

MOTOMAN PL80

Palletizing with the PL-series



The smallest palletizing robot in the MOTOMAN PL-series offers top performance with its 5 axes for box, carton and pack palletizing in end-of-line packaging and logistics applications.

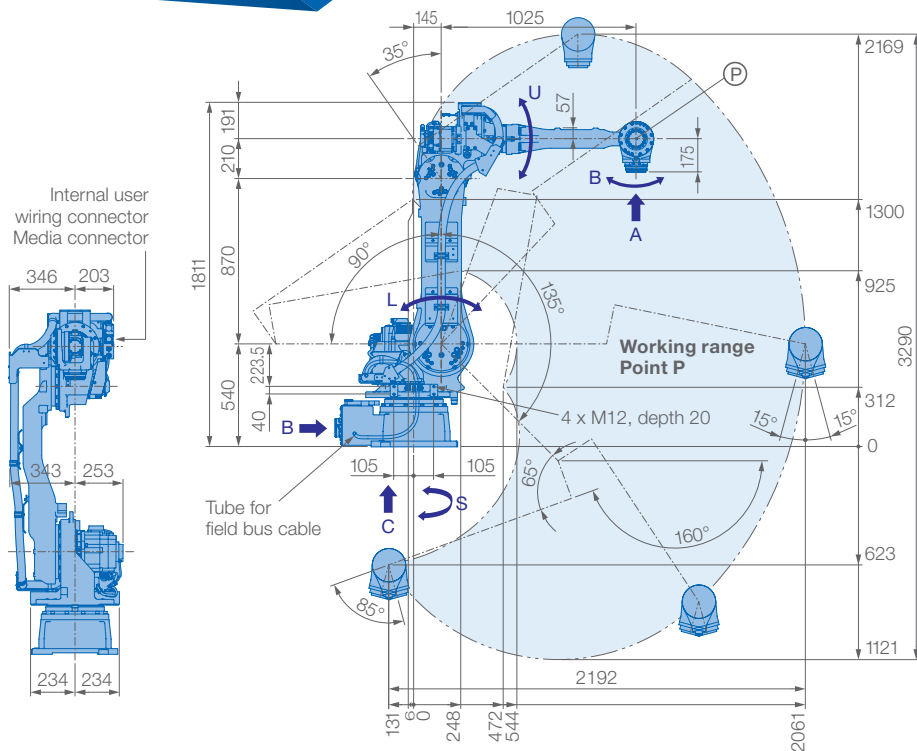
The extended vertical reach of 3,291 mm ensures high palletizing heights, in combination with its horizontal reach of 2,061 mm, this enables a wide range of applications. The compact MOTOMAN PL80 guarantees high palletizing loads of up to 80 kg and impresses with its low overall height, slim design and small footprint.

The MOTOMAN PL80 is equipped with the latest Yaskawa Sigma7 Drive Technology and the compact YRC1000 high performance controller.

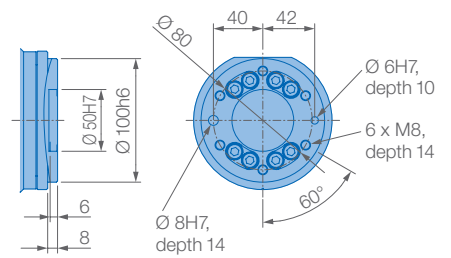
Ideal is the combination with the optional Functional Safety Unit (FSU) for safeguarding compact working areas, or with MotoLogix® for easy programming of the robot via PLC function blocks.

KEY BENEFITS

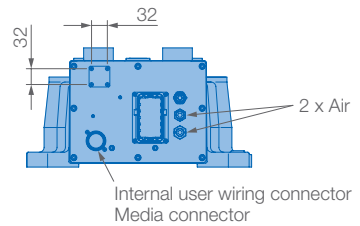
- New Sigma7 servo motors — > high accelerations, speed, energy efficiency
- High payload: max. 80 kg
- Large working range: 2,061 mm
- Compact and slim design
- Advanced functional safety (FSU) with YRC1000 controller
- Programmable by PLC function blocks via MotoLogix software interface
- Dust and liquid proof wrist design (IP54/67)



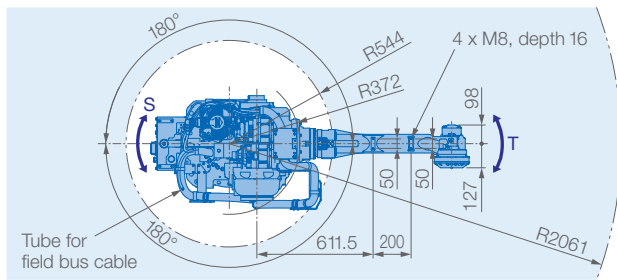
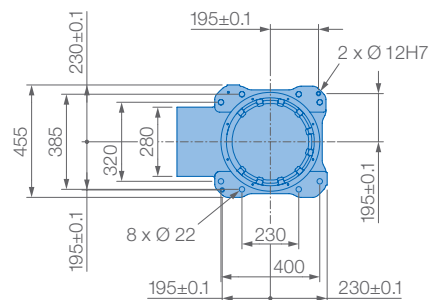
View A



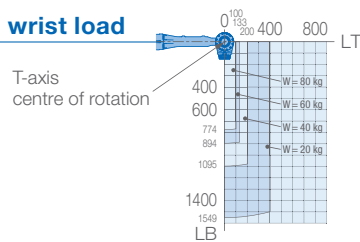
View B



View C



Allowable wrist load



Mounting option: Floor
IP Protection: IP54 (body), IP67 (wrist)



Specifications PL80

Axes	Maximum motion range [°]	Maximum speed [°/s]	Allowable moment [Nm]	Allowable moment of inertia [kg · m ²]	Controlled axes	5
S	±180	180	–	–	Max. payload [kg]	80
L	+135/–90	180	–	–	Repeatability [mm]	±0,03
U	+35/–160	180	–	–	Max. working range R [mm]	2061
R	–	–	–	–	Temperature [°C]	0 to +45
B	±15	180	78.5	48	Humidity [%]	20 – 80
T	±360	500	20.5	25	Weight [kg]	565
					Max. connected load [kVA]	4.5

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MOTOMAN PL190

Palletizing & Handling with the PL-series



With over 1700 cycles per hour, the fast and powerful 4-axis MOTOMAN PL190 robot offers top performance for box, carton and bag palletizing for end-of-line packaging and logistics applications.

The optimized kinematic structure of the PL190 provides even better stability and higher max. payload capacity of 190 kg compared to the predecessor model. The superior working range with a maximum reach of 3,159 mm and an achievable stacking height of over 2,600 mm is perfect for all kinds of palletizing tasks. The MOTOMAN PL190 is very compact, has a slim small footprint design, and does not require a heavy counterweight balancer.

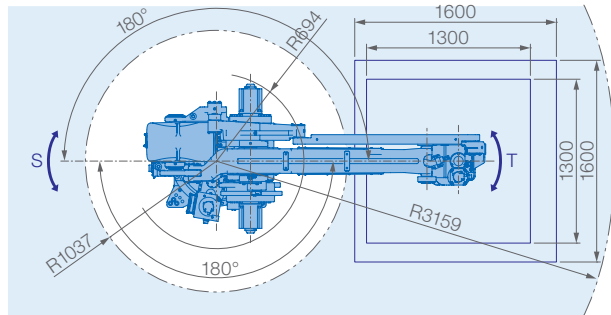
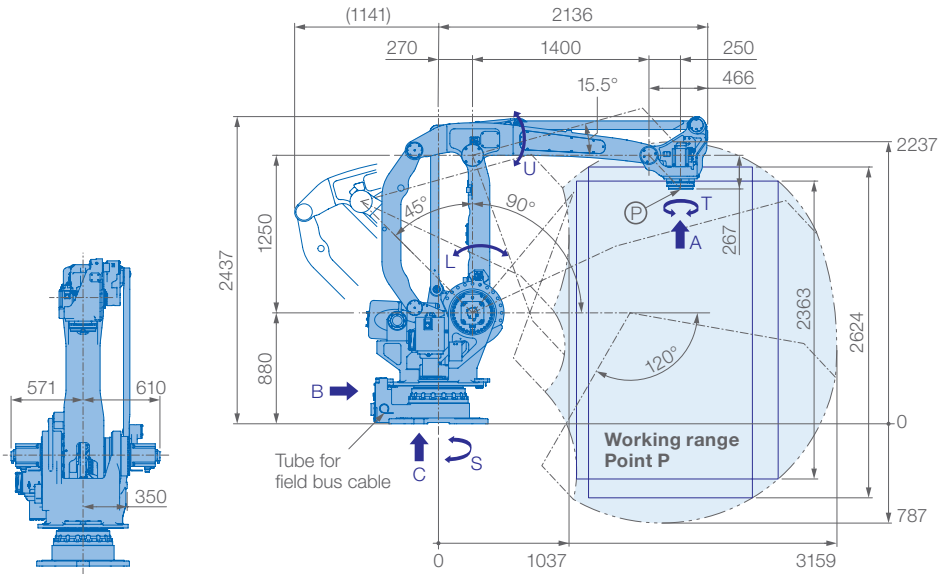
Media cables for grippers can be routed – protected and collision-free – through all axes and the hollow wrist.

The MOTOMAN PL190 is equipped with the latest Yaskawa Sigma-7 Drive Technology and the compact YRC1000 high-performance controller.

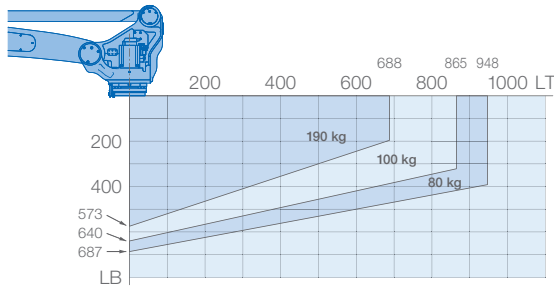
Ideal is the combination with the optional Functional Safety Unit (FSU) for safeguarding compact working areas, or with MotoLogix® for easy programming of the robot via PLC function blocks.

KEY BENEFITS

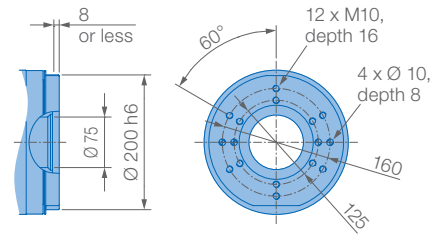
- High cycle time performance: >1700 cycles/hour with full payload (400 mm – 2000 mm – 400 mm motion pattern)
- New Sigma-7 servo motors → high accelerations, speed, energy efficiency
- High payload: max. 190 kg
- Large working range: 3159 mm
- Compact and slim design, no counterweight balancer
- Internal cable and wire routing
- Advanced functional safety (FSU) with YRC1000 controller
- Programmable by PLC function blocks via MotoLogix software interface
- Dust and liquid proof wrist design (IP54/67)



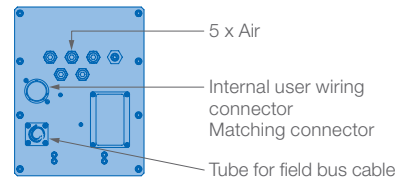
Allowable wrist load



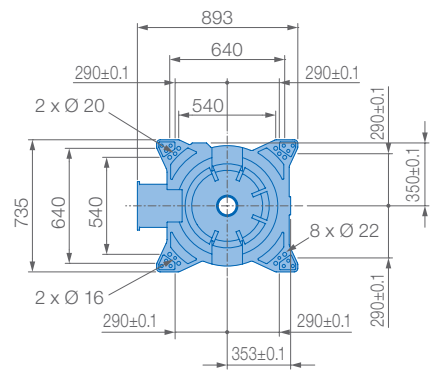
View A



View B



View C



Mounting option: Floor
IP Protection: IP54 (body), IP67 (wrist)

Specifications PL190						
Axes	Maximum motion range [°]	Maximum speed [°/s]	Allowable moment [Nm]	Allowable moment of inertia [kg · m ²]	Controlled axes	4
S	±180	140	–	–	Max. payload [kg]	190
L	+90/-45	145	–	–	Repeatability [mm]	±0.05
U	+15.5/-120	145	–	–	Max. working range R [mm]	3159
R	–	–	–	–	Temperature [°C]	0 to +45
B	–	–	–	–	Humidity [%]	20 – 80
T	±360	420	–	90	Weight [kg]	1680
					Max. connected load [kVA]	9.5

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MOTOMAN PL190-100

Palletizing & Handling with the PL-series



The fast 4-axis MOTOMAN PL190-100 achieves top performance with over 2000 cycles per hour for box, carton and pack palletizing in final packaging and logistics.

The special parameterization of the motors and the fine-tuned kinematics ensure highest accelerations for even faster cycle times with a high payload of 100 kg. The large working area with a maximum reach of 3,159 mm and an achievable stacking height of over 2,600 mm allows versatile use for all palletizing tasks. The MOTOMAN PL190-100 robot is very compact and no longer requires a heavy counterweight. It also features a low overall height, slim design and small footprint.

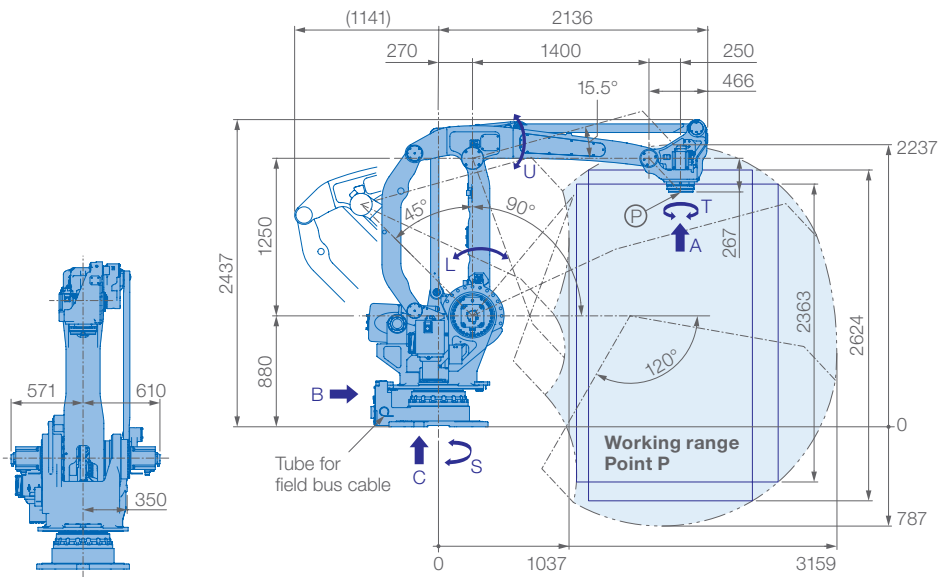
The media cables for grippers can be routed through all axes and its hollow wrist in a protected and collision-free manner.

The MOTOMAN PL190-100 uses energy-saving Yaskawa Sigma-7 generation servo motors and the compact YRC1000 high-performance controller.

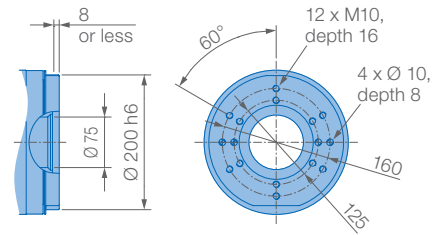
The perfect combination is offered with the optional Functional Safety Controller (FSU) for safeguarding compact work areas, or with MotoLogix® for easy programming of the robot via PLC function blocks.

KEY BENEFITS

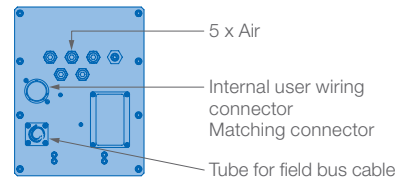
- High cycle time performance: > 2000 cycles/hour with full payload (400 mm – 2000 mm – 400 mm motion pattern)
- New Sigma-7 servo motors → high accelerations, speed, energy efficiency
- High payload: max. 100 kg
- Large working range: 3,159 mm
- Compact and slim design, no counterweight balancer
- Internal cable and wire routing, hollow wrist
- Advanced functional safety (FSU) with YRC1000 controller
- Programmable by PLC function blocks via MotoLogix software interface
- Dust and liquid proof wrist design (IP54/67)



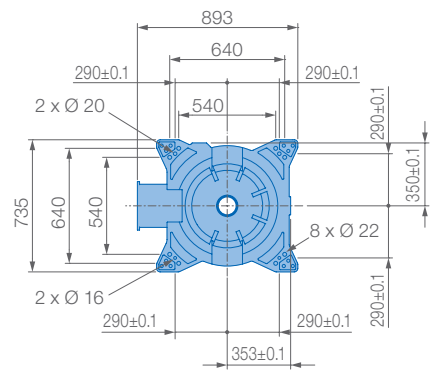
View A



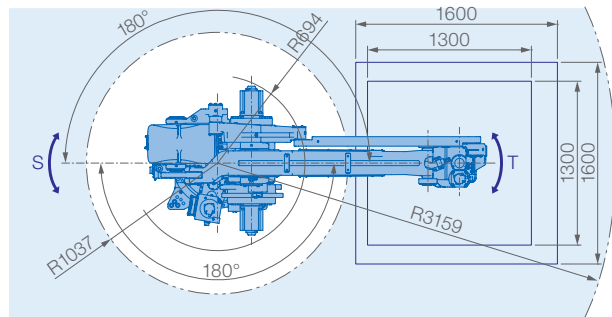
View B



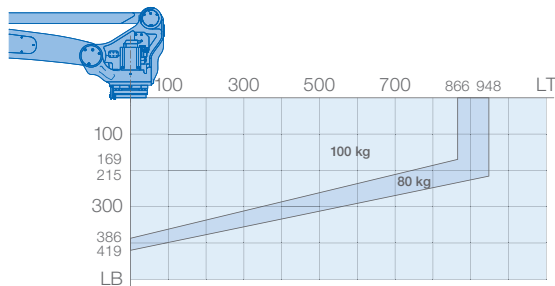
View C



Mounting option: Floor
IP Protection: IP54 (body), IP67 (wrist)



Allowable wrist load



Specifications PL190-100					
Axes	Maximum motion range [°]	Maximum speed [°/s]	Allowable moment [Nm]	Allowable moment of inertia [kg · m ²]	Controlled axes
S	±180	140	–	–	4
L	+90/–45	145	–	–	Max. payload [kg]
U	+15.5/–120	145	–	–	100
R	–	–	–	–	Repeatability [mm]
B	–	–	–	–	±0.05
T	±360	420	–	48	Max. working range R [mm]
					3159
					Temperature [°C]
					0 to +45
					Humidity [%]
					20 – 80
					Weight [kg]
					1680
					Max. connected load [kVA]
					9.5

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MOTOMAN PL320

Palletizing & Handling with the PL-series



With over 1400 cycles per hour, the fast and powerful 4-axis MOTOMAN PL320 robot offers top performance for box, carton and bag palletizing for end-of-line packaging and logistics applications.

The optimized kinematic structure of the PL320 provides even better stability and higher max. payload capacity of 320 kg compared to the predecessor model. The superior working range with a maximum reach of 3,159 mm and an achievable stacking height of over 2,600 mm is perfect for all kinds of palletizing tasks. The MOTOMAN PL320 is very compact, has a slim small footprint design, and does not require a heavy counterweight balancer.

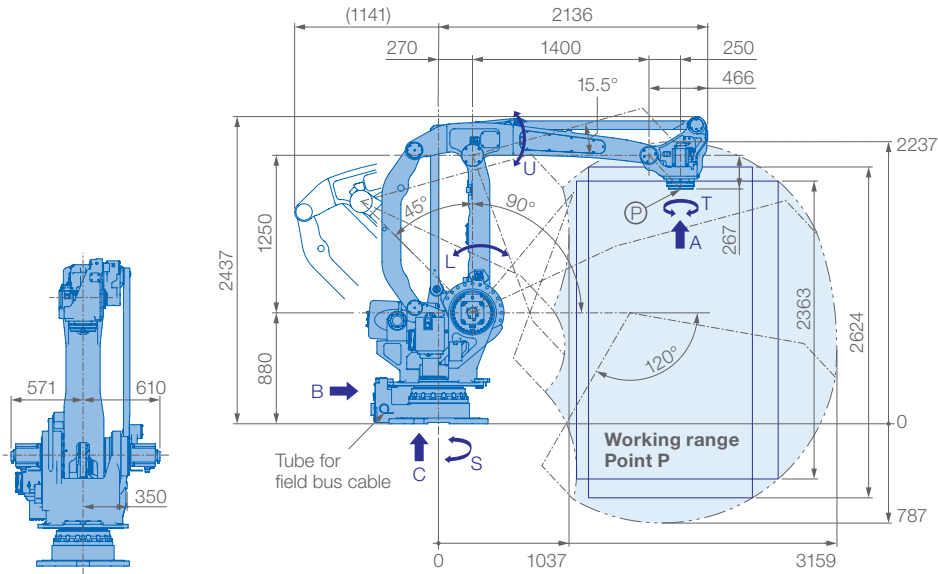
Media cables for grippers can be routed – protected and collision-free – through all axes and the hollow wrist.

The MOTOMAN PL320 is equipped with the latest Yaskawa Sigma7 Drive Technology and the compact YRC1000 high-performance controller.

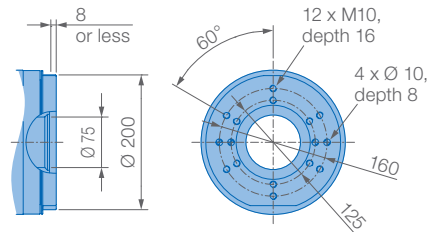
Ideal is the combination with the optional Functional Safety Unit (FSU) for safeguarding compact working areas, or with MotoLogix® for easy programming of the robot via PLC function blocks.

KEY BENEFITS

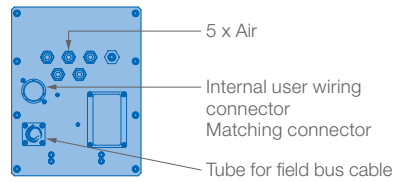
- High cycle time performance: >1400 cycles/hour with full payload (400 mm – 2000 mm – 400 mm motion pattern)
- New Sigma7 servo motors → high accelerations, speed, energy efficiency
- High payload: max. 320 kg
- Large working range: 3159 mm
- Compact and slim design, no counterweight balancer
- Internal cable and wire routing
- Advanced functional safety (FSU) with YRC1000 controller
- Programmable by PLC function blocks via MotoLogix software interface
- Dust and liquid proof wrist design (IP54/67)



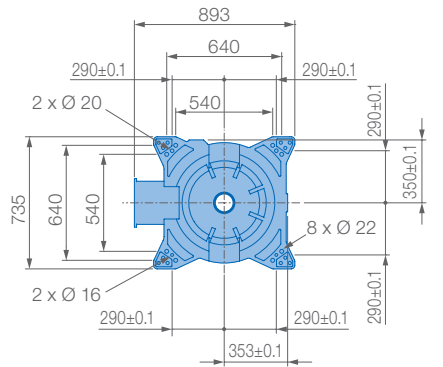
View A



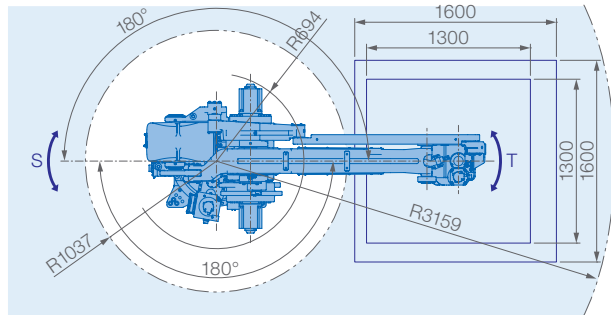
View B



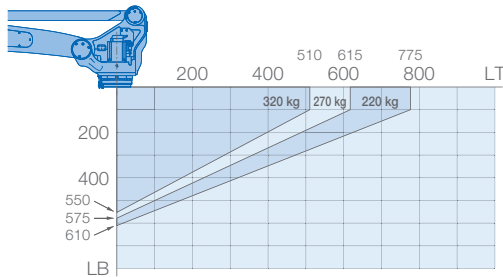
View C



Mounting option: Floor
IP Protection: IP54 (body), IP67 (wrist)



Allowable wrist load



Specifications PL320						
Axes	Maximum motion range [°]	Maximum speed [°/s]	Allowable moment [Nm]	Allowable moment of inertia [kg · m ²]	Controlled axes	
					4	
					Max. payload [kg]	320
S	±180	120	–	–	Repeatability [mm]	±0.05
L	+90/–45	110	–	–	Max. working range R [mm]	3159
U	+15.5/–120	110	–	–	Temperature [°C]	0 to +45
R	–	–	–	–	Humidity [%]	20 – 80
B	–	–	–	–	Weight [kg]	1680
T	±360	300	–	160	Max. connected load [kVA]	9.5

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All drawing dimensions in mm. Technical data may be subject to change without previous notice. Please request detailed drawings at robotics@yaskawa.eu.

MOTOMAN PL500

Palletizing with the PL-series



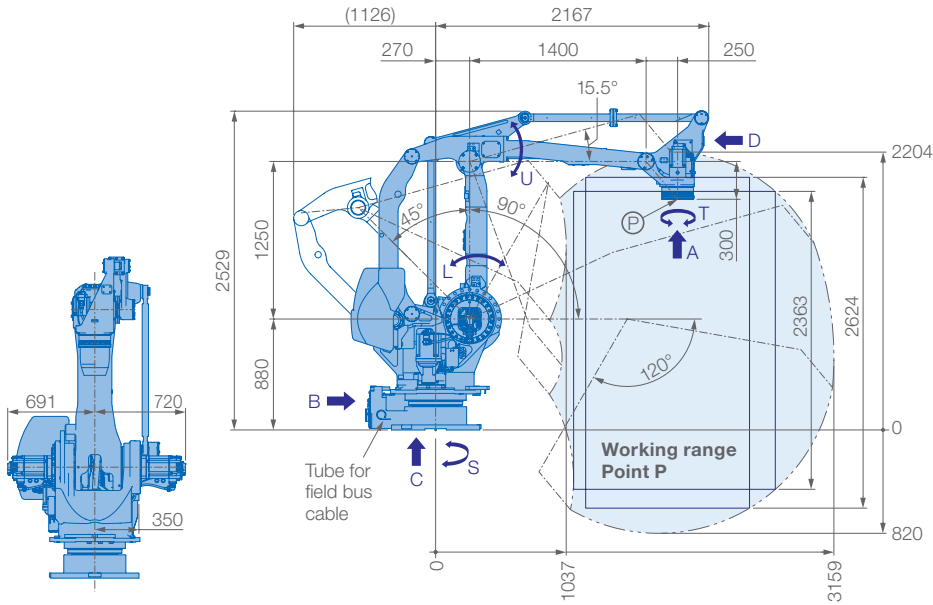
The versatile and powerful 4-axis MOTOMAN PL500 robot provides high performance in box palletizing, case palletizing and many further logistical tasks for end-of-line or distribution center automation.

Its extensive vertical reach of 3024 mm combined with 3159 mm horizontal reach enables high palletizing loads. The internal wiring from the base to U-axis maximizes system reliability.

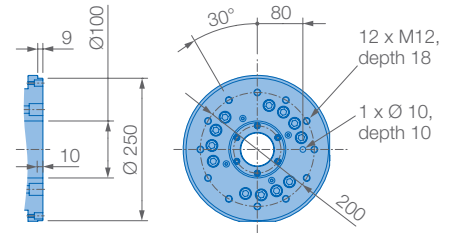
The PL500 is driven by the high-performance YRC1000 controller which is available with the optional Category 3 Functional Safety Unit (FSU), providing a variety of new safety functions.

KEY BENEFITS

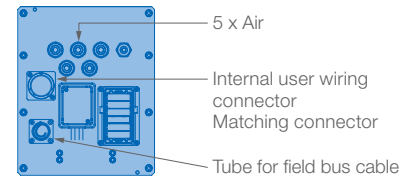
- Compact, flexible and powerful
- High acceleration and speed:
Up to 1200 cycles/h palletizing capa, suitable for box palletizing
- High Payload: 500 kg
- Large motion range:
 - 2624 mm square reach (on pallet 1300 x 1300 mm)
 - 2363 mm stack height (on pallet 1600 x 1600 mm)
- Maximum reliability, empty tube for internally routed airlines and cables
- Enhanced Safety Functions for YRC1000 Functional Safety Controller (FSU)
- IP Protection: IP54



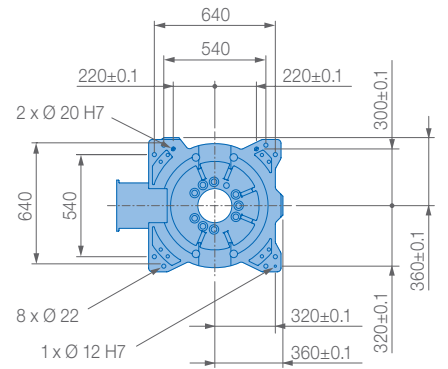
View A



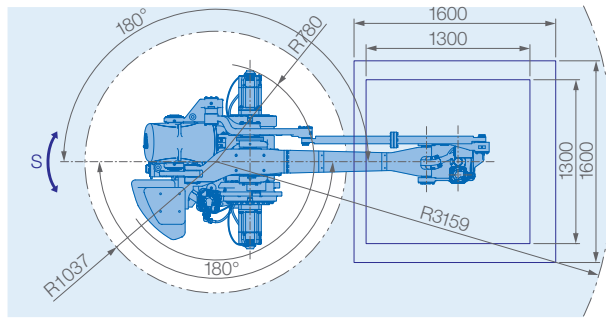
View B



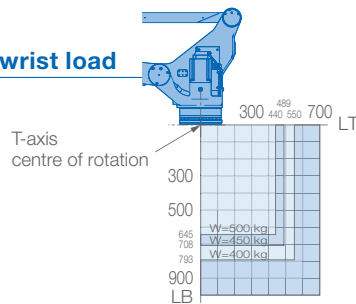
View C



Mounting option: Floor
IP Protection: IP54



Allowable wrist load



Specifications PL500

Axes	Maximum motion range [°]	Maximum speed [°/s]	Allowable moment [Nm]	Allowable moment of inertia [kg · m ²]	Controlled axes	4
S	±180	85	–	–	Max. payload [kg]	500
L	+90/–45	85	–	–	Repeatability [mm]	±0.05
U	+15.5/–120	85	–	–	Max. working range R [mm]	3159
R	–	–	–	–	Temperature [°C]	0 to +45
B	–	–	–	–	Humidity [%]	20 – 80
T	±360	195	–	200	Weight [kg]	2390
					Power supply, average [kVA]	8.0

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MOTOMAN PL800

Palletizing & Handling with the PL-series



The most powerful 4-axis robot of the PL-series is the MOTOMAN PL800 with a payload of 800 kg. This palletizer offers high performance for box, carton and pack palletizing in versatile end-of-line packaging and logistics applications. The large working range with a maximum reach of 3159 mm and an achievable stacking height of over 2624 mm allows versatile use across all palletizing applications.

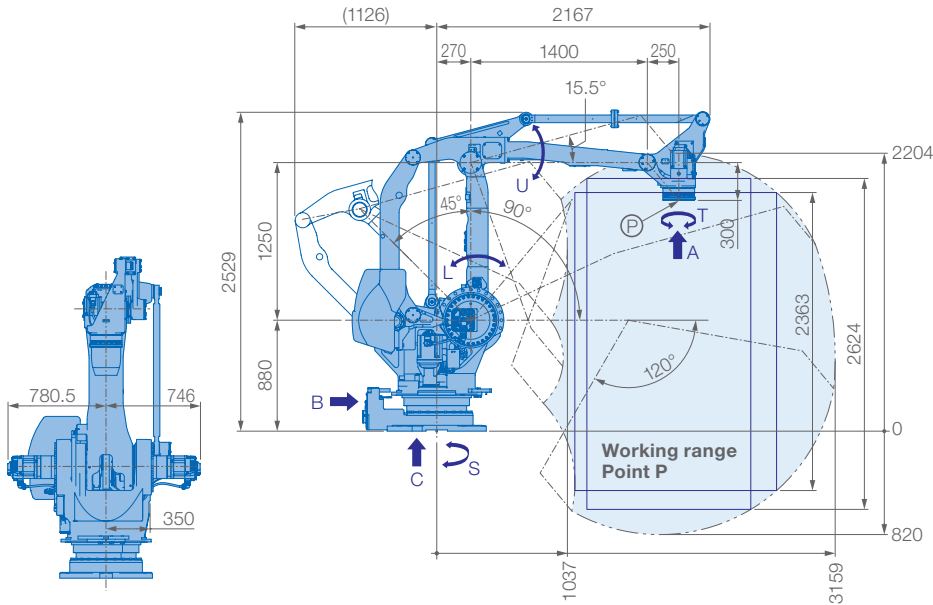
Media cables for grippers can be routed – protected and collision-free – through all axes and the hollow wrist.

The MOTOMAN PL800 is equipped with the latest energy-saving Yaskawa Sigma7 Drive Technology and the compact YRC1000 high-performance controller.

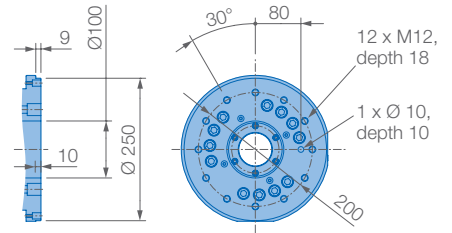
Ideal is the combination with the optional Functional Safety Unit (FSU) for safeguarding compact working areas, or with MotoLogix for easy programming of the robot via PLC function blocks.

KEY BENEFITS

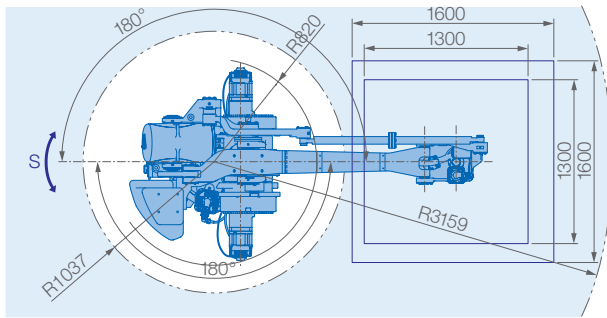
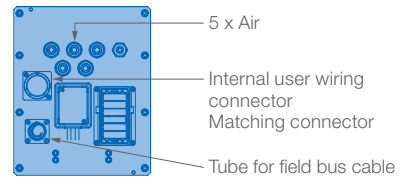
- Strongest robot in the PL series: 800 kg payload
- New Sigma7 servo motors → high accelerations, speed, energy efficiency
- Large working range: 3159 mm
- Robust and flexible
- Compact and slim design
- Identical footprint as other robots of the PL-series
- Internal cable and wire routing
- Advanced functional safety (FSU) with YRC1000 controller
- Programmable by PLC function blocks via MotoLogix software interface



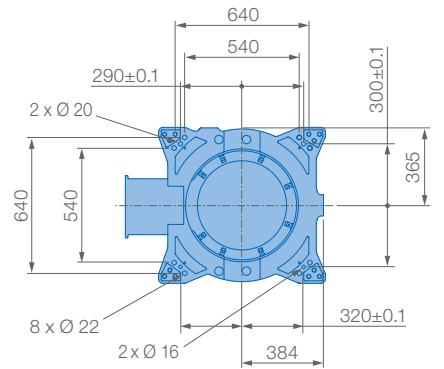
View A



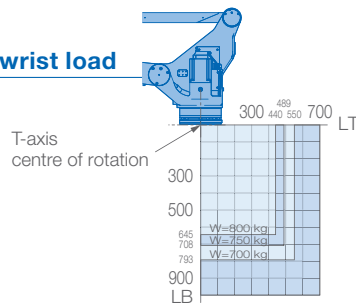
View B



View C



Allowable wrist load



Mounting option: Floor
IP Protection: IP54



Specifications PL800

Axes	Maximum motion range [°]	Maximum speed [°/s]	Allowable moment [Nm]	Allowable moment of inertia [kg · m ²]	Controlled axes	
					Max. payload [kg]	
S	±180	65	-	-	4	800
L	+90/-45	65	-	-	Repeatability [mm]	±0,05
U	+15.5/-120	65	-	-	Max. working range R [mm]	3159
R	-	-	-	-	Temperature [°C]	0 to +45
B	-	-	-	-	Humidity [%]	20 - 80
T	±360	125	-	550	Weight [kg]	2560
					Power supply, average [kVA]	8.0

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