

## Actuators

### General Information:

Pneumatic actuators are required to operate in a wide variety of applications: they have to function first time every time, often under very difficult circumstances. One actuator may perform hundreds of cycles 24 hours a day, whereas another may open and close just once a month - then may stay open for months on end, but still be ready to shut down instantly on a failure signal.

The extremes of temperature, harsh duty and corrosive atmospheres where actuators are often applied demand the highest attention to the quality of design and manufacture.

### Operating principle

Pneumatic actuators come in two versions: double acting and single acting (spring return). Both versions are designed in such a way that (with the exception of the position indicator) there are no moving parts on the outside. This makes them safe, easy to install and virtually maintenance free. Furthermore, the compact rack and pinion construction means that actuators are lightweight and occupy a minimum of space.

### Standard Specification

- Pressure 0.2 to 14 bar
- Temperature -20°C to +90°C with optional high and low temperature trims available
- Output torques to 6,000,000 lb-in (678,000 Nm) for double-acting models and 3,000,000 lb-in (339,000 Nm) for spring-return models
- Materials Housing: Aluminium alloy
- Shaft: Hard anodized aluminium alloy
- Finish 2-component polyurethane
- Lifespan Minimum of 500,000 cycles

Scotch Yoke actuators are designed to operate ball, butterfly, plug and other valves which require a quarter-turn movement for either on/off or throttling service. The standard symmetrical design is used for all Scotch Yoke actuators.

Rack and Pinion Actuators are designed to operate ball, butterfly, plug and other valves, which require a quarter-turn movement for either on/off or throttling service. Offering the most economical solution when valve torque requirements are more or less constant throughout the stroke.

Linear actuators offer the advantages of compact size, high performance and a simple but highly reliable design, and are ideal for operating on/off and control functions of both globe and wedge gate valves.

Brands:  
ROTORK  
AUMA  
EL-O-MATIC  
other...

