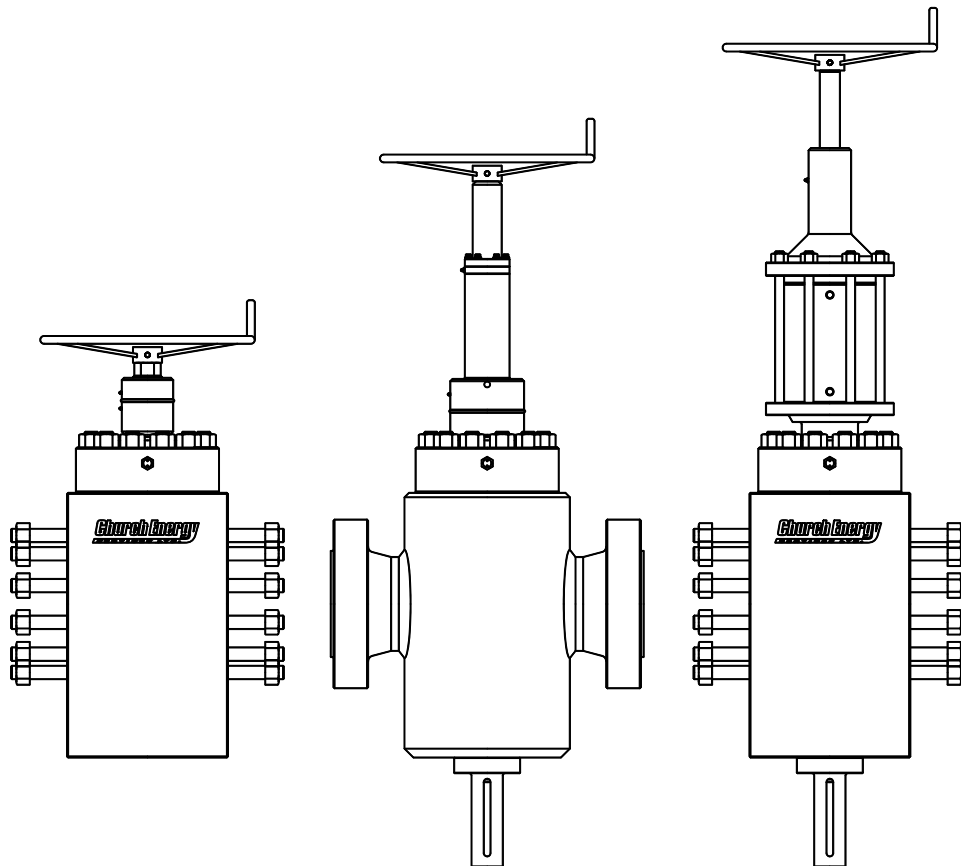


Church Energy

SERVICES LTD.

TYPE 43 MANUAL, LOW TORQUE & HYDRAULIC GATE VALVES



CHURCH ENERGY

TYPE 43 MANUAL, LOW TORQUE AND HYDRAULIC GATE VALVES

Church Energy Services Ltd. Type 43 Gate Valves are designed especially for harsh environments encountered during frac, snubbing, or work over operations. Type 43 Gate Valves use the industry proven metal sealing, floating slab type gate. Metal sealing ring gaskets are used to seal the Bonnet to the Body. The ease of maintenance and reliability make the Type 43 gate valves well suited for all oil and gas operations.

The Type 43 Gate Valves are compact and lower in weight than competitive gate valves of the same size. But, are rugged and strong enough to withstand the toughest service conditions.

Church Energy Services Ltd. offers two types of manually operated valves. The basic manual valve has a non-rising stem and a standard stem to gate thread actuation. The Model "LT" (Low-Torque) operator uses a rising stem design and "Ball-Screw" actuation to reduce the operating and opening under pressure torques. A unique feature of the "LT" and Hydraulic operators are that they are completely interchangeable between bodies. The Gate, Seats, and Body are identical. A customer can purchase a Body with the "LT" and Hydraulic operators and can convert from manual to hydraulic operation in a very short amount of time.

An optional equalizing manifold block can be used, integrally mounted on the side of the valve body. Two flush mounted needle valves with replaceable seats are provided. The equalizing block is sealed to the body by .50" bore AX type metal sealing gaskets. Porting through the Body and Block allows pressure equalization across a closed gate. This option is recommended for the manual valve to lessen the high torque required for opening under high pressure.

Type 43 Gate Valves meet NACE MR-0175 material requirements. All API Specification 6A or ISO 10423 PSL levels can be provided. Type 43 Gate Valves can be furnished with API flange or studded end connections. Special trims are available per customer request.

Church Energy designed Type 43 Gate Valves are available in bore sizes 4-1/16", 5-1/8", and 7-1/16". Pressure ratings up to 20,000 psi are also available.

Church Energy Type 43 Gate valves utilize metal-to-metal sealing on gate to seat and seat to body seal areas. Dual spring loaded lip seals prevent frac or bore contaminants from entry into the valve cavity.

Type 43 Gate Valves have a unique gate design which minimizes damage to seal surfaces. This provides increased performance and reduced valve repair cost.

