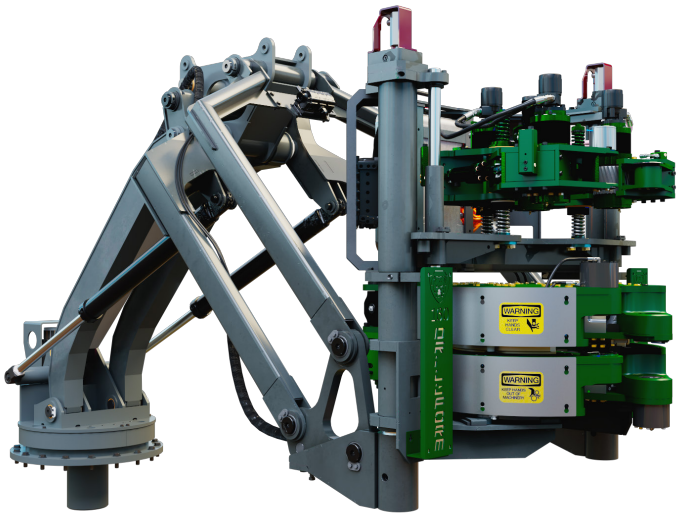
Bulldog BD160
Automated Iron Roughneck



Technical Specifications

Bulldog BD160 Automated Iron Roughneck	
~ Weight	16 500 lbs / 7 500 kg
Connection Height	36 in - 74 in / 916 mm - 1880 mm
Vertical Travel - Carriage	40 in / 1 016 mm
Vertical Travel - Arm	40 in / 1 016 mm
Horizontal Travel - Carriage	Up to 96 in
Horizontal Travel - Arm	Up to 160 in
Delivery System	Arm or Carriage (Dependent on Rig Floor)
ROUGHNECK PERFORMANCE SPECIFICATIONS	
Make-Up Torque	130 000 ft*lbs / 176 256 Nm
Break-Out Torque	160 000 ft*lbs / 216 930 Nm
Minimum Tool Joint Diameter	2 ⅞ in / 73 mm (Die Adapters Required Below 3.5 in)
Maximum Tool Joint Diameter	11 ⅞ in / 302 mm
CONTROLS AND AUTOMATION	
Control Method	Driller HMI and optional joystick
Optional	Wireless Classified Radio
System Integration	Integration into rig control system, zone Management, Driller operation
HYDRAULIC	
HPU	HPU
Maximum Flow	65 GPM / 246 LPM
Maximum Pressure	3 000 PSI / 20 680 kPa
Cooling Requirements	20 HP / 25 kW
ELECTRICAL	
Rating	Flame Proof Ex db Zone 1, 2G ATEX IECEx - Europe International
Voltage - Control System	220/120 VAC
Amperage - Control System	15 Amps
SPINNER	
Travel	Up to 12 in of independent vertical travel
Torque Capacity	3 000 ft-lbs / 4 067 Nm
Monitoring System	Active Turn Monitoring
Tubular Outer Diameter	Minimum 2 ⅞ in - Maximum 11 375 in / 76 mm - 289 mm
Max Speed	0 - 80 RPM

Product Description

Our roughnecks are engineered to expedite each connection with a fully automated solution, completing the task in just 25 seconds per pipe on average. They feature a 360-degree multipoint contact system that ensures consistent clamp force, minimizes pipe distortion, and achieves recorded torque within 1.5%.

The 360-degree multipoint contact allows these Iron Roughnecks to effectively handle high torques on small diameters by evenly distributing force across six dies, surpassing conventional systems.

The BD Tongs and Spinner incorporate a closed design with Hydra-Sync™ technology to accurately center the roughneck on the pipe axis. The Spinner includes hydraulic thread compensation for precise tubular control and reduced thread load.

All BD series roughnecks come with full automation, featuring programmable pipe tables, an interactive HMI, and remote troubleshooting via TechLink™, which minimizes downtime, training, and maintenance costs.

The delivery systems offer flexible installation options with adaptable arm delivery systems and unique 5-link arms, or the industry's most compact rotating carriage system.

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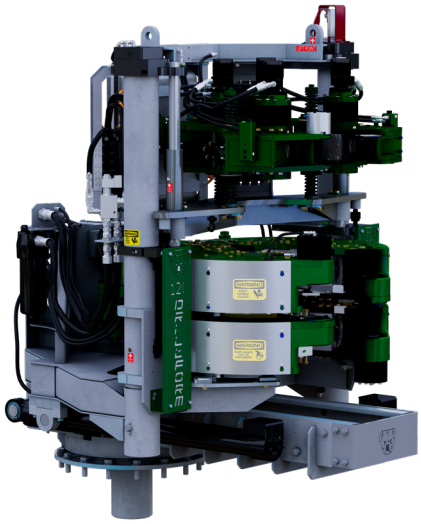
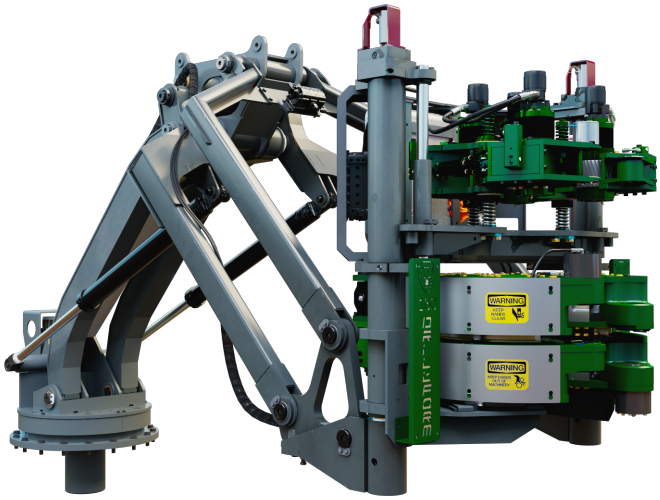


Carriage Delivery System



Arm Delivery System

Benefits

EASE OF MAINTENANCE | Modular and machined components contribute to ease and speed of maintenance.
SAFETY | Automation removes personnel around the rotating zone.
COST SAVINGS | 360° radial contact with the drill pipe reduces slippage, tool joint wear and pipe distortion resulting in more accurate torque and reduced pipe wear.
EASE OF USE | Full automation enables the operator to function the unit in steps or full auto mode.
TORQUE ACCURACY | Accurate torque on each connection reduces potential drill string damage and failure.
VERSATILITY | Hydraulic thread compensator and 12 in vertical travel on the spinner facilitate easy handling of drill string tubulars.
DATA LOG | All connection data, including torque, faults, performance time parameters, alarms, real-time analysis, and full log data, is streamed to the data cloud and can be exchanged with any drilling system.

Key Features

TONGS

- Load cell for measuring torque
- 40+ degrees of torque rotation
- Hydra-Sync™ 360-degree multipoint contact and modular design
- Error < 1.5%
- Max break torque at 5.5 in diameter

SPINNER

- Hydra-Sync™ 360-degree multipoint contact automatically aligns the pipe
- Floating spinner and hydraulic thread compensation system reduce vertical load on threads during spin in/out
- Positionable spinner height, up to 12 in vertical

AUTOMATION

- One-button makeup
- One-button positioning
- Programmable pipe tables for quick tubular changes
- Equipment can communicate over AnyBus TCP/IP protocol, making integration with other drilling systems simple
- ATEX, CSA, UL hazardous location certifications
- No personnel in rotating zone

DATA STREAM

- Full datalogging capabilities
- TechLink™ allows for remote viewing and troubleshooting of all Bulldog Iron Roughnecks

For more information, contact marketing@hmhw.com | hmhw.com