

GAS-OVER-OIL ACTUATORS

Technical DATA



CONSTRUCTION	SGO - QUARTER-TURN LGO - LINEAR
ACTION	DOUBLE ACTING
MATERIAL	CARBON STEEL / STAINLESS STEEL
VALVE APPLICATION	ON-OFF
DESIGN	ISO 12490 / API 6DX / EN15714 / ASME VIII
TORQUE / THRUST	Nm 2.000.000 / N 10.000.000
TEMPERATURE RANGE	°C -29°/+100° (F°-20/+212°) °C -60° (F°-76°) on request
DESIGN PRESSURE (MAWP)	Bar(g) 100 (Bar(g) 150 on request)
IP PROTECTION	IP66/67M
ATEX	YES
EAC CU TR	YES
PED	YES
SIL CAPABILITY	on request

MAWP: Maximum Allowable Working Pressure is the pressure defined for the design of the actuator pressure containing parts

Main APPLICATIONS

PROCONTROL SGO & LGO series actuators are composed by a SHD-SHS actuator or a LHD-LHS actuator and suitable accessories configuration specifically engineered and designed to cover the most demanding isolation service applications for automating valves located in Oil & Gas transmission pipelines. Oil & Gas pipelines typically run hundreds of miles through inhospitable and undeveloped areas where no low pressure pneumatic instrument air or high pressure hydraulic supply lines are available, carrying pressurized gas and oil typically up to 1440 psi. Gas-Over-Oil actuators use the pressurized gas pipeline medium as their power source. Since gas can be of a corrosive nature when "sour & wet" and also a potential cause of explosion, gas hydraulic operators utilize an oil barrier to ensure that clean, non-explosive hydraulic fluid is used to drive the actuator rather than using the high pressure gas directly.

PROCONTROL technologies are designed to operate in harsh and hostile conditions while keeping workers and plant safe. Actuators and control systems withstand freezing arctic, extreme hot temperature, wind, dust, electromagnetic interference, coastal and hot humid marine environments, and more, while operating at full capacity. Complete product range comes also in 316 Stainless Steel with no limitation in shape or size. Currently the best available response to highly corrosive environments.

Main FEATURES

- Suitable for all types of gas composition including sour & wet gas
- Typically designed double acting configuration (single acting version also available)
- Metallic components (including cylinder, piston, piston rod) come into contact only with hydraulic fluid containing anti-wear and anti-corrosion additives
- Proper IP protection to allow installation even under severe climatic conditions as well as a solution against unattended and non-authorized operations or vandalism. Optional for remote control: an electrical interlock can be incorporated to signal when the cabinet door is opened
- Control system equipment provided with modular block design for easy interchangeability and to reduce as much as possible the piping (limiting potential leakage points)
- Common exhaust port outside of the cabinet to convey all items which vent
- Flow control valves for both directions to allow independent adjustable opening and closing times
- Cabinet back plate made of reinforced material (10 mm thickness) to ensure stability during hand pump operation with lever
- Optional: special insulated control station complete with an internal explosion proof heating system to operate in low temperatures and arctic conditions
- Optional: emergency back-up tank to perform the fail action
- Optional: mechanical interlocking system to disable remote control while door is open, thus ensuring workers safety during local operation or servicing activities. This device also ensures the correct remote control position of local controls (manual override) when the cabinet door is shut
- Power gas supply is taken from both upstream and downstream of the valve
- The highest gas supply pressure is always used to power the actuator
- The supply pressure to the actuator is always equal to or greater than the differential pressure across the valve

All SGO & LGO series actuators are supplied as standard with two gas-hydraulic tanks designed in accordance with ASME, PED or specific project requirements, with a stainless steel lockable cabinet including control system (for i.e. valve local open / close) and a hydraulic hand pump for minimal operation. The cabinet is then custom-designed to enclose the proper controls and equipment on the basis of the required functions.