

# IRON ROUGHNECKS



The Bentec IRON ROUGHNECK maximises the efficiency of pipe handling operations.

It provides a safe and versatile alternative to conventional pipe connection techniques for make-up & break out operations.



Over the past 40 years, Bentec has developed an impressive portfolio of automated tubular running operations in order to build more robust and reliable Iron Roughnecks that reduce both downtime and maintenance. The Iron Roughneck is available in two versions.

The IR-100 model operates purely hydraulically, simple and robust for safe drilling operations. This design includes the essential functions to make-up and break out pipe connections.

The IR-100-Remote model operates electrically and hydraulically. It includes automated features for; make and break sequences, remote positioning system and a torque readout system for partial or fully automated make and break operations.

The compact dimensions of the Bentec Iron Roughneck makes it easy to install in any existing or new build rigs. The design allows a simple interchange with competitors' Iron Roughnecks. Bentec developed both Iron Roughneck models for use as either a portable unit on land rigs or permanent installation on offshore rigs. The existing rig hydraulic power unit (Rig HPU) powers the Iron Roughneck, although a separate hydraulic power unit is also available. Bentec Iron Roughnecks comply with the latest European CE and ATEX standards, as well as with the latest international API standards, maintaining the highest level of industry quality and safety.



- Wireless Ex Zone rated Control Console
- Full make and break sequence controls
- Full make and break torque control



- Zone-rated HMI based Iron Roughneck controls
- Sequences overview
- Digital documentation
- Alarm status
- Digital troubleshooting guide
- Digital pipe tally

## IR-100 &amp; IR-100-Remote

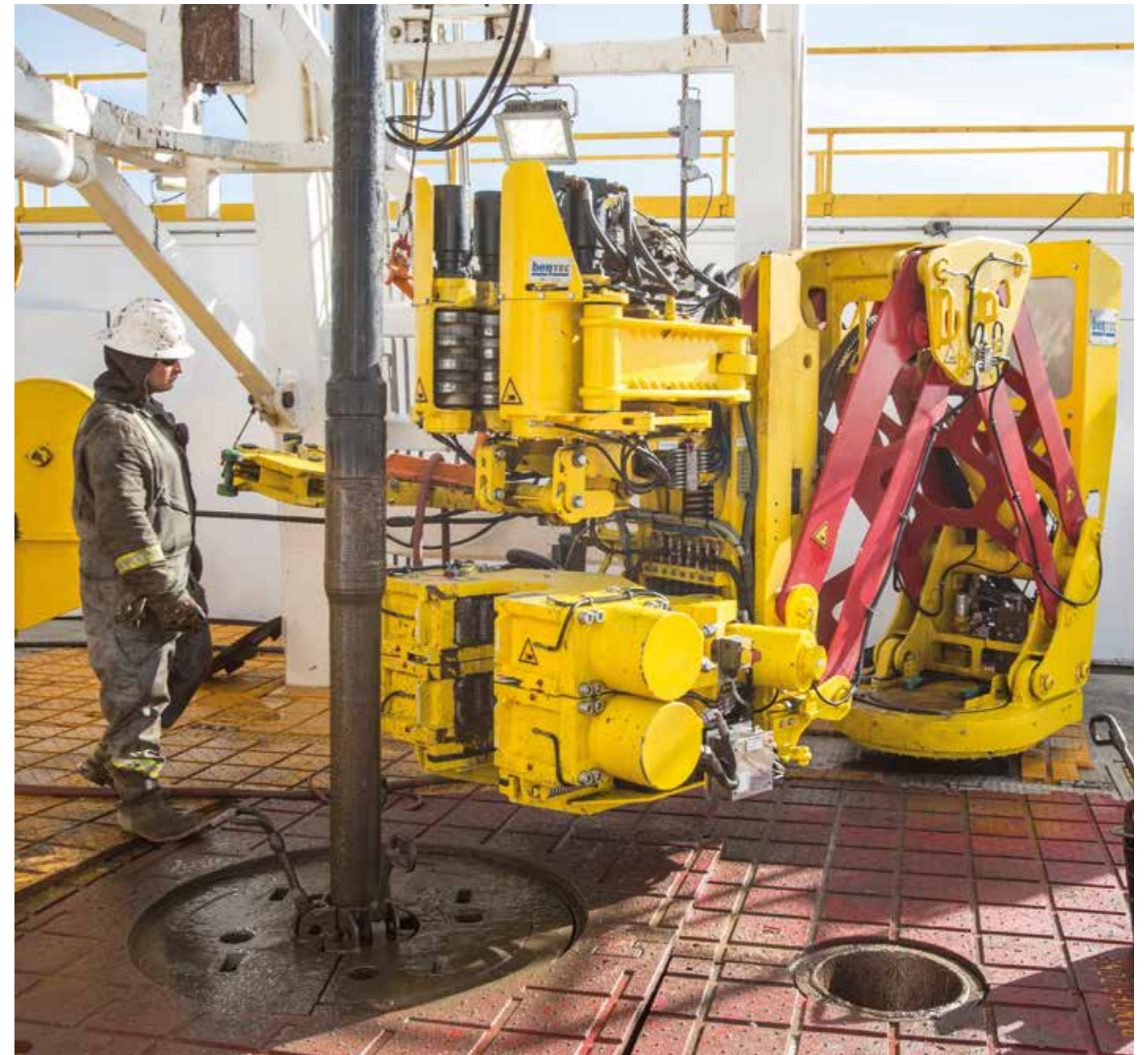
## Technical Data

Max. Makeup Torque	100,000 ft-lbs	135,600 Nm
Max. Breakout Torque	120,000 ft-lbs	162,700 Nm
Tool Joint Connection O.D. Range	3-1/8" – 9-3/4"	
Spin Speed	100 rpm @ 5" DP, 46 gpm / 176 l/min	
Spin Torque	3,000 ft-lbs @ 5" DP, 46 gpm / 176 l/min	
Min. Connection Height	30.2"	767 mm
Max Connection Height	69.6"	1,768 mm
Max. horizontal Travel*	8 ft	2,438 mm
Hydraulic Requirements (min.)	45 gpm @ 2,466 PSI	170 l/min @ 170 bar
Hydraulic Requirements (max.)	55 gpm @ 3,046 PSI	207 l/min @ 210 bar
Torque Wrench Angle	40°	
<b>Controls</b>	Local Control Panel or Remote Controls via Zone Rated HMI or Zone Rated Wireless Controls	
<b>Remote Capabilities</b>	Sequence Assisted Automation	
<b>Mount</b>	Pedestal / Floor Mount Socket	
<b>Pedestal Rotation</b>	300°	
<b>Casing Ready</b>	No	
<b>Width</b>	55.5"	1,410 mm
<b>Height (From Drill Floor Level)</b>	97.4"	2,474 mm
<b>Height (Transport)**</b>	86.6"	2,200 mm
<b>Depth</b>	89.4"	2,271 mm
<b>Weight</b>	14,330 lbs	6.5 t
<b>Min Temperature***</b>	-40 °F	-40°C
<b>Max Temperature</b>	131 °F	+55°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

\*\*\* deep temperature kit from -4°F / -20°C required



The Bentec Iron Roughneck provides a safe and versatile alternative to conventional pipe connection techniques for make and break operations.

### Key Features

- Fastest cycle time for make / break of connections min. 37 seconds
- Make and break cycles can be done in automated sequences
- Hard wired, HMI-based or wireless remote controls (zone rated)
- Each torque process is measureable with the highest accuracy and stored in the HMI unit or 3rd party systems
- Combined electric over hydraulic approach
- Central lubrication spots
- Available drilling enhancement software:
  - Digital Pipe Tally

### Benefits

- Up to 50% reduction of flat time during make and break connections
- Floorhands or drillers can focus on the actual work task
- Holistic control about all functions or sequences of the Iron Roughneck and simplified troubleshooting
- Highest level of automation
- More reliable and valuable feedback for drill string make torque documentation
- Less hydraulics requiring less maintenance
- Simplified lubrication process

---

Copyright 2018 Bentec, Rev. 03/2018  
All rights reserved. All texts, pictures as well as their arrangements are subject to copyright and other laws to protect intellectual property. They may neither be copied for commercial purposes nor for circulation, nor changed nor be used on other websites. Some of our Internet pages also contain pictures subject to the copyright of those parties having made available these pictures.

Bentec GmbH Drilling & Oilfield Systems  
Deilmannstraße 1  
48455 Bad Bentheim  
Germany  
Phone: +49 (0)5922 72 80  
Fax: +49 (0)5922 72 457  
Internet: [www.bentec.com](http://www.bentec.com)  
E-Mail: [sales@bentec.com](mailto:sales@bentec.com)

LLC Bentec Tyumen, Russia  
2 km from Stary Tobolsky Trakt 8 a  
625014 Tyumen  
Russia  
Phone: +7 (0)3452 6839 00  
Fax: +7 (0)3452 6839 26  
Internet: [www.bentec.ru](http://www.bentec.ru)  
E-Mail: [tyumen@bentec.com](mailto:tyumen@bentec.com)

For a complete list of bentec's equipment, visit us online: <https://www.bentec.com/equipment/>