

T-SERIES ACTUATOR[®]

This series of powerful robot actuators allows engineers, researchers, and industrial integrators to quickly and easily create world-class custom robots of any configuration. T-Series Actuators[®] are packed with sensors that enable controllable position, velocity, and sensitive torque control as well as three axis inertial measurement.

Each series elastic actuator integrates a brushless motor, gear train, spring, encoders, and control electronics into a compact package that runs on anything from 24V-48V DC and communicates using standard 10/100Mbps Ethernet.



The T-Series Actuator[®] is designed to function as 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 and wiring. This feature enables these actuators to be used in everything from wheeled robots to multi-degree of freedom collaborative robotic arms.

- **The T25 actuators offer the highest mechanical power, improved current sensing, and longer durability.**

HEBI Robotics provides cross-platform software tools that make configuring and controlling the T-Series a breeze, with features such as live plotting, APIs for MATLAB, ROS, C/C++, and Python.



T-SERIES ACTUATOR[®] — TECHNICAL SPECIFICATIONS

Configuration	T5-1	T5-4	T5-9	T8-3+	T8-9+	T8-16+	T25-8	T25-20	T25-40
Peak Torque	2.5 N-m	7 N-m	13 N-m	8 N-m	23 N-m	44 N-m	16 N-m	40 N-m	80 N-m
Cont. Torque	1.3 N-m	4 N-m	8 N-m	4 N-m	10 N-m	20 N-m	8 N-m	20 N-m	40 N-m
Max Speed	90 RPM	32 RPM	14 RPM	110 RPM	39 RPM	20 RPM	118 RPM	47 RPM	23 RPM
Mass	450g			575g			1.5kg		
Dimensions	126mm x 74mm x 34mm 15mm hollow bore			126mm x 74mm x 48mm 15mm hollow bore			170mm x 105mm x 67mm 20mm hollow bore		
Power	24-48V DC Cont. Current: 0.5A @ 36V Peak Current: 1.6A @ 36V			24-48V DC Cont. Current: 1.0A @ 36V Peak Current: 2.5A @ 36V			36-48V DC Cont. Current: 1.5A @ 36V Peak Current: 5A @ 36V		
Environment	-10°C to 50°C Ambient / Designed for IP65								
Communication	2x 100 Mbps Plastic Optical Fiber (OptoLock [®])								
Angular Resolution	0.005°								
Torque Resolution	0.01 N-m								
Backlash	+/- 0.25°								
Sensing	Angular Position (multi-turn absolute, +/- 4 turns) Angular Velocity Output Torque 3-axis Accelerometer / Gyro Motor and Electronics Temperature Voltage Current Internal Pressure								
API Support	MATLAB (Windows / Linux / OS X) ROS (Linux) Python (Windows / Linux / OS X) C/C++ (Windows / Linux / OS X)								
<p>Each individually purchased T-Series Actuator[®] includes: A-2456-02: R/T-Series Standard Wiring Kit Additional technical documentation at docs.hebi.us</p> <p>Updated on July 25, 2024. Specifications subject to change without notice.</p>									

