

HC10

Human-Collaborative Robot

Key Benefits

Enables humans to safely work with robots

Through-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



Specifications

10 kg payload

1,200 mm maximum reach

±0.1 mm repeatability

Applications

Assembly

Machine Tending

Material Handling

Packaging

- 6-axis collaborative robot designed for a wide variety of applications.
- Power and force limiting technology is used to protect the worker from potentially harmful contact situations.
- Depending on risk assessment, the HC10 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.
- Meets established safety standards including:
 - ISO 13849-1: Safety functions industrial robot controller, Category 3 PLd (TUV-certified)
- Controlled by Yaskawa's new high-performance YRC1000 controller that is built to a global standard and does not require a transformer for input voltages ranging from 380VAC to 480VAC.
- Operator can program through standard teach pendant, hand guiding or Smart Pendant.

The CASE for HC10 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

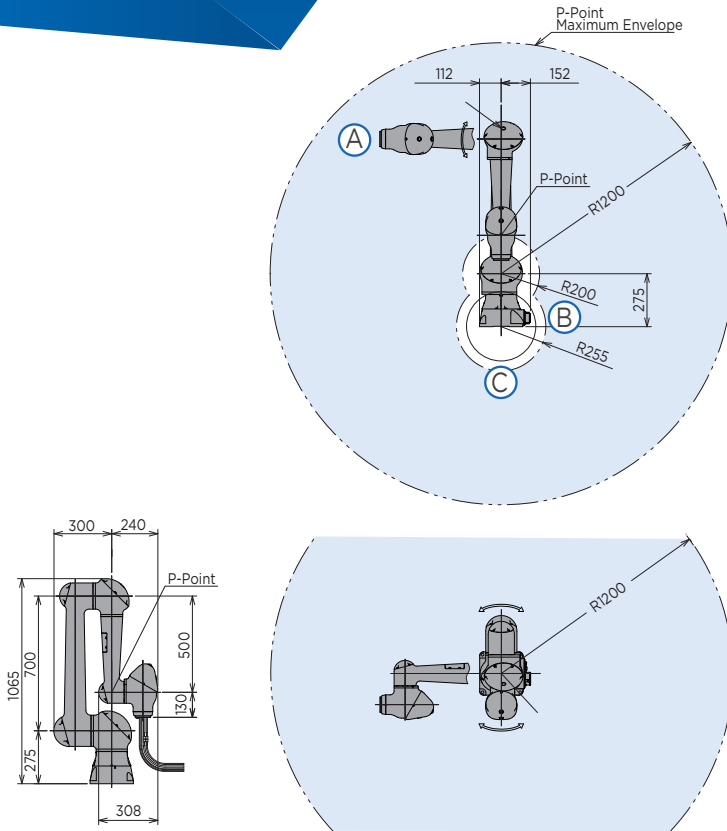
SAFE – *reduces risk*

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

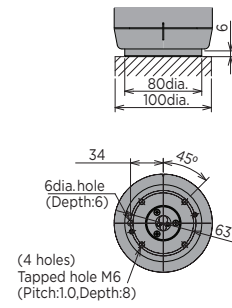
EASY – *empowers employees*

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

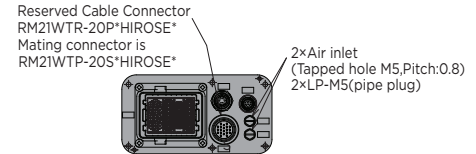
HC10 Robot



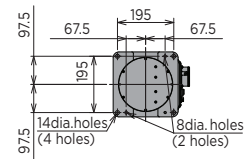
VIEW A



VIEW B



VIEW C



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

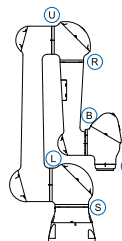
SPECIFICATIONS

Axes	Maximum motion range [°]	Maximum speed [°/sec.]	Allowable moment [N•m]	Allowable moment of inertia [kg•m ²]
S	±180	130	-	-
L	±180	130	-	-
U	+355/-5	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, Ceiling, Tilt

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	HC10
Controlled axes	6
Maximum payload [kg]	10
Repeatability [mm]	±0.1
Maximum reach [mm]	1,200
I/O Expansion	Ethernet/IP, DeviceNet, Profibus - DP, Remote I/O, Discrete I/O, Analog I/O 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	8 X 0.2 mm ² and 8 X 0.3 mm ² wires
Internal user air lines	2 x 4 mm OD
Power requirements	380-480 VAC, 3Ø, 50/60Hz
Power rating [kVA]	1.0
Weight [kg]	47
IP classification	IP20
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

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