

# Rotary Actuators



*Manually Energized  
Fail-Safe Spring Return  
Actuators for Quarter Turn  
Valves and Dampers*





For over 35 years Flow-Quip has been known as a leader in valve automation products. Utilizing only the highest standards for quality control, in compliance with ISO 9001:2000 Flow-Quip offers the manPOWER SSE and PAK series an innovative line of valve actuator products to meet the stringent demands of pipelines and industries around the world.



## Manually Energized Fail Safe Spring Return Actuators

Powerful Safe Spring Cartridge

High Visibility Position Indicator Beacon

Limit Switch (optional)

Scotch Yoke Torque Mechanism

Lockable Weatherproof Stainless Steel Hydraulic Power Module

Integral Terminal Housing for Electrical Controls (optional)

Adapts to a wide range of quarter turn Valves and Dampers

### SSE Series

Easy to operate Rotary Hydraulic Pump (fully submerged in reservoir)

Electrical Junction Box (optional)

Hydraulic Level Gauge

System Pressure Gauge

Stainless Steel Sealed Hydraulic Reservoir

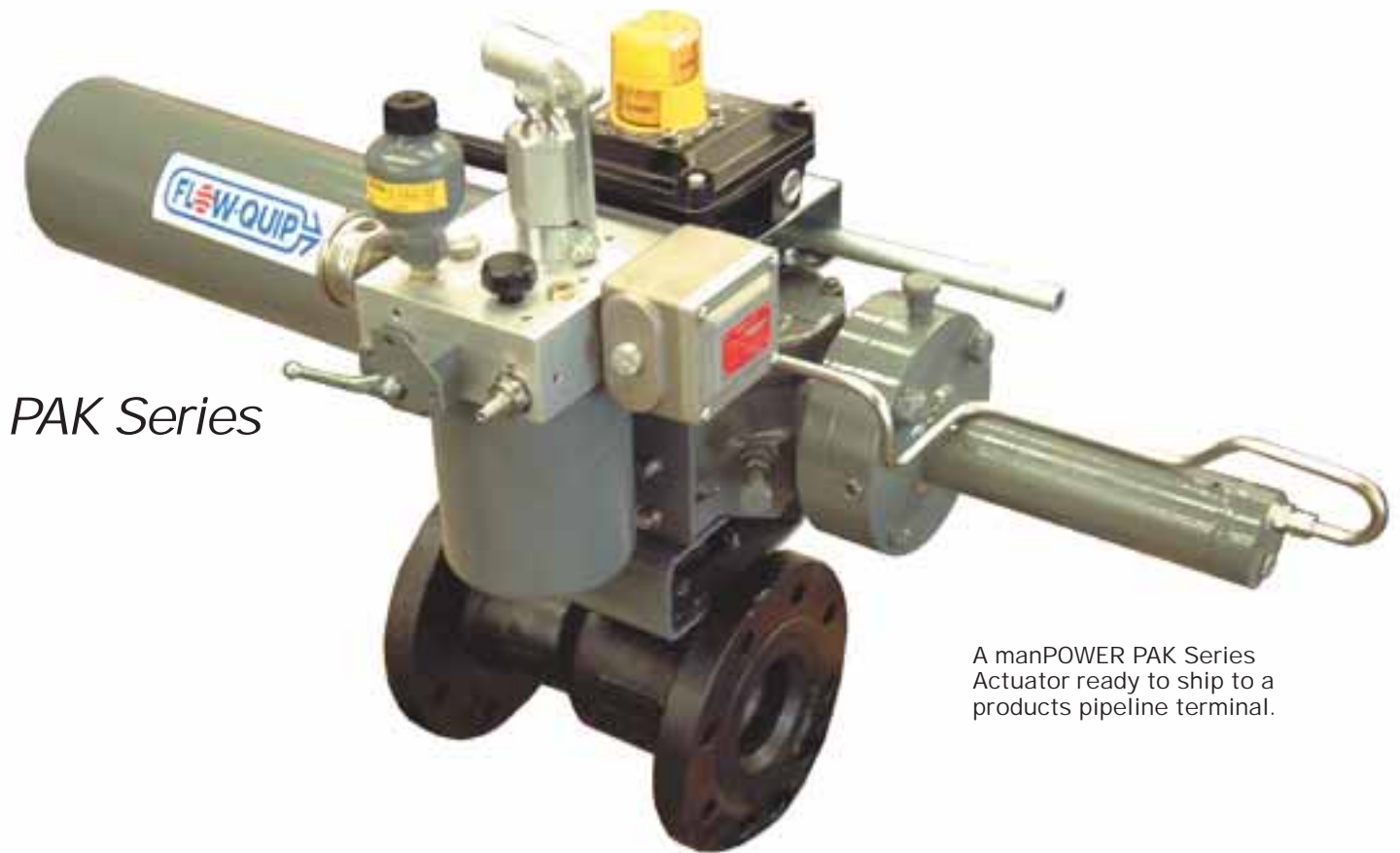
Auto/Manual Selector Valve

Solenoid Valve and Speed Controls (optional)

Power Module Lockable Access Door (shown open)

Reset Button (optional)





## PAK Series

A manPOWER PAK Series Actuator ready to ship to a products pipeline terminal.

Flow-Quip **manPOWER Series** Spring Return Manually Energized Actuators provide high integrity fail-safe operation of quarter turn valves and dampers. They are suitable for shop or field mounting on a wide range of ball, plug and butterfly valves. They offer a cost effective solution for rotary actuator applications where operation is infrequent and torque requirements are moderate.

Each manPOWER Series actuator contains a compact manually operated power supply that provides hydraulic pressure for the powerful scotch-yoke spring return torque mechanism. This self contained design greatly reduces installation time since no field hydraulic tubing runs are needed.

Each actuator can be controlled by electrical control signal(s), pressure pilots or fire sensors. When commanded, the powerful spring cartridge drives the actuator to its fail-safe position.

### Typical Applications

- ESD Valves
- Overpressure/Underpressure protection

### Key Features

- Fail Open or Closed (specify with order)
- Simplified Circuit with a minimum of components
- Eliminates the need for plant air, fuel gas, electricity or expensive nitrogen back up systems.

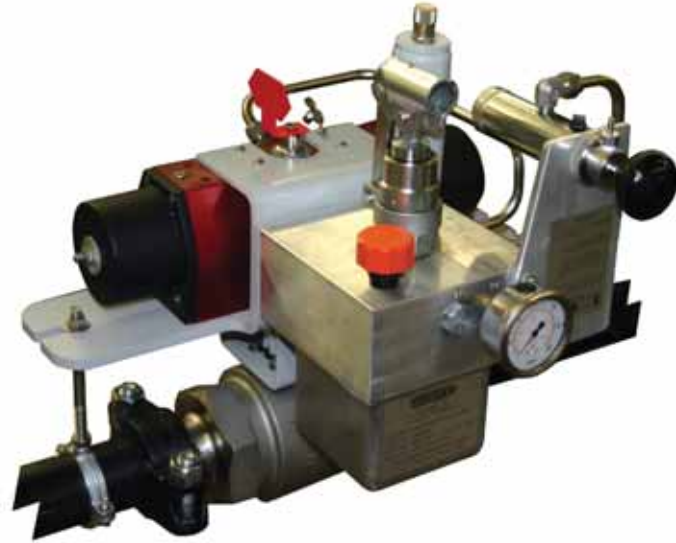
- Built in temperature compensation
- High pressure Zero leakage control
- Self Contained System (reduced installation cost)
- Mount in any position specify at time of order)
- Scotch Yoke high breakaway torque output
- Watertight or Explosion-proof Construction
- Integral Terminal Housing for solenoid controlled units
- Easy to Adjust Valve Travel Stops
- Lockable Power Module Enclosure (standard on the SSE Series)
- High Integrity Stainless Steel Tubing and Fittings
- Easy to Mount on New or Existing Valves or Dampers
- Torque Outputs up to 400,000 lb-in (45,000 Nm) Spring Ending Torque

### Optional Features

- Local Electrical Controls
- Power Module may be located remote from valve
- Manual Reset after operation
- Limit Switch mechanism with position indicator beacon.
- Corrosion Resistant Paint and Trim
- Adjustable Speed Control
- High or Low Pressure pilot(s)
- High Temperature Fire Sensor(s)







# manPower Series Rotary Spring Return Actuator

## General Specifications



- Rotation:** 90 degrees +/- 5 degrees (adjustable)
- Electrical Rating:** For units with electrical controls.  
Nema 7 – Explosion-proof, Groups C and D, Div. 1 and 2  
Nema 4, Watertight  
Other electrical ratings are available when specified at the time of order placement.
- Control Signal:** 120 VAC or 24 VDC
- Temperature:** Standard actuators are suitable for -10° F to +140° F (-23° C to +60° C)
- Auxillary Limit Switches:** Optional 2 SPDT limit switches are available, rated 15 amps/ 125VAC, 6 amps/ 24VDC  
Two additional switches are available as an option. All switches may be set at any point of travel.
- Options:** Manual Reset  
Local/ Off / Remote Selector  
Speed Control  
Corrosion Resistant Trim  
High Speed Operation  
Fusible Fire Detector (shutdown on high temp.)  
High or Low pressure pilot
- Torque Output:** 4,000 lb. in to 75,000 lb. in. ( 450-8,500 Nm) Spring Ending Torque

### Other Flow-Quip Valve Automation Products

-  SR Series – Spring return fail-safe actuators
-  SE Series – Stored energy fail-safe actuators
-  M Drive – DC Motor Drive Actuators
-  HPU Series – Hydraulic Power Units – for valve automation
-  Solar Series – Actuators powered by the sun
-  DVC Series – Custom Modulating Valve Packages

- Field Survey and Measurement Services- Retrofit on existing valves
- Valve Adaption Hardware – for all types of valves
- Field Service and Start Up Assistance- available around the world
- Solar power supplies for all products



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ISO 9001:2000