

GP20HL

EXTENDED-REACH, HOLLOW ARM DESIGN

KEY BENEFITS

Extended reach and high speeds allow use in a variety of applications

High wrist ratings provide higher handling capacity

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

20 kg payload

3,124 mm horizontal reach

5,622 mm vertical reach

0.07 mm repeatability

APPLICATION

Coating

Dispensing

Machine Tending

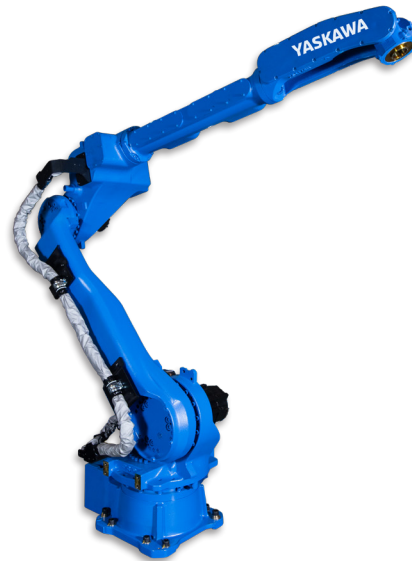
Material Cutting

Material Handling

Press Tending

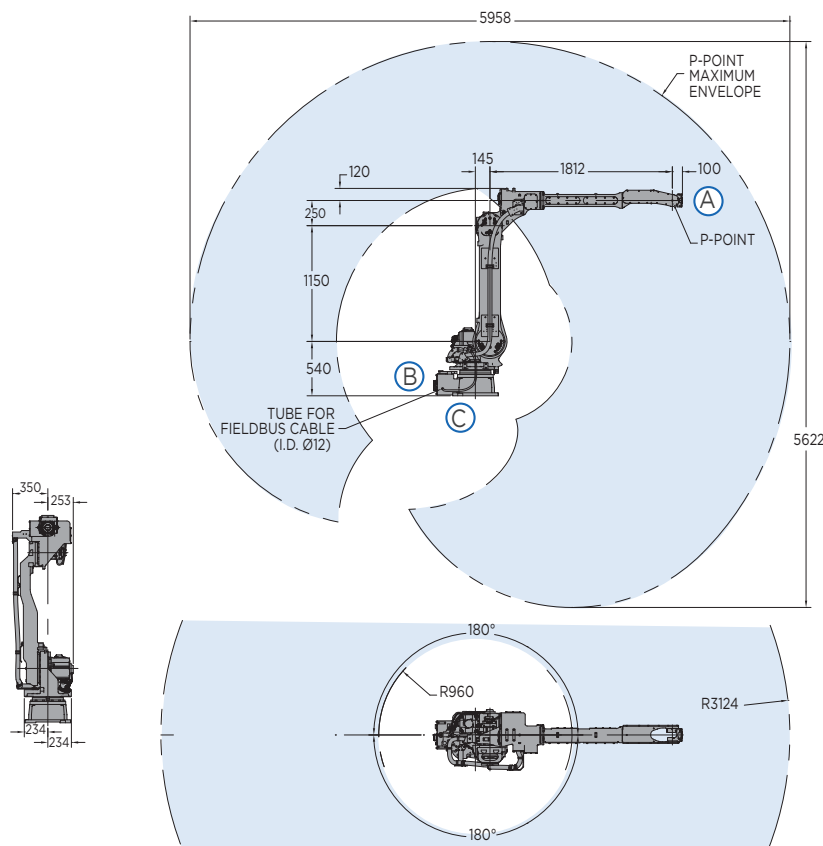
CONTROLLER

YRC1000

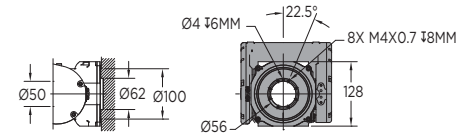


- Increase productivity with the powerful and efficient hollow-arm GP20HL robot.
- Extended reach six-axis robot offers superior performance for a variety of applications.
- Hollow upper arm provides optimal cable protection and longer life while simplifying programming. A 50 mm clearance through axes 4-6 encloses the cable and protects it from wear, interference or snagging.
- 20 kg payload supports a wide variety of tooling and sensors to fulfill diverse project needs.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Wide wrist motion range eliminates interference and improves application flexibility.
- High moment and inertia ratings allow handling of larger and heavier payloads.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Mounting for peripheral equipment is provided in multiple locations to make integration easier.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP20HL has an IP67-rated wrist and an IP54 body standard.
- The GP20HL robot can be floor-, wall-, tilt- or ceiling-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes a lightweight standard teach pendant with intuitive programming.

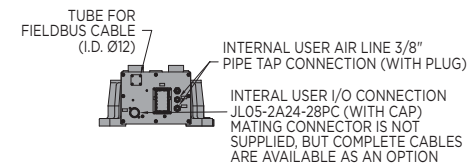
GP20HL ROBOT



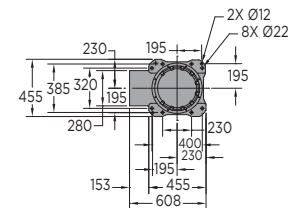
VIEW A



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	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N·m	kg·m ²
S	±180	180	-	-
L	+135/-90	180	-	-
U	+206/-80	180	-	-
R	±200	400	39.2	1.05
B	±150	430	39.2	1.05
T	±455	630	19.6	.75

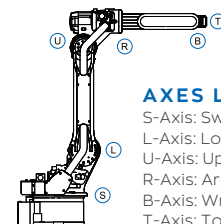
Mounting Options: Floor, Wall, Tilt or Ceiling

* 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.

Item	Unit	GP20HL
Controlled axes		6
Maximum payload	kg	20
Repeatability	mm	0.07
Horizontal reach	mm	3,124
Vertical reach	mm	5,622
Weight	kg	560
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(2) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	4.0

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



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

YASKAWA

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-868 ©2021 Yaskawa America, Inc. JANUARY 2021