

GP50

VERSATILE, HIGH-SPEED ROBOT

KEY BENEFITS

High speeds and mounting flexibility 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

50 kg payload

2,061 mm horizontal reach

3,578 mm vertical reach

0.03 mm repeatability

APPLICATION

Dispensing

Machine Tending

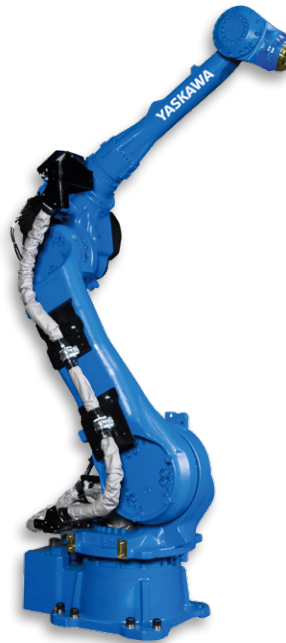
Material Cutting

Material Handling

Press Tending

CONTROLLER

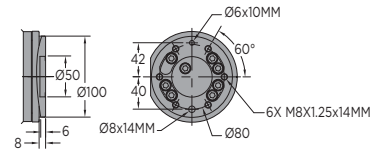
YRC1000



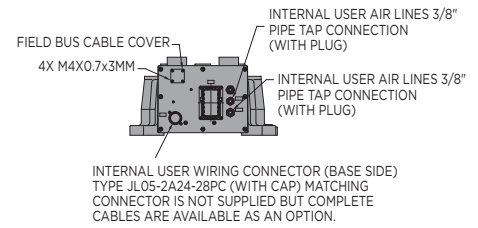
- Increase productivity with the powerful and efficient GP50 robot.
- Long reach six-axis robot offers superior performance for a variety of applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- 50 kg payload supports a wide variety of tooling and sensors to fulfill diverse application needs.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Wide wrist motion range eliminates interference and improves application flexibility.
- High moment and inertia ratings allow handling of larger and heavier payloads.
- 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.
- NSF-H1 certified food-grade lubricant option available for food or consumer product packaging environment.
- The GP50 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP50 can be floor-, wall-, tilt- or ceiling-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

GP50 ROBOT

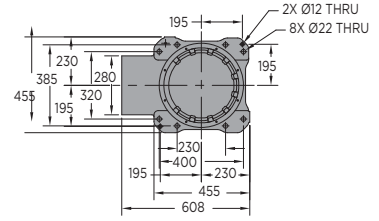
VIEW A



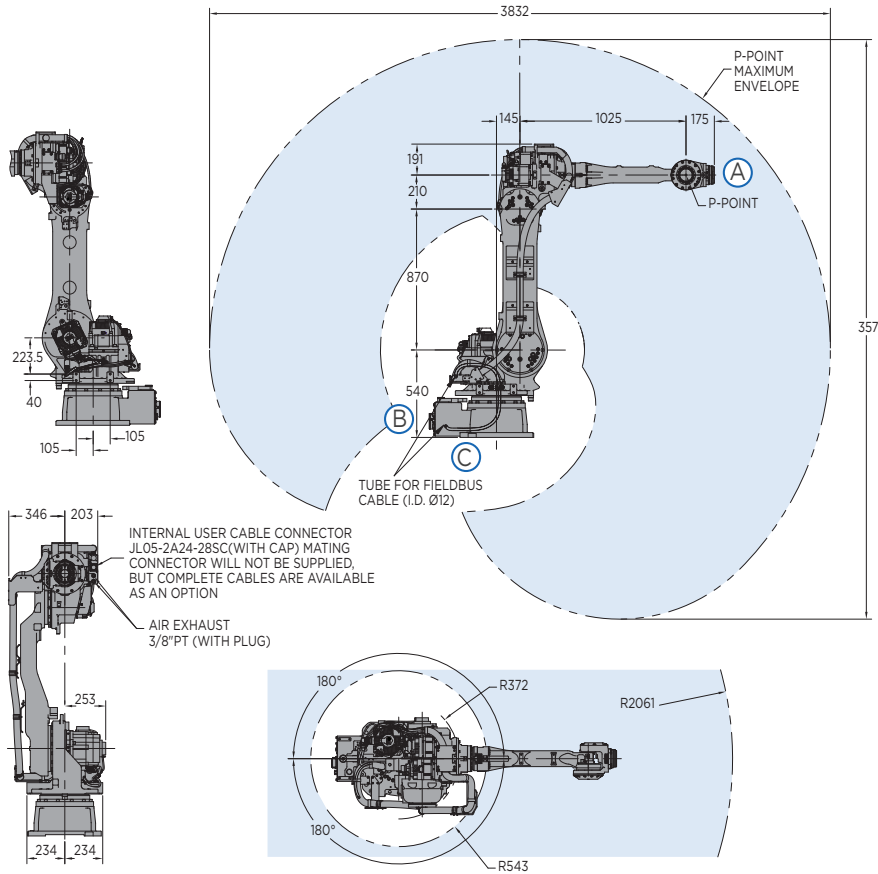
VIEW B



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 | 178 | - | - |
| U | +206/-80 | 178 | - | - |
| R | ±360 | 250 | 216 | 28 |
| B | ±125 | 250 | 216 | 28 |
| T | ±360 | 360 | 147 | 11 |

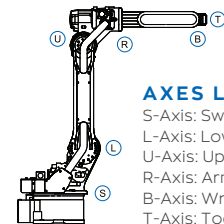
Specifications for GP50 with XP package may be different.
Mounting Options: Floor, Wall, Tilt or Ceiling

* 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 | GP50 |
|-------------------------|------|-------------------------|
| Controlled axes | | 6 |
| Maximum payload | kg | 50 |
| Repeatability | mm | 0.03 |
| Horizontal reach | mm | 2,061 |
| Vertical reach | mm | 3,578 |
| Weight | kg | 570 |
| 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 | 4.5 |

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

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