

HC30PL

DIRECT TEACH, PLUG AND PLAY COLLABORATIVE PALLETIZING ROBOT

KEY BENEFITS

Application-specific payload and motion range optimization

Enables humans to safely work with robots

IP67-rated cast aluminum construction for industrial durability

Advanced pinchless geometry avoids pinch points, increasing safety

Thru-arm Category 6 Ethernet cable and dual 5 mm ID air lines eliminate external utilities while offering fast, safe and easy setup of a wide variety of communication and tool options

EN ISO-9409-1 tool mounting flange and electrical connections provide quick and easy deployment

SPECIFICATIONS

30 kg payload

1,700 mm maximum reach

0.05 mm repeatability

APPLICATIONS

Material Handling

Packaging

Palletizing

CONTROLLER

YRC1000

YRC1000micro



- 6-axis robot designed for collaborative palletizing applications.
- Hand-guided teaching without a teach pendant enables easy programming for fast changeovers.
- Plug and play tool flange quickly connects a wide variety of end-of-arm tooling for fast and simple deployment.
- Power and force limiting technology is used to protect the worker from potentially harmful contact solutions.
- Depending on risk assessment, the HC30PL can operate without protective measures such as a safety fence, resulting in reduced cost and space requirements.
- Safety standards
 - Functional safety validated to Cat3 PLd
 - Machine safety validated to Cat3 PLe
 - Certified compliance with EN ISO 10218-1 (YRC1000micro)
 - Certified compliance with ISO/TS 15066 (YRC1000micro)
- Ideal for use in sanitary environments where wipe/wash is required. Includes IP67 rating as well as NSF H1 certified food-grade grease for food or consumer product packaging environments.*
- The HC30PL is compatible with either the standard teach pendant (with PalletSolver) or the Smart Pendant (with Smart Pattern extension).

THE CASE FOR COLLABORATION

CAPABLE – improves production rate

- Industrial-grade payload and speed for a wide variety of applications
- Easily integrated into factory automation systems using discrete I/O or fieldbus networks such as EtherNet/IP
- Built on Yaskawa legacy of quality and reliability

AFFORDABLE – quickly achieves ROI

- Reduced physical guarding**
- Simplified, built-in networked safety I/O
- Integrated thru-arm utilities

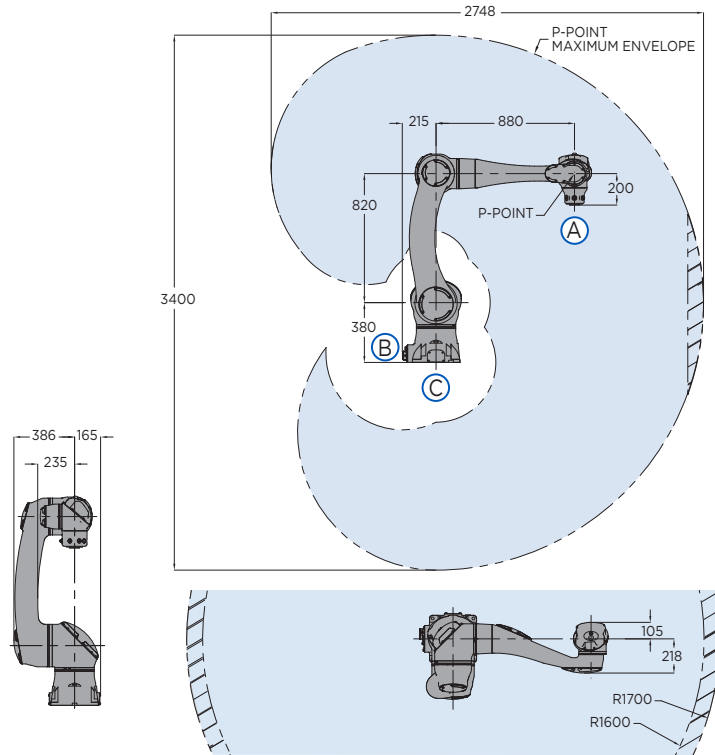
SAFE – reduces risk

- Advanced pinchless geometry
- Configurable power and force limiting (PFL) of all six axes of motion
- Powerful and flexible Functional Safety Unit for speed and position limiting

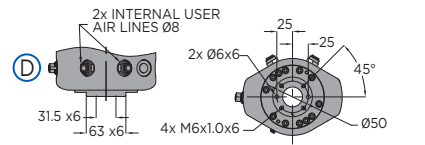
EASY – empowers employees

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

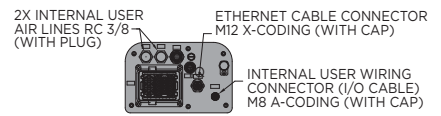
HC30PL ROBOT



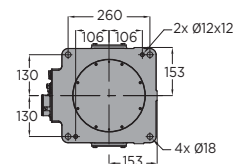
VIEW A



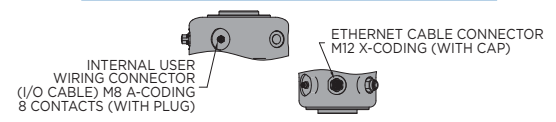
VIEW B



VIEW C



VIEW D



Maximum reach: <27 kg Payload = 1,700 mm; >27 kg Payload = 1,600 mm
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	±210	80	-	-
L	±180/-154	80	-	-
U	+247/-67	120	-	-
R	±15	112	-	-
B	±15	132	-	-
T	±210	180	-	2

Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

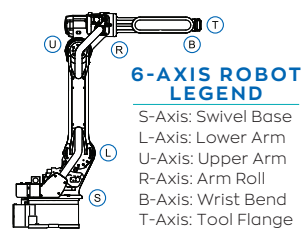
Safety Compliance And Validation	
Safety Standard	Third Party
Functional safety validated to Cat3 PLd. EN ISO 13849:2008	TUVRheinland
Machine safety validated to Cat3 PLc. EN ISO 13849:2008	TUVRheinland
Certified compliance with EN ISO 10218-1:2011 and ISO/TS 15066-2016 (YRC1000micro)	TUVRheinland

Item	Unit	HC30PL
Controlled axes		6
Maximum payload	kg	30
Repeatability	mm	0.05
Maximum reach	mm	<27 kg payload = 1,700 >27 kg payload = 1,600
I/O Expansion		Ethernet/IP, DeviceNet, Profibus, Profinet, CC-Link and other networks available
Air Lines		2 hoses; Internal diameter: 5 mm Maximum pressure: 400kPa (4 kgf/cm ² or less)
Tool Center Point (maximum linear speed)		Non-collaborative mode: 2,000 mm/s ** Collaborative mode: 1,000 mm/s ***
Internal user I/O cable		0.1 mm ² x 8 conductors; Maximum allowable current is 1.5 A or less for each conductor
Ethernet Cable		Cat. 6
Power requirements YRC1000 YRC1000micro		Three-phase 380-480VAC 50/60Hz Three-phase 200-220VAC 50/60Hz
Power rating	kVA	1.5
Weight	kg	140
Effective Mass	kg	116.7
IP classification		IP67 (all axes)
Temperature Range		0° C to 40° C
Relative Humidity		20% to 80% non-condensing

** 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
- PLC integration via MLX300 software option*



YASKAWA AMERICA, INC. 100 Automation Way | Miamisburg, OH 45342
937.847.6200 | motoman.com

Technical specifications subject to change without notice. | Motoman is a registered trademark.
All other marks are the trademarks and registered trademarks of Yaskawa America, Inc.
DS-981-A ©2022 Yaskawa America, Inc. NOVEMBER 2022