

Shafer[®]

L-Series: Linear Valve Actuators

Shafer Valve Operating Systems



• ISO 9001 Certified

“GUARDIANS OF THE WORLD’S GAS PIPELINES”



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APPLICATION

*For
operation
of rising
stem type
valves.*

- Gate valve applications on natural gas pipelines. The actuators are powered by natural gas using gas over oil tanks.
 - Natural gas transmission lines
 - Emergency shutdown
 - Linebreak protection
- Gate valve applications on crude oil or products pipelines. The actuators are typically powered hydraulically or by nitrogen pressure vessels.
- Rising stem ball valves.
- Spring return or fail-safe applications.
- Linear actuator systems with self-contained power source.
Reference: "Sentry" Bulletin



CAPABILITIES

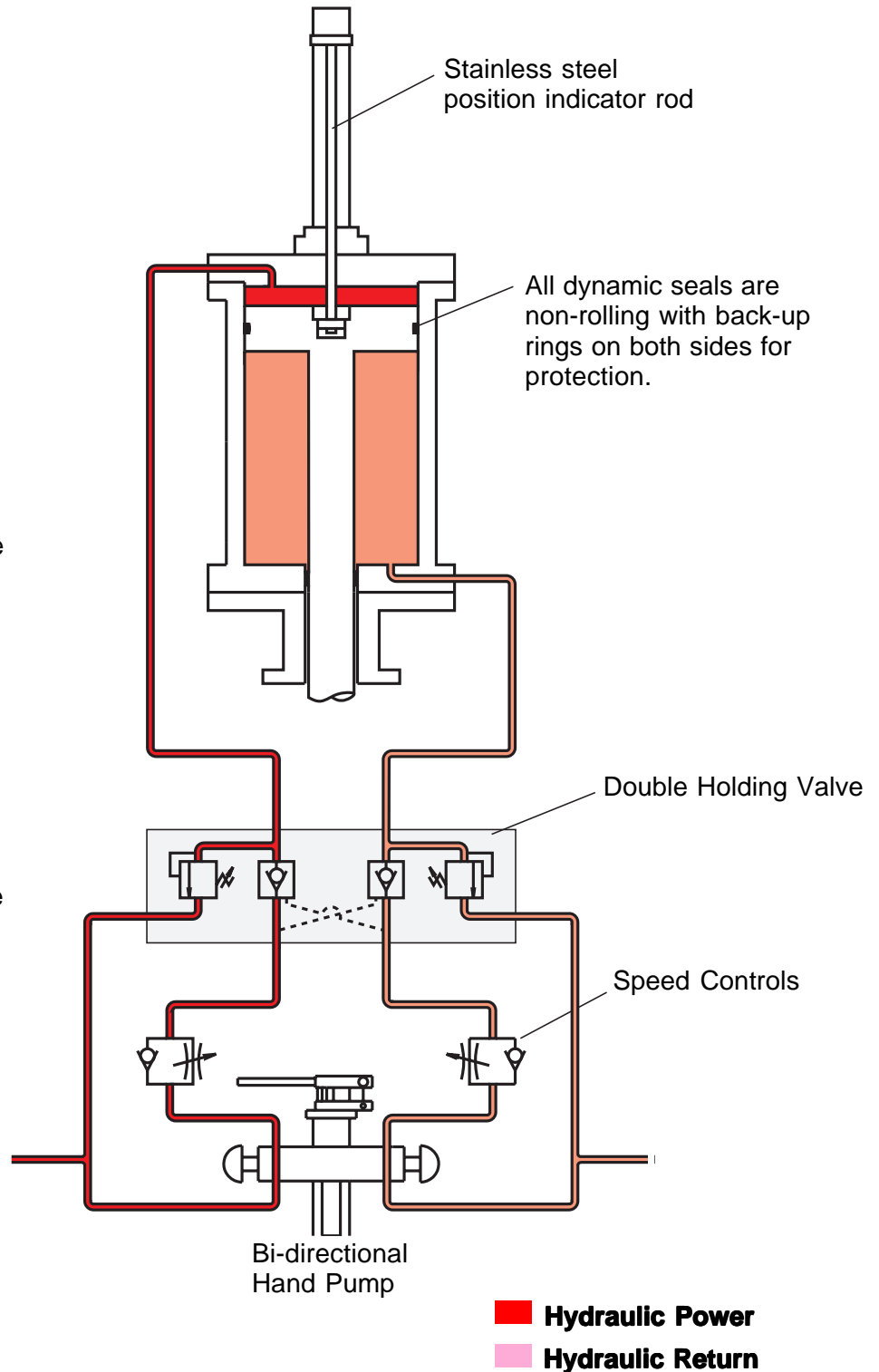
- Double acting or spring return operation.
- Thrust output range 900 to 600,000 lbs. (408 to 272,155 kg).
- Linear motion range to 72 inches (182.9 cm).
- Power supply pressure range 50 to 3,000 psi (3.4 to 207 bars).
 - Hydraulic, gas/hydraulic, pneumatic
- Ambient temperature range:
 - -20°F to 250°F (-29°C to 121°C) Standard
 - -50°F to 250°F (-45°C to 121°C) Optional

FEATURES

- The hydraulic piston generates dependable and efficient thrust which acts directly on the valve stem.
- The linear motion is always smooth, even at rapid operating speeds.
- The actuator is mounted directly on the valve, centered on the valve stem for rigid support and precise alignment. The piston is threaded directly to the valve stem which permits installation on new or in-service valves.
- The actuator absorbs all end of stroke thrust to protect the valve.
- Operating speed is easily controlled. Hydraulic snubbers are used to slow the speed, at the end of stroke, on wedge type gate valves.
- The double holding valve hydraulically locks the actuator in any desired position, without drift.



Double holding valve, speed control and hand pump assembly.



DOUBLE HOLDING VALVE

The “Double Holding Valve” is a double pilot operated check valve combined with double thermal relief valves. To maintain precise valve position, the “Double Holding Valve” locks-in hydraulic fluid on both sides of the linear actuator piston and also provides thermal relief protection.

CONTROLS AND ACCESSORIES

L-Series linear actuators can be operated locally, remotely, or automatically by a variety of sensory and control devices. Shafer has developed over 4000 individual control systems to meet the many requirements of our customers.

- Manual hydraulic hand pump for emergency operation.
- Poppet type, positive seal, control valves.
- Double holding control valve.
- Hydraulic snubbers.
- Adjustable speed controls.
- Limit Switches.

QUOTATIONS

For additional information or quotations, please contact one of our sales engineers. An SFPA representative will be glad to assist with your specific inquiry, please have as much of the following information available as possible.

■ **Application Description:**

General description of the actuator requirements and valve control function.

■ **Valve Description:**

Manufacturer, size, stroke length, type, rating, model, stem diameter, maximum differential pressure, thrust requirements, stroking speed requirements, and the valve's operating temperature range.

■ **Actuator Power Supply:**

Hydraulic - gas/hydraulic - nitrogen vessels.
Pressure range of the power supply.

■ **Control Description and Accessories:**

Description of the actuator control function. Pilot pressures, electrical supply voltages, pressure sensing requirements, etc., where applicable. Requirements for position indication, emergency manual operation, speed control, power supply filtration, etc.

■ **Environment:**

Ambient temperature range.
Corrosion considerations.

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