



ENERGY SERVICES & TECHNOLOGY CORP.



MPD/RCD Package Offerings

www.beyondmpd.com

B.E.S.T. MPD/RCD PACKAGE OFFERINGS

ROTATING CONTROL DEVICE (RCD)

Pressure Control Capabilities

None

Gas Handling Capabilities

None

Applications

- Operations requiring a diverter with little to no gas flow.
- An RCD allows the operator to upgrade their drilling system safely. Their employees will not need to rig-up equipment on top of the BOP with pressure on the surface.
- Allows for a switch to MPD/RMD operations without removing pipe from the hole.

BEYOND RMD

Pressure Control Capabilities

None

Gas Handling Capabilities

None

Applications

- Operations needing a gas diversion, with gas flow rates that require the use of a separation system.

MERCURY MPD™

Pressure Control Capabilities

- Automated with a single choke valve
- Pressure relief valve installed
- Scalable choke integration with rig operations
- Optional: Coriolis flow meter

Gas Handling Capabilities

Required/Optional depending on local regulatory rules

Applications

- Operations that need pressure control but do not require choke valve redundancy

NITRO MPD™

Pressure Control Capabilities

- Automated with dual choke valves
- Automated PRV valve
- Can be fully integrated with rig operations
- Includes Coriolis flow meter
- Optional: ultrasonic gas meter

Gas Handling Capabilities

Optional

Applications

- Operations requiring precise pressure control and choke valve redundancy (2-leg choke manifold)
- Backpressure backup system is required to avoid pressure decreasing during static periods
- Dual phase returns monitoring

INTERACTIVE TOURS



MERCURY MPD™
4" MANIFOLD BUILDING



NITRO MPD™
4" MANIFOLD BUILDING



NITRO MPD™
6" MANIFOLD BUILDING



B.E.S.T. MPD/RCD PACKAGE OFFERINGS

ROTATING CONTROL DEVICE ONLY

Includes

- B.E.S.T. TITAN series
- RCD with accessories
 - 7" or 9" test plug/logging adaptor
 - Stabbing mandrel
 - Stabbing casing
 - Riser and 2x O-rings
 - Bolt-up kit
 - RCD tool kit
- RCD valve package
 - 4" remote valve
 - 6" remote valve
 - Remote control assembly



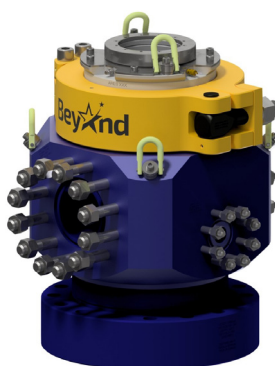
TITAN 3



ARES 1578

Functionality

- Initial component for MPD readiness
- Seals around the drill string
- Redirects annular flow from the well, avoiding potential flammable/toxic gases reaching the rig floor
- Allows for a closed-loop flow system
- Time saver for MPD call outs
- Compact design for faster rig up
- No oiler or additional hydraulic skid needed for the operation
- No running tool needed
- Additional safety barrier during drilling/cementing operations when used with a valve package



TITAN 5



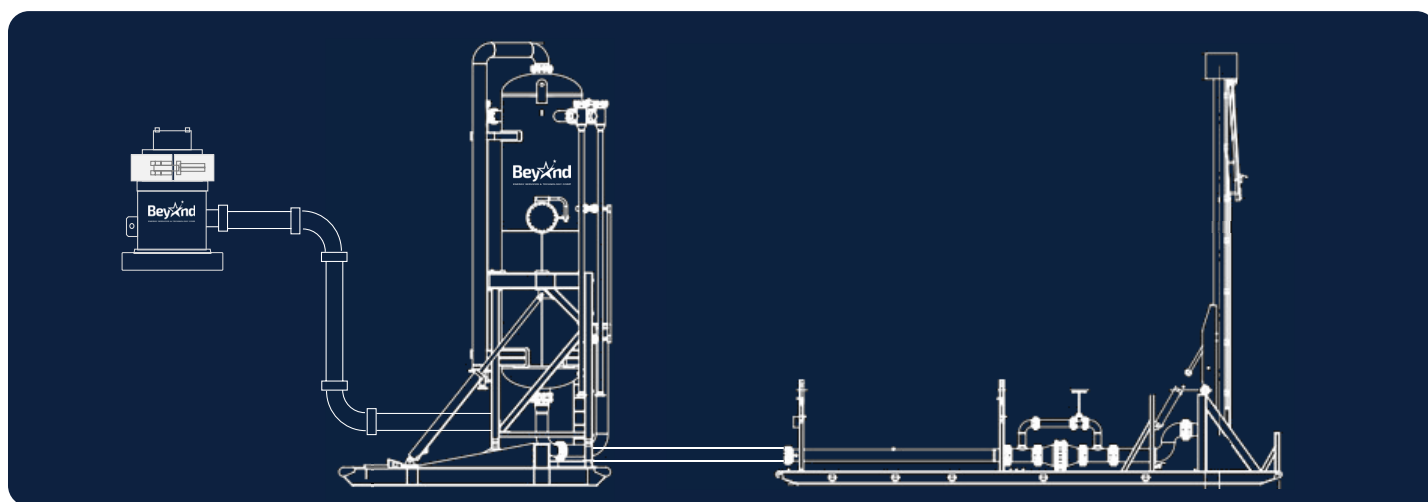
ARES 3078

ALL Beyond Energy RCD Products are developed in accordance with API Spec 16RCD.
Manufactured in accordance with API Q1, ISO 9001:2015 and API 16RCD.

B.E.S.T. MPD/RCD PACKAGE OFFERINGS

BEYOND RETURN MANAGEMENT DRILLING (RMD)

Includes	Functionality
• B.E.S.T. TITAN series RCD with accessories • RCD valve package • High-pressure pipe package • B.E.S.T. Separator • Level indicator • Hydraulic flare stack • Gas flow meter • EDR integration	• Surface gas management • Flow diversion • Separate gas and flare while drilling • Minimizing NPT during post-trip bottoms up gas and gas flaring circulation by drilling ahead • Manages nuisance gas without BOP and associated downtime



We do **Managed Pressure Drilling.**



B.E.S.T. MPD/RCD PACKAGE OFFERINGS

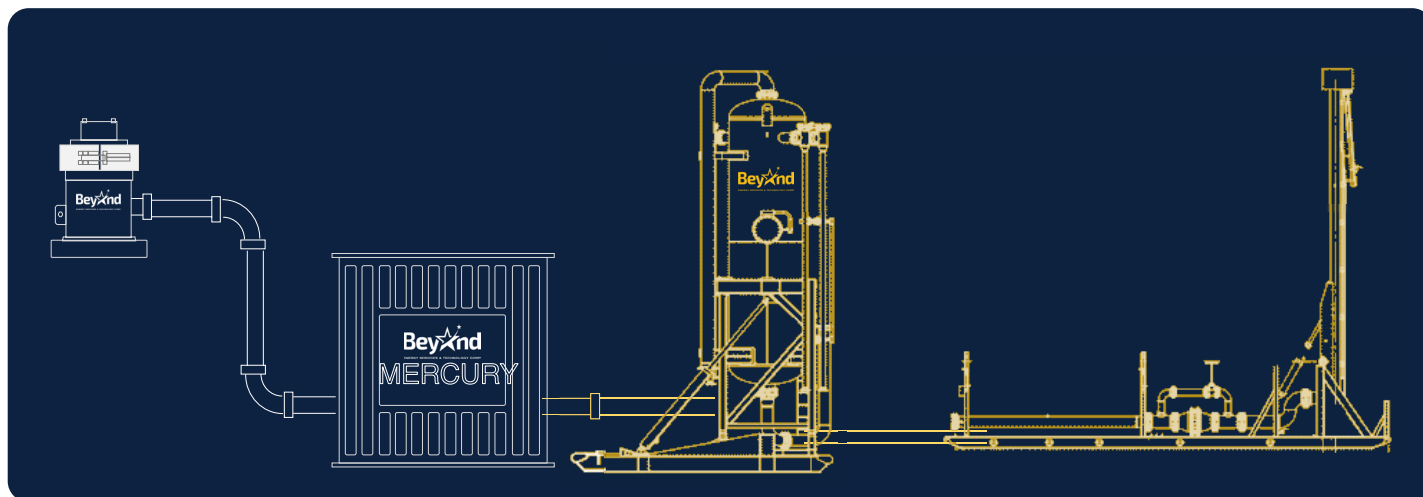
MERCURY MPD™

Includes

- Single-line 5k psi choke manifold system
- B.E.S.T. TITAN series RCD with accessories
- RCD valve package
- High-pressure pipe/hose package
- Automated choke valve
- B.E.S.T. control system (hydraulic or electric)
- Pressure Relief Valve (PRV)

Functionality

- Entry-level LOW operating expense MPD system
- Traps and holds pressure on the wellbore
- Minimal footprint on site
- Efficient integration into the rig system
- Available as a stand-alone skid or container
- Applicable to manned or unmanned operations
- Uses the same automated software as Beyond Energy's full NITRO MPD™ system
- Eliminates nuisance gas and associated downtime
- Fastest in industry rig up and rig down time
- Minimal rig intrusion
- PRV equipped to protect the wellbore and equipment



OPTIONAL EQUIPMENT

- B.E.S.T. integrated gas buster (Big-B)
- Gas flow meter
- B.E.S.T. flare stack
- Coriolis flow meter



B.E.S.T. MPD/RCD PACKAGE OFFERINGS

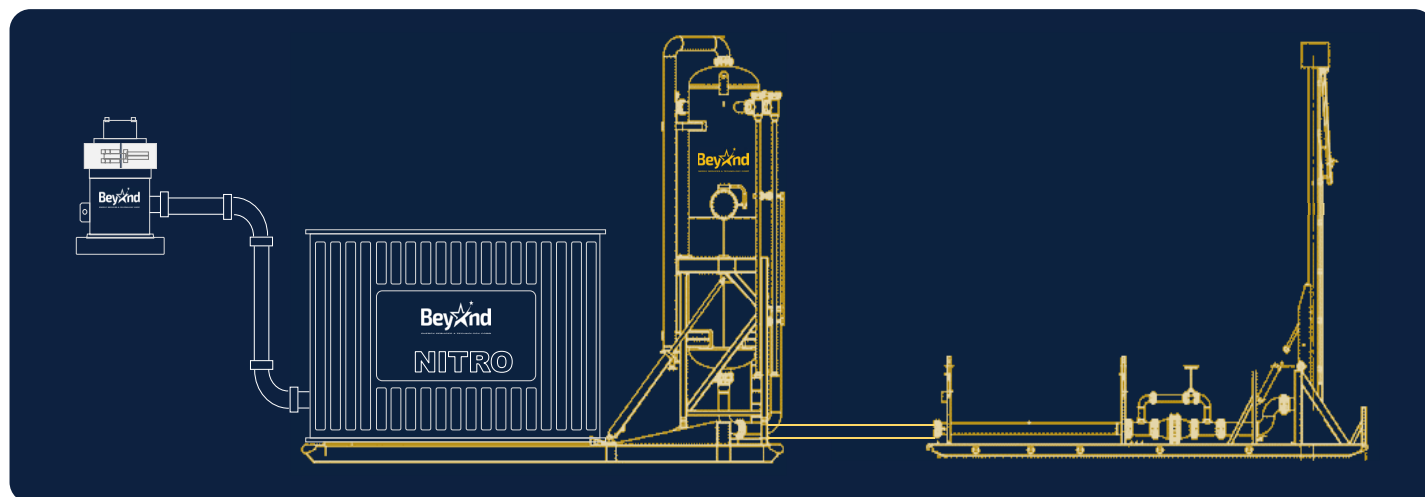
NITRO MPD™

Includes

- B.E.S.T. TITAN series RCD with accessories
- RCD valve package
- High-pressure pipe package
- Automated choke valves
- Dual-line choke manifold
- B.E.S.T. control system (hydraulic or electric)
- Coriolis flow meter
- Pressure Relief Valve (automated PRV options available)

Functionality

- Full MPD system
- Manages gas at surface
- Automatically controls downhole ECD during drilling and tripping operations
- Assists with drilling narrow window wells
- Flow drilling
- Early event (kick/loss) detection
- Redundant control system with a secondary choke
- The nitrogen backpressure system ensures dynamic control in static conditions, which operates in case rig power is lost
- Remote engineering support, including remote pressure control system access
- PRV equipped to protect the wellbore and equipment
- Fastest in industry rig up and rig down time



OPTIONAL EQUIPMENT

- B.E.S.T. integrated gas buster (Big-B)
- Gas flow meter
- B.E.S.T. flare stack



B.E.S.T. MPD Engineering Services

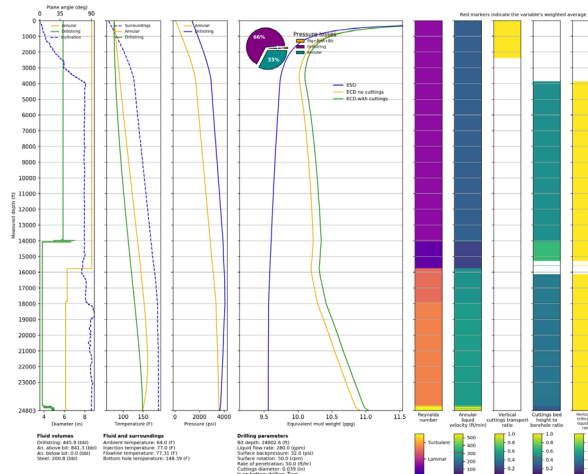
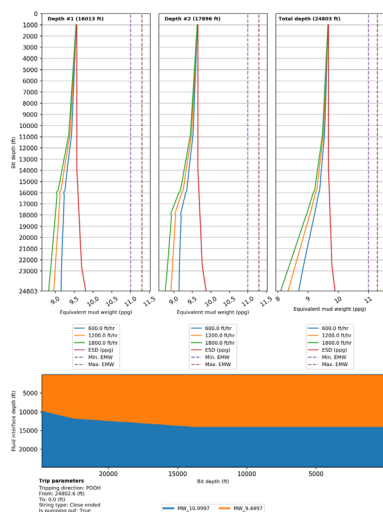
Beyond prides itself in offering the best in class MPD products as well as on-site MPD supervision and MPD Engineering. As part of the MPD portfolio of products, Beyond provides MPD technical support and Engineering with an experienced team of Engineers. They provide the customer with all their needs in well design and operations monitoring services using state-of-the-art, in house developed software, which is included with the NITRO MPD™ package.

MPD Engineering Services

MPD feasibility analysis	Mud rollover and cementing schedules in MPD mode
MPD programs	Mud density and rheology overview
Equivalent circulating and static density analysis	End of well reports
Swab and surge analyses	Real-time operations monitoring and support or on-site Engineering

Engineering Experience

Very narrow window operations	Drilling optimization (ROP optimization, pressure-related events mitigation, etc.)
Horizontal drilling in different pressure profile zone	HPHT operations in deep-wells (depth > 20,000' or 6,000 m)
Flow drilling and multiphase operations	Cementing in MPD mode



Advantages of the Beyond MPD Systems

Fewer loads to transport

Our MERCURY MPD™ package only requires a SINGLE truckload to the site. Our complete NITRO MPD™ package requires only 3 loads vs. 5-6 loads for packages available in the market today.

Faster & less expensive rig up and rig down

Our integrated package requires less piping, and with our self-erecting systems, no crane is needed for rig-up and rig-down operations.

Unique MPD package walking system

Beyond's patented walking system allows for an even faster rig-up and rig-down on multi-well pads since it is not necessary to modify the existing system for well-to-well mobilization. This system is offered with our complete NITRO MPD™ package.

Smaller footprint

For our NITRO MPD™ package, no additional interconnecting pipework is needed between the choke manifold and the separator. Only 2 skids are required for the manifold, metering system, separator, flare stack, and pipe baskets.

Minimum crew on-site

The MERCURY MPD™ package is suitable for both manned and unmanned operations. For our NITRO MPD™, our standard crew that cover 24-hr operations consists of only 2 people on-site covering site supervision, equipment maintenance, RCD operations, and continuous pressure monitoring and management.

Patented backpressure maintenance technology

Our nitrogen backpressure management system automatically maintains surface backpressure during static periods in case of pump or choke failure.

Advantages of the Beyond MPD Systems

State of the art backpressure control system

The automated backpressure control system has been designed by actual users who have in-depth knowledge of MPD operations and was created to deliver rapid and accurate pressure control while providing flexibility to operate under a wide range of conditions.

24/7 Engineering support

With the top Engineering team in the business, our staff assists our valued customers with designing their wells, supporting the field operations 24/7, and monitoring all drilling activities while ensuring the technical integrity of the drilling operations.

The most experienced and motivated team of Operators and Supervisors

All of our senior supervisory staff have 20+ years of global knowledge in MPD and UBD applications worldwide, ensuring your well is in the best hands possible.

Experience

Our experienced team has drilled over 2,000 wells in the last 7 years, ranging from multiphase operations to HPHT wells with no practical drilling window, while under various conditions around the globe.

We do Managed Pressure Drilling.







We do **Managed Pressure Drilling.**

