

MOTOMAN HC20

Human-Collaborative Robot 6 integrated Sensors

MOTOMAN HC20 is a 6 axes human-collaborative robot with a payload of up to 20 kg. Operator's safety is assured by a Power and Force Limit technology that stops the robot in case of contact with an operator.



The robot arm can be hand guided by an operator and robot positions and gripper operation can be registered via "Teach" and "Tool" buttons. These features offer time saving during the robot programming. The robot's arm geometry was designed to avoid pinch points (finger).

The MOTOMAN HC20 robot can operate without additional protective measures like a safety fence, depending on the risk assessment. This saves space and costs.

KEY BENEFITS

Controller

- Fully industrial robot controller YRC1000 and YRC1000micro

High safety

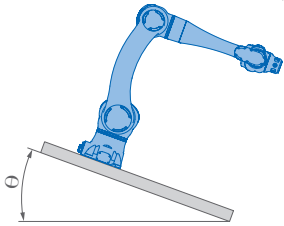
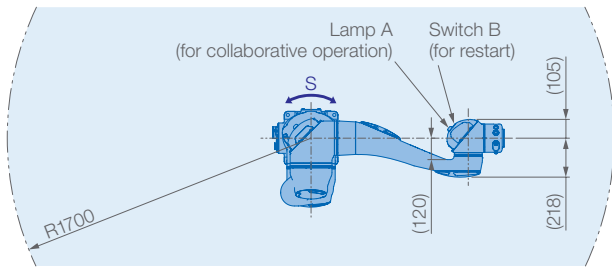
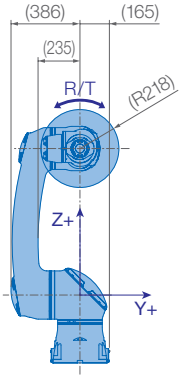
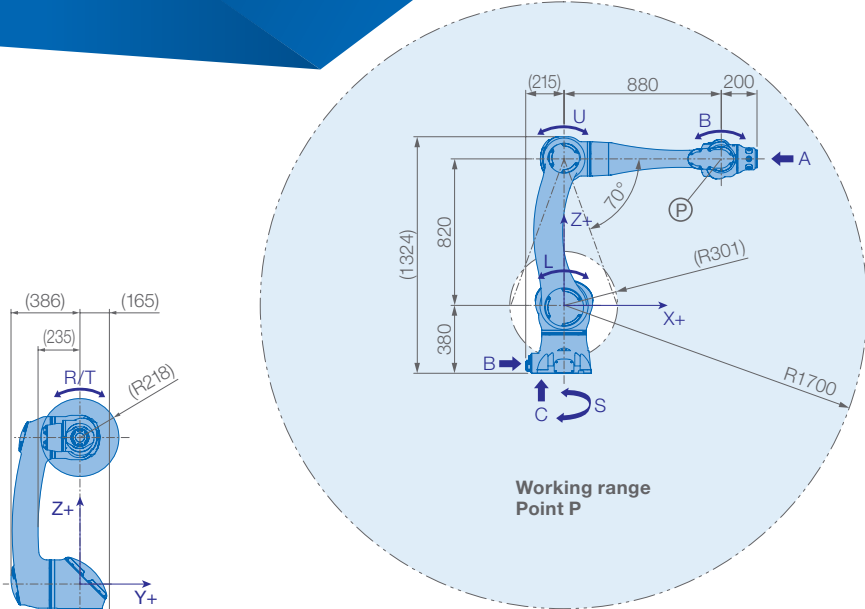
- Contact force between operator and robot is limited to a safe level
- Arm geometry designed to avoid pinch points (finger protection)
- Safety standards – applications for industrial robots: ISO 10218-1 (5.10.5 Power and Force Limiting)
- Complies to ISO TS 15066
- Safety functions industrial robot controller: ISO 13849-1, PLd, Cat. 3
- Functional Safety Unit included
- Safe Force/Torque Sensors in all 6 links

Easy teaching

- Move the robot arm directly via hand guiding function: easy teaching mode with a switch box

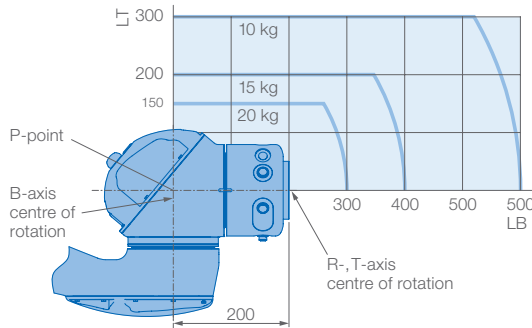
Safety and Speed

- Depending on the application, the MOTOMAN HC20 can be switched between safe/collaborative mode in phases of man-robot-interaction, and returning into high speed when absence of the operator is detected by additional safety devices.

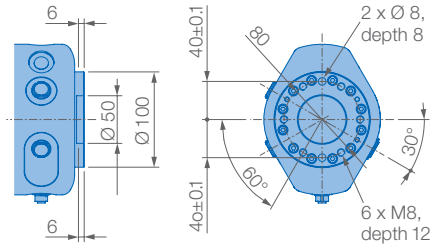


Robot installation angle θ [deg.]	S-axis operating range [deg.]
$0 \leq \theta \leq 30$	no limit
$30 < \theta \leq 35$	± 60 max.
$35 < \theta \leq 45$	± 45 max.
$45 < \theta \leq 90$ wall mounting	± 30 max.

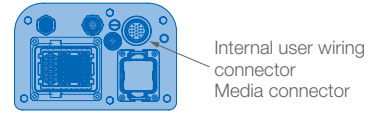
Allowable wrist load



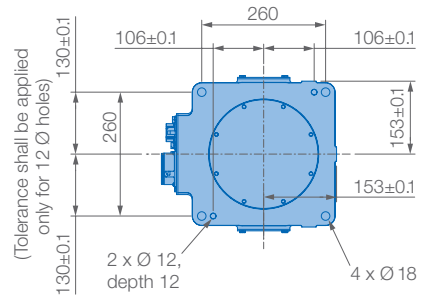
View A



View B



View C

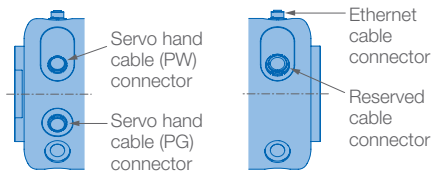


Mounting options: Floor, ceiling, wall, tilt*

Protection class: IP67

* tilt with condition of angle – see table left

View D



Specifications HC20					
Axes	Maximum motion range [°]	Maximum speed [°/sec.]	Allowable moment [Nm]	Allowable moment of inertia [kg · m ²]	Controlled axes
S	± 180	80	–	–	6
L	± 180	80	–	–	Max. payload [kg]
U	+250/–70	120	–	–	Repeatability [mm]
R	± 210	130	58.8	4.0	Max. working range R [mm]
B	± 180	180	58.8	4.0	Temperature [°C]
T	± 210	180	29.6	2.0	Humidity [%]
					Weight [kg]
					Power supply, average [KVA]

* during operation

YASKAWA Europe GmbH

Robotics Division
Yaskawastraße 1
85391 Allershausen
Germany

Tel. +49 (0) 8166 90-0
robotics@yaskawa.eu.com
www.yaskawa.eu.com

YR-1-06VXHC20-Z**
A-03-2019, A-No. 204094