

HYBRID WORKSTRING FEATURING TUBING DIMENSIONS WITH DRILL PIPE DURABILITY AND STRENGTH



FSS-338 **Rugged Workstring Design**

New workstring design with smaller OD connection giving more versatility when used for refracking existing wells.

Robust thread profile gives higher torsional strength allowing greater performance on wellbore cleanouts.

6.5 turns for makeup

Patent Pending

- ✓ Engineered for 5½ casing applications
- ✓ Metal to Metal seal
- ✓ Tested to 22,500 psi at 40deg/100ft bend radius
- ✓ Extended length upsets allow multiple recuts

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Frac String Performance Characteristics Sheet

Pipe Size and Weight: 3 1/2 12.95 IEU

Pipe Grade: S135

Range: 2

Connection: 4.125 X 2.562 FSS-338

Patent Pending

Frac String Pipe Body

	New-API	Premium
Wall Thickness (in)	0.375	0.300
ID (in)	2.750	2.750
Calculated Plain End weights (lbs/ft)	12.510	9.768
Note: Premium properties are calculated based on uniform OD and wall thickness.		
Cross sectional area pipe body (in ²)	3.682	2.875
Cross sectional area OD (in ²)	9.621	8.814
Cross sectional area ID (in ²)	5.940	5.940
Section Modulus (in ³)	2.605	2.015
Polar Section Modulus (in ³)	5.210	4.030
Strength Properties		
Torsional Strength (ft-lbs)	33,800	26,200
Tensile Strength (lbs)	497,000	388,100
80% Torsional Strength (ft-lbs)	27,000	21,000
Pressure Capacity (psi)	25,313	23,143
Collapse Capacity (psi)	25,829	22,014

Connection

FSS-338

Frack String with a Material Yield Strength of 135000 psi

Pin Tong length (in)	5	Friction Factor 1.15
Box Tong length (in)	7	
Torsional Strength (ft-lbs)	18,810	21,632
Severe Service Level Recommended Make-up Torque (ft-lbs)(70%)	13,200	15,100
Standard Service Level Recommended Make-up Torque (ft-lbs)(60%)	11,300	13,000
Min Recommended Make-up Torque (ft-lbs)	9,400	
Balance OD (in)	4.106	
Tensile Strength (lbs)	422,600	
Min OD for Tension (in)	3.906	

Frac String Properties	Frac String Bend Radius																										
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This Performance Sheet was generated by Nels Wickander.

Revision 06 9/12/2020

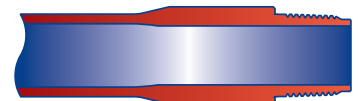
THIS TECHNICAL INFORMATION IS FOR REFERENCE ONLY

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