



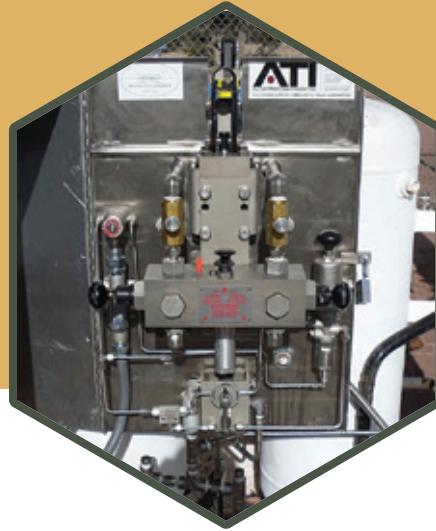
FIELD SERVICE



RATE-OF-DROP KITS, CALIBRATION, TESTING



SHAFER, EIM, & OTHER RETROFIT KITS



- Specialized maintenance service team that offers expert field and in-house valve actuator repair, retrofitting, refurbishment and replacement, as well as automation and calibration.
- The combination of all products and services at our facility assure that our clients are provided with a high level of customer service, increased efficiency, improved quality and decreased delivery times.
- Complete disassembly for audit
- Thorough inspection and cleaning
- Factory of stocked parts including seals and gaskets
- Machining and parts replacement as needed
- Re-assembly to strict ATI standards
- Complete final pressure and operation testing
- Paint and protective coatings: 2, 3, 4 coat polyurethane and epoxy systems

The ATI Rate-of-Drop Test Kit is used to calibrate and simulate various pipeline operating scenarios in order to test automation control strategies. Supplied in a portable self-contained enclosure, the Rate-of-Drop Test Kit is easily connected to the control system in the field. Quick-disconnect ports, and precision gauges are included to measure the pipeline pressure and various pressures within the control module. The Rate-of-Drop Test Kit is also used to calibrate the trip points for the Line Break, Station Bypass, and Low Pressure ESD control modules. Various emergency scenarios can then be simulated, under live conditions to test control action without inadvertently causing a shutdown. Utilizing the Rate-of-Drop Test Kit to calibrate and test control modules ensures the valve activates only when desired.

Cost for actuator maintenance and repair increases with the age and wear of the actuator. Retrofitting is a process of auditing old actuators and re-automating them with new and improved controls. This ensures that your plant is more efficiently controlled, and any changes due to age and wear are addressed. Complete bolt-on packages are available for brand-name actuators, while the actuator is in place, without any service interruption. Hand pump replacements, high pressure controls, limit switches and poppet blocks are also available. If the audit shows that replacement is not necessary, spare kits for pumps and poppets are also available.

- Prolongs the asset life of the actuator for an additional 10+ years
- Parts and materials in stock for 4 and 12 cubic inch hand pumps
- Easy bolt-on installation for all components



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DEPEND ON ATI



Passion for CustomizATIon

AUTOMATION SOLUTIONS

ACTUATORS • CONTROLS & INSTRUMENTATION
POWER SYSTEMS • SERVICES



DEPEND ON ATI

★ Global Leader in Customized Valve Automation ★

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ACTUATORS



LINEAR PNEUMATIC

- Piston Diameters: 4" to 44". Tandem piston design optional
- Stroke Lengths: 1" to 110"
- Failure Options: Close, Open, Last, Spring, Air Receiver
- Manual Override: Handwheel or Handpump
- Max Working Pressure: 150 psig instrument air
- Max Thrust Available: 450,000 lbf
- Materials: Full carbon steel construction with bronze/stainless components
- Valve Compatibility: Gate, Globe, Control, Choke, and Rising-Stem Ball
- Temperature Range: Standard -40°F to 200°F, Low -65°F to 200°F, High -20°F to 400°F

LINEAR HYDRAULIC

- Piston Diameters: 2" to 30"
- Stroke Lengths: 1" to 110"
- Failure Options: Close, Open, Last, Spring, Accumulator
- Manual Override: Handpump
- Max Working Pressure: 3000 psig hydraulic fluid or compressed gas
- Max Thrust Available: 2,100,000 lbf
- Materials: Full carbon steel construction with bronze/stainless components
- Valve Compatibility: Gate, Globe, Control, Choke, and Rising-Stem Ball
- Temperature Range: Standard -40°F to 200°F, Low -65°F to 200°F, High -20°F to 400°F

QUARTER-TURN HYDRAULIC

- Range of Rotation: 0° to 90° with addition 9° of reserve
- Failure Options: Close, Open, Last, Spring, Accumulator
- Manual Override: Handpump
- Max Working Pressure: 1500 psig hydraulic fluid
- Max Torque Available: 3,000,000 lb-in
- Materials: Full carbon steel construction with bronze/stainless components
- Valve Compatibility: Butterfly, Ball, and Plug
- Temperature Range: Standard -40°F to 200°F, Low -65°F to 200°F, High -20°F to 400°F

LINEAR PIPELINE GAS-OVER-OIL

- Piston Diameters: 2" to 30"
- Stroke Lengths: 1" to 110"
- Failure Options: Last
- Manual Override: Handpump
- Max Working Pressure: 1500 psig
- Max Thrust Available: 1,000,000 lbf
- Materials: Full carbon steel construction with bronze/stainless components
- Valve Compatibility: On/Off Linear Isolation Valves
- Temperature Range: Standard -40°F to 200°F, Low -65°F to 200°F, High -20°F to 400°F

QUARTER-TURN PIPELINE DIRECT GAS

- Range of Rotation: 0° to 90° with addition 9° of reserve
- Failure Options: Last
- Manual Override: Handpump
- Max Working Pressure: 1500 psig
- Max Torque Available: 3,000,000 lb-in
- Materials: Full carbon steel construction with bronze/stainless components
- Valve Compatibility: On/Off Quarter-Turn Isolation Butterfly, Ball, and Plug
- Temperature Range: Standard -40°F to 200°F, Low -65°F to 200°F, High -20°F to 400°F

QUARTER-TURN PIPELINE GAS-OVER-OIL

- Range of Rotation: 0° to 90° with addition 9° of reserve
- Failure Options: Last
- Manual Override: Handpump
- Max Working Pressure: 1500 psig
- Max Torque Available: 3,000,000 lb-in
- Materials: Full carbon steel construction with bronze/stainless components
- Valve Compatibility: On/Off Quarter-Turn Isolation Butterfly, Ball, and Plug
- Temperature Range: Standard -40°F to 200°F, Low -65°F to 200°F, High -20°F to 400°F

PIPELINE GAS MOTOR ACTUATOR

- Valve Compatibility: All Linear and Rotary Valves with Gear Operators
- Failure Options: Last
- Manual Override: Handwheel
- Working Pressure: 400 psig to 1500 psig unregulated gas
- Max Gear Operator Turns: 5000
- Materials: Full anodized aluminum steel construction with bronze/stainless components
- Temperature Range: Standard -40°F to 200°F, Low -65°F to 200°F, High -20°F to 400°F
- Temperature Range: -40°F to 120°F
- Max Output Torque: 330 ft/lbs



POWER SYSTEMS



HYDRAULIC POWER UNITS

ATI Hydraulic Power Units are designed as reliable and dependable valve automation and control solutions. HPU's can be customized to fit any application, control system, failure logic, or hazardous area classification. Typical construction is skid mounted or self-contained units to control single or serval actuators at the same time. Accumulators are used for power storage and failure operations on loss of power or control signal. Solar powered options are available.

NITROGEN POWER RESERVE UNITS

ATI Nitrogen Power Reserve Units operate direct high-pressure gas or gas-over-oil actuators when the primary power source is lost. We use multiple DOT compliant high-pressure nitrogen bottles, manifolded together to provide a reliable back-up gas supply for any actuator operating conditions. Power units are custom designed for the actuators to be operated and the customer control requirements. All necessary regulators, gauges, and valving are provided to supply nitrogen at the specified operating conditions. Relief valve protection is provided along with low-pressure sensing and alarm feedback. The units are supplied in sturdy, ventilated all-metal cages with two coats of aliphatic polyurethane for rugged outdoor environments.



CONTROLS & INSTRUMENTATION



ELECTRO-HYDRAULIC CONTROL SYSTEM

- Compatibility: All Valves and Actuators, both Linear and Rotary
- Positioning: 4-20mA with continuous feedback
- Supply: AC, DC, Solar
- Failure Options: Close, Open, Last
- Hazardous Location: up to Class 1 Division 1
- Motor Duty Cycle: up to 100%
- Temperature Range: -40°F to 120°F
- Max Output Pressure: 3000 psig
- Hydraulic Displacement up to 50 gallons

HYDRAULIC POSITIONING SYSTEM

The ATI Hydraulic Positioning System (HPS) provides throttling capability for our hydraulic actuators. This combination of ATI technology provides an excellent solution for control valve applications that require hydraulic actuation. The HPS receives a 4 – 20 mA signal from the DCS or PLC and uses ATI proprietary technology to move the actuator to its desired position. A comparator circuit and feedback mechanism are integral in an explosion- proof enclosure. The positioning system is a severe service, durable solution with a proven track record of success in even the harshest of conditions, including offshore oil platforms.

BI-DIRECTIONAL STATION BYPASS SYSTEM

The ATI Automatic Station Bypass is designed to keep gas flowing in the event there are major compressor problems. This control solution was developed with reliability as the primary objective to ensure the Bypass Valve opens only when it is necessary. To achieve this objective, the proven Poppet Valve is combined with a reliable, differential pilot valve to form a stand-alone control module. The differential pressure valve monitors the suction and discharge pressures of the compressor station. When the differential drops below the adjustable setpoint, pilot gas is passed to the pilot of the poppet valve and control action is initiated. Utilizing the pipeline gas for both the pilot gas and power media makes the Automatic Station Bypass control system independent pf regulator and other power media failure. The design simplicity and minimal components ensure the bypass valve opens only when required.

AUTOMATIC LINE BREAK SYSTEM

The ATI Automatic Line Break System senses a pipeline break or major leak through a unique Rate-of-Drop circuit. This circuit consists of a differential pilot valve, which senses pipeline pressure and compares it with the gas in a reference tank at the normal pipeline pressure. When the pressure in the pipeline decreases, the pressure in the reference tank also decreases, but at a rate dictated by a calibrated orifice. This establishes a differential pressure between the reference tank and the pilot connected directly to the pipeline. The rate of pressure differential drop is indicative of the severity of pipeline gas loss. The Differential Pilot Valve, set at a calibrated setpoint, senses this rate of drop. When the pilot valve trips, the actuator is activated to close the main pipeline valve. This Rate-of-Drop circuit eliminates inadvertent shutdowns on short duration pressure bumps. A manual reset feature is available for safety purposes. Utilizing the pipeline gas for both the pilot gas and power media makes the Automatic Line Break System independent of regulator and other power media failure.

HI-LO SHUTDOWN SYSTEM

The Hi-Lo Shutdown system continuously monitors pipeline pressure to ensure that operation staying with two setpoints. If pipeline pressure exceeds or drops below the setpoints, the Hi-Lo system signals the actuator to close the valve, isolating that section of the pipeline. Although the system is automatic and will re-open the pipeline after pipeline pressure normalizes, the system can be configured with a manual reset. Pilots and other pressure sensing devices allow ATI to provide smarter control packages to the actuator.

