

SWIFTI™ CRB 1300

The speedy cobot just got stronger

Introducing SWIFTI CRB 1300, the lightning-fast industrial collaborative robot that takes industrial-level performance and innovative safety to the next level. Designed for high payload and high demand applications of upto 11kg, SWIFTI opens new possibilities for using cobots in industrial applications.



Introducing SWIFTI

SWIFTI bridges the gap between collaborative and industrial robots. It enables proven safe collaborative operation to be achieved, even in applications that demand industrial-level speed and lifting capabilities.

The cobot that does more

With payload options from 7kg to 11kg and reaches from 0.9m to 1.4m, SWIFTI CRB 1300 opens an expanded range of applications. An IP67 variant also offers new possibilities for automated machine tending where high levels of dust or moisture may be present.

Collaborative safety

Combining ABB's SafeMove comprehensive safety functionality with a safety laser scanner, SWIFTI can collaborate safely with people without physical fencing. If a worker is detected within its working area, SWIFTI will slow down or halt so they can approach safely. An interaction light also provides a visual indication of SWIFTI's status.

No experience? No problem

Lead-through programming, Wizard easy programming software, and the FlexPendant graphical SafeMove configurator App makes configuring and programming SWIFTI quick and easy.

High-performance collaboration

SWIFTI's maximum Tool Center Point (TCP) speed of 6,2 m/s, is 6 times faster than cobots in its class* and comparable with industrial robots. At 0.02 mm, SWIFTI also provides up to 5 times higher position repeatability than other collaborative robots in its class.

Key features:

Increased payload and reach

- Choice of payload options from 7kg to 11kg and reaches from 0.9m to 1.4m
- IP67 variant for use in dusty, high moisture environments

Collaborative safety

- Supervised by SafeMove and safety sensor
- Stop safely before contact with a human
- Interaction status light
- Safety certified Category 3, PL d

Easy to use

- Wizard easy programming
- Intuitive robot movement programming with external lead-through device
- SafeMove configurator App on the FlexPendant

Productivity

- With a TCP speed of over 6,2 m/s, it is 6 times faster than other cobots in its class*
- Up to 5 times higher position repeatability
- Four integrated air supplies enable vacuum picking

Applications

- Palletizing
- Machine tending
- Screw driving
- Material handling
- Assembly
- Kitting
- And many more...

* Safe collaborative speed may be lower, depending on your application layout. Always do a safety risk assessment of your cobot application.

Specification

| Robot version | Reach (m) | Payload (kg) | Armload (kg) |
|------------------------------------|--|--------------|--------------|
| CRB 1300-11/0.9 | 0.9 | 11 | 1 |
| CRB 1300-10/1.15 | 1.15 | 10 | 0.5 |
| CRB 1300-7/1.4 | 1.4 | 7 | 0.5 |
| Number of Axes | 6 | | |
| Protection | IP40 standard IP67 Optional | | |
| Mounting | Any angle | | |
| Controller | Omnicores C30/ C90XT optional | | |
| Integrated signal and power supply | Upto 20 signals on upper arm (c1 + c2 +c3) | | |
| Integrated air supply | 4 air on wrist max 6 bar | | |
| Integrated ethernet | One 1000 Base-T ethernet port (C2) | | |
| Tool flange | ISO 9409-1-40-4-M6 | | |
| Functional safety | SafeMove Collaborative included all safety functions certified to Category 3, PL d | | |

Physical

| | CRB 1300-11/0.9 | CRB 1300-10/1.15 | CRB 1300-7/1.4 |
|-----------------|-----------------|------------------|----------------|
| Dimensions (mm) | 220 x220 mm | | |
| Weight (kg) | 75 Kg | 77 Kg | 79 Kg |

Performance (according to ISO 9283)

| | CRB 1300-11/0.9 | CRB 1300-10/1.15 | CRB 1300-7/1.4 |
|--|-----------------------|---------------------|---------------------|
| Max TCP Acceleration (normal control motion @nominal load) | 49.5 m/s ² | 50 m/s ² | 66 m/s ² |
| Max TCP Acceleration (e-stop @nominal load) | 75 m/s ² | 68 m/s ² | 82 m/s ² |
| Acceleration time 0-1m/s | 0.044 s | 0.042 s | 0.045 s |
| Pose repeatability, RP (mm) | 0.02 mm | 0.023 mm | 0.03 mm |
| Path repeatability, RT (mm) | 0.08 mm | 0.04 mm | 0.07 mm |
| 1 kg picking cycle 25 x 300 x 25 mm | 0.42 s | 0.45 s | 0.41 s |

Movement

| Axis movement | Working range | Axis max speed CRB 1300-11/0.9 | Axis max speed CRB 1300-10/1.15 | Axis max speed CRB 1300-7/1.4 |
|-----------------|----------------|--------------------------------|---------------------------------|-------------------------------|
| Axis 1 rotation | +180° to -180° | 280°/s | 240°/s | 249°/s |
| Axis 2 arm | +155° to -95° | 228°/s | 228°/s | 180°/s |
| Axis 3 arm | +69° to -210° | 300°/s | 336°/s | 247°/s |
| Axis 4 wrist | +230° to -230° | 500°/s | 500°/s | 500°/s |
| Axis 5 bend | +130° to -130° | 420°/s | 420°/s | 420°/s |
| Axis 6 turn | +400° to -400° | 720°/s | 720°/s | 720°/s |

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