

# HYBRID WORKSTRING FEATURING TUBING DIMENSIONS WITH DRILL PIPE DURABILITY AND STRENGTH



## **FSS-329** **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

13622 Poplar Circle, #401  
Conroe, TX 77304

vbarber@fracstrings.com

www.fracstrings.com

# Frac String Performance Characteristics Sheet

**Pipe Size and Weight:** 3 1/2 12.95 IEU

**Pipe Grade:** S135

**Range:** 2

**Connection:** 4.0 X 2.50 FSS-329

Patent Pending

## Frac String Pipe Body

	New-API	Premium
OD (in)	3.500	3.350
Wall Thickness (in)	0.375	0.300
ID (in)	2.750	2.750
Calculated Plain End weights (lbs/ft)	12,510	9,768
<b>Note: Premium properties are calculated based on uniform OD and wall thickness.</b>		
Cross sectional area pipe body (in <sup>2</sup> )	3.682	2.875
Cross sectional area OD (in <sup>2</sup> )	9.621	8.814
Cross sectional area ID (in <sup>2</sup> )	5.940	5.940
Section Modulus (in <sup>3</sup> )	2.605	2.015
Polar Section Modulus (in <sup>3</sup> )	5.210	4.030
	New-API	Premium
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-329		
OD (in)	4.000	
ID (in)	2.500	
<b>Frack String with a Material Yield Strength of 135000 psi</b>		
Pin Tong length (in)	5	<b>Friction Factor</b> 1.15
Box Tong length (in)	7	
Torsional Strength (ft-lbs)	17,200	19,780
Recommended Make-up Torque (ft-lbs)(70%)	12,000	13,800
Recommended Make-up Torque (ft-lbs)(60%)	10,300	11,900
Min Recommended Make-up Torque (ft-lbs)	8,600	
Balance OD (in)	3.981	
Tensile Strength (lbs)	389,400	
Min OD for Tension (in)	3.829	

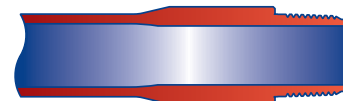
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This Performance Sheet was generated by Nels Wickarider.

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THIS TECHNICAL INFORMATION IS FOR REFERENCE ONLY

**FRAC STRING**  
**SOLUTIONS LLC**



13622 Poplar Circle, #401  
 Conroe, TX 77304  
 vbarber@fracstrings.com  
 www.fracstrings.com

**936-978-0446**

Fax: 936-978-0457