

# SmartRacker

## Vertical pipe-handling system

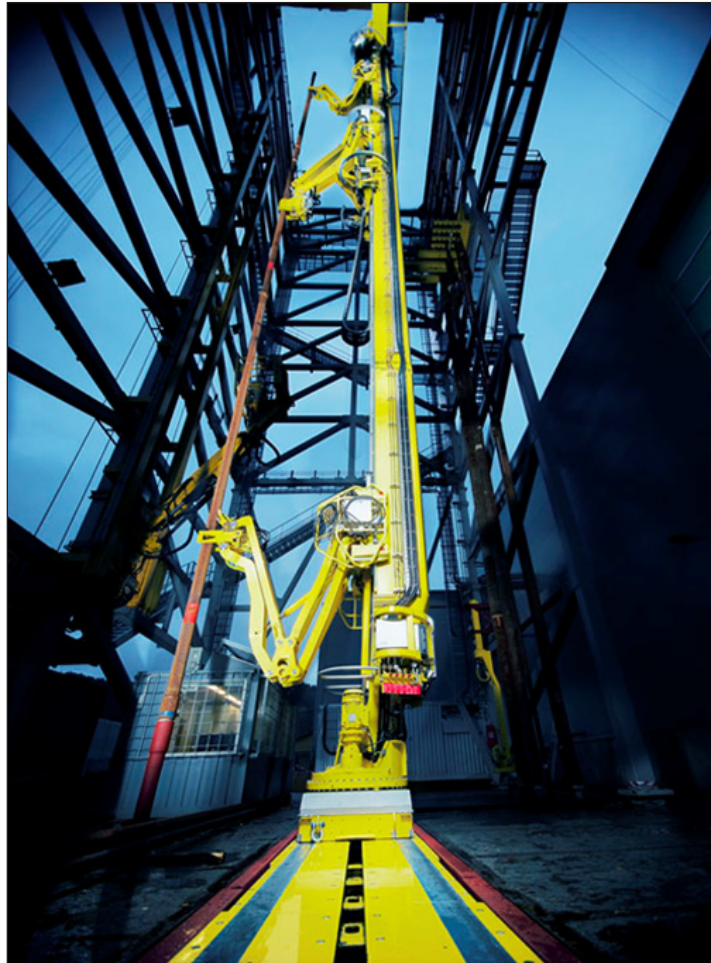
### MAIN FEATURES

- Versatile for handling of triple or quad stands, horizontal-to-vertical, as well as assistance in handling smaller bits, subs, and objects
- Fully-automated functions with focus on extremely simple use
- All main functions driven by AC or hydraulic motors for improved performance and accuracy
- One gripper head handles all drillpipe, casing and drill collar from 3½ in to 14 in (27/8 in optional); no need to stop and wait to change heads
- Accurate soft stabbing function saves threads on drillpipes
- Works in concert with the SmartCat\* for horizontal-to-vertical operations; no need for overhead v-door machines
- Pickup elevator with fail-safe mechanical lock range from 27/8 in to 14 in pipe size
- Upper and lower guide arm adjustable vertically for different stand lengths
- Robust design with well-protected sensors
- User-friendly HMI with onscreen operator guidance

Cameron SmartRacker\* triple and quad column rackers are advanced pipe handling systems for jackup rigs, semisubmersible rigs, and drillships.

SmartRacker triple and quad column rackers perform all vertical pipe handling operations on the drillfloor, including racking stands, building stands in the mousehole, picking up singles from the catwalk, laying out singles to the catwalk, and tripping in-and-out of the fingerboard. These systems are fully-automated with a robotic control system that controls and monitors all operations and protects the machine and rig from operator failure. The machine can be operated in auto-mode, semiautomatic mode, manual mode, override mode, and emergency mode. With its unique gripper head design, the SmartRacker can handle all types of pipe, including production tubing, drillpipe, casing, and spiral drill collar.

Using AC or hydraulic technology for all main functions, the SmartRacker is very accurate and reliable and easy and quick to operate. This efficient handling system is designed for the most demanding applications in an offshore environment. It is designed according to DNV and NORSOK regulations and is CE marked.



# SmartRacker Pipe Handling System

## SAFETY FEATURES

- Fail-safe design philosophy
- Fully-automated; all operations controlled from the drilling control room
- Monitoring and interlocks to avoid damage to machine or surroundings; smooth end stops
- Gripper arm lifted using dual lifting wire, dual winch motors, and gears, as well as dual fail-safe winch brakes
- Dual design (upper trolley motor, gear and brake/lower trolley motor, gear and brake/column rotate motor, gear and brake)
- Low-maintenance design throughout using high-quality components and low-maintenance bearings
- Maintenance access at defined points
- Full integration with the zone management system
- Fail-safe gripper head with accumulator to maintain pressure in case of hydraulic power loss

Technical Specifications	SI	Imperial (US)
Capacity SWL on skate	10 tonUK	11 short tonUS
Capacity SWL on skate using transport frame	30 tonUK	33 short tonUS
Tubular range on skate	2 7/8 to 20 in	
Tubular range on trolley	13 3/8 to 36 in	
Number of singles on skate	4 each 6 3/8 in or 8 each 3 1/2 in	
Maximum single tubular length	15 m	50 ft
Stand building speed <sup>†</sup>	20 joints/hr	
Maximum speed travel velocity	0.5 m/sec	1.8 ft/sec
Operating temperature	-20 to 40 degC	-4 to 104 degF

<sup>†</sup> With SmartRacker\* III or IV column racker. Other stand building speeds available upon request.

Scope of Supply	Options
Catwalk main structure with rack and pinion drive, hydraulics, drag chain, instrumentation	Standard and/or custom designed trolleys, e.g. top drive handling trolley for moving top drive in-and-out of drillfloor
Skate with lifting arm, centralizers	Support structure to align SmartCat catwalk machine with drillfloor
Pusher traveling on the catwalk main structure	Tail in arm
Rails on drillfloor	Transport frame for top drive (up to SWL 30 tonUK)
Control system cabinet	2 tonUK utility winch at rear of catwalk structure
Radio remote operator panel	Service walkway on one or both sides

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