s | 5.1 m/s | 3.9 m/s |
| Max TCP speed@1kg payload with E10 | 7.0 m/s | 7.0 m/s | 6.0 m/s |
| Max TCP speed @rated payload with C30 | 5.2 m/s | 5.2 m/s | 3.9 m/s |
| Max TCP speed@1kg payload with C30 | 7.0 m/s | 7.2 m/s | 6.0 m/s |
| Physical and movement | | | |
| Robot Base | 225*225 mm | | |
| Robot weight (kg) | 63 kg | 63 kg | 61 kg |
| Working range | | | |
| Axis 1 (rotation) | +/- 360° | | |
| Axis 2 (arm) | +/- 180° | | |
| Axis 3 (arm) | +80/- 248° | +78/- 249° | +74/- 243° |
| Axis 4 (wrist) | +/- 360° | | |
| Axis 5 (bend) | +/- 180° | | |
| Axis 6 (turn) | +/- 270° (which could be changed by customers) | | |
| Axis 6 (turn) | +/- 400° | | |
| Axis max. speed | | | |
| Axis 1 (rotation) | 149°/s | 149°/s | 149°/s |
| Axis 2 (arm) | 149°/s | 149°/s | 149°/s |
| Axis 3 (arm) | 230°/s | 230°/s | 230°/s |
| Axis 4 (wrist) | 283°/s | 300°/s | 300°/s |
| Axis 5 (bend) | 300°/s | 300°/s | 300°/s |
| Axis 6 (turn) | 300°/s | 300°/s | 300°/s |

| Omnicores E10 controller | Omnicores E10 controller | Omnicores C30 controller |
|------------------------------------|--|--|
| Dimensions (W x D x H) | 449x338x89 mm | 440x133x340 |
| Weight | 12 kg | 25kg |
| 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, PROFINET, DeviceNet Single ch. PROFIsafe Controller, PROFIsafe Device, CIP Safety Adapter, EtherCAT FSoE Device |
| Interface | Built in 16DI/8DO | Built in 16I 16O |
| Cable length to Flexpendant | 3m/10m | |
| Flexpendant | | |
| Screen | 8" color touch screen | |
| Resolution | 1024x768 | |
| Protection | IP67 | |
| Weight | 1.2kg | |
| Available Cable length | 3m/10m | |
| Additional features | 3D Joystick Adaptable for left-handed users | |



**SCAN THE CODE TO DISCOVER MORE
ABOUT THE POWA COBOT FAMILY**