High-Load 6-Axis Hexapod

Flexible Precision Positioning in the 500-kg Class

H-855

- Holding force up to 5000 N
- Travel ranges to ±160 mm, rotation ranges to ±60°
- Absolute encoder
- Actuator resolution to 5 nm
- Flexible adaptation to requirements

High-load hexapod for loads to 500 kg. The device has a modular design, which allows a fast and flexible adaptation to a broad range of application requirements. The data table shows a couple of variants, making an estimation of potential extreme values possible.
Please contact us for a specific offer!
Parallel-kinematic design for six degrees of freedom making it significantly more compact and stiff than serial-kinematic systems, higher dynamic range, no moved cables: Higher reliability, reduced friction.

Absolute encoder

Absolute encoders supply explicit position information that enables immediate determination of the position. This means that referencing is not required during switch-on, which increases efficiency and safety during operation.

Fields of application

Research and industry. Industrial automation, precision assembly, astronomy, aerospace.

Specifications

Preliminary Data	H-855	H-855	H-855	H-855	Unit	Tolerance
	The golden mean	The fastest	The flattest	With maximum travel range		
Active axes	X, Y, Z, θ_X, θ_Y, θ_Z	X, Y, Z, θ_X, θ_Y, θ_Z	X, Y, Z, θ_X, θ_Y, θ_Z	X, Y, Z, θ_X, θ_Y, θ_Z		
Motion and positioning						
Travel range in X, Y *	±100	±100	±50	±160	mm	
Travel range in Z *	±50	±50	±25	±75	mm	
Travel range in θ_X, θ_Y *	±25	±18	±12	±27	°	
Travel range in θ_Z *	±40	±35	±25	±60	°	
Encoder type	Absolute-measuring rotary encoder	Absolute-measuring rotary encoder	Absolute-measuring rotary encoder	Absolute-measuring rotary encoder		
Actuator design resolution	12	41	5	12	nm	
Max. velocity in X, Y, Z	5	13.5	2	5	mm/s	
Max. velocity in θ_X, θ_Y, θ_Z	40	85	18.5	32	mrad/s	
Typ. velocity in X, Y, Z	4	11	1.5	4	mm/s	
Typ. velocity in θ_X, θ_Y, θ_Z	35	70	15	25.5	mrad/s	
Mechanical properties						
Load capacity (base plate horizontal / any orientation)	500 / 200	260 / 120	500 / 200	300 / 200	kg	max.
Holding force, de-energized (base plate horizontal / any orientation)	5000 / 2000	2600 / 1200	5000 / 2000	3000 / 2000	N	max.
Motor type	BLDC gear motor	BLDC gear motor	BLDC gear motor	BLDC gear motor		
Dimensions						
Height (moving platform in reference position)	475	475	300	555	mm	
Base plate diameter	600	600	450	600	mm	
Top plate diameter	300	400	300	400	mm	

Technical data specified at 20±3 °C.
* The travel ranges of the individual coordinates (X, Y, Z, θ_X, θ_Y, θ_Z) are interdependent. The data for each axis in this table shows its maximum travel range, where all other axes and the pivot point are at the reference position.
Ask about customized versions.

Ordering Information

H-855
Request for proposal for H-855 high-load 6-axis hexapod