Red Valve Actuators are manufactured with lightweight composite 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 O-ring life.

The composite 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 psig 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 which 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.

The composite material 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.

Double Acting Actuator
ATO/ATC R style actuators are used on Series 5200, 5200 D-Port, and 5300 Open Frame Control Valves, and Series G and Flexgate Knife Gate 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 (or gate) 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 alone is not sufficient to fully open the valve, and on fail-open knife gate applications. The RS type actuator can be used on the same valves as the R style actuator.

Materials of Construction

Cylinder Heads .................. T6061 Aluminum
Cylinder Tube .................. Black Amalgam
Piston ........................... T6061 Aluminum
O-Ring Seal ...................... Neoprene
Threaded Rods ............... SAE Grade 5 Carbon Steel
Wiper Ring ....................... Polypak, Buna-N
Piston Rod ....................... 304 Stainless Steel
Fastening Nuts .................. Stainless Steel
Mounting Pad .................. AISI 1018 Carbon Steel
Retaining Plate .............. AISI 1018 Carbon Steel

RS Type Actuators