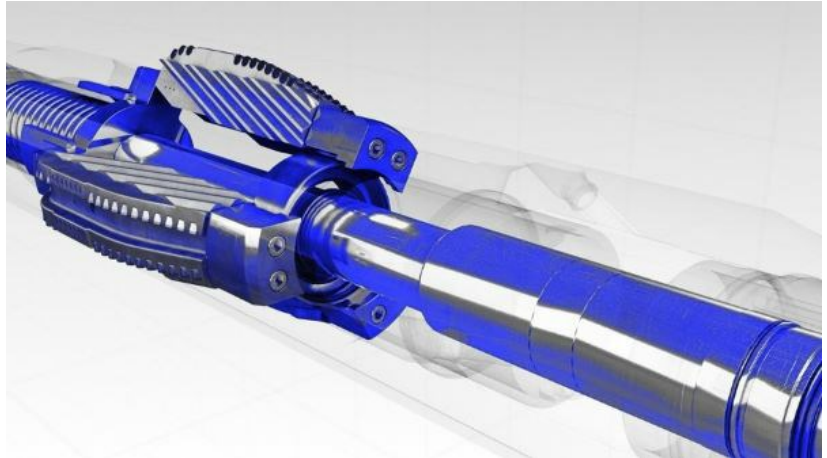


On-demand multiactivated reamer

Complete and reliable control of reamer activation and deactivation

Applications

- Boreholes requiring multiple reaming and nonreaming intervals
- BHA placement below ID-restricted components, such as LWD and MWD tools
- Rotary BHA, near-bit reamer placement
- Highly abrasive formations
- Close-tolerance and expandable casing programs
- Extended-reach drilling (ERD) operations and other well profiles with inclinations greater than 65° where conventional pumpdown activation is limited



How it improves performance

More reliable than third-party reamers, the Rhino XM™ on-demand multiactivated reamer features an indexing system with protective oil-filled chamber and functional design redundancy.

- More efficient multiactivation and deactivation
- True on-demand wellbore enlargement
- Better drilling performance
- Compatibility with full-gauge concentric wellbores

How it works

Rhino XM reamer provides complete control of reamer activation, eliminating pumpdown device activation. This enables placing the Rhino XM reamer below ID-restricted BHA components, such as MWD and LWD tools. Additionally, the reamer's flow actuation changes the reaming mode in minutes, reducing reamer activation time and enabling an unlimited number of activation cycles during a run.

- Incorporates innovative rotating cam stop to provide movement redundancy and reduce rotating seals
- Minimizes the translational and rotational force needed to move the cam
- Prevents sticking by enclosing hydraulic oil and sealing the actuation system from the annular throughbore flow
- Provides clean and lubricated environment free of mud, reducing sticking and static friction

What it replaces

Conventional reamers

Additional information

- Unlimited activations regardless of wellbore inclinations
- Full-flow capability in reaming and nonreaming modes
- Quick deployment and retraction of PDC cutter blocks
- Effective cleaning of borehole with integrated jet nozzle and flow paths One-time lockout mechanism keeping the reamer dormant until needed, providing preshear operation flexibility
- Optional through-wired feature for reliable communication across the BHA
- Optional integrated stabilizer sleeve for high shock and vibration applications

Rhino XM Specifications

Specifications	Size 9250	Size 11625	Size 13000
Overall length	17 ft [5.2 m]	19.42 ft [5.92 m]	19.42 ft [5.92 m]
Min. neck length	3.03 ft [0.92 m]	2 ft [0.61 m]	2 ft [0.61 m]
Fishing neck OD	6.5 in	8 1/4 or 9 in	8 1/4 or 9 in
Body diameter	9.25 in	115/8 in	13 in
Pin-to-cutter block length	10.24 ft [3.12 m]	9.47 ft [2.89 m]	9.47 ft [2.89 m]
Min. ID	1.75 in	211/16 in	211/16 in
Min. flow by area	13.2 in ² [85.2 cm ²]	12.1 in ² [78.06 cm ²]	22.2 in ² [143.23 cm ²]
Operating parameters: Hole opening size†	10 1/4-11 3/4 in	13 1/2-15 in	15-16 1/2 in
Min. pilot hole size	9.5 in	121/8 in	13.5 in
Min. collapsed diameter	9.25 in	115/8 in	13 in
Max. flow rate	750 galUS/min [2840]	1700 galUS/min [6435 L/min]	17000 galUS/min [6435 L/min]
Min. operating pressure	650 psi [4.57 MPa]	630 psi [4.34 MPa]	630 psi [4.34 MPa]
Max. operating pressure	3000 psi [20.68 MPa]	3000 psi [20.68 MPa]	3000 psi [20.68 MPa]
Standard PDC cutter size	13 or 16 mm	13, 16, or 19 mm	13 or 16 mm
Max. operating temperature	419 degF [215 degC]	419 degF [215 degC]	419 degF [215 degC]
Connections	Top NC 50 box & Bottom NC 50 pin	Top 65/8 or 75/8 Reg box & Bottom 65/8 or 75/8 Reg Pin	Top 65/8 or 75/8 Reg box & Bottom 65/8 or 75/8 Reg Pin
Assembled tool weight	1857 lbm [844 kg]	4519 lbm [2050 kg]	4713 lbm [2137 kg]

† Hole opening size is configurable. ‡ Higher LCM concentrations should be reviewed with an SLB representative All specifications are subject to change without notice.

Rhino XM Specifications

Specifications	Size 14250	Size 160000	Size 8000
Overall length	19.24 ft [5.92 m]	19.42 ft [5.92 m]	17 ft [5.2 m]
Min. neck length	2 ft [0.61 m]	2 ft [0.61 m]	3.03 ft [0.92 m]
Fishing neck OD	9.5 in	9.5 in	6.5 in
Body diameter	14.25 in	16 in	8 in
Pin-to-cutter block length	9.47 ft [2.89 m]	9.47 ft [2.89 m]	10.24 ft [3.12 m]
Min. ID	211/16 in	211/16 in	1.75 in
Min. flow by area	24 in ² [154.84 cm ²]	66.7 in ² [430.32 cm ²]	5.2 in ² [33.5 cm ²]
Operating parameters: Hole opening size†	16-18 in	18-22 in	
Min. pilot hole size	14.75 in	18 in	8 1/4 in
Operating parameters: Hole opening size†			9-10 1/4 in
Min. collapsed diameter	14 1/4 in	17 5/8 in	8 in
Max. flow rate	1700 galUS/min [6435 L/min]	1700 galUS/min [6435 L/min]	750 galUS/min [2840 L/min]
Min. operating pressure	630 psi [4.34 MPa]	60 psi [4.34 MPa]	620 psi [4.27 MPa]
Max. operating pressure	3000 psi [20.68 MPa]	3000 psi [20.68 MPa]	3000 psi [20.68 MPa]
Standard PDC cutter size	13, 16, or 19 mm	13, 16, or 19 mm	13 or 16 mm
Max. operating temperature	419 degF [215 degC]	419 degF [215 degC]	419 degF [215 degC]
Connections	Top 65/8 or 75/8 Reg box & Bottom 65/8 or 75/8 Reg Pin	Top 65/8 or 75/8 Reg box & Bottom 65/8 or 75/8 Reg Pin	Top NC 50 box & Bottom NC 50 pin
Assembled tool weight	4977 lbm [2258 kg]	5576 lbm [2529 kg]	1620 lbm [736 kg]
Maximum lost circulation material (LCM),‡			50 [190] medium nut plug

† Hole opening size is configurable. ‡ Higher LCM concentrations should be reviewed with an SLB representative. All specifications are subject to change without notice.