

HC10XP

HUMAN-COLLABORATIVE ROBOT

KEY BENEFITS

Enables humans to safely work with robots

Thru-arm utilities eliminate external cables and associated risks, and simplify end-of-arm tooling installation

Cast aluminum construction for industrial durability

Designed to avoid pinch points, increasing worker safety

Easy teaching for quick implementation

Thru-arm Category 6 cable enables a wide variety of communication options for tooling

SPECIFICATIONS

10 kg payload

1,200 mm maximum reach

0.05 mm repeatability

APPLICATIONS

Assembly

Machine Tending

Material Handling

Packaging

CONTROLLERS

YRC1000

YRC1000micro



- 6-axis robot designed for a wide variety of collaborative applications.
- Power and force limiting technology is used to protect the worker from potentially harmful contact situations.
- Depending on risk assessment, the HC10XP can operate without additional protective measures such as a safety fence, resulting in reduced cost and space requirements.
- Simple and easy to program, enabling the operator to quickly perform changeovers.
- Safety standards
 - TUV-certified to ISO 13849-1: Safety functions industrial robot controller, Category 3 PLd
 - Complies with ISO 10218-1: 5.10.5 Power and Force Limiting
 - Complies with ISO TS 15066
- The HC10XP allows hand-guided programming without requiring a teach pendant.
- Available with Smart Pendant featuring Smart Frame technology.
- Available with Yaskawa's ultra-compact, yet powerful, YRC1000micro controller. A 120 VAC, single-phase option is available.
- Ideal for use in sanitary environments where wipe/wash is required. Includes IP67 rating as well as NSF H1 food-grade grease for incidental food contact. Its easy-to-clean surface and laboratory-grade seals are compatible with sanitizers containing hydrogen peroxide*.

THE CASE FOR COLLABORATION

CAPABLE – improves production rate

- Industrial-grade payload and speed for real world applications
- Can be used in a wide variety of handling and assembly applications
- 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

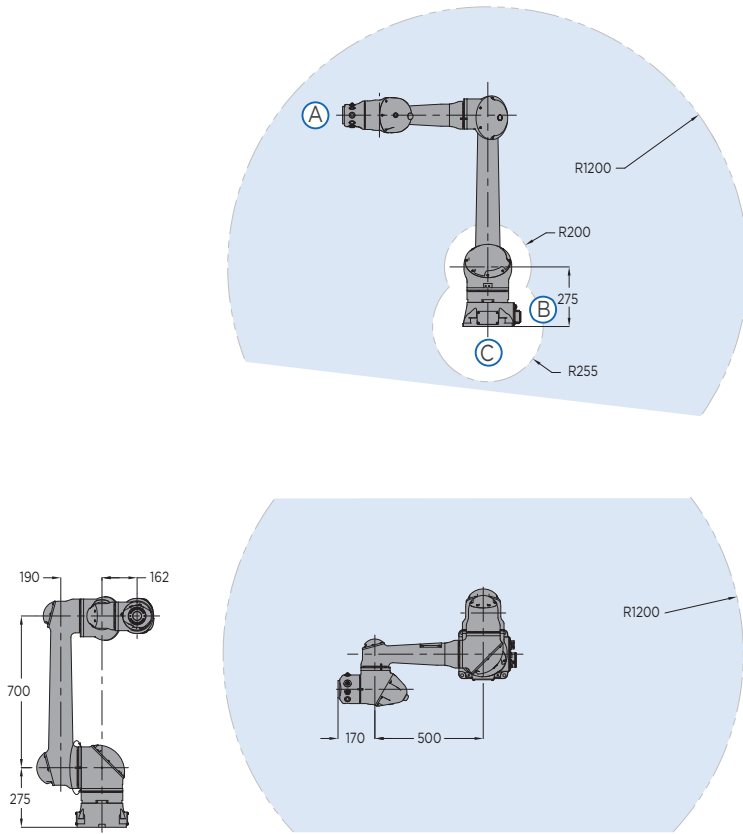
SAFE – reduces risk

- Advanced pinchless geometry
- Innovative thru-arm utilities
- Power and force limiting with FSU (Functional Safety Unit)

EASY – empowers employees

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

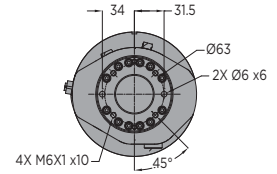
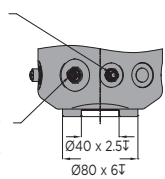
HC10XP ROBOT



VIEW A

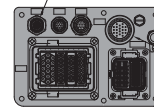
INTERNAL USER WIRING CONNECTOR FOR EXTERNAL AXIS (POWER CABLE) TYPE IS LF07WBRB-6S (WITH CAP) MATING CONNECTOR IS NOT SUPPLIED BUT COMPLETE CABLES ARE AVAILABLE AS AN OPTION.

INTERNAL USER WIRING CONNECTOR FOR EXTERNAL AXIS (ENCODER CABLE) TYPE IS LF10WBRB-12S (WITH CAP) MATING CONNECTOR IS NOT SUPPLIED BUT COMPLETE CABLES ARE AVAILABLE AS AN OPTION.



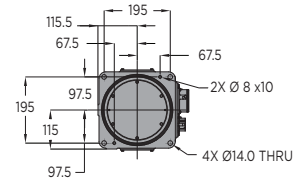
VIEW B

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



INTERNAL USER WIRING CONNECTOR RM21WTR-20P MATING CONNECTOR IS RM21WTP-20S

VIEW C



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

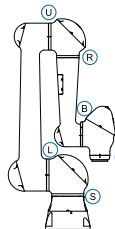
SPECIFICATIONS

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

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

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 (TCP)		Non-collaborative mode: 1000 mm/s Collaborative mode: 250 mm/s* (factory default)
Internal user I/O cable		6 X 0.2 mm ² and 8 X 0.3 mm ² wires
Power requirements YRC1000 YRC1000micro		Three-phase 380-480VAC 50/60Hz Single-phase or three-phase 200-230VAC 50/60Hz
Power rating	kVA	1
Weight	kg	58
IP classification		IP67
Safety certification		TUV Rheinland
Designed to meet		Functional Safety, Cat. 3 PLd, Safety Functions, EN ISO 13849:2008 PLd

* Collaborative mode speed is user-defined based on safety assessment

YASKAWA

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