

## IPC MPD

Vertechs IPC MPD system features a high-precision manifold equipped with electric chokes, delivering a rapid and stable response to pressure fluctuations during managed pressure drilling. With enhanced actuation accuracy and millisecond-level responsiveness, the system significantly improves pressure control performance and overall drilling efficiency. A key advantage of the electric choke design is its compact form factor, which reduces the manifold footprint by up to 60% compared to traditional hydraulic systems. This streamlined setup allows for more efficient space utilization and easier field deployment. Designed for complex and variable well conditions, the system leverages IPC (Intelligent Pressure Control) principles with an AI and neural network algorithm that replaces conventional model-based control. It dynamically adjusts to real-time downhole changes, fluid properties and pressure variations, ensuring consistent and reliable control throughout MPD operations.



## FEATURES

- **Intelligent Pressure Control**

The Intelligent Pressure Control engine uses AI and neural network algorithms to optimize control autonomously, ideal for complex systems.

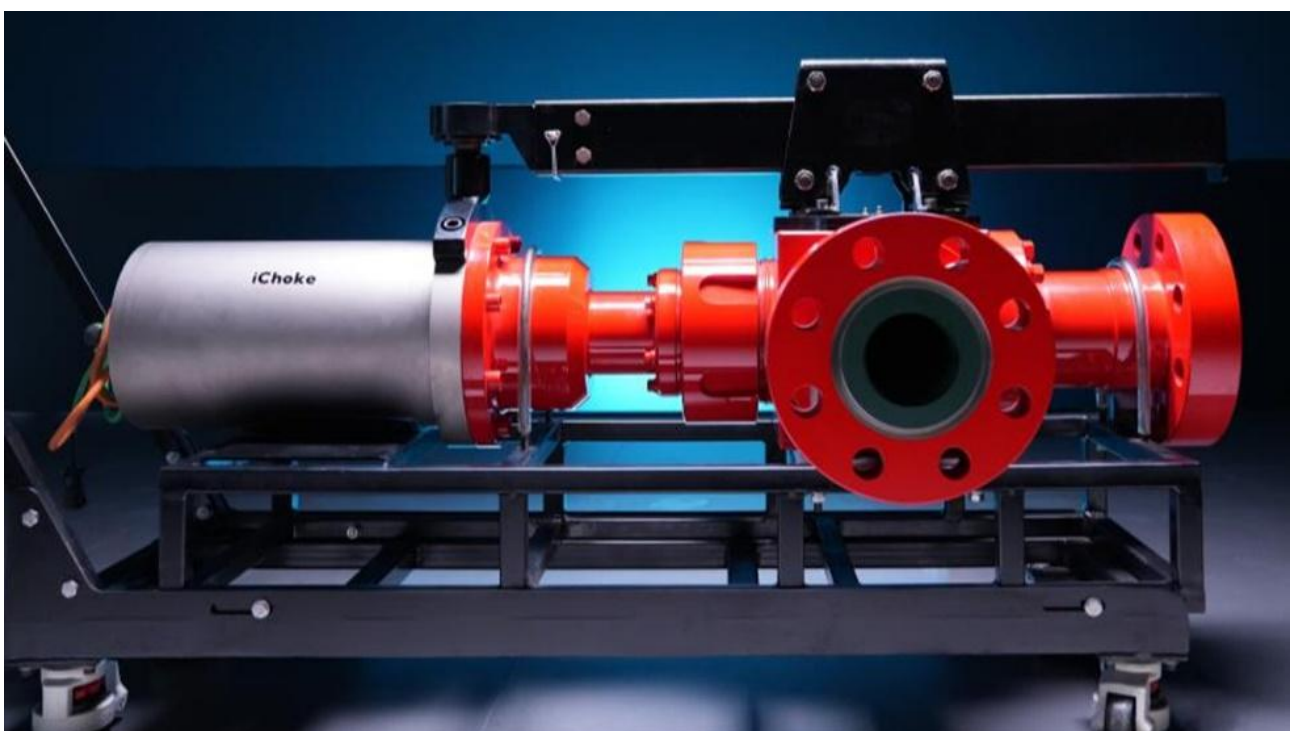
- **iChoke – High-Performance MPD Choke Assembly**

- High-speed operation, full stroke in 7s
- High-precision valve position control, accuracy up to 0.01%
- Fast response and wide linearity
- Integrated motor and actuator design
- No mechanical maintenance required
- Shock-resistant design for longer service life
- Zone 1 explosion-proof design

- **Control Algorithm Support for Various MPD Conditions**

Equipped with intelligent multi-parameter control algorithms like SBP, SPP, MFC to meet MPD precise control requirements

- Design & Manufacture Standard: API 16C
- Actuator: Electric (Low-voltage DC, Explosion-proof)
- Temperature: -40°C to 60°C
- Pressure Rating: 5,000 psi
- Connection Size: 4 1/16 in
- Orifice Size: 2 in / 3 in
- Position Accuracy:  $\pm 0.02$  mm



APPLICATION

- MPD / UBO

SPECIFICATIONS

|                               |           |                            |                                   |
|-------------------------------|-----------|----------------------------|-----------------------------------|
| Design & Manufacture Standard | API 16C   | Actuator                   | Electric DC/AC<br>Explosion-proof |
| Pressure Rating               | 5,000 psi | Pressure Control Precision | ±15 psi                           |
| Connection Size               | 4 1/16 in | Orifice Size               | 3 in / 2 in                       |

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