

# Drill Pipe Data & Performance Sheet

## 5-1/2" 21.90# S-135 R2 PTech55+™

### TUBE BODY DATA

Tube OD	5.500	in.
Wall Thickness	0.361	in.
Tube ID	4.778	in.
Tensile Yield Strength	620,600	lbs. (API Premium 80% Inspection Class)
Torsional Yield Strength	71,800	ft-lbs. (API Premium 80% Inspection Class)
Upset Type   Upset OD (max)	IEU	5.6875 in.
Elevator Capacity	873,844	lbs.
Tube Burst	14,177	psi. (API Premium 80% Inspection Class)
Tube Collapse	7,496	psi. (API Premium 80% Inspection Class)
Slip-Crush Capacity (16.5" gripper contact length)	531,700	lbs.

### CONNECTION DATA

Connection	PTech55+™	
Tool Joint OD	6.625	in.
Tool Joint ID	4.250	in.
Tool Joint SMYS	135,000	psi.

### CONNECTION PERFORMANCE

Make Up Torque (Max.) <sup>1</sup>	51,800	ft-lbs. (1.0 FF)
	59,570	ft-lbs. (1.15 FF)
Connection Tensile Yield (@ Max. M/U TQ)	934,800	lbs.
Connection Torsional Yield	86,400	ft-lbs.

### ENGINEERING DATA

Approximate Length	31	ft.		
Drift Diameter	4.125	in.		
Adj. Weight	23.44	lbs. / ft.		
Displacement	0.3581	gal. / ft.	0.0085	bbls. / ft.
Capacity	0.9109	gal. / ft.	0.0217	bbls. / ft.

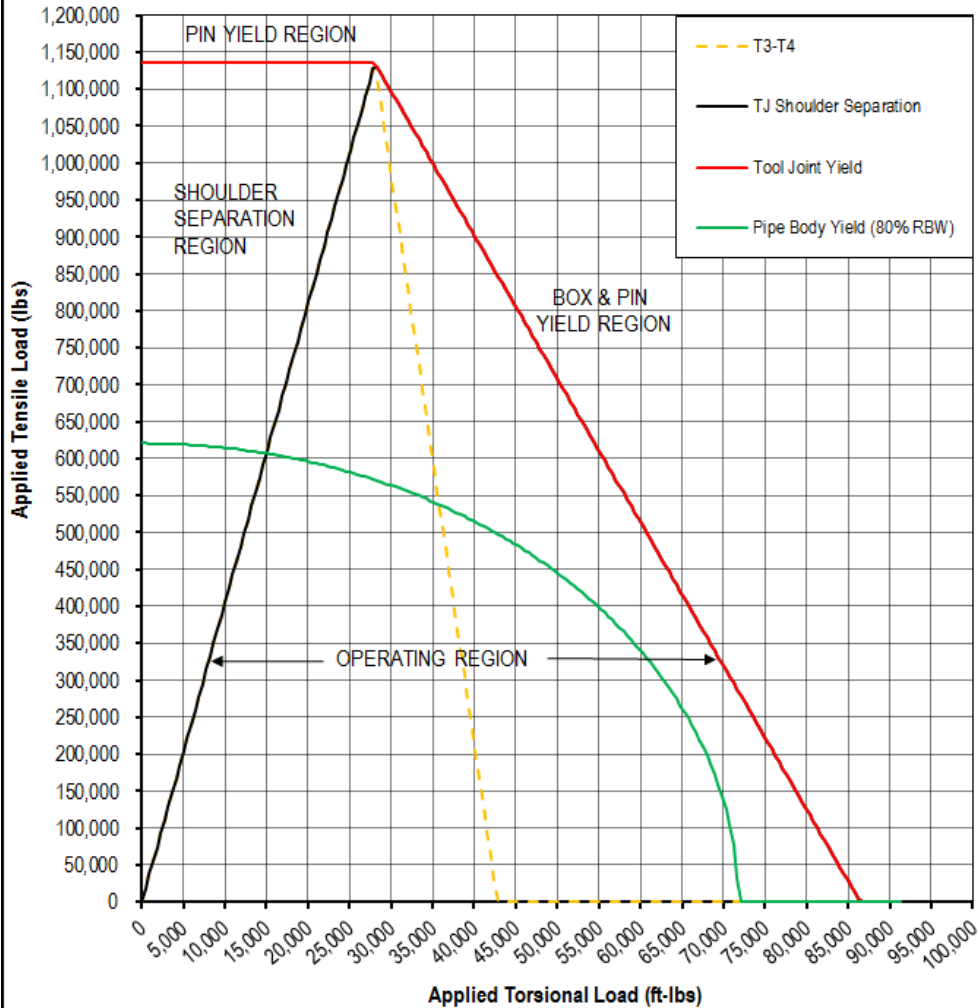
### Notes:

<sup>1</sup>Max MUT 1.0 FF is 60% of connection torsional strength. As required, adjust MUT according to applied thread compound friction factor, not exceeding 1.15. Rec MUT for most applications is that shown for 1.0 FF, regardless of dope used. Higher MUT should only be applied where rotary torque exceeds 80% of MUT 1.0 FF or when downhole torque and/or backoff is a concern.

PTech+™ is a registered trademark of TSC™ Drill Pipe

The technical information contained herein, including the product performance sheet and other attached documents, has been extracted from information available from the manufacturer and is for reference only and not a recommendation. The user is fully responsible for the accuracy and suitability of use of the technical information. Patterson Services, Inc. cannot assume responsibility for the results obtained through the use of this material. No expressed or implied warranty is intended. Drill pipe assembly properties are calculated based on uniform OD and wall thickness. No safety factor is applied. Weight, displacement, and capacity are approximate and can vary by ± 10% (or more) depending on OD, specified wall, wall tolerance, and internal coating options. It is the responsibility of the customer and the end user to determine the appropriate performance ratings, acceptable use of the product, maintain safe operational practices, and to apply a prudent safety factor suitable for the application. For API connections that have different pin and box IDs, tool joint ID refers to the pin ID. Per Chapter B, Section 4 VII of the IADC drilling manual, it is recommended that drilling torque should not exceed 80% of MUT.

**Torque Tension Curve: 5-1/2" 21.90# IEU S-135 Drill Pipe with 6.625 X 4.250 PTech55+™ Tool Joint. Curve Based on Calculation Method in API RP7G. Safety Factor =1.0**



**5-1/2" 21.90# IEU S-135 Drill Pipe Tube Body Collapse Pressure Under Axial Stress - API 5C3**

