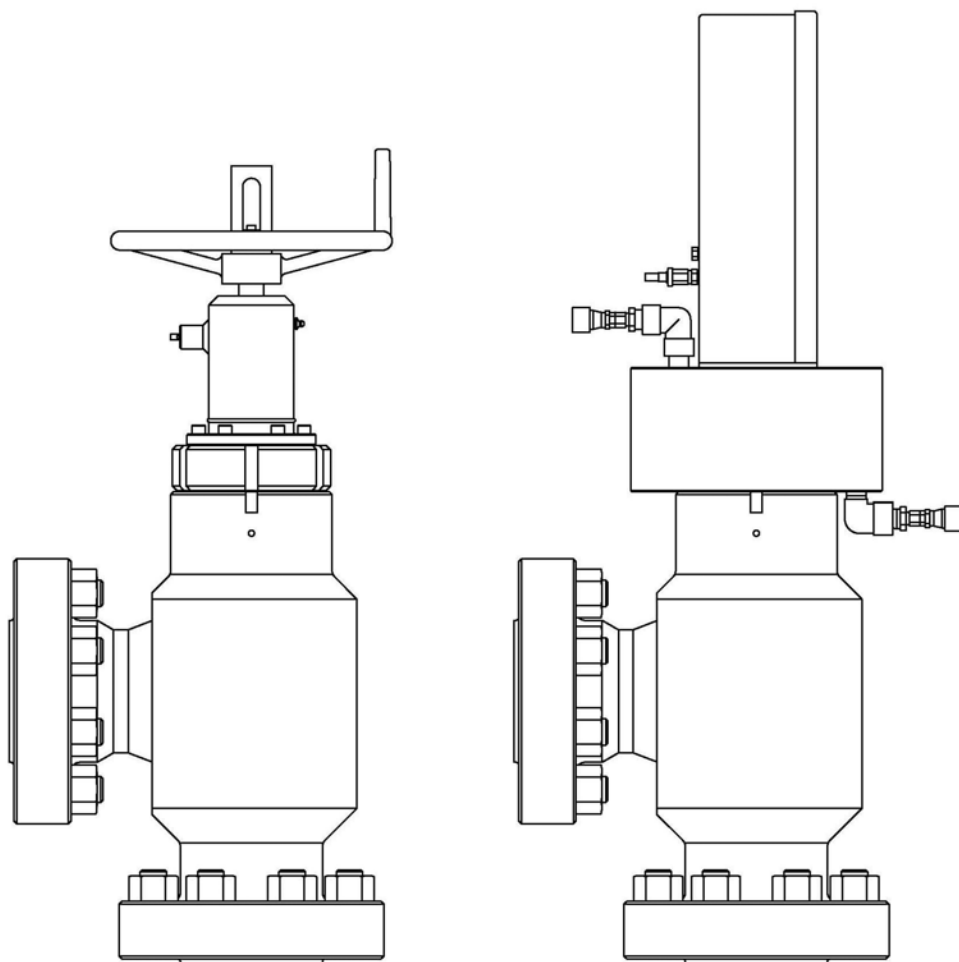




TYPE 31 MANUAL AND HYDRAULIC DRILLING CHOKES



2810 WASHINGTON DR. * HOUSTON, TEXAS * 77038

CHURCH ENERGY

TYPE 31 DRILLING CHOKES

Type 31 Drilling Chokes are designed for safe and reliable flow pressure control during production, drilling or well service operations. The Type 31 Drilling Choke has been proven and accepted for reliable operation in all oil and gas areas in the world. Type 31 Drilling Chokes are available in a manual and a hydraulically operated design.

The Type 31 Choke has a standard cylindrical orifice gate and seat design. The gate and seat are solid tungsten carbide, which are reversible for two complete seal and wear areas. The standard orifice size is 1.75" (44.5mm) diameter. A positive seal is created when the gate seats into the carbide seat. An optional 2" (50.8mm) diameter orifice is available providing a non-positive seal.

Working pressure ranges from 5,000 to 20,000 psi (34.45 to 137.9 MPa) are available. Inlet and outlet bore sizes are available in 2-9/16" to 4-1/16" diameter. Type 31 chokes are available in all temperature, material classes, and PSL levels according to API Specification 6A and ISO 10423.

Body configurations, gate and seat designs are interchangeable between the manual and hydraulic choke allowing flexibility in choke and kill manifold designs. The erosion-exposed area of the operator in both designs is hardfaced for reduced wear in the body cavity during flow through the choke.

The manual choke provides a visual position indicator for location of the seat as it traverses into or out of the body cavity. Thrust bearings in the bonnet provide for reduced torque even with full rated bore pressure in the body cavity. A non-rotating stem utilizes actuation from threaded members protected from the bore fluids. A grease fitting on the actuator provides lubrication of the bearings and threaded members. A choke position-locking device provides precise gate to seat location control.

The hydraulic choke is operated with 300-psi hydraulic fluid from an air-operated pump in the drilling console. Choke gate position is relayed to the choke console by a low-pressure air signal from the actuator of the choke.

Choke control consoles are available in single, or dual choke operation. Battery operated pump stroke counters, choke position indicator, remote manifold pressure transmitter gauge and manual pump back up are also provided in the choke control consoles.

Special design features of the Type 31 Drilling Choke:

- Designed and manufactured to API Specification 6A and ISO 10423 for Wellhead and Christmas Tree Equipment
- Orifice sizes available in 1.75" (44.5mm) and 2" (50.8mm) diameter
- Inlet and outlet sizes 2-9/16" to 4-1/16" bore in a 90° body configuration
- 5,000 to 20,000 psi (34.45 to 137.9 MPa) maximum working pressures
- Body configurations interchangeable between manual and hydraulic designs
- Reversible gate and seat provides double wear surfaces for economic value in service
- Forged materials rated for H₂S service per NACE MR0175
- Choke control consoles are designed to API Specification 16C for Choke and Kill Systems