

HC10XP

HUMAN-COLLABORATIVE WELDING ROBOT

KEY BENEFITS

Enables humans to safely work with robots

Easily adds robotic welding capacity to your production

Supplements manual welding

Easy hand-guided programming (without teach pendant) for quick implementation

Rugged IP67 rating to reliably operate in harsh welding environment

SPECIFICATIONS

10 kg payload

1,200 mm maximum reach

0.05 mm repeatability

APPLICATIONS

Welding

CONTROLLERS

YRC1000



- 6-axis collaborative robot specifically setup for arc welding applications.
- Portable robot can be easily relocated depending on production needs.
- Power and force limiting technology is used to protect the worker from potentially harmful contact situations.
- Depending on risk assessment per application, the HC10XP can operate without additional protective measures such as safety fence, resulting in reduced cost and space requirements.
- Safety standards
 - TUV-certified to ISO 13849-1: Safety functions industrial robot controller, Category 3 PLd
 - TUV-certified compliance to ISO 10218-1
 - Complies with ISO TS 15066
- Universal Weldcom Interface (UWI) is a common interface that enables full control of any power source brand.
- Through-arm Category 6 ethernet cable enables communication for a wide variety of tooling options.
- Easy-to-clean surface for use in harsh environments.
- I/O jog controls robot arm quickly with an intuitive hardware remote – used to program entire jobs or touch up points (option).

THE CASE FOR COLLABORATION

CAPABLE – improves production rate

- Industrial-grade payload and speed for real world applications
- Can be used for welding or re-deployed for handling and assembly as production needs change
- Easily integrated into factory automation systems using discrete I/O or fieldbus networks such as Ethernet/IP

AFFORDABLE – quickly achieves ROI

- Reduced physical guarding
- Simplified, built-in networked safety I/O
- Built on Yaskawa legacy of quality and reliability

SAFE – reduces risk

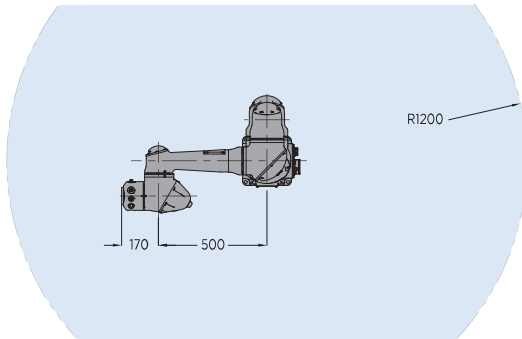
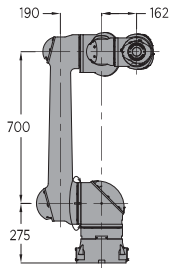
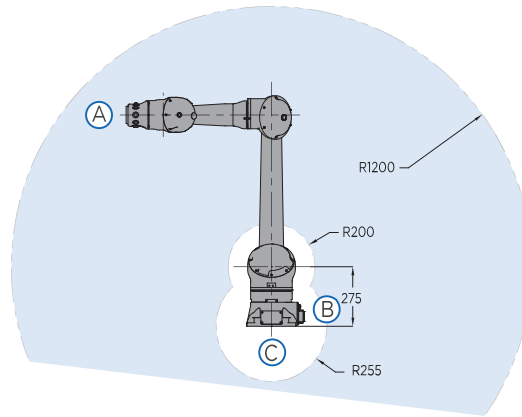
- Advanced pinchless geometry
- Innovative thru-arm utilities
- Configurable force and speed limiting of all six axes of motion
- Powerful and flexible Functional Safety Unit

EASY – empowers employees

- Teach by hand guiding
- Quick fault recovery
- Simplifies basic training needs

* Contact your Yaskawa representative for details and conditions.

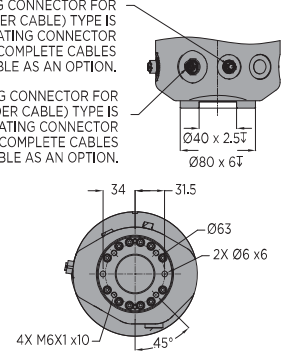
HC10XP WELDING ROBOT



VIEW A

INTERNAL USER WIRING CONNECTOR FOR EXTERNAL AXIS (POWER CABLE) TYPE IS LF07WBRB-6S (WITH CAP) MATING CONNECTOR IS NOT SUPPLIED BUT COMPLETE CABLES ARE AVAILABLE AS AN OPTION.

INTERNAL USER WIRING CONNECTOR FOR EXTERNAL AXIS (ENCODER CABLE) TYPE IS LF10WBRB-I2S (WITH CAP) MATING CONNECTOR IS NOT SUPPLIED BUT COMPLETE CABLES ARE AVAILABLE AS AN OPTION.

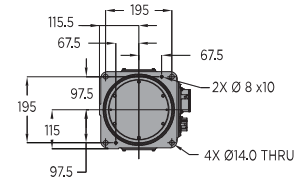


VIEW B

ETHERNET CABLE CONNECTOR M12 X-CODED (WITH CAP) MATING CONNECTOR IS M12 CONNECTOR



VIEW C



All dimensions are metric (mm) and for reference only. Request detailed drawings for all design/engineering requirements.

SPECIFICATIONS

Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N·m	kg·m ²
S	±180	130	-	-
L	±180	130	-	-
U	+265/-95	180	-	-
R	±180	180	27.4	0.78
B	±180	250	27.4	0.78
T	±180	250	9.8	0.1

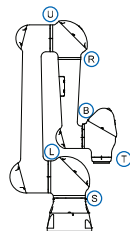
Mounting Options: Floor, Wall, Tilt or Ceiling

Item	Unit	HC10XP
Controlled axes		6
Maximum payload	kg	10
Repeatability	mm	0.05
Maximum reach	mm	1,200
I/O Expansion		Ethernet/IP, DeviceNet, Profibus, Profinet, CC-Link and other networks available
Tool Center Point (maximum linear speed)		Non-collaborative mode: 2,000 mm/s * Collaborative mode: 1,000 mm/s **
Internal user I/O cable		6 X 0.2 mm ² and 8 X 0.3 mm ² wires
Power requirements		Three-phase 380-480VAC 50/60Hz
Power rating	kVA	1
Weight	kg	58
IP classification		IP67

* Non-collaborative mode maximum speed is based on payload
** Collaborative mode speed is user-defined based on safety assessment

OPTIONS

- Third-party function-specific collaborative tooling and accessories



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

Safety Compliance And Validation

Safety Standard	Third Party
Certified Compliance with EN ISO 10218-1:2011	TUV Rheinland
Validated to Functional Safety, Cat3 PLd. EN ISO 13849:2008	TUV Rheinland
Validated to Machine Safety, Cat3 PLe. EN ISO 13849:2008	TUV Rheinland



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