

Iron Roughnecks

Cost-effective, compact designs with user-intuitive control systems

APPLICATIONS

- Land and offshore drilling operations

ADVANTAGES

- Triple-grip torque wrench with high torque capability
- Smart clamp automatic torque settings and clamp force calculation
- Universal dies and spinners that do not require inserts or changeouts
- Precise and reliable motion
- Accommodation of a wide range of stickup heights
- Wireless or wired remote control capability
- Automatic makeup and breakout cycles
- No need for manual intervention in operations
- Easy-to-use and intuitive operator interface
- Priority-based alarm system
- Integrated interlocks and message system

The Cameron portfolio includes cost-effective, compact iron roughnecks that are efficient and easy-to-use systems with automated sequences for makeup and breakout of drillpipe and drill collars. Multiple models are available to suit a range of applications on land and offshore.

The roughnecks' triple-grip torque wrench features a smart clamping system with automatic calculation of optimal clamp force for the selected tubular OD. This clamping system ensures efficient force distribution and long-lasting dies, resulting in less manual intervention and higher safety. The motion unit ensures precise movements from parked position to well center, and the elevation system handles a wide range of stickups with ease.

Operation is flexible and versatile. The roughnecks can be used with a wired or wireless remote control and can be seamlessly integrated with the OnTrack* integrated controls system. The cost-efficient and reliable design of Cameron iron roughnecks provides a sensible choice for today's demanding drilling connections.

T-P iron roughneck

- Light weight
- Torque wrench in an articulated arm that enables travel of torque wrench and spinner assembly from parked position to well center
- Elevation system that ensures handling of a wide range of stickups with ease and precision

T-P-L iron roughneck

- Maximum reach of 16 ft [4.90 m] for enhanced drill floor flexibility
- Long-reach articulated arm and slewing system
- Torque wrench and spinner assembly that can travel from parked position to well center or other positions such as the mousehole
- Elevation system that enables streamlined and accurate handling of a wide range of stickups

M-R iron roughneck

- Modular, rail-mounted design that improves drill floor efficiency and tool changeout safety
- Efficient and precise movement from parked position to well center
- Backup torque arrestor functionality—81,000 ft.lbf [110,000 N.m] transmitted to the floor
- Backup torque readings
- Enhanced bit makeup and breakout functionality
- Optional Cameron casing tongs and casing backup tongs



Cameron iron roughnecks provide high torque and handle a wide range of stickup heights while maintaining a small footprint.

Iron Roughnecks

Technical Specifications

Product Model	T-P	T-P-L	M-R		
Iron roughneck type	Standard	Standard	Modular		
Tong option	–	–	Tongs for 10-in drillpipe	Tongs for 10-in casing	Tongs for 22-in casing
Diameter range, in [mm]					
Drilling tubular	2 $\frac{7}{8}$ –10 [73–254]	2 $\frac{7}{8}$ –10 [73–254]	2 $\frac{7}{8}$ –10 [73–254]	–	–
Casing and tubing	–	–	–	2 $\frac{7}{8}$ –10 [60–254]	7–22 [178–559]
Torque capacity, ft.lbf [N.m]					
Makeup	103,000 [140,000]	140,000 [190,000]	140,137 [190,000]	50,000 [68,000]	81,000 [110,000]
Breakout	103,000 [140,000]	166,000 [225,000]	166,000 [225,000]	50,000 [68,000]	81,100 [110,000]
Backup	–	–	80,000 [109,000]	–	–
Bit breaking	–	–	80,000 [109,000]	–	–
Spinner torque, ft.lbf [N.m]	3,467 [4,700]	3,467 [4,700]	3,467 [4,700]	Variable displacement motor	Variable displacement motor
Travel (extended range), in [mm]	75.59 (94.69) [1,920 (2,405)]	153 (193) [3,900 (4,912)]	157 (209) [4,000 (5,300)]	157 (209) [4,000 (5,300)]	157 (209) [4,000 (5,300)]
Parked size (L × W × H), ft [m]	4.62 × 4.43 × 8.50 [1.41 × 1.35 × 2.59]	7.41 × 5.12 × 8.96 [2.26 × 1.56 × 2.73]	7.61 × 5.12 × 8.86 [2.32 × 1.56 × 2.73]	7.91 × 5.25 × 8.96 [2.41 × 1.60 × 2.73]	9.32 × 6.20 × 8.96 [2.84 × 1.89 × 2.73]
Integrated mud bucket	Optional	Optional	Optional	–	–
Weight including frame, tonUS [tonUK]	4.96 [4.5]	8.71 [7.90]	6.06 [5.5]	6 [5.46]	7 [6.36]
Weight of tool, tonUS [tonUK]	–	–	4 [3.65]	3.3 [3.0]	4.96 [4.5]
Hazardous area classification	IECEx [†] and ATEX [‡] Zone 1	IECEx and ATEX Zone 1	IECEx and ATEX Zone 1	IECEx and ATEX Zone 1	IECEx and ATEX Zone 1
Class	ABS [§] and DNV ^{**} Class II	ABS and DNV Class II	ABS and DNV Class II	ABS and DNV Class II	ABS and DNV Class II

[†] IEC system for certification to standards relating to equipment for use in explosive atmospheres (IECEx)

[‡] Atmosphères Explosibles (ATEX)

[§] American Bureau of Shipping (ABS)

^{**} Det Norske Veritas (DNV)



T-P hydraulic roughneck.



T-P-L hydraulic roughneck.



M-R hydraulic roughneck.

cameron.slb.com/drilling

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