

# MOTOMAN HC10, HC10DT

## Human-Collaborative Robot 6 integrated Torque Sensors



MOTOMAN HC10 is a 6 axes human-collaborative robot with a payload of up to 10 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 so called "Easy Teaching Switch Box". These features offer time saving during the robot programming. The robots arm geometry was designed to avoid pinch points (finger).

The MOTOMAN HC10 robot can operate without additional protective measures like a safety fence, depending on the risk assessment. This saves space and costs. Its installation area is very flexible and therefore able to operate at different workplaces.

### KEY BENEFITS

#### Controller

- Fully industrial robot controller
  - YRC1000 for HC10 and HC10DT
  - YRC1000micro for HC10DT

#### High safety

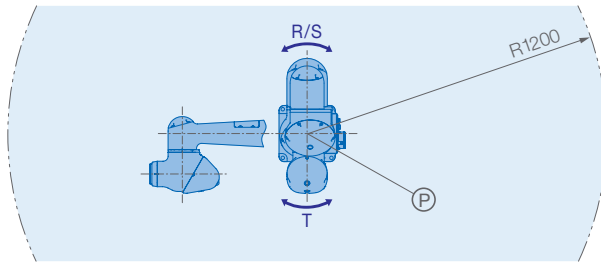
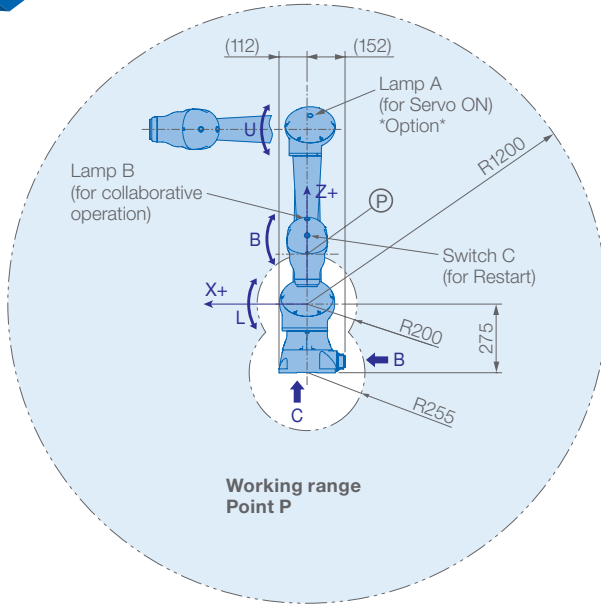
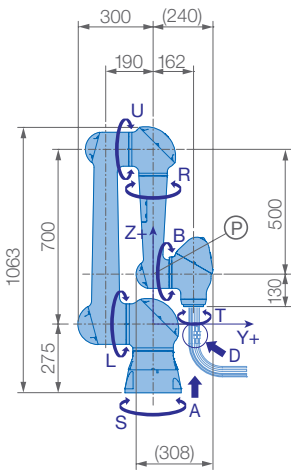
- Contact force between operator and robot is limited to a safe level
- Arm geometry designed to avoid pinch points (finger protection)
- Safety standards – applications for Industrial robots: ISO 10218-1 (5.10.5 Power and Force limiting)
- Complies to ISO TS 15066
- Safety functions industrial robot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

#### Easy teaching

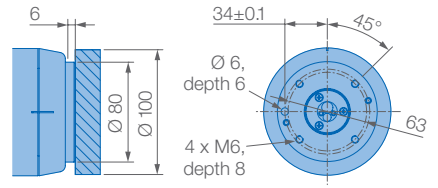
- Move the robot arm directly via hand guiding function: easy teaching mode with a switch box

#### No safety fence

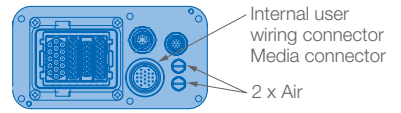
- Depending on the application, the HC10 can be used without a safety fence



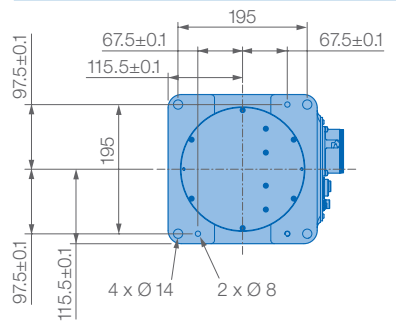
## View A



## View B



## View C

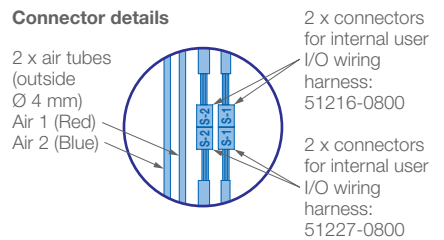


Mounting options: Floor, ceiling, wall, tilt\*

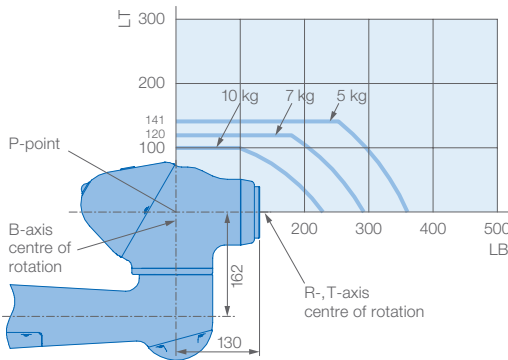
\* tilt with condition of angle – see table below

Robot installation angle $\theta$ [deg.]	S-axis operating range [deg.]
$0 < \theta \leq 60$	no limit
$60 < \theta$	within $\pm 60$

## View D

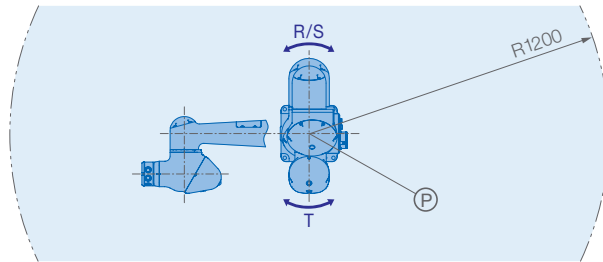
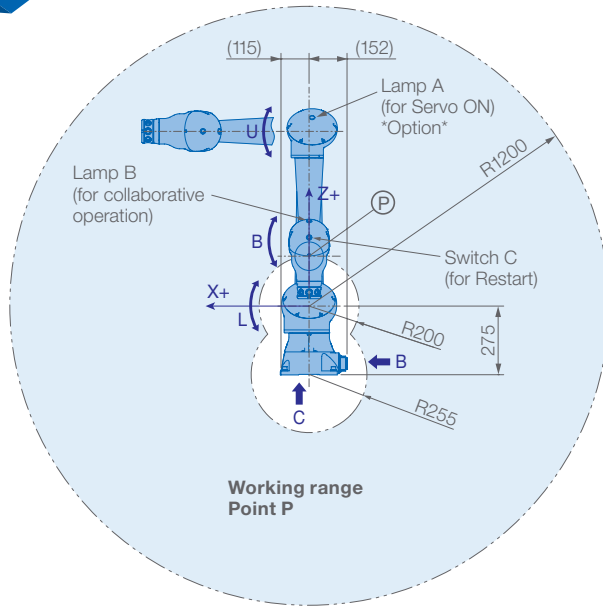
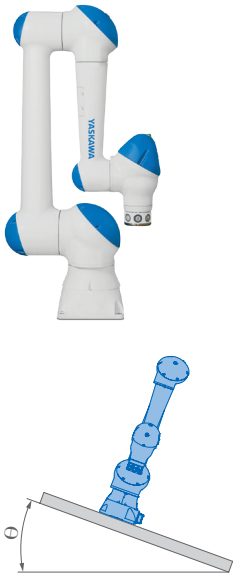
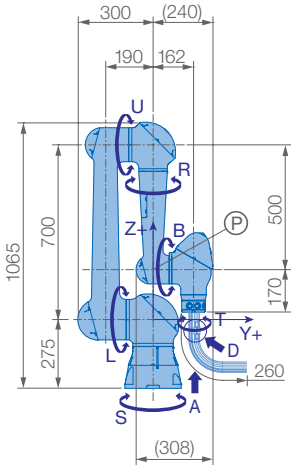


## Allowable wrist load

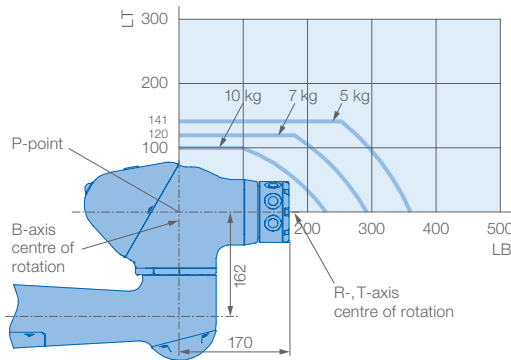


Specifications HC10						
Axes	Maximum motion range [°]	Maximum speed [°/sec.]	Allowable moment [Nm]	Allowable moment of inertia [kg · m <sup>2</sup> ]	Controlled axes	6
S	±180	130	–	–	Max. payload [kg]	10
L	±180	130	–	–	Repeatability [mm]	±0.1
U	+355/–5	180	–	–	Max. working range R [mm]	1200
R	±180	180	27.4	0.78	Temperature [°C]	0 to +40* 0 to +35**
B	±180	250	27.4	0.78	Humidity [%]	20 – 80
T	±180	250	9.8	0.1	Weight [kg]	47
					Power supply, average [KVA]	1

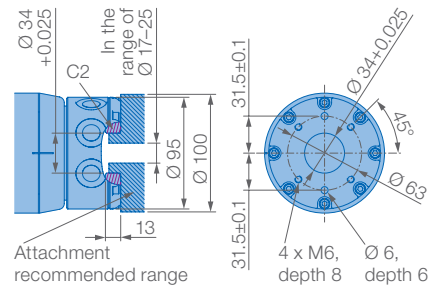
\* during operation \*\* when the soft cover (optional) is attached



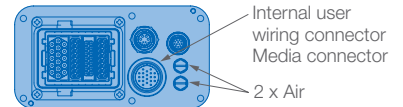
### Allowable wrist load



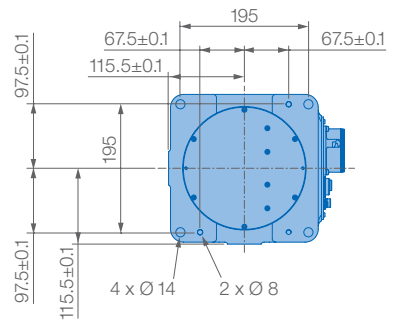
### View A



### View B



### View C

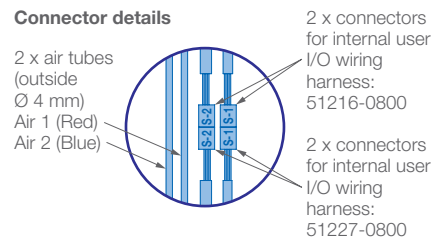


Mounting options: Floor, ceiling, wall, tilt\*

\* tilt with condition of angle – see table below

Robot installation angle $\theta$ [deg.]	S-axis operating range $\theta$ [deg.]
$0 < \theta \leq 60$	no limit
$60 < \theta$	within $\pm 60$

### View D



### Specifications HC10DT

Axes	Maximum motion range [°]	Maximum speed [°/sec.]	Allowable moment [Nm]	Allowable moment of inertia [kg · m <sup>2</sup> ]	Controlled axes	6
S	$\pm 180$	130	–	–	Max. payload [kg]	10
L	$\pm 180$	130	–	–	Repeatability [mm]	$\pm 0.1$
U	+355/–5	180	–	–	Max. working range R [mm]	1200
R	$\pm 180$	180	25.3	0.73	Temperature [°C]	0 to +40
B	$\pm 180$	250	25.3	0.73	Humidity [%]	20 – 80
T	$\pm 180$	250	9.8	0.1	Weight [kg]	48
					Power supply, average [KVA]	1

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All dimensions in mm.  
Technical data may be subject to change without previous notice.  
Please request detailed drawings at [robotics@yaskawa.eu.com](mailto:robotics@yaskawa.eu.com).

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