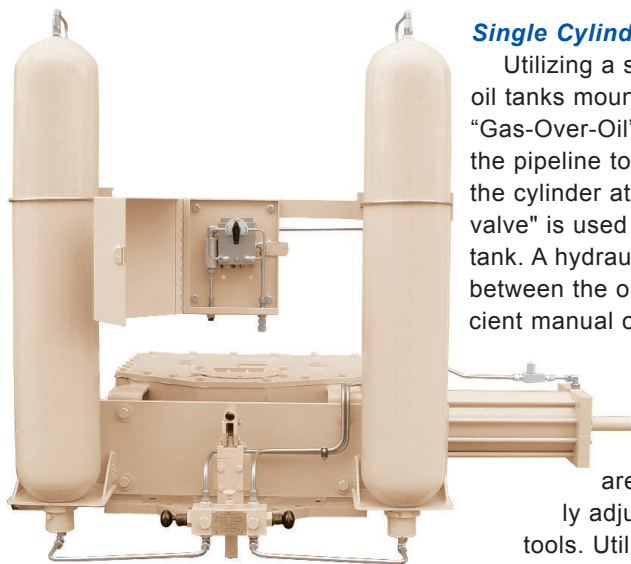




Quarter-Turn Gas-Over-Oil Actuator

The Gevalco "Quarter-Turn Gas-Over-Oil" valve actuator is designed to operate using direct pipeline natural gas with pressures up to 1500 psi, providing torque outputs over 1 million inch-pounds. The Gevalco design utilizes a proven canted scotch yoke actuator with dual oil tanks. With the cylinder always immersed in oil, the Gevalco "Gas-Over-Oil" actuator provides maintenance free, long cycle-life actuation. The Gevalco control modules can be used with the actuator to implement various valve control strategies.



Single Cylinder-Dual Oil Tanks

Utilizing a single cylinder of varying size with ASME rated oil tanks mounted directly on the actuator body, the Gevalco "Gas-Over-Oil" actuator uses the hi-pressure gas direct from the pipeline to pressure the hydraulic fluid in the tanks into the cylinder at up to 1500 psi. The proven Gevalco "poppet valve" is used to direct the power gas to the appropriate oil tank. A hydraulic hand pump is installed in the control circuit between the oil tanks and the cylinder to provide smooth, efficient manual operation. When pipeline pressure is not available, the hand pump can be used to safely and reliably open and close the valve at its maximum torque requirement. Independently adjustable opening and closing speed controls are built into the hand pump module and are easily adjusted in the field without the need for special tools. Utilizing the pipeline gas itself, for both the pilot gas and power media, makes the "Gas-Over-Oil" actuator system independent of regulator and other power media failure.

Canted Scotch Yoke Design

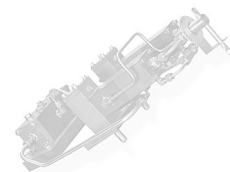
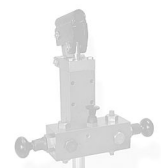
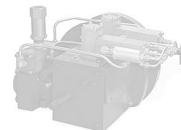
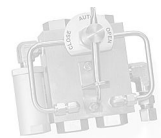
The canted scotch yoke mechanism provides high breakaway torque at the beginning of the stroke resulting in smaller cylinder, which reduces cost and gas consumption. All Gevalco actuators utilize teflon impregnated, sintered bronze bushings on a heavily chrome-plated guide bar to absorb any side loads, guaranteeing smooth operation and longer cycle life

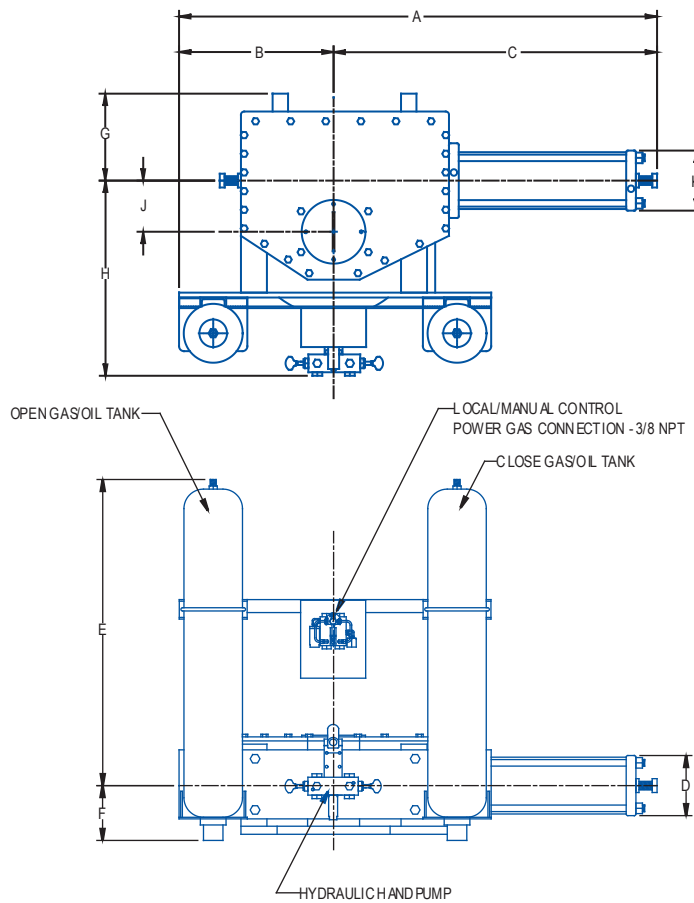
Linear Travel Stops

The externally adjustable travel stops are on center with the piston rod, eliminating side loading on the scotch yoke. Located at either end of the actuator, these travel stops provide precise adjustment. Both the "open" and "close" travel stops are independently adjustable.

Electroless Nickel-Plated Cylinder

The cylinder walls are electroless nickel-plated and precision honed to ensure long lasting, trouble free service. The piston is furnished with a teflon impregnated graphite guide ring (wear band) that eliminates any possible metal to metal contact. The piston and rod seals are made of teflon rings preloaded by an "O" ring suitable for the most severe working conditions.





Dimensions (inches)

Actuator Model	A	B	C	D	E	F	G	H	J	K	Pneumatic Conn, (NPT)	Weight (lbs)
1.5-5.5	58.1	18.8	39.3	6.5	28.1	7	7.3	21.9	3.94	8.75	3/8	675
1.5-7.0	59.7	18.8	40.9	8	49.1	7	7.3	21.9	3.94	9.75	3/8	920
3.0-5.5	62.2	18.8	43.4	6.5	27.31	7.75	8.3	25.3	6.3	8.75	3/8	840
3.0-7.0	63.8	18.8	45.0	8	48.1	7.75	8.3	25.3	6.3	9.75	3/8	1105
6.0-7.0	67.6	20.8	46.8	8	47.56	8.25	11.7	28.1	7.28	9.75	3/8	1415
6.0-8.0	68.5	20.8	47.7	9	47.56	8.25	11.7	28.1	7.28	12	3/8	1495
14-8.0	73.7	23.8	49.9	9	49.06	10.31	13.5	27.8	7.87	12	3/8	1945
14-9.0	73.7	23.8	49.9	10	51	10.31	13.5	27.8	7.87	15	3/8	2095
14-11.0	73.7	23.8	49.9	12	69	10.31	13.5	27.8	7.87	15	3/8	2330

Mechanical Data (maximum Allowable Pressure 1500psig)*

Actuator Model	Max. Operating Torque (lb. In.)	Max. Operating Pressure (psig)**	Oil Content (cu. In.)
1.5-5.5	130500	514	1010
1.5-7.0	130500	320	1910
3.0-5.5	261000	663	1010
3.0-7.0	261000	407	1910
6.0-7.0	522000	688	1910
6.0-8.0	522000	533	2185
14-8.0	1044000	959	2185
14-9.0	1044000	740	2575
14-11.0	1044000	492	3680

*Maximum allowable pressure is the maximum static pressure that may be applied cylinder with the piston against travel stops.

**Maximum operating pressure is the pressure required to produce the maximum operating torque of the actuator.

