

Pipe							METRIC	
							NEW	API PREMIUM
Pipe size	in	4.500	mm	114.3	OD	mm	114.3	110.9
Pipe weight	lb/ft	16.60	kg/m	24.70	Thickness	mm	8.6	6.8
Upset Type		IEU			X-Sec Area	cm ²	28.4	22.4
Tube grade		S135			Section Modulus	cm ³	70.0	54.8
Range		2			Polar Section Modulus	cm ³	140.0	109.7
Tube Yield	MPa	931			Tensile Yield	kdaN	265	208
ID	mm	97.2			Torsional Yield	N-m	75,200	59,000
					80% Torsional Yield	N-m	60,200	47,200
					Internal Pressure Yield	MPa	122.0	111.7
					Collapse Yield	MPa	115.8	75.8
					D/t		13.35	16.19
					Connection/Tube Torsional Ratio		0.781	

Tool Joint						METRIC	
						NEW	REC MIN OD
Connection Type		430 DUO		OD	mm	133.4	125.4
Material Yield Strength	MPa	896	Tensile Yield Strength		kdaN	368	368
OD	mm	133.4	Torsional Yield Strength		N-m	58,800	42,800
ID	mm	76.2	Recommended Makeup Torque		N-m	35,300	25,800
Pin Shoulder Angle	deg	18	Maximum Makeup Torque		N-m	38,200	27,900
Pin Tool Joint Length	mm	356					
Box Tool Joint Length	mm	356					

Drill Pipe Assembly						METRIC	
					Shoulder-Shoulder Length	m	9.60
					Adjusted Weight	kg/m	27.20
					Closed End Displacement	L/m	10.57
					Open End Displacement	L/m	3.47
					Fluid Capacity	L/m	7.10
					Drift Size	mm	73.0

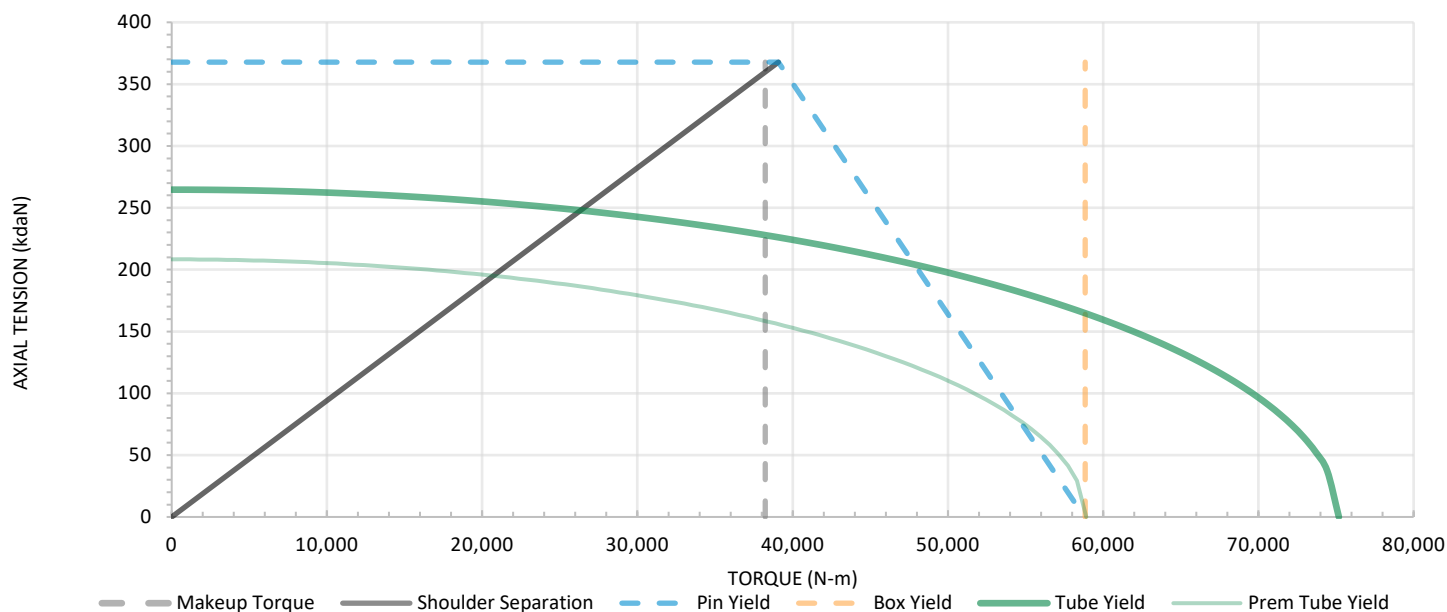
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Calculations are based on uniform wall thickness and outside diameter – no safety factor has been applied. The information provided for inspection classes is based on uniform wear and is not intended to recommend or confirm operational limits of any used product. It is recommended that drilling torque not exceed 80% of the makeup torque, however it is the responsibility of the end user to determine the acceptable use of the end product including appropriate performance ratings and safety factors where applicable. All connection torque calculations have been performed using a thread compound friction factor of 1.0. Complete Group does not endorse any specific thread compound and waives all responsibility in determining appropriate makeup torque values for any specific drilling circumstance. Modifying makeup torque values for any reason shall be done at the end users discretion and risk.

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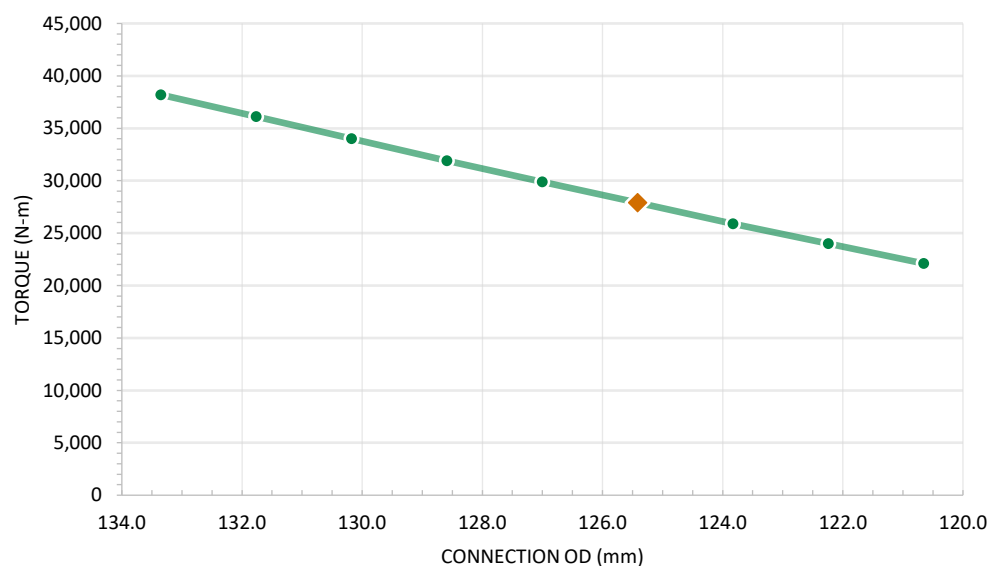
Makeup Torque Then Tension Chart

METRIC



Connection Wear Chart

METRIC



CONNECTION OD (mm)	MAXIMUM MAKEUP TORQUE (N-m)
133.4	38,200
131.8	36,100
130.2	34,000
128.6	31,900
127.0	29,900
125.4	27,900
123.8	25,900
122.2	24,000
120.7	22,100
MIN REC OD (mm)	
125.4	27,900

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