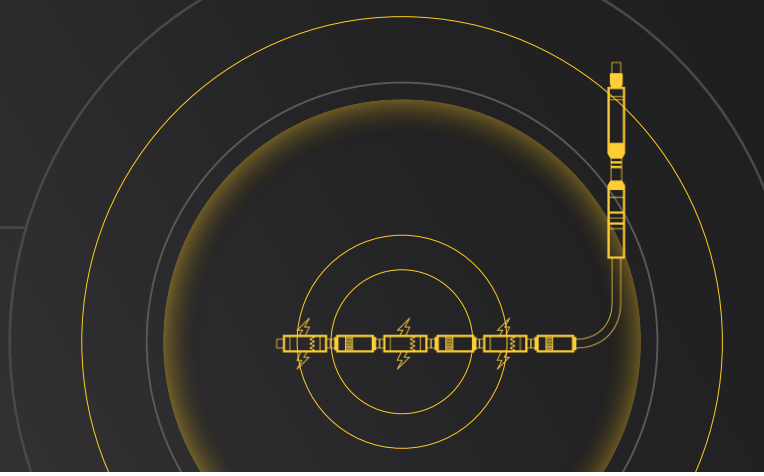


TECH DATA SHEET

Frontier PermaFlex Hydraulic Liner Hanger



OVERVIEW

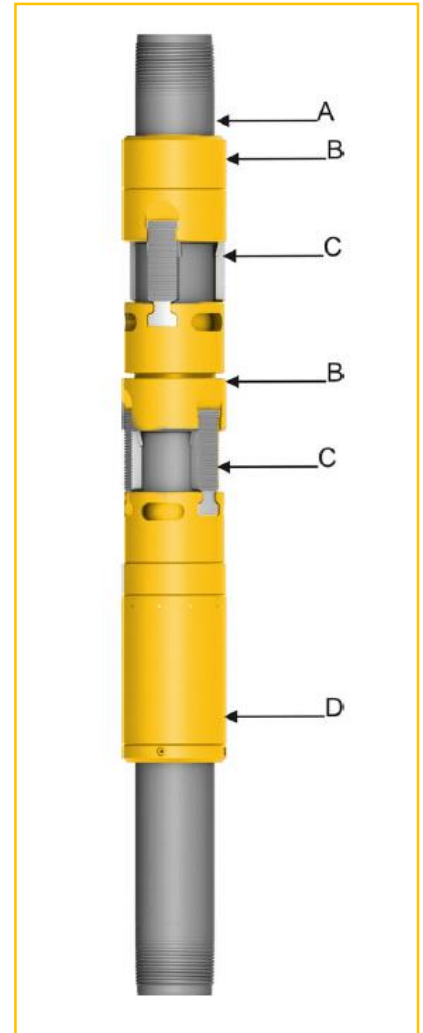
The PermaFlex Liner Hanger is a Hydraulic Set Liner Hanger. The Hanger has Multiple Slip sets that allow for higher hanging loads to be suspended without causing casing damage. Constrained Slips also allow for rotation while running the liner downhole and are held firmly to the cone preventing slip damage.

FEATURES

- Hydraulic Set
- Rotation can be applied while being Deployed
- Multiple Slip Set Allowing for Higher Hanging Load Capacity
- Setting Sleeve Prevents Prematurely Setting
- Full ID Mandrel
- High Burst and Collapse Pressure Rating
- 10,000 PSI Differential Pressure Rating

APPLICATIONS

- Compatible with LTSeries Liner Top Packer
- Deviated Wells
- Used when Downhole Mechanical Manipulation is a Concern



PERMAFLEX LINER HANGER SPECIFICATION

Basic Information	
Liner Size & Weight	3-1/2" 9.2#
Casing Size & Weight	5-1/2" 20-23#
Packer Grade	API P-110
Thread	API NU-10 Rnd

Basic Information	
Liner Size & Weight	4" 11.6#
Casing Size & Weight	5-1/2" 17-20#
Packer Grade	API Q-125
Thread	API NU-10 Rnd

Dimensional Information 3-1/2" x 5-1/2"	
A	3.500"
B	4.375"
C	4.375"
D	4.375"
E	2.992"

Dimensional Information 4" x 5-1/2"	
A	4.000"
B	4.563"
C	4.563"
D	4.563"
E	3.476"

Mechanical Specifications 3-1/2" x 5-1/2"	
Tensile (lbs)	284,921
Body Burst (psi)	15,966
Body Collapse (psi)	13,530
Cylinder Collapse (psi)	13,122
Cylinder Burst (psi)	11,875

Mechanical Specifications 4" x 5-1/2"	
Tensile (lbs)	320,486
Body Burst (psi)	14,419
Body Collapse (psi)	8,863
Cylinder Collapse (psi)	7,675
Cylinder Burst (psi)	8,107

Hanging Capacity (lbs)		
Casing Grade	Single Cone	Dual Cone
20# P-110 Casing	131,930	263,861
23# P-110 Casing	151,665	303,330

* Or by Thread

Hanging Capacity (lbs)		
Casing Grade	Single Cone	Dual Cone
17# P-110 Casing	111,099	222,198
20# P-110 Casing	131,930	263,861

* Or by Thread

