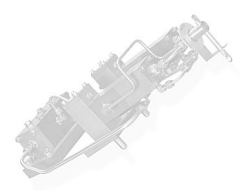
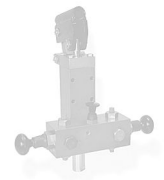
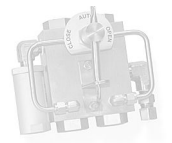
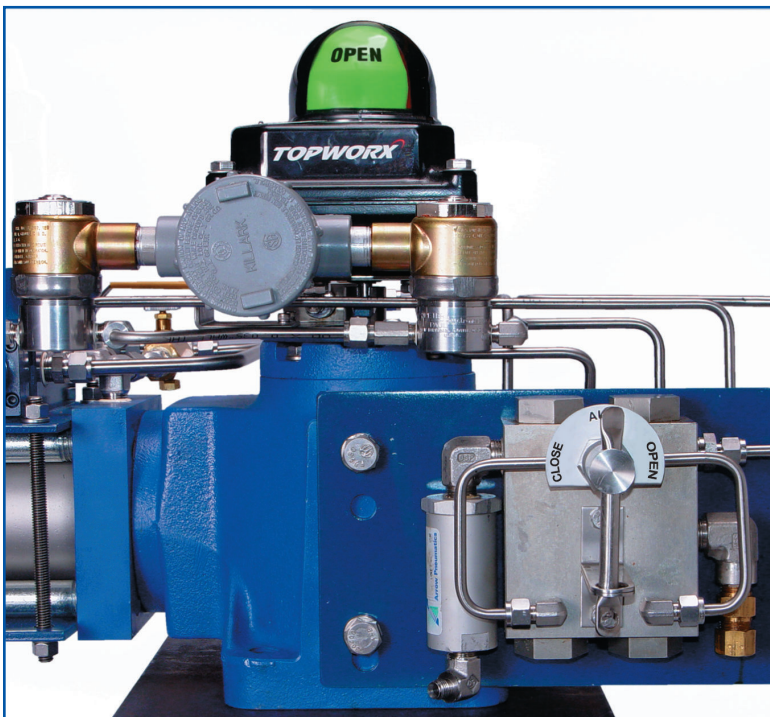




Remote Electric Control

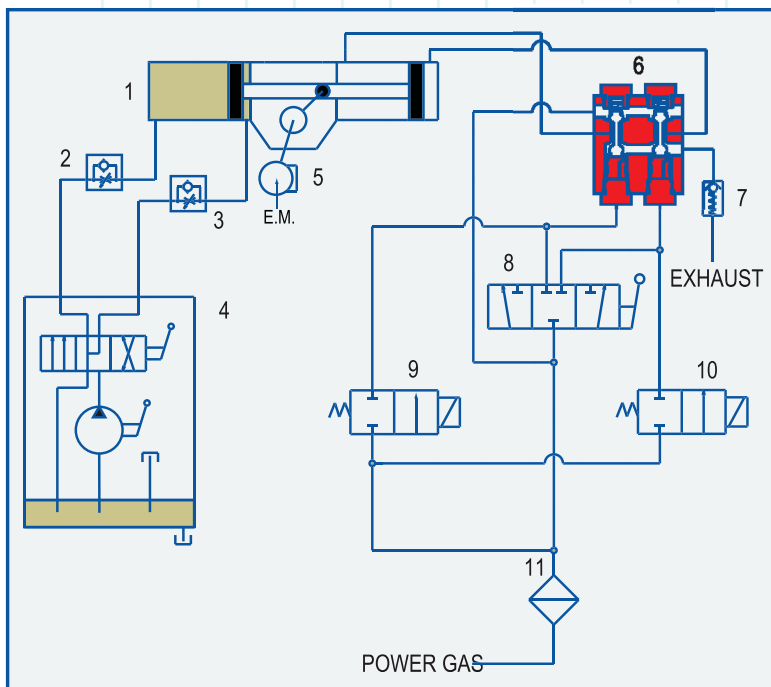
The Gevalco "Remote Electric Control" module is designed to meet the need to operate pipeline valves from a remote electric signal. Explosion-proof electrically operated hi-pressure solenoid valves are integrated with the proven Gevalco "poppet" valve to provide reliable, maintenance-free control based on a wide range of electrical signals. The electrical signals can be AC or DC, at any specific voltage. The hi-pressure solenoids can be set up for power fail-safe or energize-to-activate operation depending on the application requirements. Explosion-proof limit switches are also supplied as standard components of the "Remote Electric Control" module to provide for valve position feedback and to reset the system on end of travel condition. Optionally, manual over-ride control and local reset controls can be integrated into the control module.



Sequence of Operation



The Gevalco "Remote Electric Control" module is designed to meet the need to operate pipeline valves from a remote electric signal.



- 1 Power gas directly from the pipeline enters the system through a power gas filter (11), and is routed to the common port of the normally closed "open/auto/close" manual selector valve (8), as well as, to two normally closed solenoid valves (9/10). The hi-pressure gas also flows to the power gas port of the poppet directional control valve (6).
- 2 When the auto/manual selector valve (8) is shifted to the "open" or "close" position, pilot gas pressurizes the control piston in the poppet valve (6), opening the appropriate power gas port and allowing hi-pressure gas to flow to the proper side of the actuator (1) cylinder. With the opposing side of the gas cylinder vented thru the poppet valve to exhaust, the actuator piston begins to travel.
- 3 As the actuator moves, hydraulic fluid in the opposite cylinder is displaced thru the hydraulic hand pump (4) into the reservoir, and back into the other side of the hydraulic cylinder. The hydraulic fluid flows into and out of the cylinder at a rate controlled by the flow restrictors (2/3). These restrictors allow independent adjustment of the opening and closing speed of the actuator.
- 4 With the manual selector valve (8) returned to the "auto" position, the system is ready to react to an "open" or "close" electrical signal from a remote location. When an "open" or "close" signal is activated, the appropriate hi-pressure solenoid (9/10) is energized, causing the valve to open. Hi-pressure pilot gas is allowed to flow to the corresponding "open" or "close" pilot port on the poppet valve, which opens the proper power gas port to provide hi-pressure gas to the actuator.
- 5 The solenoid valves should be de-energized at the end of the actuator stroke to reset the poppet valve, which vents the actuator and resets the system to allow the valve to move in the opposite direction. Normally, this function is accomplished electrically utilizing the limit switch (5) contacts.

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PIPELINE VALVE AUTOMATION
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