

PL500

HIGHLY VERSATILE PALLETIZING ROBOT

KEY BENEFITS

Versatile, high-speed robot for palletizing applications

High allowable moment of inertia handles unbalanced loads effectively

Highly reliable

SPECIFICATIONS

500 kg payload

3,159 mm horizontal reach

3,024 mm vertical reach

0.05 mm repeatability

APPLICATION

Case Palletizing

Bag Palletizing

Depalletizing

Layer Picking

Layer Forming

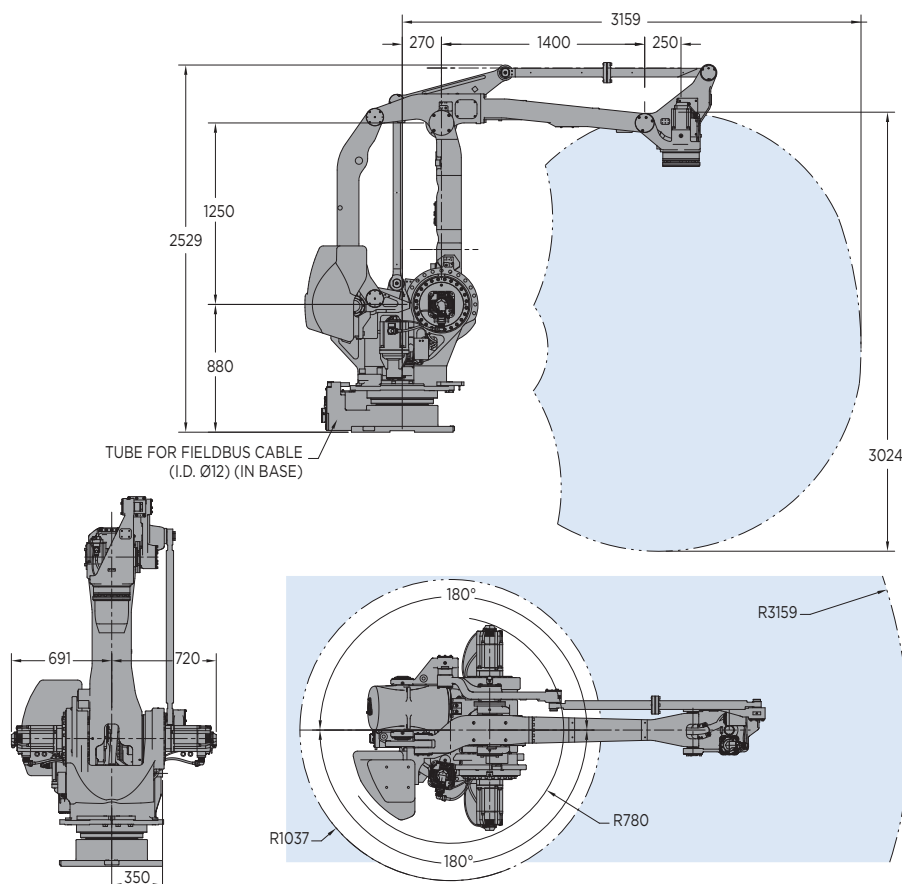
CONTROLLER

YRC1000

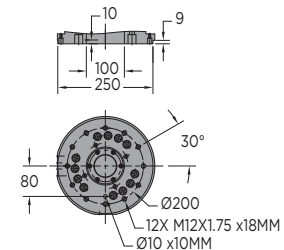


- Increase productivity with the powerful and efficient 4-axis PL500 robot.
- Performance-driven design and large work envelope enable a variety of palletizing applications, layer picking and other logistical tasks for end-of-line or distribution automation.
- Exceptionally fast axis speeds and acceleration reduce cycle time and increase production throughput.
- 100 mm T-axis pass-through facilitates easy connections to end-of-arm tool.
- T-axis features high allowable moment of inertia; asymmetric loads are handled effectively without compromising speed or performance.
- Parallel-link design for strength, rigidity and stabilization of high moment/inertia loads. Heavy-duty bearings provide smooth arm rotation.
- Internally routed airlines and cables from base to the end-of-arm tool maximize reliability.
- Cable installation tube facilitates fieldbus routing to the upper arm and/or gripper.
- 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 PL500 has an IP54-rated wrist and body as standard.
- The PL500 can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight teach pendant with intuitive programming.
- Available with PalletSolver® software for fast and easy creation of palletizing patterns.

PL500 ROBOT

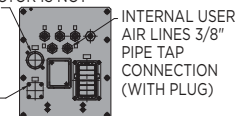


VIEW A



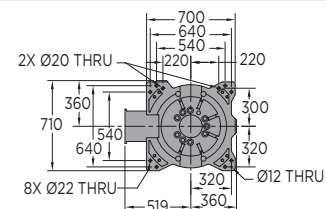
VIEW B

INTERNAL USER WIRING CONNECTOR TYPE IS JL05-2A24-28PC (WITH CAP) MATING CONNECTOR IS NOT SUPPLIED, BUT COMPLETE CABLES ARE AVAILABLE AS AN OPTION.



TUBE FOR FIELDBUS CABLE (I.D. Ø12) (IN BASE)

VIEW C



VIEW D

TUBE FOR FIELDBUS CABLE (I.D. Ø12)

INTERNAL USER WIRING CONNECTOR TYPE IS JL05-2A24-28SC (WITH CAP) MATING CONNECTOR IS NOT SUPPLIED, BUT COMPLETE CABLES ARE AVAILABLE AS AN OPTION.



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	85	-	-
L	+90/-45	85	-	-
U	+15.5/-120	85	-	-
T	±360	195	-	200

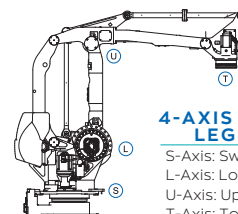
Mounting Options: Floor

* 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	PL500
Controlled axes		4
Maximum payload	kg	500
Repeatability	mm	0.05
Horizontal reach	mm	3,159
Vertical reach	mm	3,024
Weight	kg	2,390
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(5) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	8

OPTIONS

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



4-AXIS ROBOT LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
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-920-A ©2022 Yaskawa America, Inc. SEPTEMBER 2022