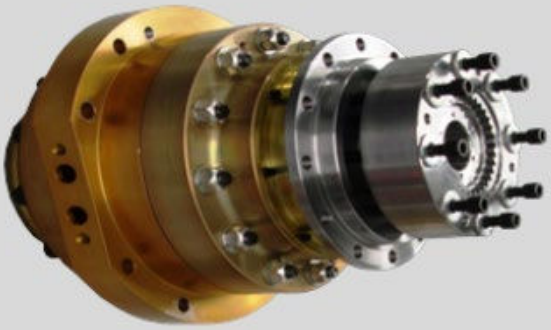
HYDRAULIC VANE ROTATY ACTUATORS
MODEL SERIES HVRS/HVRD

STANDARD FEATURES

- Customizable components including mounting options and servo valve interfacing manifolds
- Single or double vane configurations
- Shaft and vane(s) constructed from single piece for high strength and stiffness
- Vane end sealed to minimize vane seal bypass
- High and low pressure seals utilizing case drain minimize friction and maximize seal life
- Proprietary vane-to-flange connection for zero backlash connection to load
- Center of travel located on the shaft for easy referencing
- Shaft and vane assembly supported by two tapered roller bearings

DESCRIPTION

The HVRS and HVRD line of single and double vane hydraulic actuators were developed to be servo-quality actuators, capable of achieving extreme torque and superior hydraulic stiffness. Due to a very low friction-to-torque ratio, axes using these actuators have been able to achieve arc-second positioning accuracy. An additional benefit of these actuators is a high torque-to-weight ratio which stems from their historical application on multi-axis dynamic motion tables. The large load capacities of the integrated bearings allow for no additional axis bearings in most applications. Ideal actuators are designed to provide precision performance and reliable operation with only minimal preventative maintenance.



COMPANY EXPERIENCE

Ideal Aerosmith has been in the precision motion simulation business for more than 75 years providing turnkey state-of-the-art direct-drive electric and hydraulic motion systems to support the development, testing and evaluation of inertial navigation devices and guidance systems required by the commercial and defense markets. Our team of seasoned mechanical engineers have a combined 90+ years' experience designing precision mechanical systems that are used in the most high-dynamic and precise hydraulic missile flight motion simulators in the industry. Ideal has applied our expertise in mechanical design and made it transferable to all industries by offering our hydraulic rotary actuators as a singular component or as part of an integrated test solution which may be used in an array of industries such as agriculture, automotive, construction, energy, marine, material handling and mining to name a few.

Engineering Specifications

Model No.	Unit Size	HVRS Series	HVRD Series
Vane		Single Vane	Double Vane
Rotation	Degree	±150	±60
Maximum Operating Pressure Range	psi	3000	3000
Displacement	In^3/rad	120 (max)	200 (max)
Torque (@ 3,000 PSI)	Ft-lb	30,000 (max)	50,000 (max)
Moment Capacity, Dynamic	Ft-lb	32,000 (max)	40,000 (max)
Radial Capacity, Dynamic	lb	95,000 (max)	120,000 (max)
Axial Capacity, Dynamic	lb	125,000 (max)	125,000 (max)
Approximate Torque/Weight Ratio	Ft-lb/Lb	70	110

The above values represent our standard actuators which are able to be customized for your specific application. Please contact Ideal Aerosmith for additional information. Specifications subject to change without notice.

For much more detailed information, contact Ideal to request a 2002P Series Specification Document or AERO 4000 Controller Data Sheet

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