

## Product Specification for 25 series Actuator

**Actuator Type: Series 25 Scotch yoke actuator-Double acting and spring return**

**Ductile Iron Housing:**

- It provides better strength with water ingress protection meeting IP67 grade.

**Hard Chrome Plated, Honed Finished Cylinder Bore:**

- Increase seal life.

**Hard Chrome Plated Steel Piston Rod:**

- It provides strength and corrosion resistance for enduring high cycle applications.

**Heat Treated Stainless Steel Thrust Pin:**

- It transfers piston force to the steel yoke for efficient transmission of torque.

**Guide Bands and Piston Quad Seals:**

- It ensures low-friction piston guidance during operation to protect cylinder walls from potential scoring and provide continuous cylinder wiping action.

**Spring Return Actuators:**

- Pre-piped with stainless steel tubing to provide air to both pistons with one single connection

**Compact Design:**

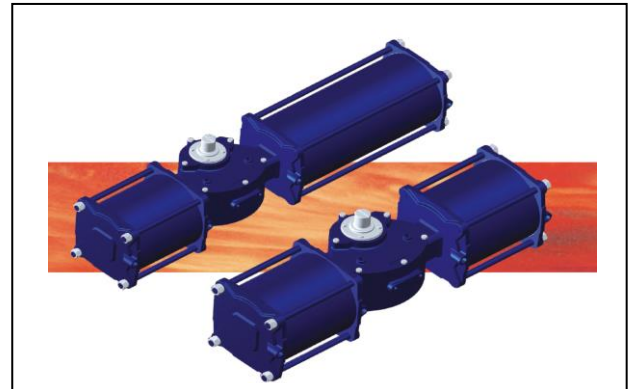
- Utilizing a unique two piston design.

**Unique "Safe Spring Cartridge" Design:**

- Allows the actuator to be safely assembled and disassembled in the field without the need for special tools. A double acting actuator can be converted to spring return unit by simply changing the cylinder and installing corresponding size of spring cartridge assembly. A spring return can be converted to a double acting actuator by removing the spring cartridge.

**ISO 5211 Mounting Pattern:**

- It provides easy valve/actuator mounting using international standards.
- It has mounting provision for Limit switch box.



**Scotch yoke actuators models (DA & SR40, SR60, SR80, SR100 combination):**

- 250-06,250-07,250-08,250-10;
- 350-10,350-12,350-14;
- 500-12,500-14,500-15,500-16.

**Torque Output from 40 psi to 100 psi {2.8 Bar to 7 Bar}:**

- 7310 - 220710 Lb.-inch  
{826 - 31174 Nm}

**Design:**

- Valve mounting - ISO 5211

**Testing:**

- AWWA-C-540

**Approvals & Certifications:**

- CE Certification
- ATEX
- SIL

**Special Applications:**

- Low temperature
- High temperature

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**Top Cover Drilled To Namur Standards:**

- Namur drive slot in shaft on top of yoke enables accessory driven components to maintain a compact assembly.

**Bi-directional Travel Stop:**

- Its located in the main housing to provide adjustment in open and closed direction  $\pm 5^\circ$ .

**Phosphor Bronze Piston Rod Bushing:**

- It provides low-friction support. Precise alignment of the piston rod increases efficiency and provides extended actuator life and efficient torque transmission.

**High Strength Yoke:**

- The Yoke is a very critical part of the scotch yoke actuator. This part is most often where the life of the actuator is controlled. The yoke converts the linear force to torque. On series 25 yoke arm DelTorq® uses 17-4 Ph stainless steel as standard for this critical part. Unique hollow yoke design permits the use of a universal adapter for direct mounting to quarter turn valves.

**Actuator Mounting:**

- Manufactured in full compliance with the latest requirements of EN ISO 5211.

**New features for Demanding Applications:**

**Aluminum Bronze Roller:**

- Provides low friction and high strength and increases efficiency and life cycle of actuator.

**Chrome Plated Guide Bar:**

- Bar and guide block connection bearing with guide bar support the transverse force and ensure proper support of the piston to give high cycle life and smooth operation.

**Ductile Iron Guide Block:**

- With bearing ensures proper lubrication to pin & guide bar, provides low friction and increases efficiency of the actuator.

**Corrosion Protection:**

- All casting components are coated on all surfaces through a process of liquid passivation based on trivalent chromium to achieve excellent corrosion resistance.

**Material of Construction:**

- **BODY:** DUCTILE IRON
- **HOUSING TOP COVER:** DUCTILE IRON
- **YOKE:** DUCTILE IRON / STAINLESS STEEL
- **PIN:** EN 24 (Fully Hardened)
- **PISTON ROD:** EN 24 Chrome plated
- **YOKE PIN ROLLER:** ALUMINUM BRONZE
- **PISTON:** DUCTILE IRON
- **CYLINDER:** CARBON STEEL
- **LEFT & RIGHT END PLATE:** DUCTILE IRON
- **PISTON ROD BEARING:** PHOSPHOR BRONZE
- **STEEL BACK UP BEARING:** STEEL+PTFE (DU)
- **YOKE MOUNTED INDICATION PLATE:** EN8 CHROME PLATED
- **O RINGS:** NITRILE
- **GASKETS:** CAF (CHAMPION ASBESTOS FREE)
- **PISTON BANDS:** NYLON 6 (MOS 2 FILLED)
- **HARDWARE:** HTS Gr. 10.9, 8.8; SS304

**Temperature Range:**

- **NITRILE O'rings:** -4°F to 176°F (- 20°C to 80°C)
- **VITON O'rings:** -4°F to 302°F (- 20°C to 150°C)
- **SILICON O'rings:** -40°F to 302°F (- 40°C to 150°C)