

# Rhino XC 13000 Series

On-demand hydraulically actuated reamer

## APPLICATIONS

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

## BENEFITS

- Provides on-demand wellbore enlargement
- Improves drilling performance
- Ensures full-gauge concentric wellbores

## FEATURES

- Unlimited activations regardless of wellbore inclination
- Full-flow capability in reaming and nonreaming modes
- Deployment and retraction of PDC cutter blocks in minutes
- Effective cleaning of borehole with integrated jet nozzle and flow paths

The Rhino XC\* 13000 series on-demand hydraulically actuated reamer enables complete control of reamer activation, eliminating pumpdown-device activation. This allows the Rhino XC reamer to be placed below ID-restricted BHA components, such as MWD and LWD tools.

Additionally, the reamer's flow actuation allows the reaming mode to be changed in minutes, reducing reamer activation time and enabling an unlimited number of activation cycles during a run.

## Specifications

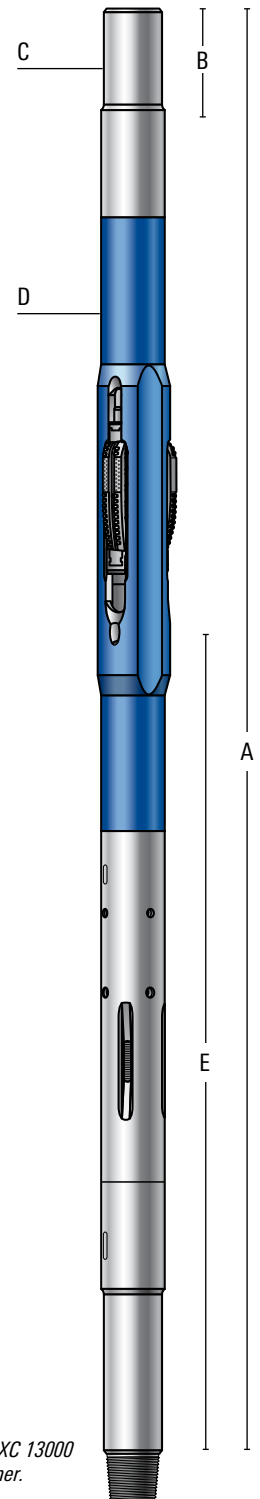
Overall length (A), ft [m]	19.42 [5.92]
Min. neck length (B), ft [m]	2 [0.61]
Fishing neck OD (C), in	8¼ or 9½
Body diameter (D), in	13
Pin to cutter block length (E), ft [m]	9.47 [2.89]
Min. ID, in	2 1/16
Min. flow by area, in <sup>2</sup> [cm <sup>2</sup> ]	22.20 [143.23]

## Operating Parameters

Hole opening size, <sup>†</sup> in	14½–16	
Min. pilot hole size, in	13½	
Min. collapsed diameter, in	13	
Max. flow rate, galUS/min [m <sup>3</sup> /min]	1,700 [6.44]	
Min. operating pressure, psi [MPa]	500 [3.45]	
Max. operating pressure, psi [MPa]	3,000 [20.68]	
Standard PDC cutter size, mm	13 or 16	
Max. operating temperature, degF [degC]	419 [215]	
Connections	Top	7/8 Reg box
	Bottom	7/8 Reg pin
Assembled tool weight, lbm [kg]	4,691 [2,128]	
Max. lost circulation material (LCM), <sup>‡</sup> lbm/bbl [kg/m <sup>3</sup> ]	50 [190] medium nut plug	

<sup>†</sup>Hole opening size is configurable.

<sup>‡</sup>Higher LCM concentrations should be reviewed with a Schlumberger representative.



The Rhino XC 13000 series reamer.