

SRA Series Spinning Rotary Actuator

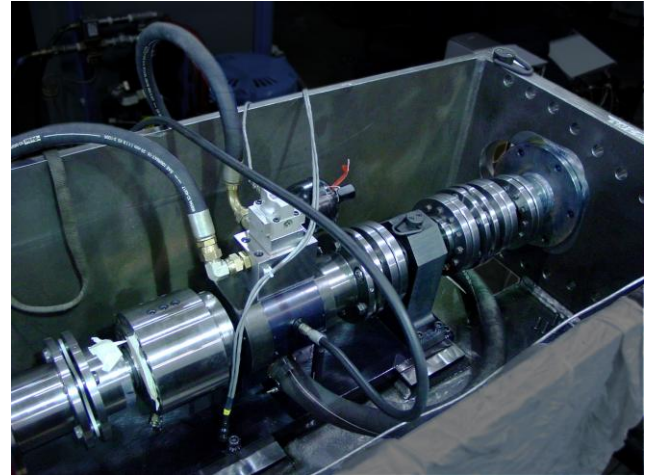
Applying torque in 4-square applications

The Spinning Rotary Actuator (SRA) consists of a double vane type hydraulic rotary actuator and a rotary coupling to communicate hydraulic fluid to the actuator while it is spinning.

Application and Function

A four square mechanically regenerates power through a mechanical system of shafts and gearboxes. This rotary actuator provides torque to load the system while the drive motor provides the rotational speed and is sized only to overcome the friction in the system, resulting in a very energy efficient test stand.

The SRA has been designed specifically for this application. This design is based upon decades of experience with manufacturing fatigue rated test systems. Almost all dynamic sealing is done through the use of labyrinth sealing, resulting in a low friction interface with a theoretically infinite life. The low friction, low internal leakage design allows this unit to be used in very highly dynamic systems.



An additional advantage, resulting from the extremely low friction, is that the torque developed by the actuator very closely correlates to the pressure difference across the two hydraulic ports.

The rotating coupling again utilizes labyrinth sealing techniques for long life and low friction, allowing high rotational speeds with accurate control. The input and output shafts are designed for high strength, keyless connection which provides an easy method for installation and removal. No special tooling or installation equipment is needed as is the case with 50:1 taper locking systems.

Standard SRA Product Specifications*			
Model	Output Torque		Max RPM
	Inch-Lb @3500 psid	Newton-Meter @240 bar Δ	
SRA-4420	4420	500	7000
SRA-22000	22000	2475	6000
SRA-44000	44200	5000	4000
SRA-88000	88400	10000	2000
SRA-177000	176800	20000	2000
SRA-353000	353600	40000	1000
SRA-440000	884000	100000	400
SRA-884000	1768000	200000	400
SRA1768000	3530000	400000	400
SRA-3530000	7060000	800000	300

*Specifications are subject to change

The success of the test system is dependent upon many factors and we highly recommend contacting DTE for application recommendations when utilizing a spinning rotary actuator. Drawings are available upon request.

