



Nick Caskey – Sr Sales Rep
Drilling Products

FR120 IRON ROUGHNECK

IMPROVING PRODUCTS THROUGH CUSTOMER PARTNERSHIPS

2024 IADC MAINTENANCE AND EQUIPMENT RELIABILITY MEETING

Production Equipment

EDGE® Desalting equipment
Separators & Pressure Vessels
Skidded Process Units
LACT Units

Global Tubing®

Coiled Tubing
Coiled Line Pipe

Drilling

Rig Floor Handling Tools
Iron Roughnecks
Hydraulic Catwalks
Drilling Consumables
Bearings
Drilling Instrumentation
Repair & Field Services

Valve Solutions

DSI® Gate, Globe & Check Valves
PBV® Ball Valves
Severe Service Valves

Stimulation & Intervention

GHT™ radiators and Cooling Systems
Manifold Trailers
Power Ends & Fluid Ends
Wireline Pressure Control
Hydraulic Latch Assembly
Quality Wireline & Cable™

Downhole

Forum MultiLift Solutions
Davis-Lynch™ Cementing & Casing Equipment
ProDrill® Composite Frac Plugs

Subsea

Perry Work® Class ROVs
Sub-Atlantic® Observation Class ROVs
Tether Management Systems
Dynacon® Launch and Recovery Systems
ROV Hardware, Tooling & Components
VisualSoft™ Video & Data Acquisition
VMAX® Simulation Software

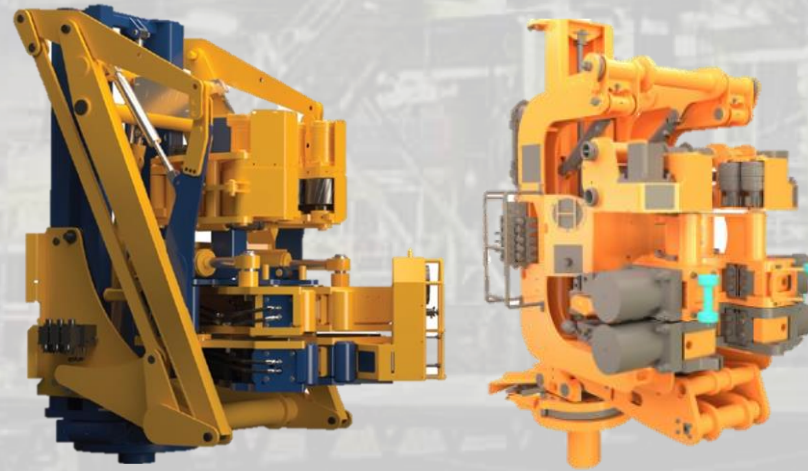


Drilling Equipment Portfolio and Install Base

FET has a rich history in onshore and offshore tubular handling dating back to the early 2000's...



Handling Tools 500+ rigs
Elevators, Slips, Links,
Tongs, Spinners



Iron Roughnecks Approx. 850 Tools
FR120 / Compact / SubCompact
FH70/80/100

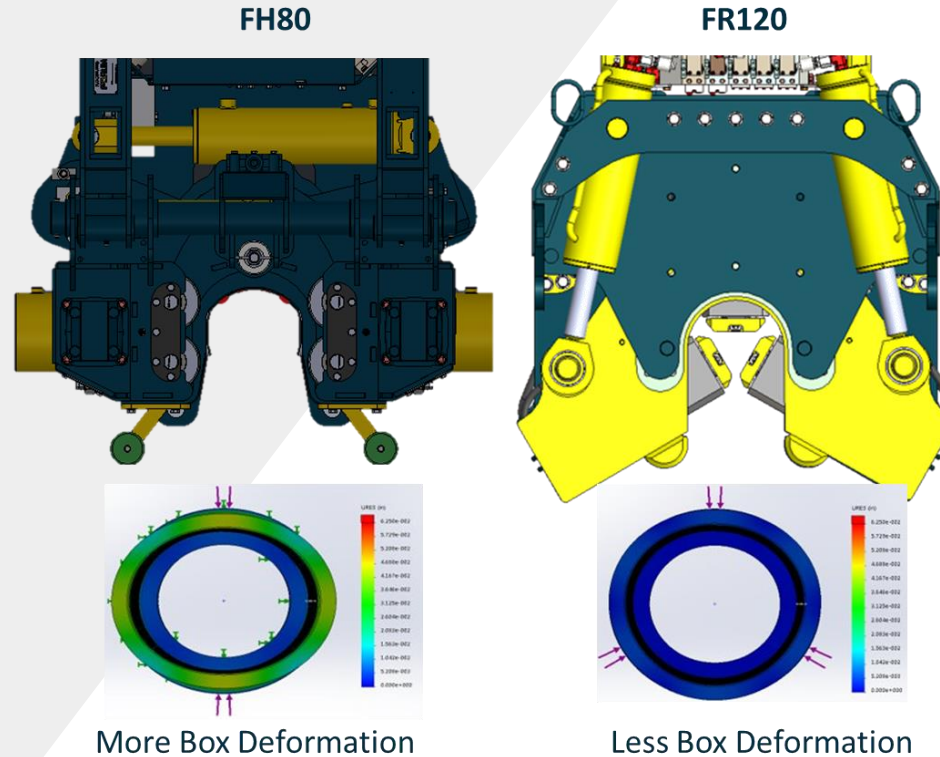


Laydown Machines & Catwalks 1200+
2500, 3000, 3500, 4000, 4500
Little Tripper, TL30, TL40
Hawker Pipe Handler

Developing Solutions for today's drilling – FR120



FR120



3 Jaw Grip System

- Improved drilling efficiency has greatly increased the cycle count of pipe handling equipment.
- ✓ **FR120 operates at <50% capacity to reduce wear and improve long term durability.**
- ✓ **Improved safety factor more than 2.25:1, designed to API 7k.**
- Greater torque requires higher grip force.
- ✓ **Three Jaw clamping design provides best in class connection integrity.**
- ✓ **45deg rotation eliminates extra bites on pipe reducing wear and repair costs on tool joints.**

FR120 Adaptability

Challenge: More compact unit for tight rig floors.

Solution: Develop FR120-C & SC model reducing height and width, maintaining torque capabilities.



Challenge: Short tool joints with hardband interference.

Solution: Modify grip cylinders to decrease grip spacing and design a half die.

Challenge: Improve part reliability to match operational environment.

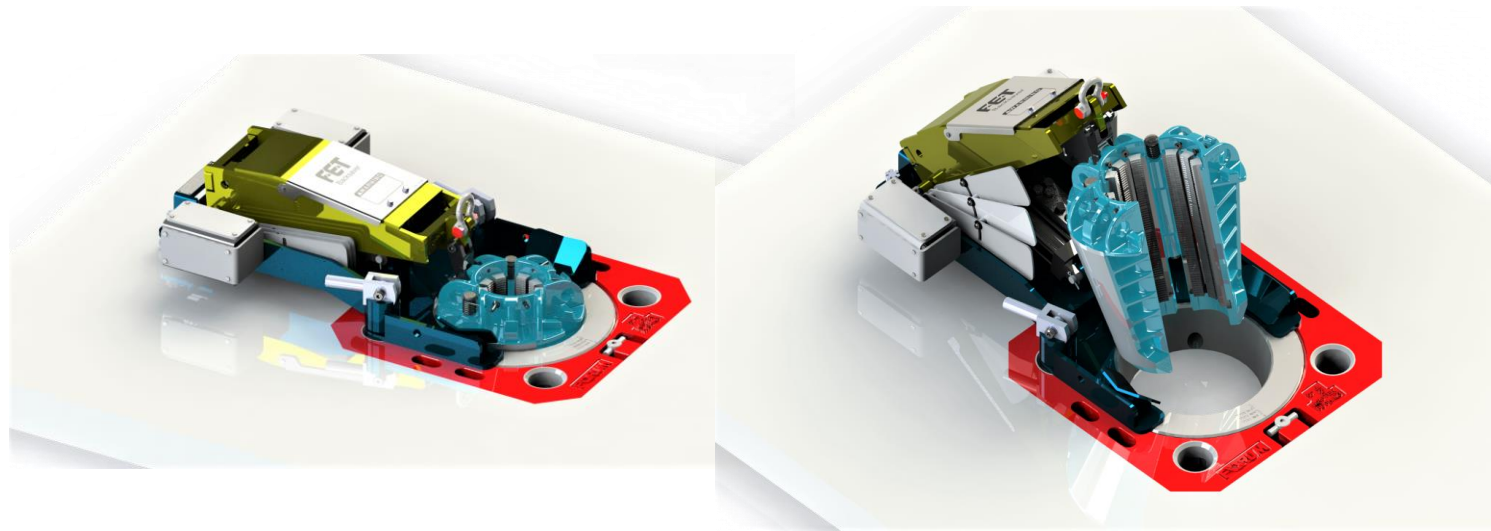
Solution: Continuous improvement through feedback from customer experience.

Application	Larger Land Rigs and Jackups	Smaller Land Rigs and Jackups	Land Rigs
Tool Name	FR120	FR120-C	FR120-SC
Torque: Make-up	100,000 ft-lbs.	100,000 ft-lbs.	100,000 ft-lbs.
Torque: Break-out	120,000 ft-lbs.	120,000 ft-lbs.	120,000 ft-lbs.
Connection OD	4" - 9.75"	4" - 9.75"	4" - 9.75"
Torque Rotation Angle	45°	45°	45°
Tubular Range	3.5" - 9.75"	3.5" - 9.75"	3.5" - 9.75"
Spinner Torque	3000 ft-lbs.	3000 ft-lbs.	3000 ft-lbs.
Spinner Thread Compensation	±5"	±5"	±5"
Effective Horizontal travel	96"	72"	72"
Reach	132"	108"	102"
Vertical Travel	36"	36"	36"
Slew Angle	±179°	±179°	±179°
Minimum Connection Height	27"	27"	35.5"
Ambient Temperature Range	-20°C to +45°C	-20°C to +45°C	-20°C to +45°C
Weight	12,000 lbs.	11,000 lbs.	11,500 lbs.
Height Stowed	96"	96"	85.5"
Depth	70"	70"	77"
Width	55"	48.75"	48.5"
Min Flow	45 gpm	45 gpm	35 gpm (45 gpm recommended)
Min Pressure	2500 psi	2500 psi	2500 psi
Meets API 7K Design Requirements	√	√	√

*From Floor Socket location without optional Extender Plates

Backsaver[®] Remote Slip Lifter

Automates slip handling from a remote location



- Increases safety on the rig floor (reduces the personnel in redzone and potential for injuries)
- Automated operation can reduce be integrated into drilling system
- True Slip set / raised feedback signal
- Downforce applied to ensure proper slip set, less personnel
- Adjustable Speed Control
- Easy to install
- Over 150 units in the Market



Questions?

Thank you!