



# Drill Pipe Specification & Performance Data Sheet

## 5-7/8", 34.21#, 0.625", Z140, IEU, R3

### TF-M575 - 7.000" x 4.000"

QT Item #: 9547

Tube / Pipe Body Specification			Tubular Assembly			Tube / Pipe Body Performance		
OD:	5.875	in	Adjusted Weight:	40.43	lbs/ft	<b>Inspection Class:</b>		<b>95%</b>
ID:	4.625	in	Length (approximate):	44 - 45.5	ft	Remaining Body Wall:	0.594	in
Wall Thickness:	0.625	in	Box TJ Length (nominal):	18	in	Tensile Strength:	1,362,850	lbs
Weight (nominal):	34.21	lbs/ft	Pin TJ Length (nominal):	14	in	Torsional Strength:	155,510	ft-lbs
Grade:	Z140		Fluid Displacement:	0.0147	bbbls/ft	Burst Capacity:	28,300	psi
Range:	R3		Fluid Capacity w/ IPC:	0.0197	bbbls/ft	Collapse Capacity:	25,680	psi
Upset Type:	IEU		<i>An oilfield barrel equals 42 US gallons.</i>					
Maximum Upset OD:	6.000	in						

#### Notes:

-Dimensions, wall thickness, and tool joint lengths shown above are nominal if not otherwise stated.  
-Values shown may vary with actual values due to OEM tolerances, rounding, and other factors.  
-Capacity, Displacement, & Adjusted Weight are best estimates from the OEM and are based on pipe purchased at 95% RBW with longer than standard tool joints. Nominal thickness of IPC is .009" when applied.

#### Notes:

-Tube / Pipe body properties are calculated based on uniform OD and wall thickness.  
-Contact techserv@quailtools.com for assistance with slip crush capacity calculations.

Connection / Tool Joint Specification			Connection Performance			
Connection:		TF-M575	Thread Compound Friction Factor (FF):		1.0 FF	1.15 FF
OD:	7.000	in	Maximum Make-Up Torque: (Recommended)		63,200	72,680 ft-lbs
ID:	4.000	in	Tension at Maximum Make-Up Torque:		1,591,400	1,591,400 lbs
SMYS:	135	ksi	Minimum Make-Up Torque:		52,600	60,490 ft-lbs
Drift Size:	3.875	in	Tension at Minimum Make-Up Torque:		1,326,100	1,326,100 lbs
Elevator Taper:	18°		Torsional Strength:		118,500	136,275 ft-lbs

#### Notes:

-Above dimensions are nominal.  
-The following are registered trademarks of NOV-Grant Prideco™: TurboFrac-M™, TF-M™, Z140™

The Maximum Make-Up Torque based on the appropriate thread compound friction factor (FF) is recommended. MUTs lower than maximum should only be applied when MUT is limited by rig equipment or connection tensile capacity. MUT values lower than Minimum MUT should never be used.

Adjust MUT values per the applied thread compound's FF greater than 1.0, without exceeding 1.15. Above values tabulated at 1.0 and 1.15 FF.

Elevator Shoulder Capacity		Connection Pressure Rating					
-Refer to the attached OEM page(s) for capacities with wear prior to using.		Internal:	20,000	psi	External:	10,000	psi

For combined loading of drill pipe, connection wear table, & elevator capacity figures, please see the attached page(s) provided by NOV-Grant Prideco™.



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QT-DP 5.875 34.21 Z TF-M575 7.000 x 4.000 R3 95RBW

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# Drill Pipe Performance Sheet (1.0 FF)

6/28/2021

## Combined Loading for Drill Pipe

Connection: TurboFrac-M™ 575 7.0" x 4.0" (135 KSI SMYS) Friction Factor: 1.0

Pipe: 5.875" OD 0.625" Wall Thickness Z140™ 95% Inspection Class

At Max MUT (63200 ft-lbs )		At Min MUT (52600 ft-lbs )	
Operational Torque(ft-lbs)	Assembly Max Tension(lbs)	Operational Torque(ft-lbs)	Assembly Max Tension(lbs)
0	1362800	0	1326100
2700	1362600	2100	1326100
5400	1362000	4200	1326100
8100	1361000	6400	1326100
10700	1359600	8500	1326100
13400	1357800	10600	1326100
16100	1355500	12700	1326100
18800	1352900	14800	1326100
21500	1349800	16900	1326100
24200	1346200	19100	1326100
26900	1342300	21200	1326100
29500	1338100	23300	1326100
32200	1333300	25400	1326100
34900	1328100	27500	1326100
37600	1322400	29600	1326100
40300	1316300	31800	1326100
43000	1309700	33900	1326100
45700	1302700	36000	1325800
48400	1295200	38100	1321300
51000	1287500	40200	1316500

## Elevator Capacity

Bore Diameter: 6.125 Elevator SMYS: 110100 psi 5.875in. 0.625 in. wall IEU Z140™

TurboFrac-M™ 575

Tool Joint OD (in)	Elevator Hoist Capacity(lbs) No Wear	Elevator Hoist Capacity(lbs) 1/32 In. Wear Factor
7.25	1301100	1268000
7.188	1223700	1190500
7.125	1145800	1112600
7.063	1069700	1036500
7.001	994300	961100
6.939	919600	886400
6.876	844300	811100
6.814	770900	737700
6.752	698200	665000
6.69	626100	592900
6.627	553600	520400
6.565	482800	449600

The Technical information contained herein, including the product performance sheet and other attached documents, is for reference only and should not be consider as a recommendation. The user is fully responsible for the accuracy and suitability of use of the technical information. NOV Grant Prideco 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. The information provided for various inspection classes and for various wear conditions (remaining body wall) is for information only and does not represent or imply acceptable operating limits. It is the responsibility of the customer and the end user to determine the appropriate performance ratings, acceptable use of the product, maintain safe operating 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 drilling manual, it is recommended that drilling torque should not exceed 80% of MUT.

All references to any internal standards or specifications are per the current edition/revision at the point of manufacturing, unless otherwise stated. All references to any external standards or specifications are per the current edition/revision at the original purchase order (P.O.) date, unless otherwise stated.

# Drill Pipe Performance Sheet (1.15 FF)

6/28/2021

## Combined Loading for Drill Pipe

Connection: TurboFrac-M™ 575 7.0" x 4.0" (135 KSI SMYS) Friction Factor: 1.15  
 Pipe: 5.875" OD 0.625" Wall Thickness Z140™ 95% Inspection Class

At Max MUT (72700 ft-lbs )		At Min MUT (60500 ft-lbs )	
Operational Torque(ft-lbs)	Assembly Max Tension(lbs)	Operational Torque(ft-lbs)	Assembly Max Tension(lbs)
0	1362800	0	1326100
3100	1362600	2400	1326100
6200	1361800	4900	1326100
9300	1360400	7300	1326100
12400	1358500	9800	1326100
15500	1356100	12200	1326100
18600	1353100	14700	1326100
21700	1349500	17100	1326100
24800	1345400	19600	1326100
27900	1340700	22000	1326100
31000	1335500	24400	1326100
34100	1329700	26900	1326100
37300	1323100	29300	1326100
40400	1316100	31800	1326100
43500	1308400	34200	1326100
46600	1300200	36700	1324400
49700	1291400	39100	1319100
52800	1281900	41600	1313200
55900	1271800	44000	1307200
59000	1261000	46400	1300800

## Elevator Capacity

Bore Diameter: 6.125 Elevator SMYS: 110100 psi 5.875in. 0.625 in. wall IEU Z140™  
 TurboFrac-M™ 575

Tool Joint OD (in)	Elevator Hoist Capacity(lbs) No Wear	Elevator Hoist Capacity(lbs) 1/32 In. Wear Factor
7.25	1301100	1268000
7.188	1223700	1190500
7.125	1145800	1112600
7.063	1069700	1036500
7.001	994300	961100
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