

**DRILL PIPE DATA SHEET**  
**DRILL PIPE: 6 5/8" IEU by 25.20 lb/ft by Grade S135 by Range 2 (31.5 ft)**  
**TOOL JOINT: 8" OD by 5" ID by TSDS65 (135 ksi SMYS)**

DRILL PIPE BODY DIMENSIONAL DATA		
	NEW	PREMIUM (80% RBW)
OD (in)	6.625	6.493
ID, Ref (in)	5.965	5.965
Wall Thickness (in)	0.330	0.264
Cross Sectional Area (in <sup>2</sup> )	6.526	5.166
Polar Section Modulus, J/c (in <sup>3</sup> )	19,572	15,464
Section Modulus, I/c (in <sup>3</sup> )	9.786	7.732

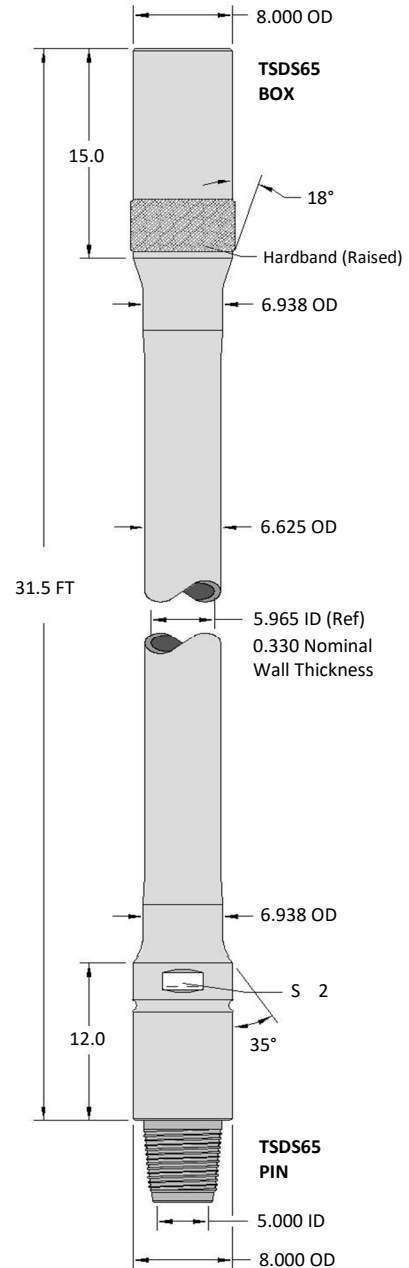
Premium class values based on a minimum wall thickness equal to 80% of New drill pipe body nominal wall thickness, reference API RP 7G-2.

DRILL PIPE BODY PERFORMANCE PROPERTIES		
	NEW	PREMIUM (80% RBW)
Tensile Yield (lb)	881,035	697,438
Torsional Yield (ft-lb)	127,044	100,379
Collapse Pressure (psi)	6,036	3,429
Internal Yield Pressure (psi)	11,768	10,759
Material Yield Strength (psi)	135,000	

Drill pipe body performance properties are based on API RP 7G. Class New drill pipe body data is for reference only and is not intended for drill string design purposes.

TOOL JOINT DATA (New)		
Connection Size	TSDS65	
OD (in)	8.000	
ID (in)	5.000	
Box Tool Joint OD Length (in)	15.0	
Pin Tool Joint OD Length (in)	12.0	
Connection Bevel Diameter (in)	7.703	
Material Yield Strength (psi)	135,000	
<b>Thread Compound Friction Factor</b>	<b>1.0 (a)</b>	<b>1.15 (b)</b>
Recommended Make-Up Torque (ft-lb)	63,800	73,300 (c)
Max Make-Up Torque (ft-lb)	74,300	85,500 (d)
Torsional Yield (ft-lb)	106,300	
Torsional Strength Ratio, TJ/DPB	0.84	
Approximate Tension to Yield Pin at Recommended Make-Up Torque (lb)	1,246,000	
Approximate Tension to Yield Pin at Max Make-Up Torque (lb)	938,000	
Tool Joint Tensile Yield (lb)	1,601,400	
Balanced OD (in)	7.809	

- (a) Make-Up Torque values shown under column 1.0 are based on using a 1.0 friction factor thread compound (0.08 coefficient of friction).
- (b) Make-Up Torque values shown under column 1.15 have been adjusted based on using a 1.15 friction factor thread compound. The make-up torque values are only applicable when using a thread compound rated by the manufacturer to have a 1.15 friction factor.
- (c) Recommended Make-Up Torque is based on 60% of the connection torsional yield, ref. API RP 7G.
- (d) Max Make-Up Torque is based on 70% of the connection torsional yield. It is the maximum make-up torque that can be applied to the connection to prevent downhole make-up, reference IADC Drilling Manual. Never exceed Max Make-Up Torque.



ASSEMBLY DATA (New)							
Weight (Approx.)		Capacity (Approx.)		Displacement Open Ends (Approx.)		Drift Diameter	Assembly Length Shld'r to Shld'r (Approx.)
(lb/Joint)	(lb/ft)	(US gallon/ft)	(BBL/ft)	(US gallon/ft)	(BBL/ft)	(in)	(ft)
962	30.52	1.3912	0.0331	0.4664	0.0111	4.875	31.5

Assembly data based on TSC 95% RBW New drill pipe nominal dimensions and no internal plastic coating. Conversion Factor: 1 BBL= 42 US gallons

- Notes:
- All data is calculated based on standard methods. No safety factor applied.
  - Premium Class drill pipe body data is based on a minimum wall thickness equal to 80% of New drill pipe nominal wall thickness, reference API RP 7G-2.
  - Drawing is for reference purposes only, not to scale, and based on New drill pipe nominal dimensions, units of inches unless otherwise indicated.

Tool Joint Make-Up Torque TSDS65 x 5.000" ID (135 ksi SMYS) 1.0 Friction Factor Thread Compound (1)			
Tool Joint OD (in)	Recommended Make-Up Torque (1) (2) (ft-lb)	Max Make-Up Torque (1) (3) (ft-lb)	Torsional Yield Ref. (ft-lb)
8.000	63,800	74,300	106,300
7.875	63,800	74,300	106,300
7.750	60,700	70,700	101,100
7.625	54,200	63,200	90,400
7.594	52,600	61,400	87,700

Combined Torque and Tension to Yield Drill Pipe Body Premium Class (80% RBW) 6 5/8" IEU x 25.20 lb/ft x Grade S135 (5)	
Operational Torque (ft-lb)	Drill Pipe Body Max Tension (lb)
0	697,438
2,000	697,300
4,000	696,800
6,000	696,100
8,000	695,200
10,000	693,900
12,000	692,400
14,000	690,600
16,000	688,500
18,000	686,100
20,000	683,400
22,000	680,400
24,000	677,200
26,000	673,600
28,000	669,700
30,000	665,500
32,000	661,000
34,000	656,200
36,000	651,000
38,000	645,500
40,000	639,600
42,000	633,400
44,000	626,800
46,000	619,800
48,000	612,500
50,000	604,700
52,000	596,500
54,000	587,900
56,000	578,800
58,000	569,200

Tool Joint Make-Up Torque TSDS65 x 5.000" ID (135 ksi SMYS) 1.15 Friction Factor Thread Compound (4)		
Tool Joint OD (in)	Recommended Make-Up Torque (4) (2) (ft-lb)	Max Make-Up Torque (4) (3) (ft-lb)
8.000	73,300	85,500
7.875	73,300	85,500
7.750	69,800	81,300
7.625	62,400	72,700
7.594	60,500	70,600

Estimated Elevator Hoist Capacity (lb) (6)		
Tool Joint OD (in)	7.031" Dia. Assumed Elev. Bore	7.063" Dia. Assumed Elev. Bore
8.000	1,258,000	1,219,900
7.594	710,700	672,600

\* Estimated elevator hoist capacity is less than Premium Class (80% RBW) drill pipe body tensile yield capacity.

Caution: Operational (rotating) torque should never exceed 80% of the connection make-up torque, reference IADC Drilling Manual.

Notes:

- (1) Make-Up Torque values are based on 1.0 friction factor thread compound (0.08 coefficient of friction).
- (2) Recommended Make-Up Torque is based on 60% of the connection torsional yield, ref. API RP 7G.
- (3) Max Make-Up Torque is based on 70% of the connection torsional yield. It is the maximum make-up torque that can be applied to the connection to prevent downhole make-up, reference IADC Drilling Manual. Never exceed Max Make-Up Torque.
- (4) Make-Up Torque values have been adjusted based on using a 1.15 friction factor thread compound. The make-up torque values are only applicable when using a thread compound rated by the manufacturer to have a 1.15 friction factor.
- (5) Premium class drill pipe body based on 80% remaining pipe body wall and other requirements specified in API RP 7G-2. Drill pipe body combined torque and tension based on API RP 7G, no safety factor applied.
- (6) Estimated elevator hoist capacity is for reference only and based on tool joint projected taper area, 110,000 psi SMYS and no safety factor. User is advised to contact their elevator manufacturer for elevator hoist capacity versus tool joint OD.

