H-SERIES ACTUATOR®
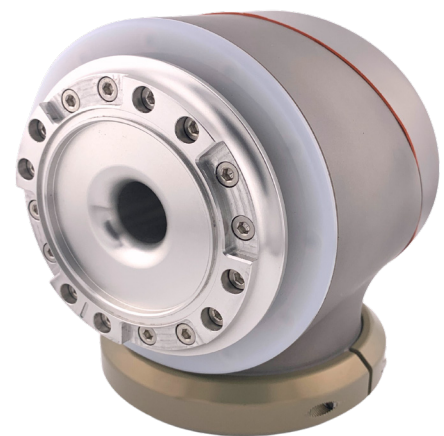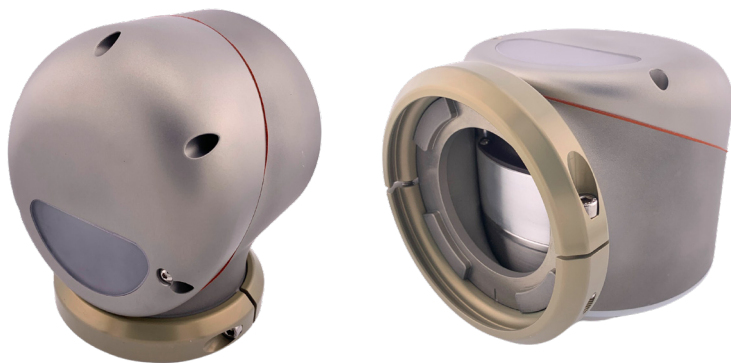
This series of robotic actuators allows engineers and end-users to make custom robotic systems that require heavier payloads or longer reach. H-Series Actuators are sealed to IP65 and are designed to address applications that require the torque and precision of an industrial arm, but in a non-standard form factor.

Each actuator integrates a brushless motor, harmonic gear reduction, encoders, and control electronics into a compact package that runs on anything from 24V-48V DC and communicates using standard 100Mbps Fiber-Optic Ethernet. This keeps the overall robotic system lightweight, low-power, simple, and safe.

The H-Series Actuator is a full-featured robotic component as opposed to a simple servo motor. The output rotates continuously, requires no calibration or homing on boot-up, and contains a thru-bore for easy daisy-chaining of wiring. This enables the actuators to be used in everything from wheeled robots to collaborative robotic arms.

HEBI Robotics provides cross-platform software tools that make configuring and controlling the H-Series a breeze, with features such as live plotting, control from mobile devices like phones and tablets, and APIs for MATLAB, ROS, C/C++, and Python.

H-SERIES ACTUATOR – TECHNICAL SPECIFICATIONS

CONFIGURATION	H25-45	H25-90	H25-140
Peak Torque Cont. Torque Max Speed	90 N-m 45 N-m 100 RPM	180 N-m 90 N-m 50 RPM	280 N-m 140 N-m 30 RPM
Mass	2.9 kg		
Dimensions	126mm x 115mm x 114mm 20mm hollow bore		
Power	24V - 48V DC Cont. Current 5A @ 36V Peak Current 10A @ 36V		
Environment	-10ºC to 50ºC Ambient Designed for IP65		
Communication	2x 100 Mbps Fiber-Optic Ethernet Plastic Optical Fiber (OptoLock®)		
Angular Resolution	0.001º		
Angular Accuracy	0.02º		
Backlash	None - harmonic-type reducer		
Safety	Optional brake - locked on power-off M-Stop line input - 5V - 48V DC		
Sensing	Angular Position Angular Velocity Motor Torque (Current-Based) 3-axis Accelerometer / Gyro Motor and Electronics Temperature Bus Voltage Bus and Winding Current Internal Pressure		
Certification	MIL-STD-461G RE102, RS103 (EMI/ESD) MIL-STD-810G 514.6, 516.6 (Shock/Vibration) EMC-2014/30/EU		
API Support	Angular Position Angular Velocity Motor Torque (Current-Based) 3-axis Accelerometer / Gyro Motor and Electronics Temperature Bus Voltage Bus and Winding Current Internal Pressure		