Recognized as “Guardians of the World’s Gas Pipelines”
Portfolio answers flow control’s toughest automation, safety and productivity challenges
The Shafer rotary vane actuator was specifically designed for pipeline applications where rugged dependability of equipment is vital. The rotary vane actuators are used to automate ball valves or plug valves in all types of severe climatic conditions.

**Key Features**
- Constant torque output over the full 90° rotation
- Compact and vibration resistant with the actuator body centered directly over the valve stem
- 50 year life expectancy backed by a 10 year warranty
- Exceptional reliability with minimal maintenance

**Operating Temperature**
-60°C to 121°C
(-76°F to 250°F)

**Typical Applications**
Natural gas pipelines with the actuators powered by pipeline gas, slurry pipelines where the actuators are powered hydraulically

**Torque**
325 N-m to 2.0 million N-m
(2,875 lbf-in to 17.8 million lbf-in)

**Operating Pressure**
17.2 bar to 207 bar
(250 psi to 3,000 psi)
Shafer SH-Series
Gas Over Oil, Helical Spline Valve Actuator

The SH-Series actuator was specifically designed to automate small (2” to 8”) ball and plug valves on natural gas pipelines, using pipeline gas to power the actuator.

Key Features
• Constant torque output over the full 90° rotation
• No power gas regulators and relief valves required
• Gas-over-oil operation prevents internal corrosion and vastly extends seal life
• 50 year life expectancy backed by a 10 year warranty

Torque
101 N-m to 762 N-m
(900 lbf-in to 6,750 lbf-in)

Operating Pressure
13.8 bar to 103 bar
(200 psi to 1,500 psi)

Operating Temperature
-46°C to 121°C
(-50°F to 250°F)

Typical Application
Blow-down valves, meter runs compressor stations, gathering, transmission, storage

Shafer Subsea Rotary Vane Actuators

Emerson’s experience in providing Shafer subsea valve actuators spans 45 years. There are hundreds of valve actuators currently in service around the world. The actuators are powered hydraulically, and we also provide top-side Hydraulic Power Units to encompass a complete valve control system.

Key Features
• Subsea valve control at depths up to 1,000 meters
• Compact design facilitates subsea installation and retrieval
• Pressure compensation devices are not required
• 40 year design life backed by a 10 year warranty

Torque
325 N-m to 564,923 N-m
(2,875 lbf-in to 5 million lbf-in)

Operating Pressure
17.2 bar to 207 bar
(250 psi to 3,000 psi)

Typical Applications
Tanker mooring systems, loading & off-loading, PLEM valve control, subsea manifold valve control
We take on the most critical applications
Shafer Emissions Controlled Actuation Technology (ECAT)

ECAT is a unique, eco-friendly, valve operating system specifically designed for natural gas pipelines. The novel design uses pipeline gas to power the actuator without any associated gas emissions.

Key Features
- ECAT system utilizes the field-proven rotary vane actuator and control components
- An innovative power pack re-injects gas back into the pipeline after valve operation
- The re-injection mechanism uses utility or solar power for remote applications
- The reliability of the rotary vane gas-over-oil actuator with no associated emissions

Operating Pressure
17.2 bar to 153 bar (250 psi to 2,220 psi)

Operating Temperature
-29°C to 121°C (-20°F to 250°F)

Typical Application
Mainline isolation valves, remote valve control, compressor station ESD, linebreak and high/low pressure shut down

Torque
325 N-m to 451,939 N-m (2,875 lbf-in to 4 million lbf-in)
Shafer Hydraulic Power Units (HPU’s)

Shafer Hydraulic Power Units have been manufactured for over 40 years. The majority of installations are for outdoor, severe service and/or hazardous locations. The HPU’s are custom engineered to provide reliable hydraulic fluid power for our valve operating systems. The HPU’s are designed to stroke multiple valves singly or in unison, depending on our client’s needs.

Key Features
- An innovative motor control system ensures there is sufficient fluid volume and pressure for a complete shutdown in ESD applications.
- A pressurized reservoir prevents ingress of moisture and fluid contamination which is critical for long life in hostile environments.
- Piston accumulator seals are lubricated on the nitrogen side, vastly extending seal life.

Capabilities
- Accumulator fluid capacity from 19 litres to 3785 litres (5 gallons to 1,000 gallons)
- Operating pressures up to 207 bar (5,000 psi)
- Biodegradable or petroleum based fluids
- Hazardous area installations

Energy Sources
Electric motors, solar power, gasoline or diesel engines, pneumatic driven hydraulic pumps

Typical Applications
Slurry pipeline and pumping station valve actuators, offshore loading terminals and buoys, offshore platforms for subsea valve actuators, portable or solar powered HPU’s for valve operation in remote locations