

eCHOKE electric actuator system

Provides a high degree of control, safety, and speed in well-control situations

 Enables quick response to well-control situations

How it improves wells

When attached to a drilling choke, the eCHOKE* electric actuator system is a remotely operated, electrically actuated variable-speed unit that provides a high degree of control, safety, and speed in well-control situations.

The small, portable remote-control panel enables easy transportation and replaces the large choke console required for hydraulic operation. An actuator control panel located at the choke enables local control and display of pressures, position, and strokes. A second actuator control panel may be added to allow for dual-choke operation.

The system can communicate via enhanced third-party communication capabilities to external data-acquisition systems, increasing your ability to evaluate frac flowbacks, well-control problems, and leak-off tests in real time. The feature enables the operator to control operating parameters including leak-off test pressures, flowback pressures, and maximum casing pressure.

How it works

The variable speed drive controls the speed at which the choke opens or closes during a well-control situation, precisely adjusting the choke positioning.

Three control points include a remote at the driller's console, local at the choke manifold, and a manual at the choke valve. The system provides easy access to the operator for quick response to well-control situations. The three modes also provide redundancy, ensuring the operator has control of the choke at all times.

Additional information

When attached to a drilling choke, the eCHOKE system takes eight seconds from full-open to full-close, providing a reliable, quick response from the actuator assembly during well-control operations. The system is capable of withstanding more than 1,500 lbf.ft [2,048 N.m] of torque and can sever a ½-in [12.7-mm] alloy steel rod. It helps clear obstructions that may become lodged between the plates while drilling or flowing back a well.

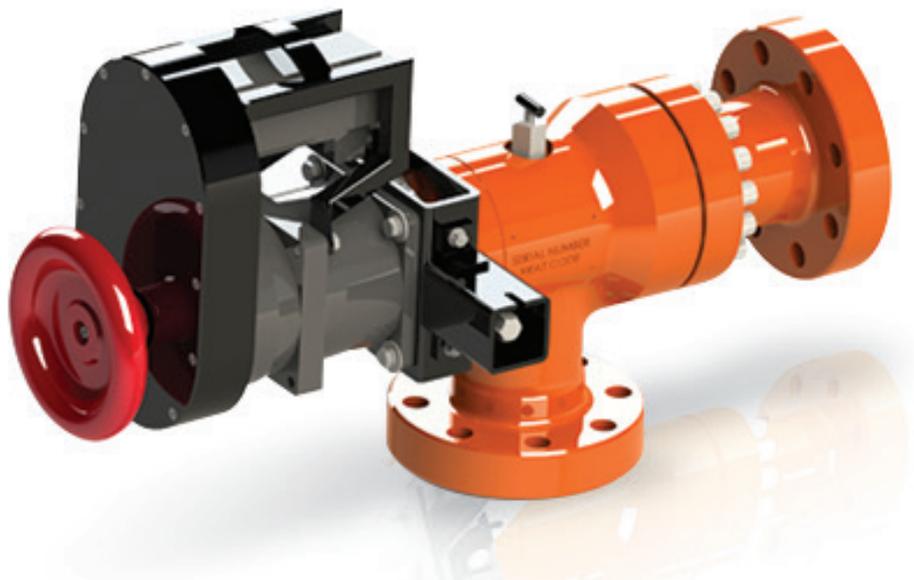
Electronic pressure sensing and transmitting eliminate the need for hydraulic hoses and fittings, reducing calibration and maintenance requirements while enhancing accuracy.

The eCHOKE system requires only one communication cable between the remote and the local console. Simplified cabling lessens tripping hazards and troubleshooting while providing the best available transmission medium for data communication.

eCHOKE Electric Actuator System Specifications

	Pressure	Holding (H) and Moving (M)	Speed†	Maximum Amps
Motor and drive only	na	H	100%	0.472
	na	M	100%	0.832
With new choke body	na	M	50%	1.248
	na	M	100%	2.176
	10,000 psi (690 bar)	M	~1%	1.44
	10,000 psi (690 bar)	M	50%	2.152
	10,000 psi (690 bar)	M	100%	3.624

†0% equal to 40-sec opening/closing speed (slower); 100 equal to 8 sec faster).



The eCHOKE system provides control, safety, and speed in well-control situations.