

### Pipe

CDN

						NEW	API PREMIUM
Pipe size	<i>in</i>	4.500	<i>mm</i>	114.3	OD <i>mm</i>	<b>114.3</b>	109.9
Pipe weight	<i>lb/ft</i>	20.00	<i>kg/m</i>	29.76	Thickness <i>mm</i>	<b>10.9</b>	8.7
Upset Type		IEU			X-Sec Area <i>cm<sup>2</sup></i>	<b>35.5</b>	27.8
Tube grade		S135			Section Modulus <i>cm<sup>3</sup></i>	<b>83.8</b>	65.2
Range		2			Polar Section Modulus <i>cm<sup>3</sup></i>	<b>167.7</b>	130.3
Tube Yield	<i>MPa</i>	931			Tensile Yield <i>kdaN</i>	<b>330</b>	258
ID	<i>mm</i>	92.5			Torsional Yield <i>ft-lbs</i>	<b>66,400</b>	51,600
					80% Torsional Yield <i>ft-lbs</i>	<b>53,100</b>	41,280
					Internal Pressure Yield <i>MPa</i>	<b>155.8</b>	142.0
					Collapse Yield <i>MPa</i>	<b>160.6</b>	129.6
					D/t	<b>10.47</b>	12.58
					Connection/Tube Torsional Ratio	<b>0.732</b>	

### Tool Joint

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					NEW	REC MIN OD		
Connection Type		400 DUO		OD	mm	133.4	122.2	
Material Yield Strength	MPa	896		Tensile Yield Strength	kdaN	409	409	
	OD	mm	133.4		Torsional Yield Strength	ft-lbs	48,600	32,700
	ID	mm	68.3		Recommended Makeup Torque	ft-lbs	29,200	19,600
	Pin Shoulder Angle	deg	18		Maximum Makeup Torque	ft-lbs	31,600	21,300
	Pin Tool Joint Length	mm	356					
	Box Tool Joint Length	mm	356					

### Drill Pipe Assembly

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Shoulder-Shoulder Length	m	9.60
Adjusted Weight	kg/m	32.89
Closed End Displacement	L/m	10.57
Open End Displacement	L/m	4.19
Fluid Capacity	L/m	6.37
Drift Size	mm	65.1

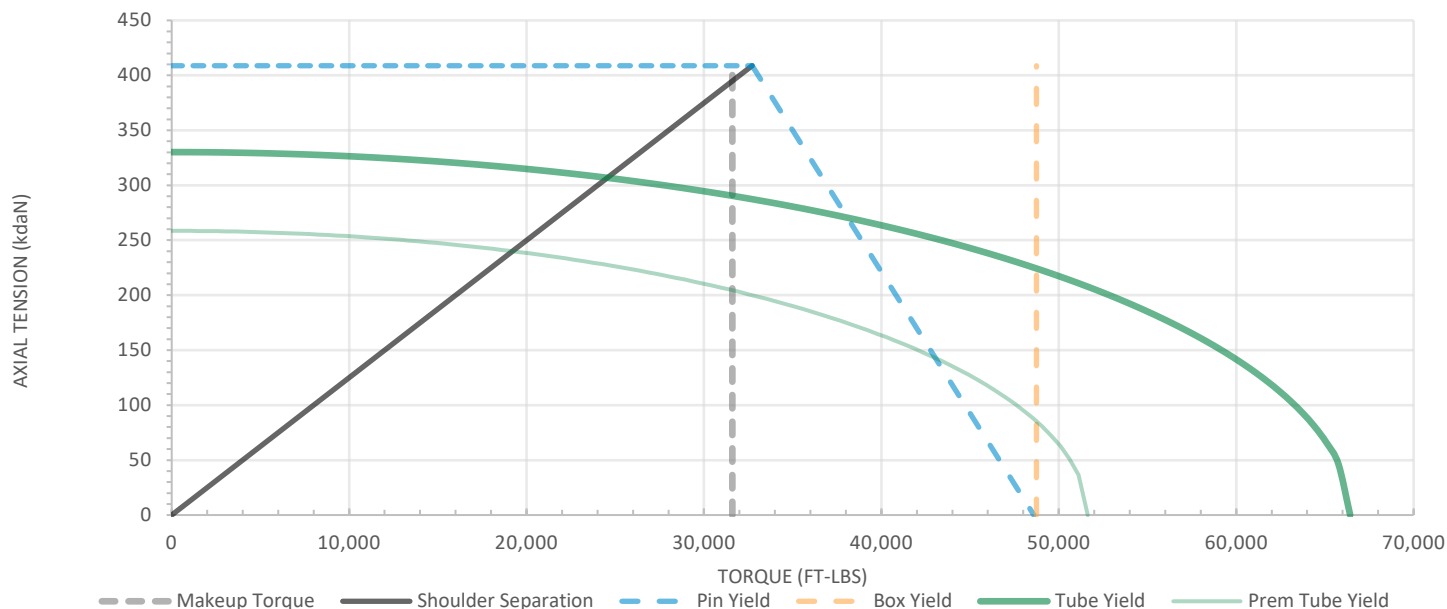
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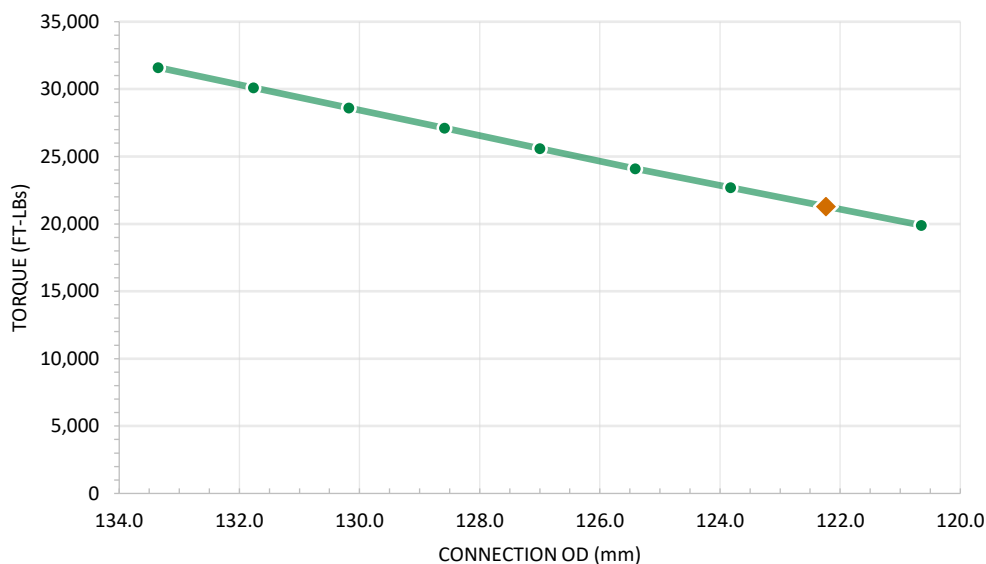
### Makeup Torque Then Tension Chart

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### Connection Wear Chart

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CONNECTION OD (mm)	MAXIMUM MAKEUP TORQUE (ft-lbs)
133.4	31,600
131.8	30,100
130.2	28,600
128.6	27,100
127.0	25,600
125.4	24,100
123.8	22,700
122.2	21,300
120.7	19,900
MIN REC OD (mm)	
122.2	21,300

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