

Iron Roughnecks

**Faster
Connections.
Lower Downtime.
Safer Operations.**

Product range

IR-80

IR-100

IR-120

IR-100 Remote

IR-120 Remote

**Faster Connections. Safer Operations.
Lower Cost per Well.**

BENTEC Iron Roughnecks are engineered to deliver the fastest cycle times, high reliability, and advanced automation, enabling drilling contractors and operators to reduce flat time, improve safety, and achieve consistent, high-performance connections.

Applications



Oil & gas



Onshore
& offshore
drilling
operations

Fastest cycle
time down to
34-40
seconds
per cycle.

- Up to 50% reduction in IR related flat time
- Remote operation for safer drilling
- Reduced maintenance and lower total cost of ownership

Reducing rig flat time and improving connection efficiency remains critical to well economics

Modern drilling operations demand:

- Faster connection cycles
- Reliable, repetitive performance
- Reduced manual operation for safety

Challenges include:

- Costly downtime during making / breaking connections
- Inconsistent cycle time
- High maintenance and spare part consumption
- Exposure of personnel to high-risk areas due to non-remote operations

- ✓ **Faster connections and reduced flat time**
- ✓ **Earlier well delivery**
- ✓ **Lower maintenance and operating costs**
- ✓ **Improved safety through automation and remote control**
- ✓ **Reliable, repeatable performance**

Why BENTEC?

More efficiency. More safety. More uptime.

A high-performance iron roughneck system designed to deliver fast, consistent, and automated pipe handling, reducing flat time while improving operational safety and reliability.

Unlike conventional systems, BENTEC Iron Roughnecks combine:

- High-speed cycle performance for faster connections
- Advanced automation and remote operation capabilities
- Dynamic clamping technology to protect tool joint bending
- Reliable, low-maintenance design

All systems are engineered for consistent performance, reduced wear, and seamless integration into modern drilling operations, complying with API, ATEX, and EU standards and are interchangeable with common third-party market models.

Designed to deliver

- ✓ **Fastest cycle time**
34-40 seconds per cycle. Minimizes flat time and enables earlier well delivery
- ✓ **Reduced downtime**
Up to 50% reduction in flat time. High reliability and longer MTBF ensure consistent operations
- ✓ **Improved safety**
Remote operation options remove personnel from hazardous areas
- ✓ **Lower total cost of ownership**
Reduced spare parts consumption, maintenance, and overhaul requirements
- ✓ **Consistent, repetitive performance**
Reliable make & break cycles with minimal variation
- ✓ **Advanced connection control**
Accurate torque measurement with digital recording and integration options
- ✓ **Tool joint protection**
Dynamic clamping eliminates "egging effect" and prevents over-torque of tool joints
- ✓ **Flexible product range**
Complete product range covering the entire suite of land rigs. Tailored from compact, to intelligently automated to heavy duty and high performance

Proven performance

- ✓ **Field-proven high-speed and consistent connection performance**
- ✓ **Reliable operation across harsh, global drilling environments**
- ✓ **Strong track record of reduced downtime and maintenance**
- ✓ **Long-term customer relationships and continuous deployments**



Iron Roughneck

IR-80

Specifications

Torque make-up	60,000 ft-lbs	81,350 Nm
Torque break-out	80,000 ft-lbs	108,465 Nm
Max. spinner speed	100 rpm (5 in DP)	
Horizontal travel	5 ft	1,524 mm
Min. connection height	24 in	610 mm
Max. connection height	63 in	1,600 mm
Length	55-1/8 in	1,400 mm
Width	53-1/8 in	1,350 mm
Height	76-3/4 in	1,950 mm
Weight	8,267 lbs	3,750 kg
Min. pipe diameter	2-7/8 in	73 mm
Max. pipe diameter	8-1/2 in	216 mm
Min. hydraulic pressure	2,500 psi	172 bar
Max. hydraulic pressure	3,000 psi	207 bar
Min. volume/flow	28 gpm	106 l/min
Max. volume/flow	40 gpm	151 l/min
Cycle time make-up	<=40 sec	
Pedestal rotation L/R	>=90 / >=90	
Ambient temperature	-4°F to 131°F	-20°C to +55°C
Ex / haz. zone	IP-Code 15	

Key features

Cost Effective. Highly Compact.

The IR-80 is designed with a compact footprint, making it ideal for space-constrained rig floors across both onshore and offshore operations. Engineered for reliability in harsh environments, including arctic and desert conditions, it delivers consistent performance wherever it is deployed. Flexible configuration options including hydraulic systems, central lubrication, and transport skid solutions ensure easy integration and adaptability to a wide range of rig requirements.

Benefits

- Cycle times down to 34 seconds per connection
- Reduced non-productive time (NPT)
- Interchangeable with common competitor iron roughnecks
- Easy installation and integration
- Field-proven, reliable design
- Component parts easily exchanged for simplified maintenance
- Improved operational safety
- Fully compliant with CE, ATEX



Iron Roughneck

IR-100 & IR-100-Remote

Specifications

Torque make-up	100,000 ft-lbs	135,600 Nm
Torque break-out	120,000 ft-lbs	162,700 Nm
Tool joint connection OD range	3-1/8 in – 9-3/4 in	
Spinner speed (nominal)	80 rpm @ 5" DP, 46 gpm / 176 ℓ/min. / 170 bar	
Spin torque	3,000 ft-lbs 4,000 Nm @ 5" DP, 46 gpm / 176ℓ/min.	
Max. connection height	69.2 in	1,759 mm
Min. connection height	30 in	759 mm
Max. horizontal travel*	8 ft	2,438mm
Max. hydraulic requirements	58 gpm @ 3,046 psi. / 220 ℓ/min. @ 210 bar	
Min. hydraulic requirements	35.3 gpm @ 2,466 psi. / 130 ℓ/min. @ 210 bar	
Torque wrench working angle	40°	
Controls	Local control panel or remote controls via zone rated HMI or zone rated wireless controls	
Remote capabilities	Sequence assisted automation	
Mount	Pedestal / floor mount socket	
Pedestal rotation	300°	
Casing ready	No	
Width	55.5 in	1,410 mm
Height (from drill floor level)	97.4 in	2,474 mm
Height (transport)**	86.6 in	2,200 mm
Depth (retracted)	89.4 in	2,271 mm
Weight	19,800 lbs	8.9 t
Max. temperature	131 °F	+55 °C
Min. temperature	-40 °F	-40 °C

* Horizontal travel is the defined distance between center of wrench when retracted and center of wrench when extended

** Socket pin removed from the unit for transport

Key features

Controlled Performance. Intelligent Automation.

The IR-100 is designed with a compact footprint for flexible integration across a wide range of rig configurations, whether for portable onshore use or permanent offshore installation.

The IR-100 is hydraulically operated, delivering robust, reliable operation.

IR-100 Remote is electro-hydraulically operated with advanced automation and remote capability — providing higher automation and enhancing both safety and operational efficiency.

Benefits

- Up to 50% reduction in flat time during make & break operations
- Fastest cycle times down to 37 seconds per connection
- Simplified electro-hydraulic system
- Precise torque measurement with dynamic clamping system
- Tool Joint pointer for automatic pre-positioning
- Integrated torque readout system for accurate make-up/ break-out
- E-Torque List for digital recording and traceability
- Central lubrication system lowering greasing ports
- Spin-out sensor for improved operational control
- Improved HSE through reduced manual intervention
- Interchangeable with common third-party market models
- Fully compliant with CE, ATEX

Iron Roughneck

IR-120 & IR-120-Remote

Specifications

Torque make-up	100,000 ft-lbs	135,600 Nm
Torque break-out	120,000 ft-lbs	162,700 Nm
Tool joint connection OD range	3-1/8 in – 9-3/4 in	
Spinner speed (nominal)	80 rpm @ 5" DP, 46 gpm / 176 ℓ/min. / 170 bar	
Spin torque	3,000 ft-lbs 4,000 Nm @ 5" DP, 46 gpm / 176ℓ/min.	
Max. connection height	69.2 in	1,759 mm
Min. connection height	30 in	759 mm
Max. horizontal travel*	12 ft	3,657mm
Max. hydraulic requirements	58 gpm @ 3,046 psi. / 220 ℓ/min. @ 210 bar	
Min. hydraulic requirements	35.3 gpm @ 2,466 psi. / 130 ℓ/min. @ 210 bar	
Torque wrench working angle	40°	
Controls	Local control panel or remote controls via zone rated HMI or zone rated wireless controls	
Remote capabilities	Sequence assisted automation	
Mount	Pedestal / floor mount socket	
Pedestal rotation	300°	
Casing ready	No	
Width	55.5 in	1,410 mm
Height (from drill floor level)	97.4 in	2,474 mm
Height (transport)**	86.6 in	2,200 mm
Depth (retracted)	89.4 in	2,271 mm
Weight	19,800 lbs	8.9 t
Max. temperature	131 °F	+55 °C
Min. temperature	-40 °F	-40 °C

* Horizontal travel is the defined distance between center of wrench when retracted and center of wrench when extended

** Socket pin removed from the unit for transport

Key features

High Performance. Heavy Duty.

The IR-120 is engineered for demanding drilling applications, delivering high performance in the most challenging operating environments. Its robust design supports both portable onshore use and permanent offshore installation, providing flexibility across rig configurations.

The IR-120 is hydraulically operated, ensuring powerful and reliable performance.

The IR-120 Remote is electro-hydraulically operated, offering advanced automation and remote capability — reducing manual intervention while enhancing safety, consistency, and operational efficiency.

Benefits

- Up to 50% reduction in flat time during make & break operations
- Fastest cycle times down to 37 seconds per connection
- Simplified electro-hydraulic system with reduced hydraulic requirements
- High-accuracy torque measurement with dynamic clamping system
- Automatic positioning via Tool Joint Pointer
- Integrated torque readout system for consistent connection quality
- E-Torque List for digital recording and performance tracking
- Central lubrication lowering grease ports
- Spin-out sensor for enhanced control and safety
- Improved HSE through automation and remote operation
- Interchangeable with common third-party market models
- Fully compliant with CE, ATEX