

# Managed Pressure Drilling (MPD) Equipment Overview

## AutoChoke

Our automated MPD choke provides easier, more precise well pressure control, and serves as the only true pressure balanced choke in the market.



The AutoChoke design allows the safe and efficient implementation of managed pressure drilling (MPD)

practices under all conditions. Choke operators no longer have to fight the controls during transition operations, such as mud pump start-up or shut-down, making or breaking connections, or when mud and gas are flowing alternately through the choke.

### Features

- Patented sliding shuttle/sleeve design automatically adjusts fluid flow to regulate well, casing and drill pipe pressures
- Triple, tungsten-carbide wear sleeves provide downstream choke bore protection
- No-leak shut-in seals (metal-to-metal and Teflon-to-metal)
- High-capacity, 3-in. (76 -mm) choke bore
- Rated for H<sub>2</sub>S service
- Chrome-plated internal bores for corrosion resistance
- Simple seal replacement
- Electronic position indicator, computer compatible

## AutoChoke Console

Accurate and economic choke control for managed pressure drilling (MPD) and underbalanced drilling (UBD) operations.



panel near the driller.

The ECD-M AUTOCHOKE CONSOLE is precision-built to provide accurate and economical control of the Autochoke drilling choke during MPD, UBD and other low-surface pressure operations. The console allows the operator to directly set and maintain the desired backpressure on the well. Adjustments to the backpressure can be made on the local HPU console or on a remote HMI

### Features

- Ability to operate two AUTOCHOKE drilling choke units simultaneously
- Hydraulic accumulator, air storage tank, and uninterruptible power supply for backup
- Small footprint remote human machine interface (HMI)
- Sunlight readable touch screen panel on both the local hydraulic power unit (HPU) and remote HMI
- Increased gauge resolution and digital readouts



## MPD Manifold

Ideal for installation in closed containers for use in harsh environments.

Our L-shape manifolds are configured in a cost-effective space-saving design, making them ideal for installation in closed containers for use in managed pressure drilling (MPD) and underbalanced drilling (UBD) applications in harsh environments. The design reduces the wellsite footprint and, if necessary, provides assistance in modular designs.



### Manifold Building

Our field ready manifold building integrates the components required to perform Managed Pressure Drilling in an efficient and cost effective manner.

### The building contains:

- 5000 psi Manifold
- Autochoke Control Console
- Coriolis Flowmeter (optional)
- RCD skid
- Heated and powered

## Mud/Gas Separator



The MUD/GAS SEPARATOR is primarily used to separate and safely vent large pockets of free gas, that may include toxic gases such as hydrogen sulfide, from the drilling-fluid system.

It is ideal for use where drilling is likely to encounter large volumes of gas, sour gas or when an operator is drilling with an underbalanced mud column.

## Rotating Control Device

Complementing the rig's traditional BOP stack, our RCD systems form a positive seal on the drill pipe or kelly and safely divert the flow from the annulus away from the rig floor.

The RCD enables safe and secure operation during drilling and tripping operations

