



Customized

PIPELINE SOLUTIONS

VALVE ACTUATORS • CONTROLS
• POWER • SERVICE



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Customized

VALVE AUTOMATION

AND MORE...



ATI was founded more than 20 years ago with a well-defined vision: Develop high-quality products, customized to meet our customers' specific needs. We achieve that vision by consistently making the most reliable products available. Our daily culture at ATI is based on a set of core values that begins with our people and ends with our customers. What this means is that while we focus on moderation, we are always listening to understand your needs.

We share a passion for learning and are constantly communicating that knowledge to each other as we strive to create the best solutions. We have the willpower to build the best products for our customers, and we stand behind what we build. We never forget that we are here to develop and produce the best customized valve automation solutions possible.

Our modern manufacturing and engineering center in Houston provides a uniquely customized approach. Manufacturing is fully integrated and does not commence until engineering has developed a solution tailored to your requirements.



Gevalco®

The

TRUSTED NAME

IN PIPELINE PRODUCTS



As with our parent company, ATI, Gevalco is recognized the world over. The brand has a long history based on innovation and field experience. The Gevalco name stands for the latest technology pipeline products, customized for end use. In addition to the actuator quality, a broad range of control packages are available to automate the valve system, making it fit for purpose. Everything we do is engineered with the specific application and optimized performance in mind.

OUR PROVEN PIPELINE SOLUTIONS

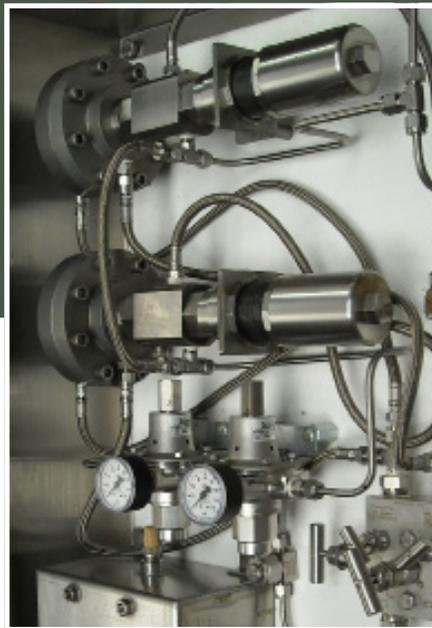


VALVE ACTUATORS



ATI is recognized globally for its broad range of dependable linear and quarter-turn actuators. Our pipeline actuators are used on all types of quarter-turn and rising stem valves, including gate valves, globe valves and rising stem ball valves. We offer both pneumatic and hydraulic actuators in spring-return and double-acting varieties depending on the failure mode specified. In addition, we offer a full line of manual overrides.

CONTROL SYSTEMS



ATI offers its own proprietary line of control systems with a superb track record. We also offer control systems from well-known and commonly specified manufacturers. Our safety controls – line break systems, hi/lo shutdowns and compressor station bypass, assure that pipelines operate safely. Our brackets are custom designed to accommodate all controls needed to achieve proper valve automation. Leading control valve manufacturers rely on ATI actuators for precise positioning in critical applications.

POWER SYSTEMS



With ATI power systems, you will never be restricted by your available power source. Our flexibility accommodates all power sources, including air, natural gas, hydraulic fluids, electric and solar. We can also amplify the power to reduce the actuator size to provide a more cost-effective actuator solution. ATI power systems can be seamlessly integrated with ATI actuators and control systems to provide a fully integrated package.

ATI'S VALUE-ADDED SERVICES



REPAIR



ATI FrontLine Services specializes in valve actuator repair, both in the field and in our ISO 9001:2008 certified facility. We not only repair our own products, but we have standard bolt-on control packages to upgrade and retrofit competitive actuator brands in the field without removing them from service. We stock repair components, including seals and gaskets, so repairs can be made quickly and efficiently.

INSTALLATION/ SERVICE



ATI technicians have years of experience in valve actuator installation and service. Our team members are available around the clock to support our customers and their emergency requirements. Our commitment helps avoid unscheduled downtime, prevents failures and extends product life cycle.

CALIBRATION



ATI technicians are experienced in the use of calibration test kits in order to keep field instrumentation accurate and problem-free. We can conduct field calibration on safety systems in the field with our proven rate-of-drop test kits. If preferred, we can supply the kits and training for your personnel. Either way, we are your partner in providing safe pipeline control.

GAS MOTOR ACTUATORS



GAS MOTOR ACTUATORS

ARE
RELIABLE, SIMPLE AND
ECONOMICAL



ATI gas motor actuators utilize unregulated pipeline gas to provide a simple, reliable and economical means of automating valves without gear boxes. Using pipeline gas up to 1500 psi to drive a gas motor coupled to a gear train, these actuators motorize the input shaft of the valve gear box. Instead of spending 30-45 minutes operating a gear box hand wheel, the gas motor actuator can open or close a 36-inch valve in less than two minutes.

The ATI gas motor actuator utilizes high-pressure technology. Fabricated from lightweight aluminum, the actuator eliminates the costly hardware of traditional actuators because it is directly mounted to the standard gear box. With the gear motor design, gas consumption is reduced by 50% or more. Proven poppet technology makes our patented control package leak-proof and reliable. Utilizing the high-pressure pilot valve, any control strategy such as remote electric, ESD or line break control can be integrated with the gas motor controls.

The gas motor actuator can save 25% to 40% of the automation cost for a new, large pipeline valve and even greater savings on an existing valve. If gas pressure is not available, manual hand wheel operation can be employed.

FEATURES AND ADVANTAGES



- Operates with 400-1500 psi unregulated gas
 - Lightweight – 250 pounds
 - Allows manual hand wheel backup operation of gear box
 - Mounts easily to any standard gear box without costly adaptors
 - All control elements are constructed of marine-grade, hard-anodized aluminum and stainless steel to maximum corrosion resistance and longer cycle life
- 
- High-pressure poppet valve technology prevents leaks
 - Optional limit switches and solenoids available
 - Shutdown control modules optional
 - No special tools needed for limit valve adjustments
 - Optional oil mist extractor/muffler
 - Knockout filters for dirty gas
 - Sour gas option

QUARTER-TURN GAS-OVER-OIL AND LINEAR ACTUATORS



The Gevalco® engineered quarter-turn gas hydraulic (gas-over-oil) valve actuator from ATI is specifically designed to operate using direct pipeline natural gas with pressures up to 1500 psi, providing torque outputs over 1 million inch-pounds.

The design utilizes a proven canted scotch yoke actuator with dual oil tanks. The unique actuator provides maintenance-free, long cycle-life actuation. The Gevalco control modules can be used with the actuator to implement various valve control strategies. Using a single cylinder of varying size with ASME-certified oil tanks mounted to the actuator body, our gas hydraulic actuator uses the high-pressure gas directly from the pipeline to pressure the hydraulic fluid in the tanks into the cylinder at up to 1500 psi. By utilizing the pipeline gas itself, for both the pilot gas and power media, this makes the actuator system independent of regulator and other power media failure. The hydraulic hand pump provides smooth, efficient manual operation as well as an additional safety measure when power is unavailable or fails.

GEVALCO GAS-OVER-OIL ACTUATORS

PROVIDE LONG SERVICE LIFE IN TOUGH
PIPELINE CONDITIONS



FEATURES AND ADVANTAGES



- Proven Gevalco poppet valve directs the power gas to the appropriate oil tank
 - The hand pump can be used to safely, and reliably open and close the valve at its maximum torque requirement, even with no power available
 - Hand pump module opening/closing speed controls are field-adjustable without the need for special tools
 - Canted scotch yoke mechanism on quarter-turn actuators provides high breakaway torque at the beginning of the stroke, resulting in smaller cylinder, reduced cost and less gas consumption
- ★
- Teflon-impregnated, sintered bronze bushings on a heavily chrome plated guide bar absorb side loads, guaranteeing smooth operation and longer cycle life
 - External linear travel stops, independently adjustable, eliminate side loading while providing precise adjustment
 - Electroless nickel-plated, precision-honed cylinder walls ensure long-lasting and trouble-free service
 - Teflon-impregnated wear band eliminates metal-to-metal contact
 - Teflon piston and rod seals are preloaded with O-ring suitable for severe service conditions
- ★

DIRECT GAS ACTUATORS

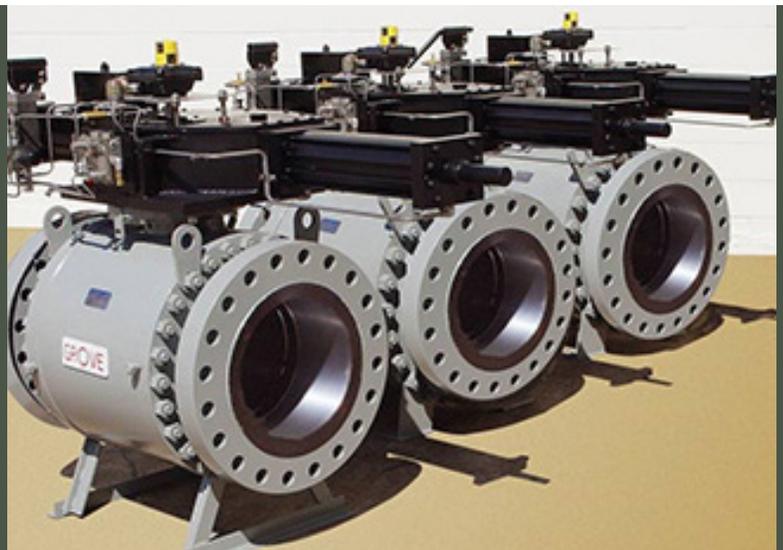


The ATI Quarter-Turn High-Pressure Direct Gas valve actuator incorporates proven pipeline technology and is designed to operate using direct pipeline natural gas with pressures up to 1500 psi, providing torque outputs over 1 million inch-pounds. The unique design utilizes the best features of the traditional gas-over-oil (gas hydraulic) actuator, while solving some of the problem areas associated with these designs. The design is based on separate gas and hydraulic cylinders to provide simple, reliable, low-maintenance actuation for pipeline valves.

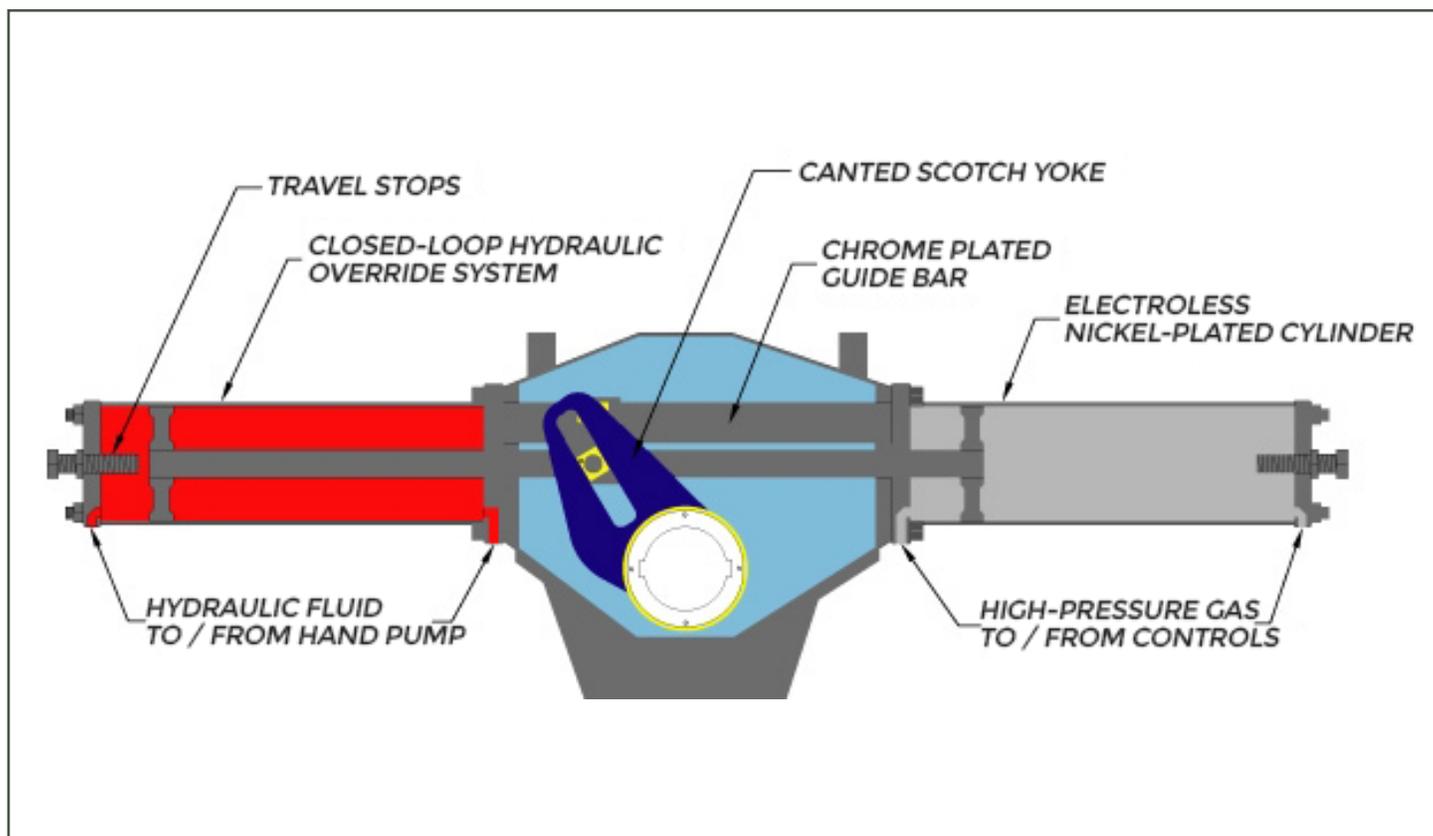
Utilizing separate cylinders for the high-pressure power gas and the hydraulic hand pump eliminates the mixing of gas and oil, and therefore stops the release of oil to the atmosphere during valve operation. The ATI direct gas actuator utilizes 50% to 75% less natural gas during operation than the traditional gas hydraulic system.

DIRECT GAS ACTUATORS

INCORPORATE PROVEN FEATURES FOR HIGH-PRESSURE OPERATION



FEATURES AND ADVANTAGES



- Less gas composition (no gas/oil tanks)
- Gevalco-designed closed-loop hydraulic system for hand pump
- No oil venting to environment
- Less expensive
 - No spillage
 - No condensate drainage
 - No oil disposal or recycle



- Uses 75% less onboard oil than gas/oil units
- Low maintenance
- Easy adjustable opening-and-closing speed controls



AUTOMATIC LINE BREAK CONTROL SYSTEM



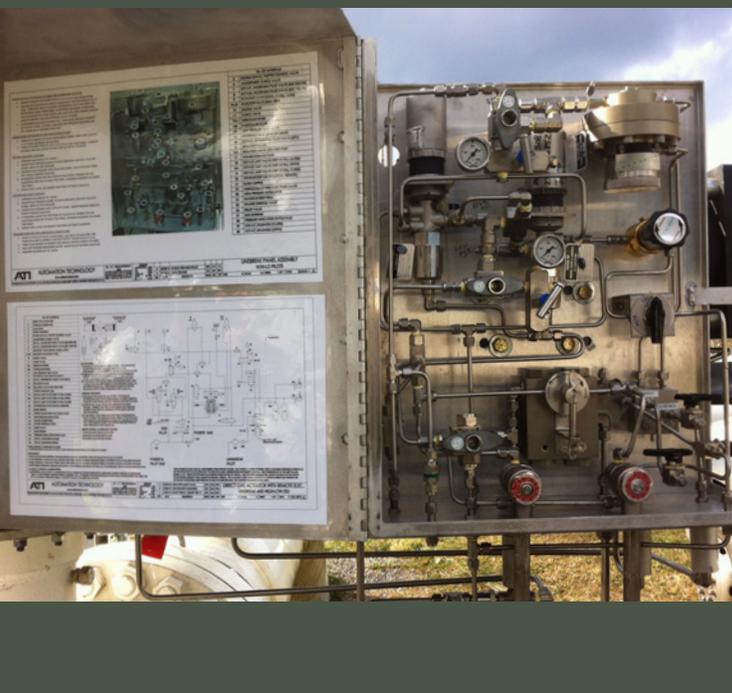
AUTOMATIC LINE BREAK CONTROL

HELPS PREVENT
PIPELINE LEAKS AND BREAKS



The Gevalco Automatic Line Break Control module from ATI is designed to automatically close main pipeline valves in the case of a major leak or break. By quickly and reliably closing the main pipeline block valves, gas loss can be minimized to prevent fires and other catastrophic disasters.

The line break module detects a pipeline break or major leak through a unique circuit. The circuit consists of a differential pilot valve that detects pipeline pressure and compares it to 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. The rate of pressure differential drop is indicative of the severity of pipeline gas loss. The differential pilot valve, set at a calibrated set point, 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. Utilizing the pipeline gas itself, for both pilot gas and power gas, makes the Automatic Line Break Control system not use a pressure-reducing regulator and other power media that can fail.



FEATURES AND ADVANTAGES



- **High-pressure construction – no regulator, relief valve or mechanical switching valve to fail or maintain**
- **Differential pilot valve utilizes a stainless steel diaphragm for accuracy and repeatability**
- **Easily adjusted Rate-of-Drop trip setpoint (10 to 150 psi/min)**
- **No mechanical linkages subject to environmental failure**



- **Marine-grade, hard-anodized aluminum body for both poppet and differential pilot valve**
- **Limit valve ensures complete valve closing**
- **Single unit design for diaphragm unit, and directional control valve for a shorter diaphragm stroke and lower hysteresis**
- **Easily calibrated with Rate-of-Drop kit (sold separately)**
- **Relies on pipeline gas making it more stable**



LOCAL AUTO-MANUAL CONTROL



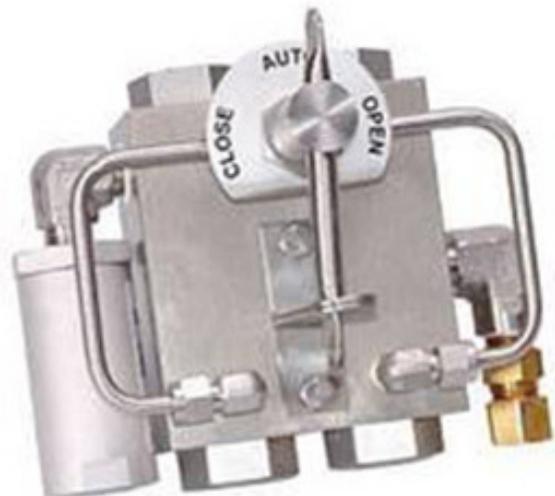
The ATI Local Auto-Manual Control module is based on proven, high-pressure pilot-type poppet technology. ATI has utilized this technology for many years in its Dual Three-way Poppet Control Valve to provide the selective directional control of the power media for any direct gas, gas-over-oil or hydraulic valve actuator. The local Auto-Manual function is integrated with the poppet valve assembly, utilizing a commercially available three-way stainless steel ball valve with a stainless steel lockable handle, eliminating large levers. The poppet valve combines simplicity of design with corrosion-resistant materials and easily replaceable nylon poppets to provide reliable, durable operation. With working pressures up to 3000 psi, the Dual Three-way Poppet Control Valve utilizes the direct pipeline pressure gas for both power gas and pilot media,

thereby eliminating the need for any regulators or special low-pressure control supply systems. Eliminating this point of possible failure significantly increases the reliability of the entire system. The compact design has multiple inputs and outputs to provide a central point for all final actuator control actions.

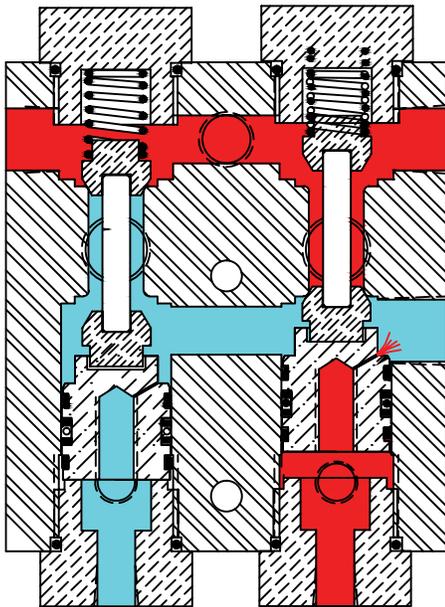
The sure action control of the poppet valve is achieved utilizing a pilot pressure on a piston to pop the nylon seals into the seat. This provides quick response and zero-leak control of the power gas directly to the actuator or to the hydraulic tanks. The poppet design allows for up to 1" flow port, providing high flow rates while handling contaminants.

LOCAL AUTO-MANUAL CONTROLS

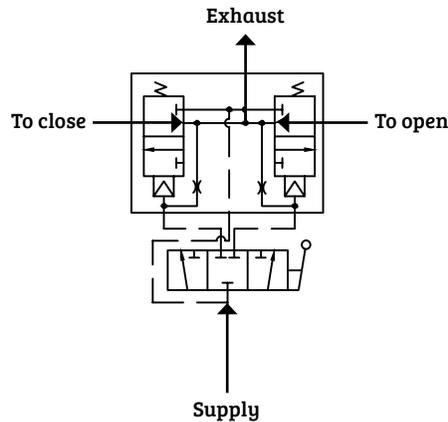
ARE COMPACT, SIMPLY DESIGNED AND
EXTREMELY RELIABLE



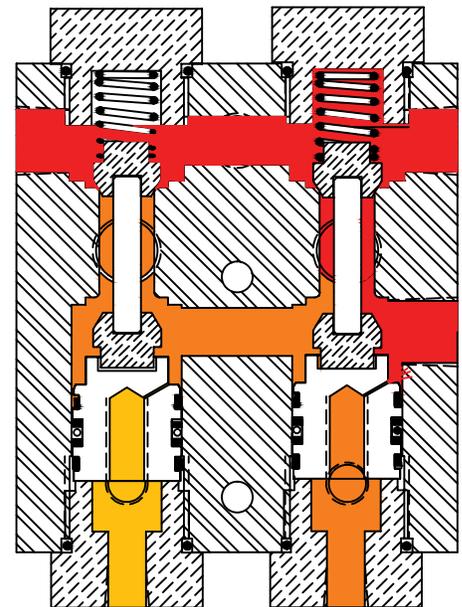
FEATURES AND ADVANTAGES



**POPPET VALVE PRESSURIZING
ACTUATOR TO CLOSE PIPELINE
VALVE**



POPPET VALVE ASSEMBLY

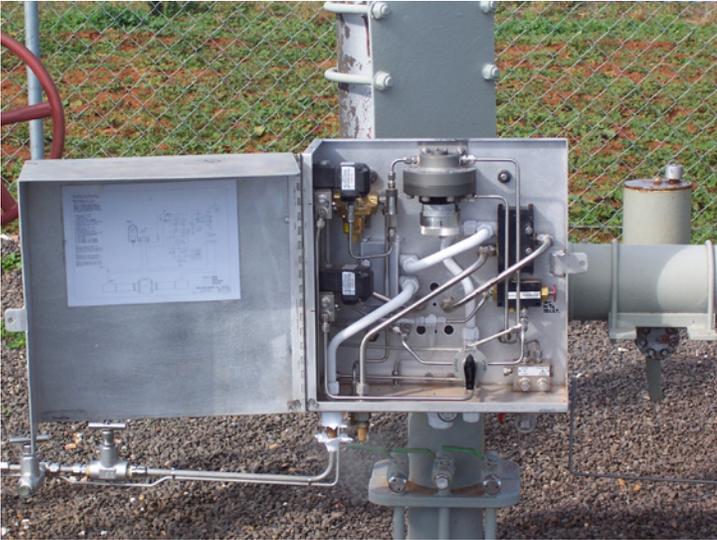


**POPPET VALVE RELIEVING
PRESSURE FROM ACTUATOR AFTER
CLOSING THE PIPELINE VALVE**

- Marine-grade, hard-anodized aluminum body with all stainless steel components
- Standard piston provides 4:1 pressure ratio for pilot operation of other control components
- Low-pressure pistons available for retrofit applications

- Compact assembly (4"x4"x1½") for direct valve mounting
- Integrated in-line filter on power and pilot gas
- Exhaust check valve to prevent atmospheric contaminants from entering the poppet valve
- Suitable for both gas and hydraulic applications

BIDIRECTIONAL COMPRESSOR STATION BYPASS CONTROL



The Gevalco Automatic Bidirectional Station Bypass Control module from ATI is designed to keep gas flowing in the event there are major compressor problems in a bidirectional flowing pipeline. It is self-configuring to provide protection regardless of flow direction. The bidirectional system provides ultimate reliability of control action using a proven high-pressure poppet valve, which is combined with a reliable, differential pilot valve to form a stand-alone control module. Opposing sets of pressure-activated check valves route the appropriate suction and discharge signal, depending on flow direction, to the sensing inputs of the differential pilot valve. 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 pipeline gas for both the pilot gas and power media makes the system independent of regulator and other power media failure. The simple design, which utilizes minimal components, ensures the bypass valve opens only when required. The Rate-of-Drop Test Kit provides an accurate calibration of the trip point as well as the simulation of various operational failure scenarios for testing control action.

RELIABLE BYPASS CONTROL

ASSURES CONTINUAL FLOW IN
BIDIRECTIONAL PIPELINES



FEATURES AND ADVANTAGES



- High-pressure construction – no regulator, relief valve or mechanical switching valve
- Differential pilot valve utilizes a stainless steel diaphragm for accuracy and repeatability
- Marine-grade, hard-anodized aluminum body for both poppet and differential pilot valves
- Easily adjustable differential trip set point (1.0 psi to 14.5 psi)
- No mechanical linkages, which are subject to environmental failure
- Limit valve ensures complete opening of bypass valve
- Simple design with minimal components
- ATI Rate-of-Drop Test Kit insures accurate calibration (purchased separately)

HI-LO EMERGENCY SHUTDOWN PILOTS



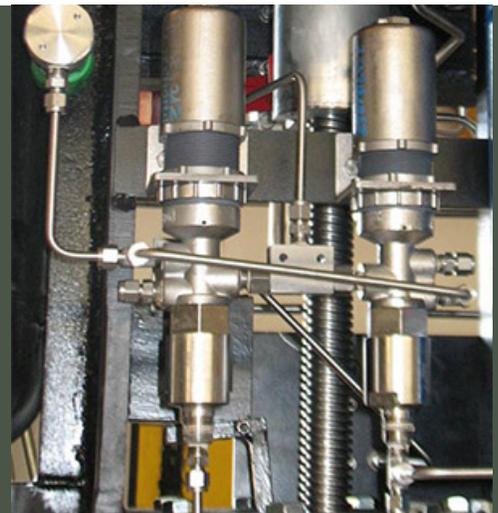
- **ATI Hi-Lo Pilot operating sensors can trigger an emergency valve shutdown on natural gas pipelines**
- **Field-adjustable high- or low- pressure set points**
- **Converts pressure into motion when set point is reached**



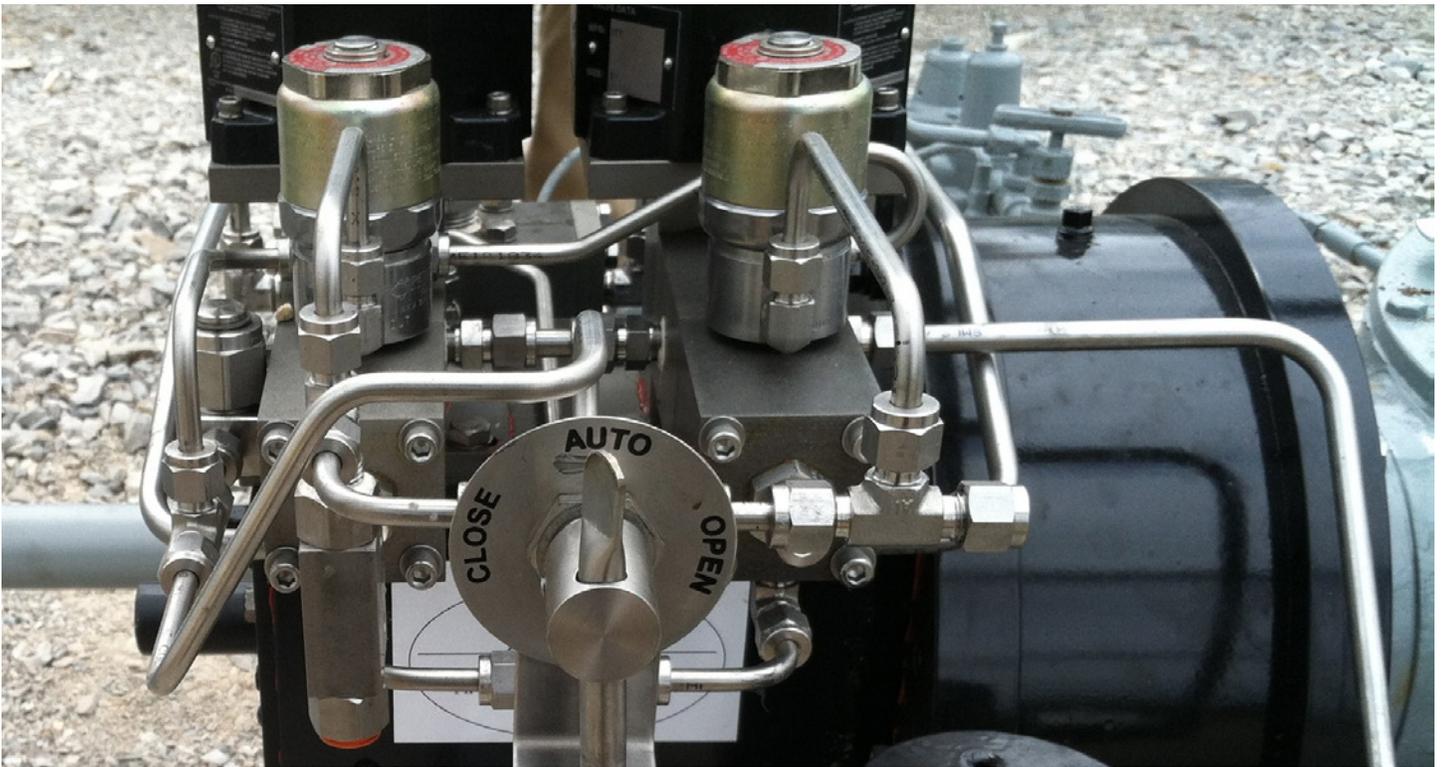
- **Pressure ranges from 5000 psi (high) to 30 psi (low)**
- **Manufactured with low-corrosion materials**
- **Positive piston travel stop limits to guard against overpressure**
- **Pilots are integral to the poppet block, providing high flow to quickly actuate the valve closure**



HI-LO EMERGENCY SHUTDOWN PILOTS



REMOTE ELECTRIC CONTROL



The Remote Electric Control module from ATI is designed to operate pipeline valves from a remote electric signal. Explosion-proof electrically operated high-pressure solenoid valves are integrated with the proven poppet valve to provide reliable, maintenance-free control based on a wide range of electrical signals. The electrical signals can be AC or DC, at any specific voltage. The high-pressure solenoids can be set up

for power fail-safe or energized to activate operation depending on the customer's requirements. Explosion-proof limit switches are supplied as a standard part of the Remote Electric Control module to provide for valve position feedback and to reset the system on end of travel condition. Optionally, manual override control and local reset controls can be integrated into the control module.

OPERATING PIPELINE VALVES REMOTELY
WITH AN ELECTRIC SIGNAL
IS POSSIBLE WITH

THE ATI REMOTE ELECTRIC CONTROL MODULE



HYDRAULIC HAND PUMP



The ATI designed and manufactured Hydraulic Hand Pump utilizes current technology to provide an efficient backup system for opening and closing valves when power gas is not available. Utilizing a balanced piston design eliminates the possibility of cavitation or creating a vacuum because the pressure on either side of the piston is always equal, and both cavities are always full of oil. The high flow capacity provides easy and efficient manual opening and closing of even the largest valves. The Hydraulic Hand Pump

includes an automatic reset function on the open/close selectors to prevent inadvertent movement of the pump handle when power gas is reintroduced. This feature automatically resets the pump to the neutral position when gas pressure is detected. A pressure relief push button is provided to relieve any internal pressure after pumping is complete. This allows the pump ram to be retracted into the pump, out of any hostile atmosphere. The Hydraulic Hand Pumps are available in 4-cubic-inch and 12-cubic-inch displacement strokes.

HYDRAULIC HAND PUMP

FROM ATI ASSURES EFFICIENT AND
RELIABLE VALVE OPEN/CLOSE BACKUP
WHEN POWER IS UNAVAILABLE



NITROGEN POWER RESERVE UNITS



The ATI Nitrogen Power Reserve Units are utilized to operate direct high-pressure gas or gas-over-oil actuators when the primary power source, such as pipeline pressure, is lost. We use multiple Department of Transportation (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 according to the customer control requirements. All necessary regulators, gauges and valving are provided to ensure nitrogen is supplied at the specified operating conditions. Relief valve protection is also provided, along with low-pressure sensing and alarm feedback. The units are supplied in sturdy, lockable, ventilated all-metal cages.

NITROGEN POWER RESERVE UNITS

ARE CUSTOM DESIGNED FOR CUSTOMER
OPERATING REQUIREMENTS



HYDRAULIC POWER UNITS



ATI Hydraulic Power Units (HPUs) are completely self-contained, designed to operate hydraulic actuators and provide a power reserve when the primary power source is lost. HPUs can be powered electrically or pneumatically with capacity for one or more actuators. Electric-powered units can be designed for any voltage in order to deliver the required high-pressure (typically up to 1500 psi) hydraulic fluid needed to operate the actuators. ATI also manufactures pneumatically powered units utilizing air pressures as

low as 40 psi to generate hydraulic pressures up to 1500 psi. Accumulator tanks are sized based on the cycle requirements under failure conditions. The proven control components are used to ensure there is always power when it is needed, while incorporating a wide variety of emergency controls to provide customers with a system to meet their exacting needs. HPUs are provided on skids with all connections manifolded for easy field installation.

SELF-CONTAINED HPUs

ENSURE THAT POWER
IS ALWAYS AVAILABLE



FRONTLINE SERVICES

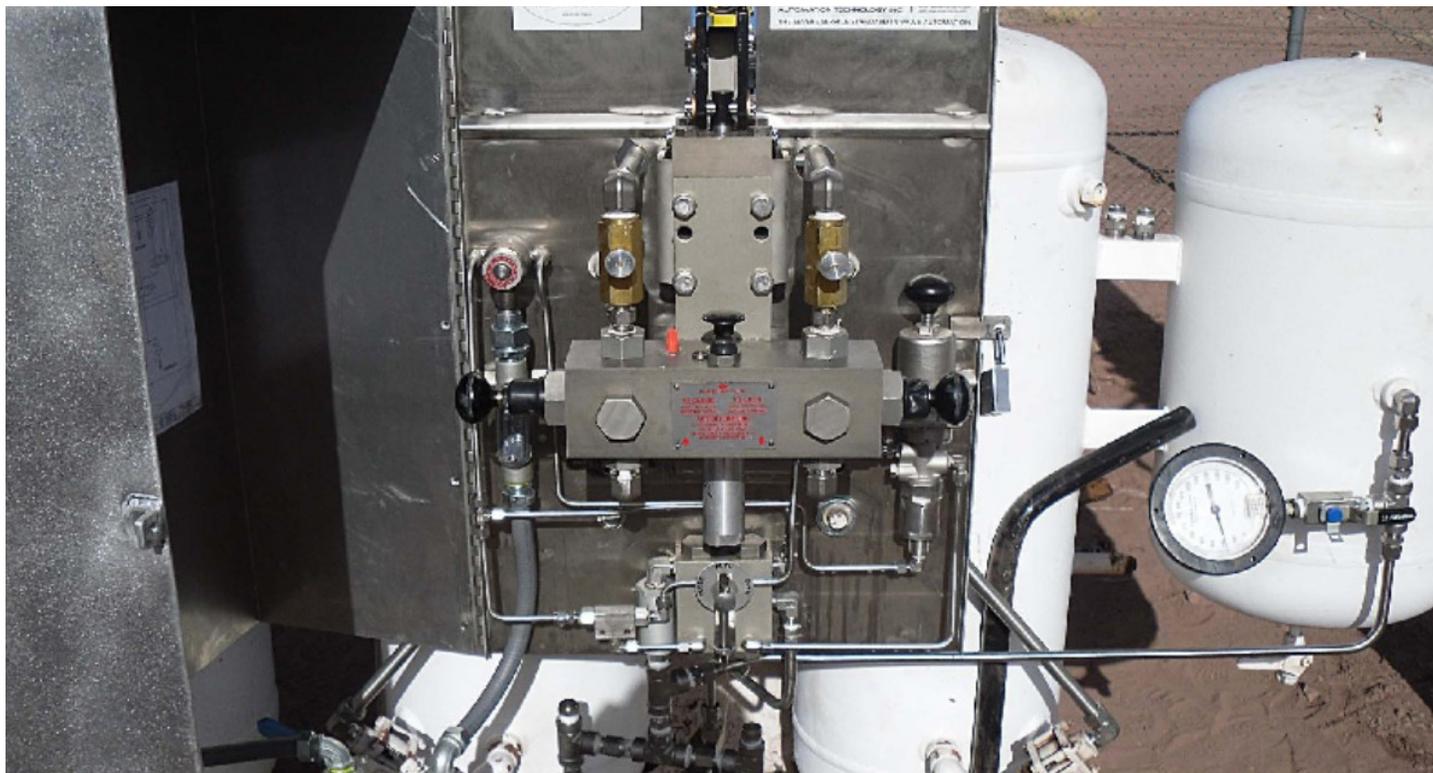


ATI's FrontLine Services offering utilizes our experienced field and shop service technicians for a variety of customer support. Repairs can be made either in our ISO 9001:2008 certified facility or at the job site. We specialize in installations and retrofits, as well as

field calibration of instruments and systems. FrontLine Services technicians are available around the clock for assignments to reduce customer operating downtime.



RETROFIT CONTROL KITS



Cost for actuator maintenance and repair increases with the age and wear of the actuator. Retrofitting is an essential process of auditing old actuators and re-automating them with controls. This ATI capability ensures that your pipeline is more efficiently controlled, and any changes due to age and wear are addressed.

We offer a complete bolt-on package for name-brand actuators, while the actuator is in place, without any service interruption. We can also replace hand pumps, high-pressure controls, limit switches and poppet blocks.

ATI RETROFIT KITS

CAN EFFICIENTLY AND COST-EFFECTIVELY
RETROFIT ATI AND COMPETITIVE ACTUATOR
CONTROL PACKAGES IN THE FIELD



FEATURES AND ADVANTAGES



- **Effective, easy bolt-on retrofit kit**
- **Parts and materials in stock for complete retrofit kit**
- **Quick shipments available on spare kits for hand pumps and poppets**
- **ATI-engineered and stocked brackets to accommodate most limit switches**

- **Can provide pre-assembled panel, including hand pump, for single shipment**
- **Quick and convenient bolt-on solutions without any interruption in service**
- **Simple way to retrofit with quality ATI actuators, whether your existing system is electronic or pneumatic**

RATE-OF-DROP TEST KITS



THE ATI ROD TEST KIT

IS ESSENTIAL IN CALIBRATING
PRESSURE TRIP POINTS



The ATI Rate-of-Drop (ROD) 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 test kit is also used to calibrate the trip points for the Line Break, Station Bypass, and High- 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.

FEATURES AND ADVANTAGES



- Accurate testing of Line Break with pipeline pressure level monitoring
- Determines pre-set Rate-of-Drop trip point
- Easy connection to test ports and isolation valves on Line Break module
- Station Bypass control module test ports connect the test kit in parallel with the differential pressure sensing lines from the suction and discharge of the compressor station

- Using the precision differential and digital pressure gauges, a station failure can be simulated and the exact trip point calibrated.
- ROD Test Kit can also calibrate and test all other high- or low-pressure ESD control modules
- ATI technicians, utilizing the Line Break calibration charts, can test the set point of the differential switching valve against simulated rates of pressure drop to obtain an exact trip point



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