



Weatherford®

Tubular Running Services

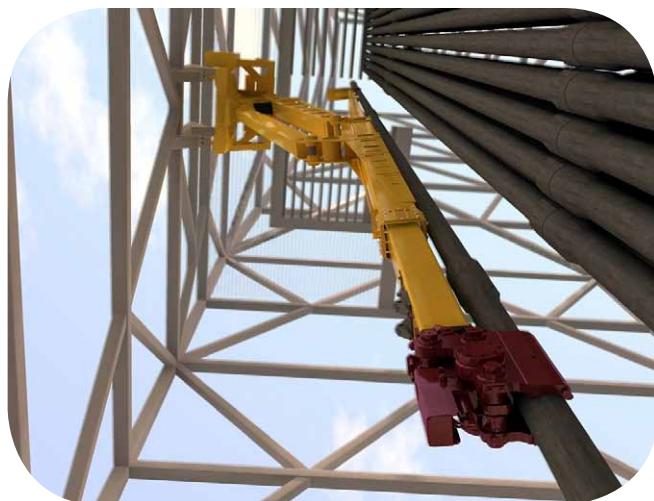
Iron Derrickman® Plus Pipe-Handling System

Weatherford's *Iron Derrickman Plus* pipe-handling system marks a major advancement in hands-free handling of tubulars on offshore jackup or platform drilling rigs. This patent-pending racking-board-mounted system lifts up to 23,000 lb (10,433 kg) and eliminates the need for personnel on the derrick or on the drill floor when tripping or making connections.

Designed to mount into existing offshore jackup or platform drilling rigs, the system vertically lifts double and triple stands of drillpipe, heavyweight drillpipe, and drill collars up to 10-in. (254-mm) diameter and racks these stands into racking-collar fingers on the well-center side of the system. The design combines innovative mechanical engineering, positive control of hydraulic closed-loop proportional circuitry, electrical remote motion controls, radio, and a direct-wired operator's panel, giving the operator an intuitive feel of all movements.

Applications

- Offshore jackup and platform drilling rigs
- Any closed-derrick rig





Iron Derrickman[®] Plus Pipe-Handling System

Features, Advantages and Benefits

- The *Iron Derrickman Plus* system operates from the rig floor by portable or wired remote control, significantly enhancing safety by removing personnel from the mast and floor when racking or unracking pipe during tripping operations.
- Rig-up and rig-down of this compact, lightweight system is simple; it is attached to, or is built as part of, the racking board. Mounting is against the inside of the derrick, below the racking board.
- The unique rotating design of the *Iron Derrickman Plus* system offers simplicity of operation, low-derrick loading characteristics, and smooth control of all pipe movements. The system lifts a stand of pipe by gripping the pipe body wall, moves the stand in a controlled path between well center and a designated spot in the setback area, and automatically racks the stand in the fingerboard.
- Unlike other systems, the position of the *Iron Derrickman Plus* system is not in the critical path for pipe movement between the setback area and well center. In the unlikely event of malfunction, the system can be parked in its retracted position, allowing manual pipe racking operations to quickly resume pipe tripping or drilling.

Options

- 480-V AC, 60-Hz, 100A or 600-V AC, 50-Hz hydraulic power unit
- Remote log-in capability
- Power gripper for handling drill collars with an OD of 2-7/8 in. (gripper with shims); or drill collars from 3-1/2 to 8 in., or 5 to 9-1/2 in., or 5-1/2 to 10 in., and 11 in.

Specifications

Dimensional	
Overall length (ft/m)	45 13.7
Overall width (ft/m)	8 2.4
Overall depth (ft/m)	3.5 1.1
Overall weight (lb/kg)	15,000 6,804
Mechanical	
Lifting capability, drillpipe, heavyweight drillpipe, and drill collar OD ^a (in.)	2-7/8 to 11
Manipulation capability, drill collar OD ^b (in.)	≤ 11
Lifting capacity (lb/kg)	23,000 10,433
Average full operational cycle time (sec)	≈ 90
Hydraulic power requirements	
Hydraulic power unit (HP)	60
Flow (gpm/lpm)	30 114
Pressure (psi/bar)	3,000 207
Electrical control panel requirements ^b	120 VAC, 15 AMP, 60 Hz

^aWith power gripper.

^bOther control voltage can be provided on request.