Combining reliable, high-performance drilling with precise directional control
The Magnus™ RSS gives you reliable, accurate, and fast drilling performance.

Today’s well geometries and economics demand advanced directional drilling technology that can help you to lower overall costs and drill more hole per day.

Our Magnus rotary steerable system (RSS) uses a push-the-bit design to satisfy your need for speed without sacrificing directional control. With rugged design elements, the RSS fits nearly any scenario—from the everyday to extreme—and excels in high-performance drilling applications.

Unique features—including fully independent pad control and a true-inclination hold—help you to sustain drilling, stay on plan, and reduce well-construction costs. Combining the RSS with our comprehensive Wave™ family of logging-while-drilling (LWD) tools, market-leading HyperLine™ downhole motors, and cutting-edge RipTide® borehole enlargement tools provides you world-class capabilities.
RUGGED DESIGN
FOR LASTING RELIABILITY

Reach your target without setbacks. The robust, modular construction of the Magnus™ RSS helps you to drill reliably and maintain trajectory easily.

Reach total depth with a trio of valves
A unique valve design helps you to achieve TD. Because the three valves operate independently from each other, they offer built-in redundancy and enhanced reliability.

Maintain operations with local service
A modular design and local support keeps you running. The Magnus RSS is easy to deploy and maintain, even in remote locations. Service is just around the corner with our global network of maintenance and repair facilities.

Minimize stuck pipe issues
A streamlined design reduces sticking issues. Features such as a fully rotating bias unit, minimal BHA stabilization, and an optimized junk slot area reduce the risk of expensive stuck pipe events.

Make reliable decisions using real-time diagnostics
To stay on top of what happens downhole, the Magnus RSS uses real-time diagnostics. The resulting instantaneous information from the BHA enables you to confirm proper operation, take action ahead of issues, and drill ahead with confidence.

Resist harsh environments with robust piston seals
For performance under pressure, the Magnus RSS incorporates non-elastomeric piston seals in the mud-actuated pads. The result is enhanced mechanical integrity in harsh drilling environments and greater overall system reliability.
FULLY INDEPENDENT PAD CONTROL

ON-TARGET EXECUTION

TRUE-INCLINATION HOLD

FEATURES

3 INDEPENDENT VALVES
FOR REDUNDANCY AND ENHANCED DIRECTIONAL CONTROL
PRECISE DIRECTIONAL STEERING FOR STAYING ON PLAN

Remain on course from start to finish. Whether you’re drilling verticals, curves, or laterals, our Magnus™ RSS provides precise, proportional adjustments for continuous control.

Control direction with three independent pads
Unique independent pad control helps you to optimize the well trajectory. The three pads actively manage your direction through the entire wellbore and achieve a true-inclination hold in the lateral.

Steer with real-time near-bit data
Every bit of clear, real-time information makes a difference. Taken as little as 6 ft behind the bit, continuous azimuthal gamma ray and inclination measurements enable effective wellbore placement and geosteering changes to stay in the zone.

Maintain direction while drilling with autopilot
Self-regulated adjustments instill confidence in the course. Using an innovative electronic system and autopilot functionality, the Magnus RSS provides closed-loop control for course corrections during drilling.

Take command of downhole communication
The DownLink Commander® bidirectional communication system works without interrupting drilling. This proven system sends control signals to the Magnus RSS and then quickly verifies the information so that steering adjustments immediately take effect.
HIGH-PERFORMANCE DRILLING
FOR COST-EFFECTIVE WELLBORES

Make gains in speed and savings with the Magnus™ RSS. Drilling efficiencies can deliver a quality wellbore ahead of time and add value that cascades to casing and completion running.

Speed up with selective pad activation
A proportional control system in the Magnus RSS picks up the pace. The equivalent drilling adjustments minimize tortuosity for a smooth, high-quality wellbore that can increase the efficiency—and reduce the costs—of future well-construction operations.

Verify position with high-speed sampling
An electronic control system confirms the toolface orientation again and again. The system samples data at rapid rates to give you the ability to have full control and optimal performance at high rpms.

Build up with a higher dogleg
A high-dogleg capability makes a deep kickoff a matter of course. With a consistent dogleg severity capability of 10° per 100 ft, the RSS enables you to build the curve section, eliminate correction runs, and contact the pay zone sooner.

Streamline your inventory using a standard bit
For your convenience, the Magnus RSS works with standard drill bit designs. This compatibility enables using off-the-shelf equipment to avoid lengthy lead times and reduce the need for additional inventory.

COMPLEMENTARY TOOLS
FOR TOP-NOTCH RESULTS

The Magnus RSS offers seamless integration with our other best-in-class drilling tools. Together, they shift your drilling capabilities from high gear to overdrive.

Obtain real-time formation-evaluation data
The Magnus RSS works with our industry-leading Wave™ family of LWD sensors. This compatibility enables accurate reservoir data while drilling from spud to TD, which helps you to characterize the formation, stay on the planned course, and maximize sweet-spot exposure.

Put more power into your drilling performance
Adding a motor can meet your need for bit speed. The Magnus RSS can run with any HyperLine™ performance drilling motor, which enables you to make the optimal choice for greater ROP, lower torque, and reduced stick-slip.

Double up on your drilling capabilities
Optionally equipped with radio-frequency identification (RFID) technology, our RipTide® borehole-enlargement tools can run with the Magnus RSS to underream while drilling, which further prepares your wellbore for casing and completion running.
PUSH YOUR LIMITS

The Magnus™ RSS delivers reliable, high-performance drilling with full directional control in nearly any environment or application. To learn how the RSS can help you to push performance to the next level, please contact your Weatherford representative or visit our website.

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