

## MPD Manifold 4"x 6" 2000 psi with Integrated Control System



Reform Energy Service's MPD manifold has been designed to automatically maintain the annulus surface back pressure during drilling operations to maintain the downhole drilling window. It uses two drilling chokes which are controlled by a PLC control system to maintain the selected set point pressure using an HMI interface panel for operator input of required settings and for displaying control system output parameters. If required the manifold can also be used in a manual mode.

### MPD Manifold with Integrated Control System

- Double block and bleed 4" x 6" ANSI 900 lbs 200 psi working pressure ball valve manifold assembly
- Independent flow paths to dual pneumatically actuated 4" ANSI 900 lbs 2000 psi 3" full bore tight shut off capable drilling chokes
- Each 4" flow path has a set of upstream and downstream double block and bleed WOM Dual seal 4" ANSI 900Lbs flanged full bore ball valves with gear operator
- 6" bypass or gut line capability
- Bypass line has a set of double block and bleed WOM Dual seal 6" ANSI 900Lbs flanged full bore ball valves with gear operator.
- Flow path and bypass of gut line ball valve sets have bleed off option between to provide the double block and bleed capability required to allow for maintenance or repairs to be carried out during operations if required.
- Housed in an offshore skid and crash frame with lifting sling set and fork lift pockets



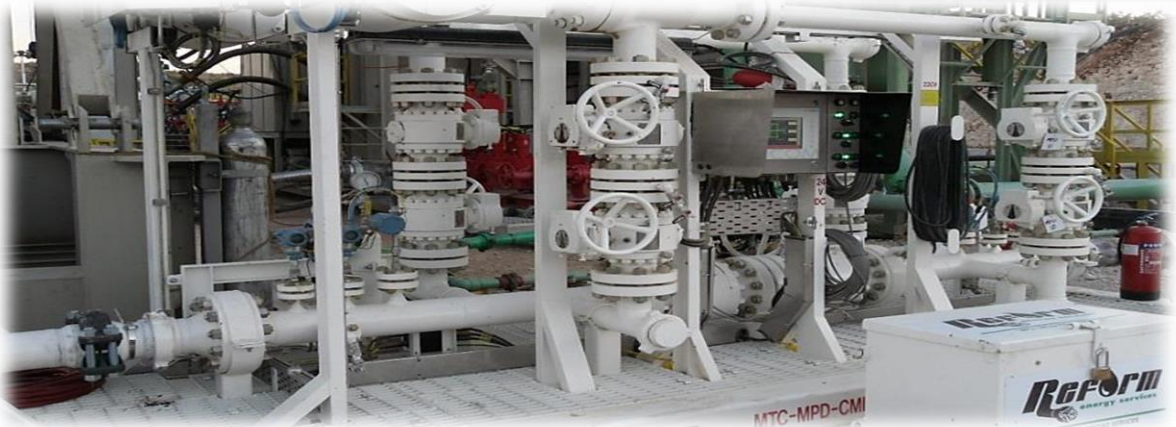
Visit us at [www.reformenergy.com](http://www.reformenergy.com)

2K MPD MANIFOLD



## Choke Control System Hardware

- Explosion proof Eexd PLC enclosure which houses:
  - PLC system components
  - Data storage
  - Power supplies
  - Intrinsically safe barriers and input-output connectors
- Intrinsically safe operator control panel:
  - Touch screen HMI panel
- Intrinsically safe pressure and temperature transmitters
- Intrinsically safe integrated alarm beacon and sounder system



## Choke Control System Software

- Designed to automatically control the pneumatically actuated drilling chokes either independently or in parallel
- The choke control system can be operated either:
  - LOCAL: via the operator control panel
  - REMOTE: via LAN cable to laptop
- WITS interface for transmission of data to 3<sup>rd</sup> parties



### Additional Safety Features

- 100% operational redundancy of the drilling chokes
- Digital and backup mechanical choke position readouts on drilling chokes
- Fail in last position logic in case of power failure on drilling chokes
- Choke failure and choke plugging logic activates audible and visual alarms
- Double block and bleed ANSI / ASME ball valve on all flow paths.

### Specifications

DNV 2.7-3 Skid & Frame	4.5 m L x 2.0 m W x 2.3 m H
Max. Gross Mass	8,000 kgs
Tare	7,200 kgs
Payload	1,000 kgs
Air supply	50 scfm @125 psi
Max. working temp.	121°C
Service conditions	H2S / CO2 NACE MR0175
Inlet/outlet flanges	6" Fig 206F x 6" ANSI 900RF Flange with test plug 6" Fig 206M x 6" ANSI 900RF Flange with test plug
Power supply requirements	220 VAC for Skid lighting, 24 VDC for Choke control system
50 meters of SCADA & 30 of WITS cable	Cat 5e SWA cable with Stahl Exd quick connects



\*Manufacturing codes are in compliance with API 6A, API 6D, ANSI B31.3, NACE MR01-75, ATEX Zone 1 & DNV 2.7-3.