ALLIED ASD
Spring-Diaphragm Rotary Actuators

By utilizing proven spring material, advanced filler reinforced diaphragm technologies, precision engineering of the crankshaft, and the connecting rod design, the ASD Spring-Diaphragm Rotary Actuators are developed specifically for quarter turn valve automation applications to provide safe and reliable operation even with minimal media supply pressure. The design separates the supply power media chamber from the spring sets allowing the actuator to be operated by unfiltered air, gas, water or mineral-based hydraulic fluid. The housing is constructed using a ductile iron and carbon steel casting that is coated with a polyester powder process to ensure exceptional corrosion resistance in most field environments. The independent media chamber is also equipped with a Buna-N diaphragm reinforced with special compound polyamine fabric, allowing the actuators to work in the temperature conditions from as low as -40 and to +340°F.

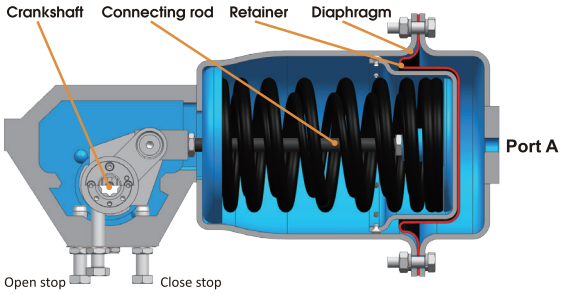
Warning:
The two EYEBOLTS are provided to assist in valve mounting assemble only. USE EYEBOLTS with lifting straps for safe handling. Refer to IOM 3.1 for Handling Installation Instruction.

Operating Principle

Spring Stroke

Upon loss of pressure (air) on port A, the stored energy in the compressed springs forces the diaphragm retainer and connection rod to move right and the crankshaft to rotate clock-wise which can be limited by an adjustable close stop.

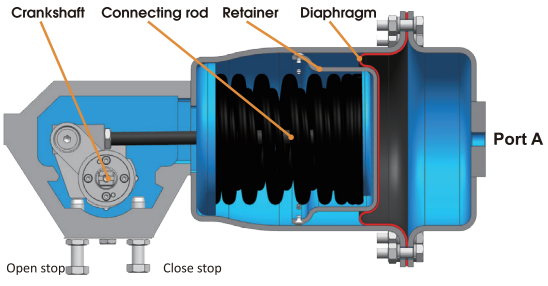
FIELD REVERSIBLE: Fail Closed or Fail Open operation is achieved by inverting the actuator.



Spring Stroke

Air Stroke

By supplying media (air) to port A, pressure forces the diaphragm retainer and connection rod to move left, causing the springs to be compressed. The crankshaft will be rotated counter clock-wise which is limited by an adjustable open stop.



Air Stroke