

GP400

HEAVY-PAYLOAD ROBOT

KEY BENEFITS

Versatile, high-performance robot for heavy-payload applications

High moment of inertia ratings accommodates a wide range of large heavy parts

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

400 kg payload

2,942 mm horizontal reach

2,898 mm vertical reach

0.1 mm repeatability

APPLICATION

Machine Tending

Material Cutting

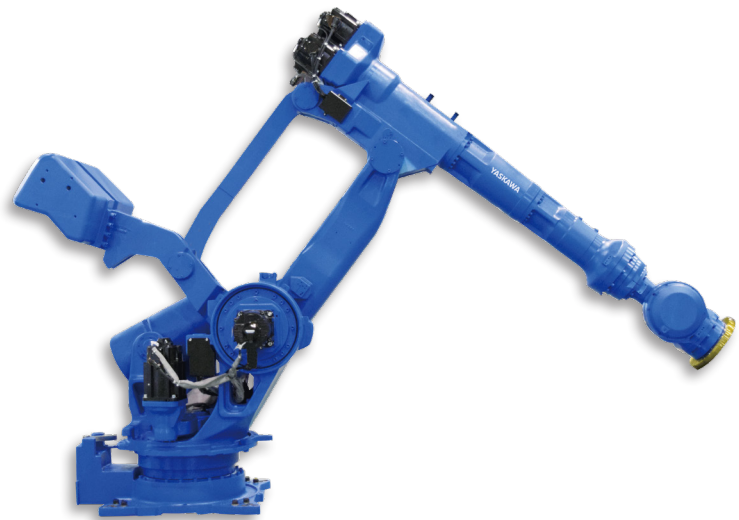
Material Handling

Material Removal

Press Tending

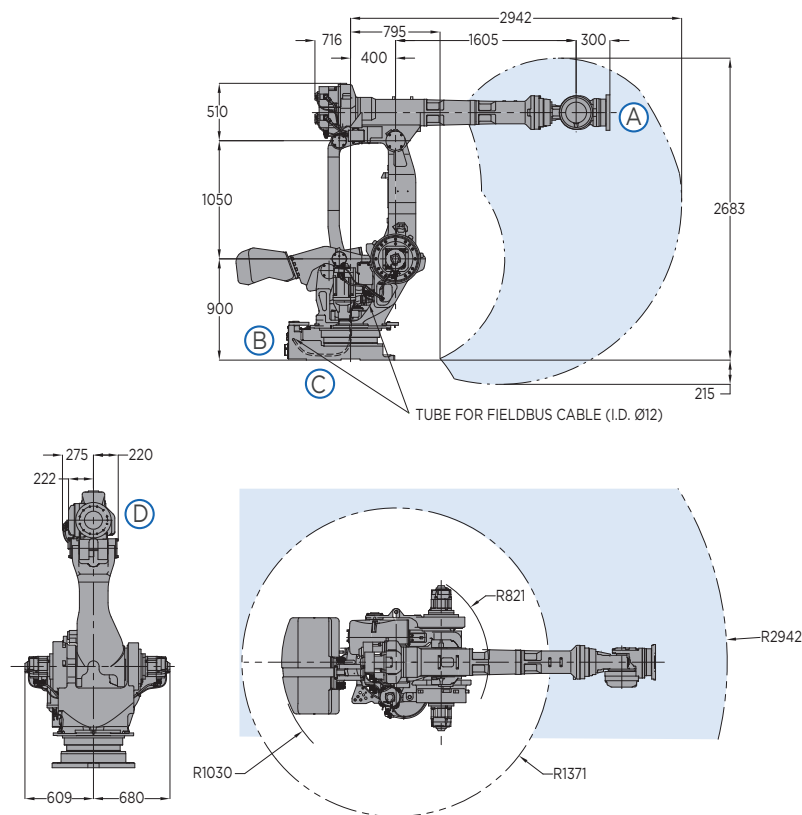
CONTROLLER

YRC1000

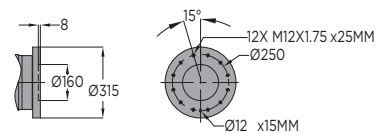


- Increase productivity with the powerful and efficient six-axis GP400 robot.
- 400 kg payload provides superior performance in machine and press tending, and other heavy-payload applications.
- Ideal for "jigless" applications where robot positions part for processing by other robots or two robots handle a single part.
- Capable of loading and unloading parts, the GP400 robot can help eliminate inconsistencies of a manual process for applications such as turning, milling and grinding.
- Large work envelope and high moment of inertia ratings accommodate a wide range of large, heavy parts.
- Exceptionally fast axis speeds and acceleration reduce cycle time and increase production output.
- Parallel-link design for strength, rigidity and stabilization of high moment/inertia loads. Heavy-duty bearings provide smooth arm rotation.
- Reduced interference design allows the robot to be mounted closer to machines and fixtures, making the best use of valuable floorspace.
- Streamlined upper arm features a slim wrist profile and reduces robot width, allowing easier reach into confined spaces and improving application flexibility.
- 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.
- 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 GP400 has an IP67-rated wrist and an IP30 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP54 is available.
- The GP400 can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

GP400 ROBOT

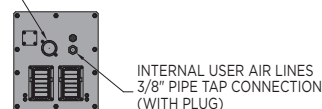


VIEW A

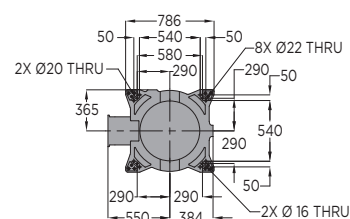


VIEW B

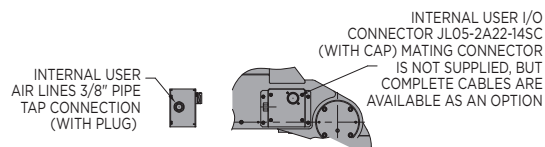
INTERNAL USER I/O CONNECTOR JL05-2A28-2IPC (WITH CAP) MATING CONNECTOR IS NOT SUPPLIED, BUT COMPLETE CABLES ARE AVAILABLE AS AN OPTION



VIEW C



VIEW D



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	102	-	-
L	+61/-55	97	-	-
U	+18/-113	97	-	-
R	±360	80	2,989	500
B	±115	80	2,989	500
T	±360	172	1,343	315

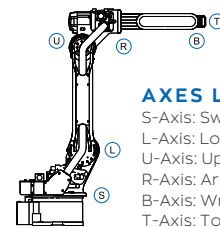
Specifications for GP400 with XP package may be different.
Mounting Options: Floor

* 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.

Item	Unit	GP400
Controlled axes		6
Maximum payload	kg	400
Repeatability	mm	0.1
Horizontal reach	mm	2,942
Vertical reach	mm	2,898
Weight	kg	2,840
Internal user I/O cable		19 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	7

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- Endless T-axis rotation
- 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-902 ©2021 Yaskawa America, Inc. FEBRUARY 2021