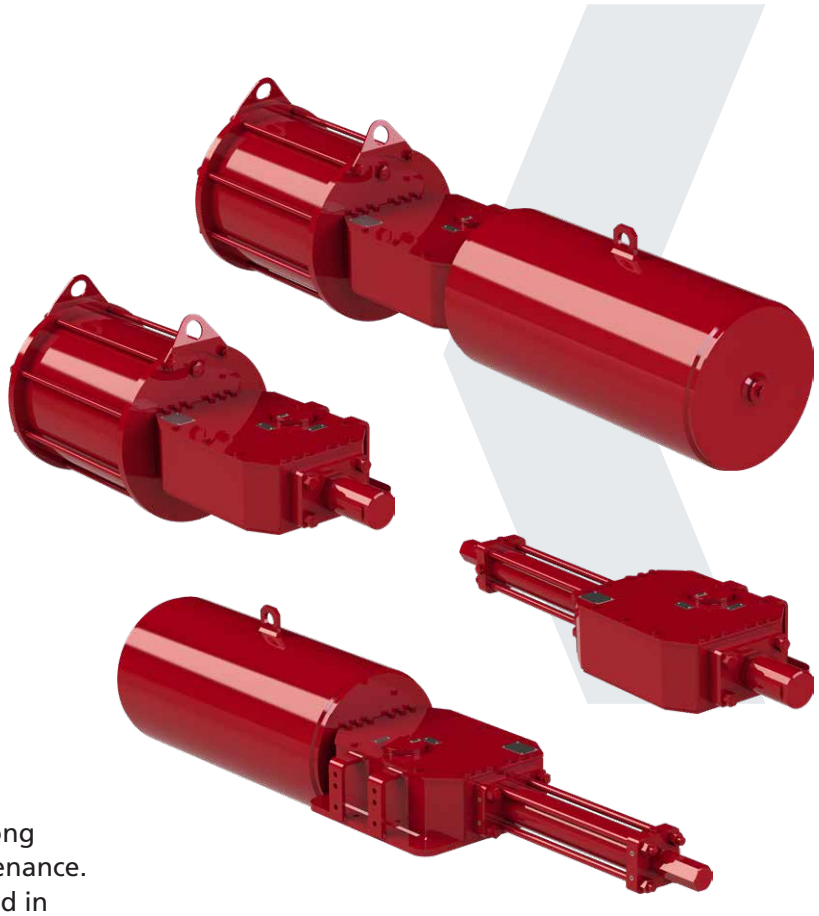
rotork®

Keeping the World Flowing
for Future Generations



GP/GH Range

Pneumatic and hydraulic actuators for quarter-turn valves

Every Rotork actuator is built to provide long and efficient service with minimum maintenance. The design, engineering and materials used in their construction ensure optimum performance even in the harshest of environments.

Features and Benefits

- Heavy-duty pneumatic and hydraulic scotch-yoke rotary output actuators
- Lightweight and robust construction for excellent strength to weight ratio
- Operating pressure:
  Pneumatic up to 12 bar (175 psi)
  Hydraulic up to 210 bar (3,000 psi)
- Torque output:
  Up to 600,000 Nm (5.3 million lbf.in)
- Temperature Ranges:

Standard:	-30 to +100 °C	(-22 to +212 °F)
Low:	-40 to +100 °C	(-40 to +212 °F)
Extreme Low:	-60 to +100 °C	(-76 to +212 °F)

- Minimum friction with electroless nickel-plated cylinders and bronze sliding blocks on torque arm
- Dynamic floating piston seal reduces friction and avoids stick-slip effect
- Protection to IEC IP66M, IP67M
- Corrosion resistant materials

Proven, Dependable Design

GP and GH range scotch yoke actuators are designed to operate ball, butterfly and plug valves requiring a rotary, quarter-turn movement for either on/off or modulating duty. The robust design has been proven in thousands of diverse applications the world over.

Safety by Design

Spring-return units can be assembled to provide operation in either direction. The spring-return module is inherently safe since it can only be removed from the centre body after all spring forces have been released. Centre bodies incorporate a pressure relief valve.

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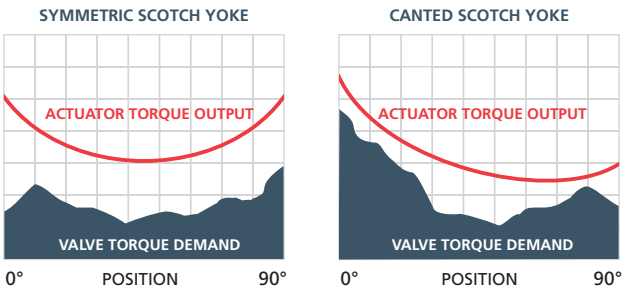
Two Torque Output Profiles

GP and GH range actuators can be supplied with either symmetrical or canted torque arms. The classic symmetric yoke delivers peak torque at both ends of stroke. The canted yoke is a Rotork design innovation that delivers peak torque at only one end of stroke. Use of canted arms can often reduce actuator size, weight and cost for valves with appropriate torque demand characteristics.



Corrosion Resistance

Extended service life provided by carbon steel, electroless nickel-plated cylinders and chromium plated piston rod.

Robust Yet Lightweight Design

Totally enclosed weatherproof centre body fabricated in carbon steel or ductile iron (depending upon size) provide an excellent strength to weight ratio. The scotch yoke mechanism is available in either symmetric or canted design to meet application specific valve torque demand requirements with minimum cost and weight. The design incorporates a chromium plated alloy steel thrust bar to support the transverse loads of the scotch yoke.

Efficiency and Long Life

Minimum friction is ensured by electroless nickel-plated cylinders and bronze sliding blocks on the torque arm. A dynamic floating piston seal further reduces friction and avoids stick-slip effect, even after prolonged periods without operation.

Environmental Protection

O-ring sealing provides protection certified to IEC IP66M, IP67M.

Available Options

Manual override solutions. Stainless steel cylinders and tie rods. Custom paint specifications. Fibreglide® yoke bushing for modulating duty applications.

Manual Override Options

A dependable manual override facility is an important part of many valve/actuator applications. Rotork has a variety of override options available to meet virtually any requirement. Available options include open or enclosed jackscrews in both gear reducer and declutchable versions, as well as a number of hydraulic override solutions.

Complete Control Systems

Control component packages are a part of any actuator/valve installation. Rotork has extensive experience in the design and assembly of all types of fluid power control systems to satisfy any customer requirement for on/off, modulating or ESD service.

Packages can be mounted on a panel or in a cabinet and mounted either on the actuator or at a remote location. Rotork offers components from all leading industry suppliers as well as those of our own design including limit switch housings, quick exhaust valves, pneumatic and hydraulic manifolds, shuttle valves, linebreak safety systems and a torque limiting device.

Fire Protection Systems

Rotork actuators and control systems can be customised to withstand exposure both to fire and very high environmental temperatures. A range of fire-proof systems is available that include flexible protective jackets, intumescent coatings and rigid enclosure systems.

For further information on Rotork's fire protection solutions, consult publication PUB000-004.

For detailed GP/GH Range information refer to PUB011-001.

Contact us now

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PUB011-043-00
Issue 05/26

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