

MOTOMAN GP-Shelftype-series

Handling & General Applications
with the Shelftype GP-series

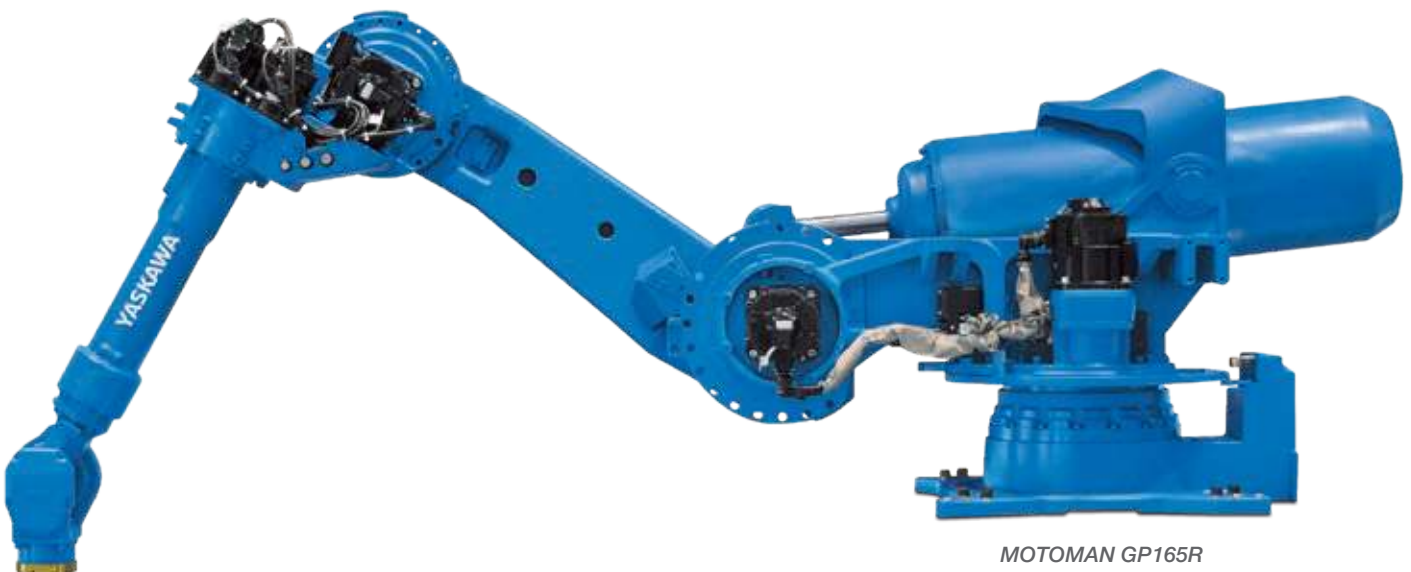
KEY BENEFITS

- Flexible and powerful (120 – 400 kg payload)
- Minimum space requirements
- Shelf-mounted:
 - Extended working range
 - Simple gripping of components
- Possibility of mounting on machine

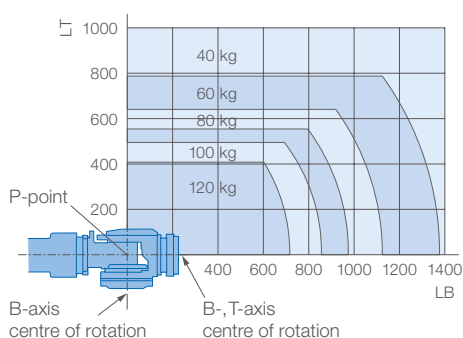
MOTOMAN GP120RL, GP165R, GP200R, GP300R and GP400R

The flexible MOTOMAN GP120RL, GP165R, GP200R, GP300R and GP400R are 6-axis shelf-mounted robots. Due to this higher position they are able to unload work pieces from above. This saves precious floor space and ensures that the space required for tool changing is kept free. Furthermore, the internal cable routing extends the service life of the robots, increases safety and reduces cycle times. These robots offer high productivity, reliability and maximum performance in the areas of handling, machine tending and press brake tending.

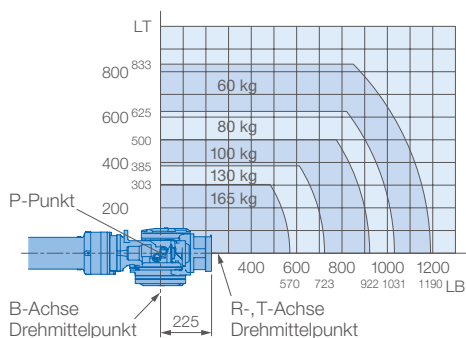
The GP-Shelftype-series are controlled by the compact high performance MOTOMAN YRC1000 controller. It is available with the optional Functional Safety Unit (FSU) that offers a wide range of new safety functions.



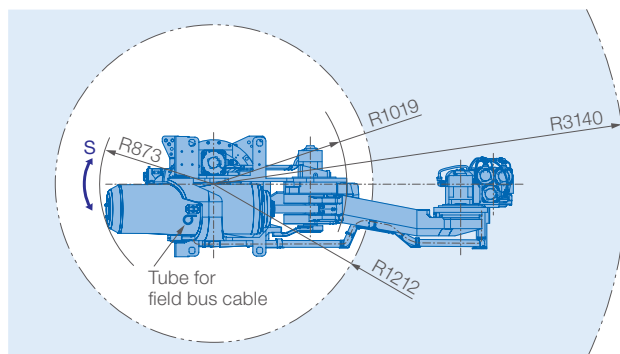
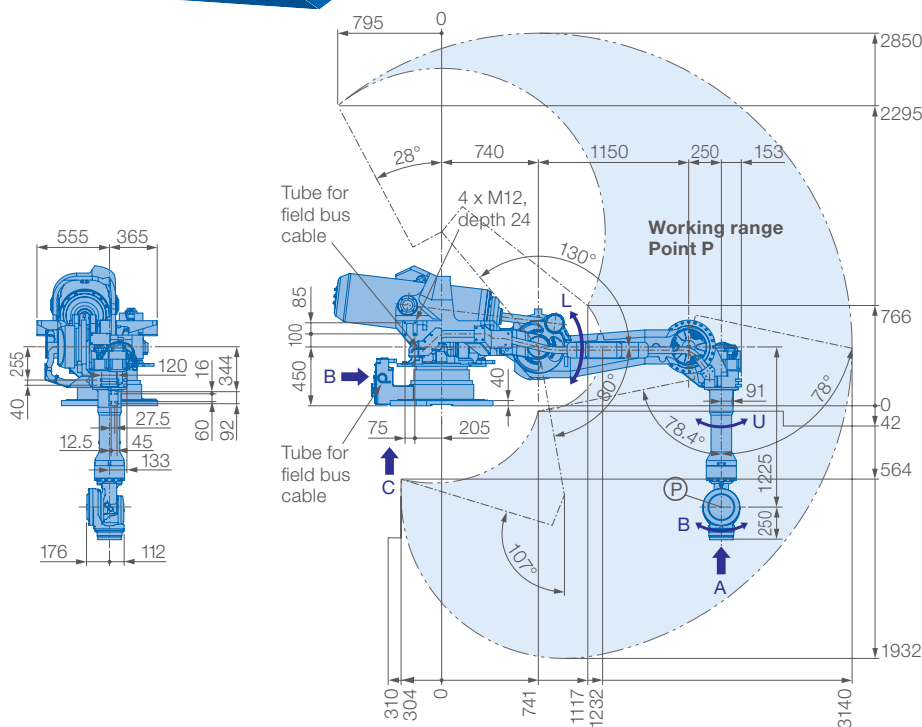
MOTOMAN GP165R



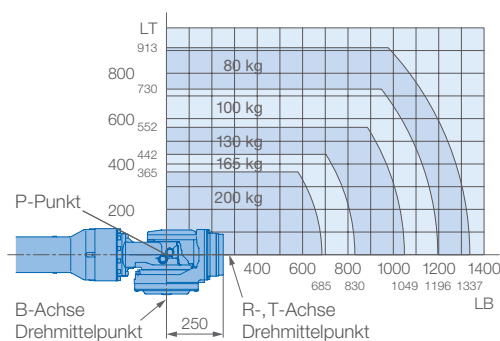
Specifications GP120RL						
Axes	Maximum motion range [°]	Maximum speed [°/sec.]	Allowable moment [Nm]	Allowable moment of inertia [kg · m²]	Controlled axes	6
					Max. payload [kg]	120
S	±180	90	–	–	Repeatability [mm]	±0.2
L	+80/–130	85	–	–	Max. working range R [mm]	4004
U	+90/–78.4	85	–	–	Temperature [°C]	0 to +45
R	±360	175	833	75	Humidity [%]	20 – 80
B	±130	150	833	75	Weight [kg]	1830
T	±360	240	490	25	Power supply, average [KVA]	5



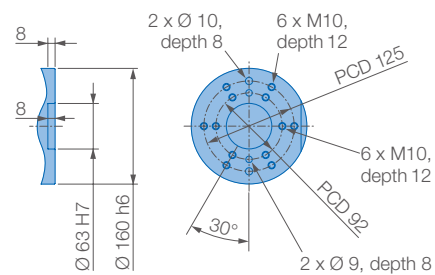
Specifications GP165R						
Axes	Maximum motion range [°]	Maximum speed [°/sec.]	Allowable moment [Nm]	Allowable moment of inertia [kg · m²]	Controlled axes	6
					Max. payload [kg]	165
S	±180	105	–	–	Repeatability [mm]	±0.05
L	+80/–130	105	–	–	Max. working range R [mm]	3143
U	+78/–79.4	105	–	–	Temperature [°C]	0 to +45
R	±360	175	921	85	Humidity [%]	20 – 80
B	±130	150	921	85	Weight [kg]	1760
T	±360	240	490	45	Power supply, average [KVA]	5



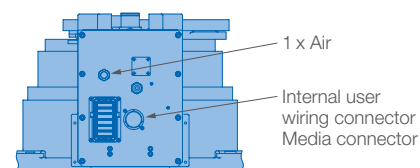
Allowable wrist load



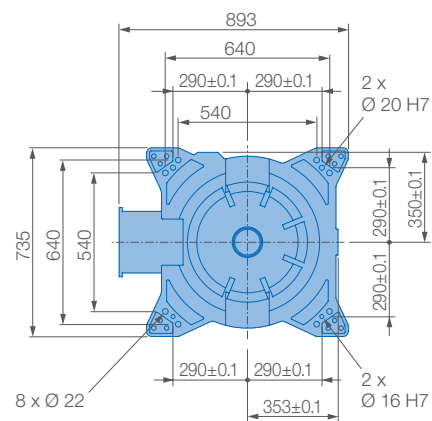
View A



View B



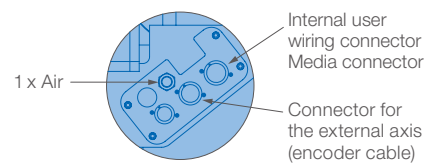
View C



Mounting option: Shelf-mounted

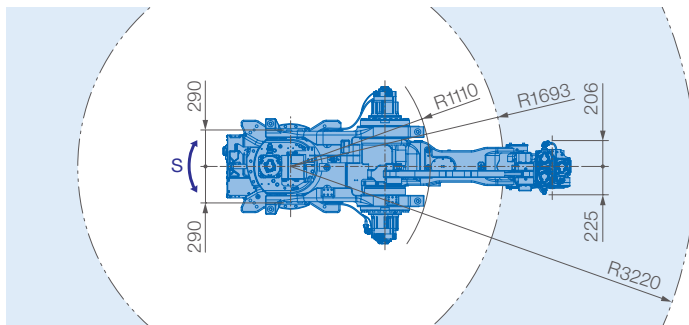
Protection class: IP54/67

View D



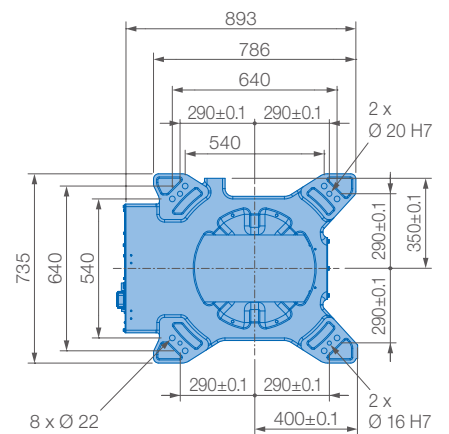
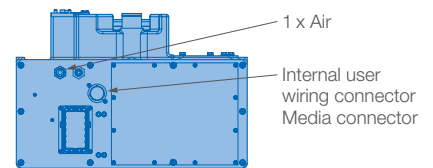
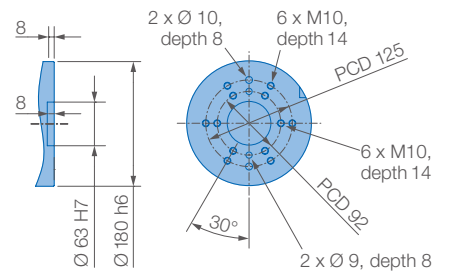
Specifications GP200R

Axes	Maximum motion range [°]	Maximum speed [°/sec.]	Allowable moment [Nm]	Allowable moment of inertia [kg · m²]	Controlled axes	6
S	±180	90	—	—	Max. payload [kg]	200
L	+80/-130	85	—	—	Repeatability [mm]	±0,05
U	+78/-78.4	85	—	—	Max. working range R [mm]	3140
R	±360	120	1344	143	Temperature [°C]	0 to +45
B	±125	120	1344	143	Humidity [%]	20 – 80
T	±360	190	715	80	Weight [kg]	1830
					Power supply, average [KVA]	5

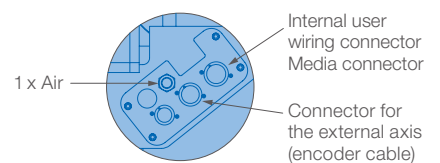


The graph illustrates the relationship between Load (LB) and Lift (LT) for various capacities. The Y-axis represents Lift (LT) in kg and the X-axis represents Load (LB) in kg. The graph shows that as the load increases, the lift capacity decreases. The capacities shown are 100 kg, 150 kg, 200 kg, 250 kg, and 300 kg. The graph also includes a 3D diagram of the crane with labels for the P-point, B-axis centre of rotation, and R-, T-axis centre of rotation.

Capacity (kg)	Load (LB) at Max Lift	Max Lift (kg)
100	1800	850
150	1000	567
200	667	425
250	333	283
300	200	200



Protection class: IP54/67



Specifications GP300R						
Axes	Maximum motion range [°]	Maximum speed [°/sec.]	Allowable moment [Nm]	Allowable moment of inertia [kg · m²]	Controlled axes	6
					Max. payload [kg]	300
S	±180	110	–	–	Repeatability [mm]	±0.2
L	+70/–140	95	–	–	Max. working range R [mm]	3220
U	+115/–70	95	–	–	Temperature [°C]	0 to +45
R	±360	120	1962	320	Humidity [%]	20 – 80
B	±125	120	1962	320	Weight [kg]	1530
T	±360	190	834	200	Power supply, average [KVA]	5.0

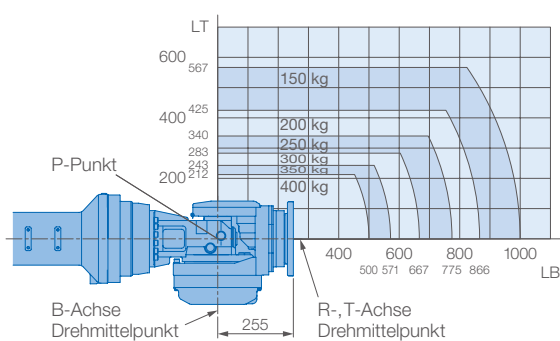


Diagram illustrating the internal wiring connector layout. The layout shows a blue rectangular area representing the connector housing. Labels and arrows indicate the following components:

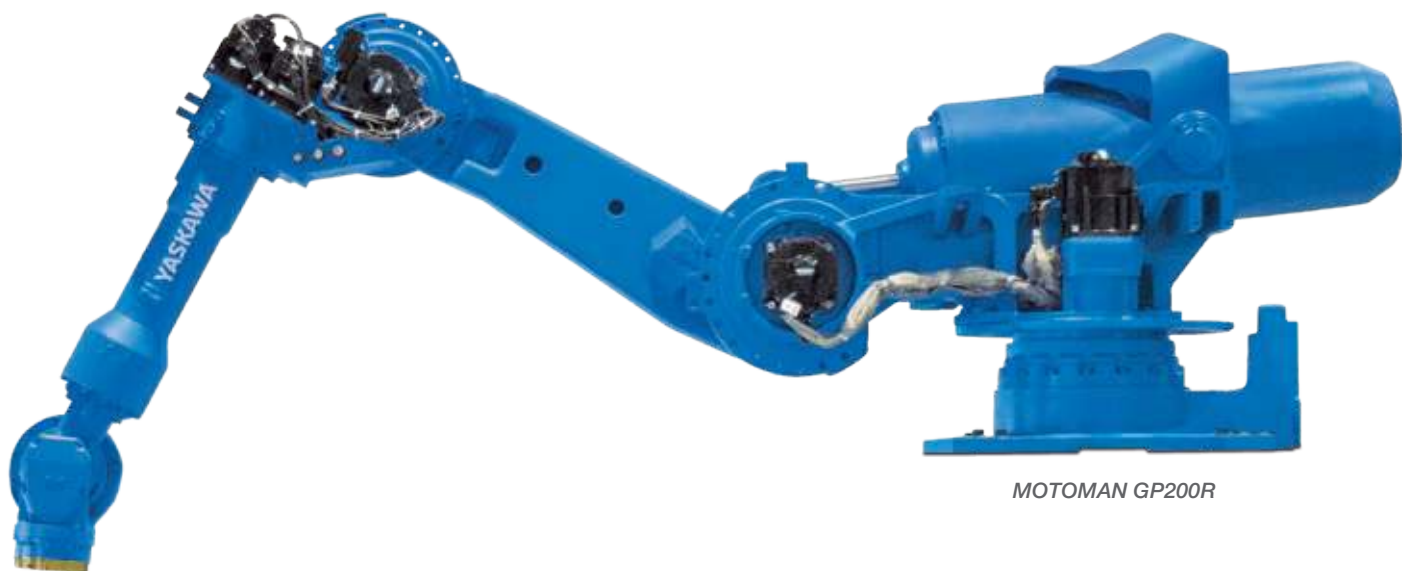
- 2 x Air**: Points to two circular air vents on the left side.
- Tube for field bus cable**: Points to a square-shaped connector on the right side.
- Internal user wiring connector**: Points to a large rectangular connector in the center.
- Media connector**: Points to a smaller rectangular connector on the right side, adjacent to the field bus cable tube.

[illegible]

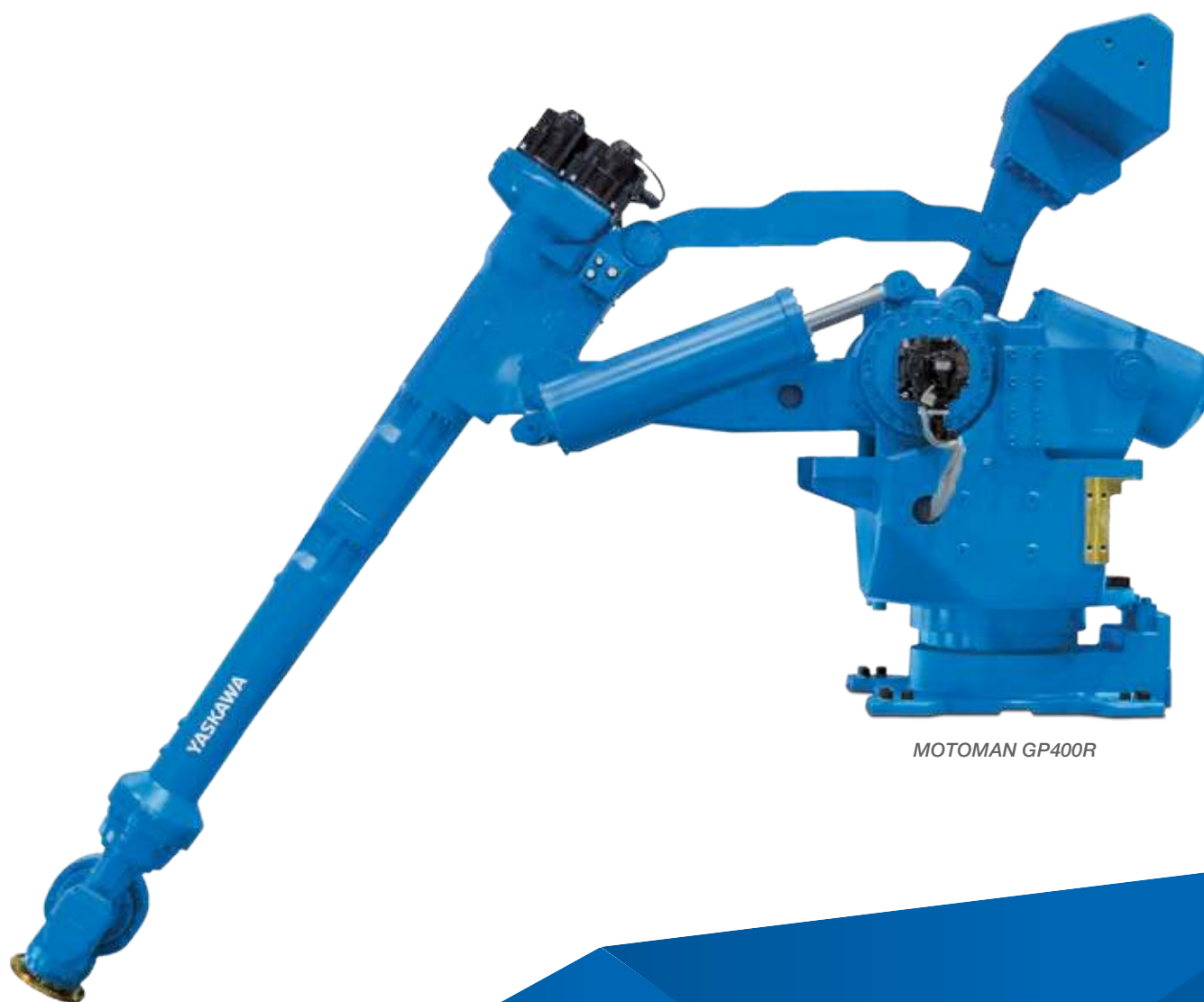
Protection class: IP54/67

Internal user wiring connector
Media connector
Connector for the external axis (encoder cable)

Specifications GP400R						
Axes	Maximum motion range [°]	Maximum speed [°/sec.]	Allowable moment [Nm]	Allowable moment of inertia [kg · m²]	Controlled axes	6
					Max. payload [kg]	400
S	±150	80	–	–	Repeatability [mm]	±0.1
L	+20/–122	80	–	–	Max. working range R [mm]	3518
U	+120/–9	80	–	–	Temperature [°C]	0 to +45
R	±360	80	1960	150	Humidity [%]	20 – 80
B	±120	80	1960	150	Weight [kg]	3560
T	±360	160	833	50	Power supply, average [KVA]	7,0



MOTOMAN GP200R



MOTOMAN GP400R

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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.com.

YR-1-06VRL120-A00, YR-1-06VR165-A00, YR-1-06VR200-A00,
YR-1-06VR300-A00, YR-1-06VR400-A00
MOTOMAN GP-Shelftype-series
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