

# MOTOMAN HC10DTP

**Human-Collaborative Robot for sensitive Environments**

**6 integrated Sensors**

with internal Cable Routing



Controlled by  
**YRC1000**

Controlled by  
**YRC1000  
micro**

The MOTOMAN HC10DTP is perfect for simple use of cobots in industrial applications. It's robust, the lightweight manipulator housing has an IP67 protection rating, which protects it from dust, coolants or welding spatter. This makes the robot an ideal choice for fenceless palletizing tasks, such as in end-of-line packaging applications. However, applications in harsh environments, e.g. machine tool loading, are also possible without any problems thanks to its resistant surface coating and IP67 protection class against coolants and dust. The food-grade grease also opens up further applications in the food and pharmaceutical industries. Thanks to the integrated torque sensors in each joint, the robot can be used in human-robot collaboration without any protection fence. A robot flange which is commonly used in the cobot world and configuration wizard software apps simplify the adaption of grippers.

The MOTOMAN HC robot series from Yaskawa was developed for easy entry into robotic automation. In addition to the simple programming philosophy with hand guidance/operator buttons on the robot's wrist, online tutorials and application builders on the web make it easier to take the first steps in robot automation. The convenient tablet-based Smart Pendant guides you intuitively through the individual steps – from programming to safety configuration, simple menus provide the perfect overview of your application. Simply set up the cobot, after connecting the robot and all components, you're ready to start programming the task. Many compatible accessories – supplied either by Yaskawa or ecosystem partners – make it easy to set up robot installations for many applications.

## KEY BENEFITS

### Easy-to-use

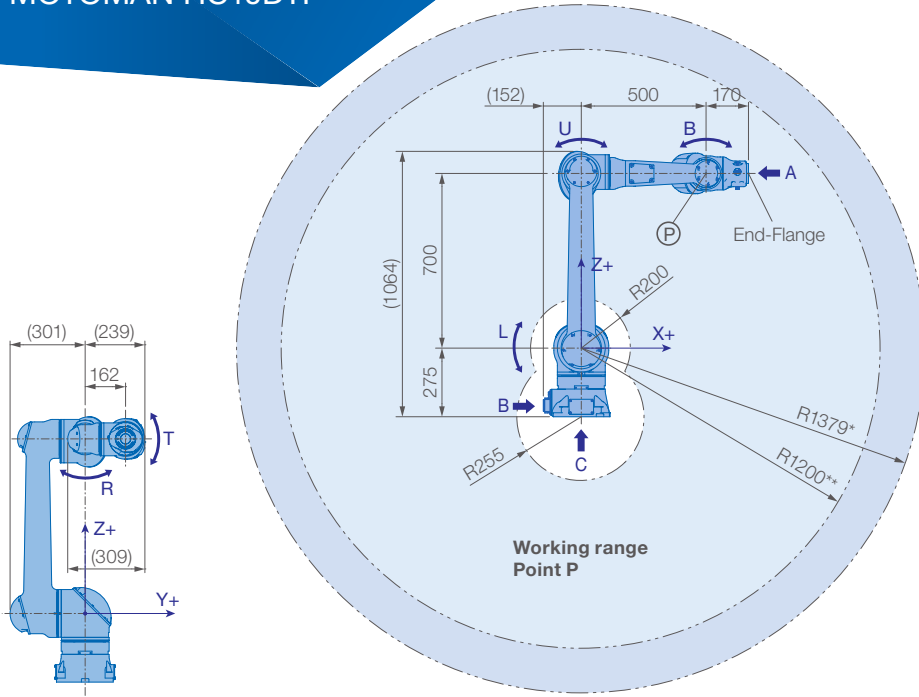
- Simple programming with Smart Pendant incl. Smart Frame and hand guiding
- Complex programming with Teach Pendant
- Pendants with standard 3-position enabling switch
- Wizard programming for applications and accessories
- Ecosystem of Plug & Play partner products
- ISO flange for easy connection of accessories
- Yaskawa simulation software MotoSim EG VRC

### Smart safety

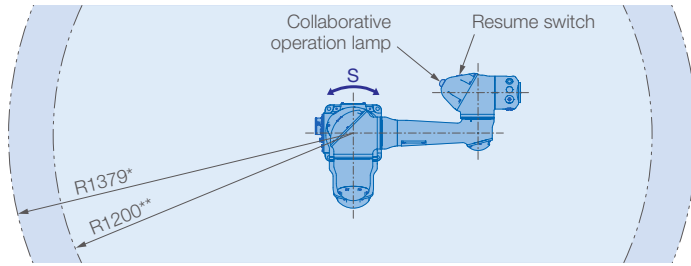
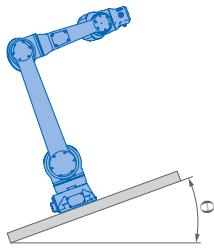
- PL d Cat. 3 certification with 25 safety-related hardware and software functions
- High-resolution torque sensors in each joint
- Easy configuration of the safety unit, such as definition of ranges, plains and precise envelopes for manipulator and gripper
- Two retract movements: Retract & Clamp Release function
- Pushback function for pushing the robot away during operation

### Industrial design for hybrid operation

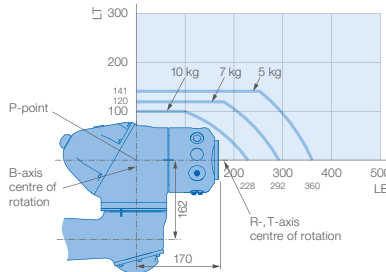
- IP67 protection class with high-quality seals
- Food grade grease
- Robust aluminium cast in lightweight design
- Powerful Yaskawa 200V servo drives
- Internal media routing
- Automatic calibration
- Fast axis speeds
- Industrial control options YRC1000 and YRC1000micro



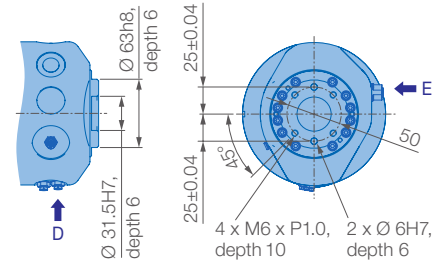
\* Absolute reach: S/L-Axis center of rotation to R/T-Axis center of rotation  
 \*\* Effective reach: S/L-Axis center of rotation to Point P



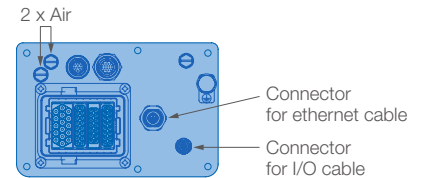
### Allowable wrist load



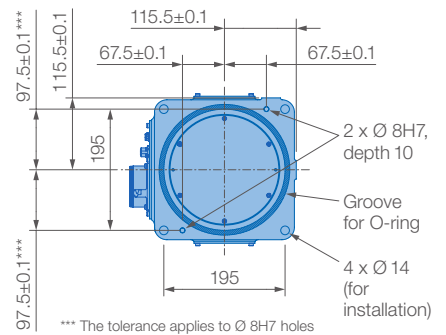
### View A



### View B



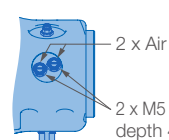
### View C



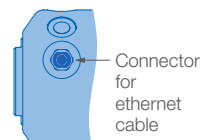
Mounting options: Floor, ceiling, wall, tilt\*  
 IP Protection: IP67

\* S Axis motion limits – see table left side

### View D



### View E



Robot installation angle $\theta$ [deg.]	S-axis operating range [deg.]
$0 \leq \theta \leq 25$	no limit
$25 < \theta \leq 40$	$\pm 60$ max.
$30 < \theta \leq 40$	$\pm 45$ max.
$40 < \theta$	$\pm 30$ max.

Specifications HC10DTP					
Axes	Maximum motion range [°]	Maximum speed [°/s]	Allowable moment [Nm]	Allowable moment of inertia [kg · m <sup>2</sup> ]	Controlled axes
S	$\pm 210$	130	–	–	6
L	$\pm 180$	130	–	–	Max. payload [kg]
U	$\pm 290$	180	–	–	Repeatability [mm]
R	$\pm 210$	180	27.4	0.78	Max. working range R [mm]
B	$\pm 180$	250	27.4	0.78	Temperature [°C]
T	$\pm 210$	250	9.8	0.1	Humidity [%]
					Weight [kg]
					Power supply, average [kVA]

\* Absolute reach: S/L-Axis center of rotation to R/T-Axis center of rotation \*\* Effective reach: S/L-Axis center of rotation to Point P

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