

Recognized as “Guardians
of the World’s Gas Pipelines”



Shafer™ Actuation Solutions



A photograph of industrial pipes in a factory or refinery setting during dusk or dawn. The pipes are arranged in a perspective that leads towards the background. The lighting is soft and blue-toned, with some blurred lights in the distance.

SHAFFERTM

Portfolio answers flow control's toughest
automation, safety and productivity challenges

HYDRAULICS

Actuator

VALVE CONTROL FOR SUBSEA AND OTHER CRITICAL APPLICATIONS



Shafer RV-Series Rotary Vane Valve Actuator

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

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)

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





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 Actuator

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

Torque

325 N-m to 451,939 N-m
(2,875 lbf-in to 4 million lbf-in)

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





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

**Emerson Automation Solutions
Actuation Technologies
World Area Headquarters**

North & South America
19200 Northwest Freeway
Houston TX 77065
United States
T +1 281 477 4100

Av. Hollingsworth
325 Iporanga Sorocaba
SP 18087-105
Brazil
T +55 15 3413 8888

Asia Pacific
No. 9 Gul Road
#01-02 Singapore 629361
T +65 6777 8211

No. 1 Lai Yuan Road
Wuqing Development Area
Tianjin 301700
P. R. China
T +86 22 8212 3300

Latin America
1300 Concord Terrace Suite 400
Sunrise, Florida 33323,
United States
T +1 954 846 5030

Middle East & Africa
P. O. Box 17033
Jebel Ali Free Zone
Dubai
T +971 4 811 8100

P. O. Box 10305
Jubail 31961
Saudi Arabia
T +966 3 340 8650

24 Angus Crescent
Longmeadow Business Estate East
P.O. Box 6908 Greenstone
1616 Modderfontein Extension 5
South Africa
T +27 11 451 3700

Europe
Holland Fasor 6
Székesfehérvár 8000
Hungary
T +36 22 53 09 50

Strada Biffi 165
29017 Fiorenzuola d'Arda (PC)
Italy
T +39 0523 944 411

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