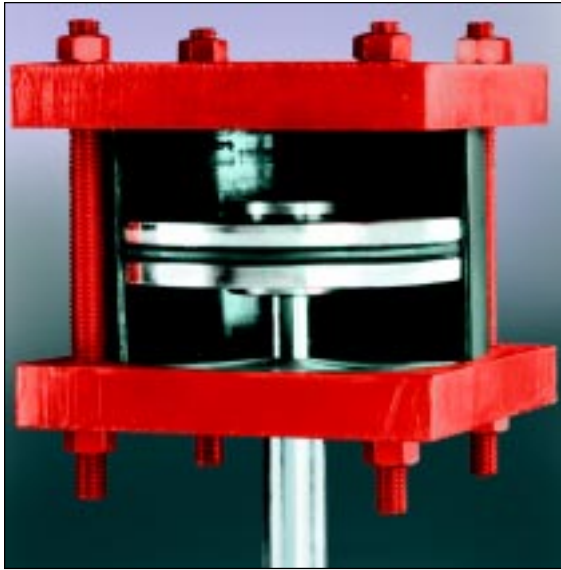


Actuators

- ▶ Self-lubricating for high cycle life
- ▶ Impact and dent resistant
- ▶ Resistant to chemical attack for a variety of processes
- ▶ Double-acting or single-acting spring return



Materials of Construction

- ▶ Black Amalga cylinder tube
- ▶ Neoprene O-ring seal
- ▶ 304 stainless steel piston rod
- ▶ Polypak or Buna-N wiper ring
- ▶ SAE grade 5 carbon steel threaded tie rods
- ▶ Stainless steel fastening nuts
- ▶ T6061 aluminum cylinder heads and piston

Red Valve actuators are manufactured with lightweight Black Amalga tubing, which is fiberglass-reinforced epoxy. The actuator material is impregnated with an anti-friction additive to reduce the piston and O-ring to cylinder friction. The actuator is self-lubricating, and the inside of the cylinder is honed to a 5-15 micro inch finish. The combination of the surface finish and the self-lubricating feature greatly increase the O-ring life.

The Black Amalga is resistant to chemical attack and corrosion, making it ideal for most environments. It has an impact strength of 40 izod ft-lbs, which makes the actuator much more dent-resistant than aluminum or brass.

Red Valve actuators have a maximum operating pressure of 150 psi and can withstand external operating temperatures of -90°F to 225°F.

Piston rods are made of polished 304 stainless steel, and the piston rod is sealed with a polyurethane lip seal. Both the piston rod and seal are protected by a wiper ring that cleans the piston rod before it passes through the lip seal. The rod seal and wiper ring are held in place by a bronze stem bushing, which prevents galling of the piston rod. The combination of a stainless steel piston rod, wiper ring and lip seal contribute to extended actuator life.

Double-Acting Actuator

ATO/ATC R style actuators are used on Series 5200, 5200 D-Port, 5400 and 5300 Open-Frame Control Valves. These actuators use air to open and close the valve.

Single-Acting Actuator

ATO/FCS and ATC/FOS RS style actuators consist of either a fail-close spring, which is preloaded to provide enough force to close and seal the sleeve upon air loss, or a fail-open spring, which drives the valve open upon air loss. Fail-open spring actuators are used primarily in low pressure or partial vacuum services, where the line pressure is not sufficient to fully open the valve.

Standard tubing is polyethylene; optional tubing includes copper, PVC-coated copper and stainless steel.