

MOTOMAN HD7

Industrial Robot in Hygienic Design



The new 6-axis high-performance robots from the MOTOMAN HD Series were developed in collaboration with the Fraunhofer Institute for Manufacturing Engineering and Automation IPA for use in hygienic and cleanroom environments.

With its modern design, the HD Series meets the strict standards for applications in the food, life sciences, laboratory automation, medical and pharmaceutical sectors.

These robot models are particularly suitable for laboratory, humid and cleanroom environments, are easy to clean and resistant to commonly used disinfectants and disinfection processes.

The product can be operated with an intuitive Smart Pendant or conventional Teach Pendant.

As a MOTOMAN product, the HD7 robot guarantees the highest industrial quality standards and reliability for many years of 24/7 operation.

ADVANTAGES AT A GLANCE

In addition to being suitable for use in hygienic areas up to the highest cleanroom class – GMP class A according to EHEDG, EN 1672-2 and ISO 14159 – the HD7 is also certified to cleanroom class 5 according to ISO 14644-1, in accordance with the measurement and assessment procedures defined in ISO 14644-14.

- Hygienic Design: encapsulated housing, no protruding screws
- Robot connections on the underside
- Internally routed cables and hoses, including Ethernet connections
- Hygienically designed axes and flange with O-ring groove
- Very low particulate emissions
- Food grade grease
- Protection rating IP69K

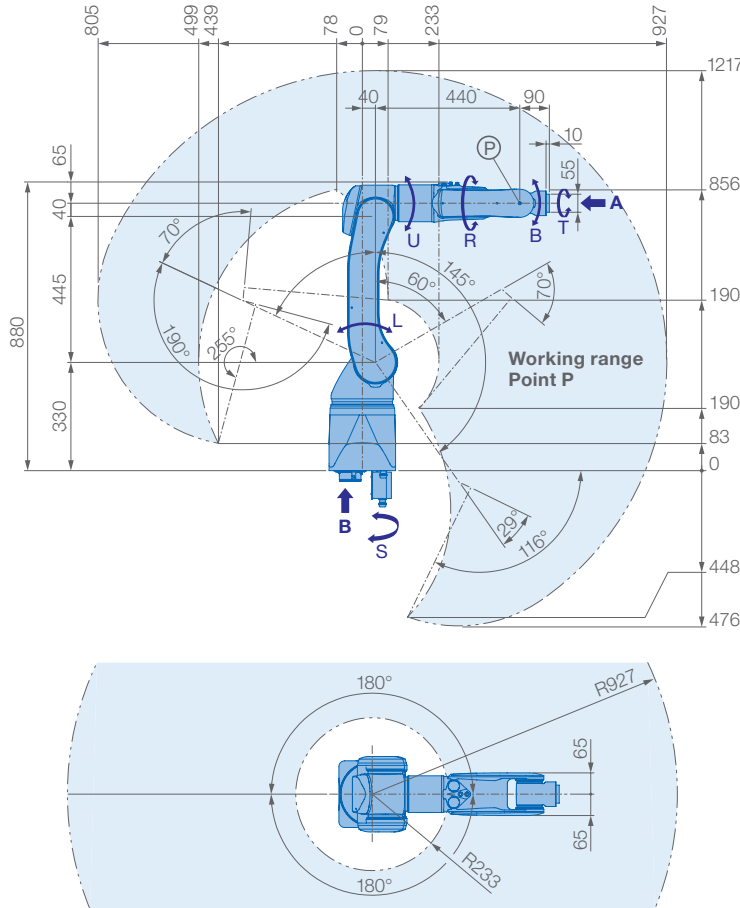
CLEANABILITY

- Special coating with excellent mechanical and chemical resistance
- FDA-certified surface materials
- Smooth, antimicrobial surface
- Special seals and design of the robot axes

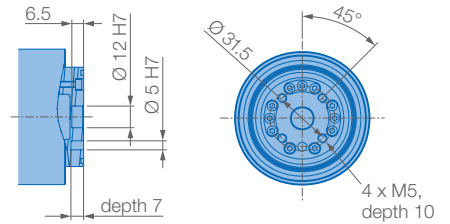


CERTIFICATIONS:

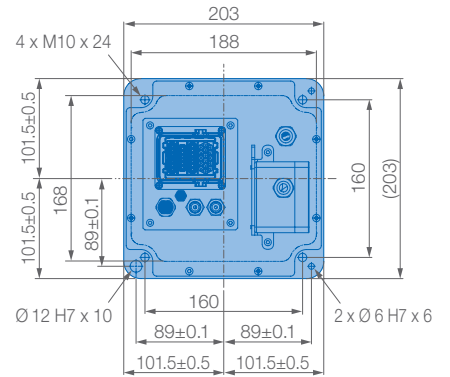
- GMP conform: Class A
- ISO 14644-1, Cleanroom class 5
- EN 1672-2:2005+A1:2009



View A

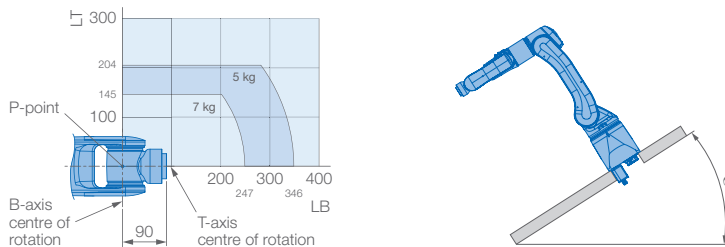


View B



Mounting options: Floor, ceiling, wall, tilt*
 IP Protection: IP69K
 * tilt with condition of angle – see table below

Allowable wrist load



Robot installation angle θ [deg.]	S-axis operating range [deg.]
$0 \leq \theta \leq 30$	± 180 degrees or less (no limit)
$30 < \theta \leq 35$	± 60 degrees or less
$35 < \theta \leq 45$	± 45 degrees or less
$45 < \theta$	± 30 degrees or less

Specifications HD7						
Axes	Maximum motion range [°]	Maximum speed [°/s]	Allowable moment [Nm]	Allowable moment of inertia [kg · m ²]	Controlled axes	6
S	± 180	375	–	–	Max. payload [kg]	7
L	+145/–65	315	–	–	Repeatability [mm]	$\pm 0.02^*$
U	+190/–70	410	–	–	Max. working range R [mm]	927
R	± 190	550	17	0.5	Temperature [°C]	0 to +45
B	± 135	550	17	0.5	Humidity [%]	20 – 80
T	± 360	1000	10	0.2	Weight [kg]	47
					Power supply, average [kVA]	1**

* Conforms to ISO 9283 ** Varies in accordance with applications and motion patterns Note: SI units are used for specifications.

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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.

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