The MPowerD choke manifold is designed to provide primary finite control for balanced/underbalanced fluid return rates and wellhead pressure automatically during managed pressure drilling (MPD) operations. This choke manifold has been designed for use in a wider range of MPD applications and is suitable for land, shelf, and offshore drilling operations.

**Safety**

- Double block and bleed isolation valve with suitable pressure rating
  - Safety for personnel
- Integrated automated pressure relief valve (PRV)
  - Safety for the operation
- Inconel nickel-chromium alloy 625 for high strength and outstanding corrosion resistance
  - Lower ownership costs
- Collection unit for capturing and holding drilling fluids when servicing the choke
  - Reduces environmental contamination

**Features and Benefits**

Our choke manifold offers the widest range of operations in the different MPD variants. Since NOV is a single-source OEM, you will gain greater value and a positive impact on your MPD applications and overall ownership costs. Each of our MPowerD systems features robust designs, and the choke manifold includes these proven subcomponents:

**HXE-G3 Choke**

- Continuous duty-cycle Siemens electric servo motor
  - Yields extremely precise pressure control and quick response times
  - Allows the choke to function reliably in very cold conditions, and without the cost of running and maintaining hydraulic lines
- Remote MPowerD control system operation allows automatic or manual control of the choke
  - Automatic mode - The choke will rapidly adjust trim positioning to maintain the set-point pressure that is input at the control system
  - Manual mode – The choke can be operated by bypassing the electric motor for inspection and service

**Integrated Bypass Line**

- Allows cement and the casing shoe to be drilled out with no impact to the chokes while in MPD Mode
- Allows the MPD system to be bypassed when not in need with no impact to drilling operations
- Directs pressure and fluids safely away from personnel servicing the choke while online

**Technical Specifications**

**Choke Specifications**

Working pressure................................................. 5,000 psi
Flange inlet and outlet...........................................API 41/16 in.
Service.................................................................Sour NACE MR0175
Ring groove inlay..................................................CRA 625
Temp. class........................................................."P+U" (-20°F to 250°F)
Choke model.......................................................HXE-G3
Choke actuator....................................................Electric servo
Choke size................................................................3 in.
Relief valve.......................................................MPD 30 Automatic PRV
Isolation valves.....................................................ANSON E-Type
Performance standard..............................................PSL-3
Dimensions (L x W x H)..............................................16 x 8 x 7.5 ft
Weight.................................................................23,700 lbn
Lifting certification..................................................DNV 2.7-1
Area classification.................................................Class 1, Div.1, ATEX Zone 1
Manufacturing certifications.................................ISO 9001-2008 and API Q1 9th edition
API standards....................................................API 6A and API 16C Monogrammed