

THIS TECHNICAL INFORMATION IS FOR REFERENCE ONLY

Drill Pipe Performance Characteristics Sheet

TSC Drill Pipe



Patent: 9,885,214

Pipe Size and Weight: 3 1/2 13.30 IEU

Pipe Grade: S135

Range: 2

Tool Joint: 5.0 X 2.438 PTECH+™35



110 Cypress Station Drive
Suite 160
Houston, TX 77090
Phone: (832) 230-8228
Fax: (281) 741-9914

Revision 01 2023-05-31

Pipe Body		
	New-API	Premium
OD (in)	3.500	3.353
Wall Thickness (in)	0.368	0.294
ID (in)	2.764	2.764
Calculated Plain End weights (lbs/ft)	12.304	9.612
Note: Premium properties are calculated based on uniform OD and wall thickness.		
Cross sectional area pipe body (in ²)	3.621	2.829
Cross sectional area OD (in ²)	9.621	8.829
Cross sectional area ID (in ²)	6.000	6.000
Section Modulus (in ³)	2.572	1.991
Polar Section Modulus (in ³)	5.144	3.982
	New-API	Premium
Torsional Strength (ft-lbs)	33,400	25,900
Tensile Strength (lbs)	488,800	381,900
80% Torsional Strength (ft-lbs)	26,700	20,700
Pressure Capacity (psi)	24,840	22,711
Collapse Capacity (psi)	25,404	21,626

Tool Joint		
	PTECH+™35	
	OD (in)	5.000
	ID (in)	2.438
Tool Joint with a Material Yield Strength of 135000 psi		
	Pin Tong length (in)	6
	Box Tong length (in)	8
	Friction Factor	1.0 1.15
	Torsional Strength (ft-lbs)	31,070 35,731
	Severe Service Level Recommended Make-up Torque (ft-lbs)(70%)	21,746 25,007
	Standard Service Level Recommended Make-up Torque (ft-lbs)(60%)	18,600 21,390
	Minimum Recommended Make-up Torque (ft-lbs)	15,500 17,825
	Balance OD (in)	4.435
	Tensile Strength (lbs)	595,400
	Tool joint/Drill pipe torsional ratio (New pipe)	0.93
	Tool joint/Drill pipe torsional ratio (Prem pipe)	1.20
	Min OD for premium class (in)	4.248

Drill Pipe Assembly with PTECH+ Tool Joint	Drill Pipe Bend Radius
API Adjusted weight (lbs/ft)	14.10
Approximate length (ft)	32.54
API Fluid Displacement (gal/ft)	0.216
Fluid Capacity (gal/ft)	0.305
Drift Size	2.313
* These calculations are based on new pipe with nominal wall	
	Based on Bending Stress (psi) at Pipe OD
	15,000
	Radius of Curvature (R) (ft.) (@ OD of pipe)
	291.7
	BUR (dogleg) deg/100 ft.
	19.6

The technical information contained herein is for reference purposes only and is not a recommendation. TSC Drill Pipe does not assume responsibility for results obtained through the use of the technical information, no warranty is expressed or implied. User is fully responsible for the accuracy and suitability of use of the technical information and application of appropriate safety factor.