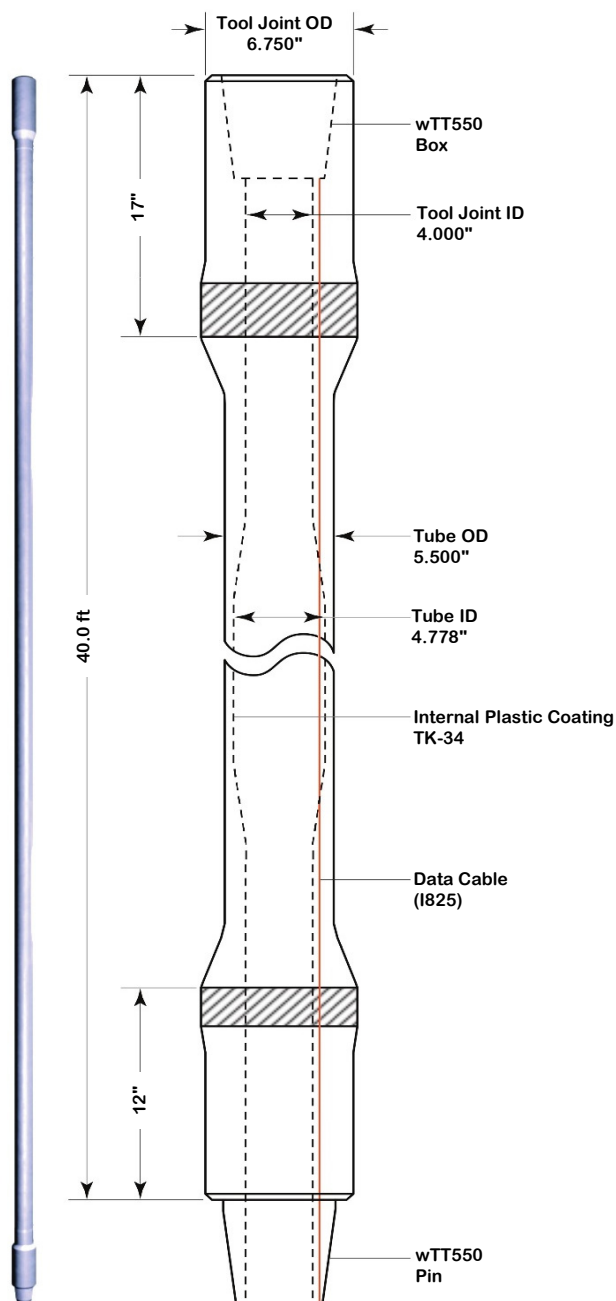


IntelliServ™ 5-1/2" Drill Pipe - wTT550, V2 Coil S-135, 0.361" Wall, Range 3, w/ TracID

Specification Imperial Units



Specifications and Dimensions¹

Telemetry Drill Pipe Performance Specifications			
Nominal Size and Weight	5-1/2" 21.90 IEU		
Drill Pipe Length	Range 3		
Pipe Body Grade	S-135		
Connection Type	wTT550		
PIPE BODY (135,000 PSI MATERIAL YIELD STRENGTH)			
	Nominal	Premium	Class 2
Pipe Body OD	5.500 in	5.356 in	5.283 in
Wall Thickness	0.361 in	0.289 in	0.253 in
Pipe Body ID	4.778 in	4.778 in	4.778 in
Burst Pressure ²	15,500 psi	12,700 psi	11,300 psi
Collapse Pressure ²	12,600 psi	7,500 psi	5,400 psi
Slip Crushing Capacity ⁵	531,600 lbs	423,600 lbs	369,800 lbs
TOOL JOINT (130,000 PSI MATERIAL YIELD STRENGTH)			
	Nominal	Premium	Class 2
Tool Joint OD ⁹	6.750 in	6.362 in	6.315 in
Tool Joint ID	4.000 in	4.000 in	4.000 in
Max Make-up Torque ^{3,7,8}	51,100 ft-lbs	38,000 ft-lbs	36,100 ft-lbs
Min Make-up Torque ^{3,7,8}	42,600 ft-lbs	31,600 ft-lbs	30,100 ft-lbs
Box Tool Joint Length ⁶	17 in		
Pin Tool Joint Length ⁶	12 in		
DRILL PIPE ASSEMBLY WITH wTT550 CONNECTIONS			
Adjusted Weight	24.99 lbs/ft		
Approximate Length	40.0 ft		
Approx. Fluid Displacement	0.38 gal/ft		
Approx. Fluid Capacity	0.90 gal/ft		
Drift Size ⁴	3.875 in		
IntelliCoil Generation	V2 Coil		

¹ All measurements listed are nominal unless otherwise specified. Redressed or worn pipe values may vary.

² Differential Pressure. Assumes no axial load or bending in string.

³ Value includes impact of coil groove.

⁴ Value includes impact of DataCable.

⁵ Slip crushing capacity is for new pipe with an assumed slip length of 16.5 in. and a transverse load factor (K) of 4.2. Value is for reference only and assumes no axial load or bending in string. Consult with the slip manufacturer for additional information.

⁶ Hard banding reduces the length of tool-joint outside diameter available for tong placement.

⁷ The maximum make-up torque should be applied when possible. To determine proper MUT, consult the specification sheet of the mating component. The lesser of the two max MUT values shall not be exceeded.

⁸ Make up torque and torsional strength are calculated based on the use of a thread compound with a friction factor of 1.0.

⁹ Premium and Class 2 tool joint OD's are constrained by Grant Prideco requirements or API requirements, whichever results in a larger OD.

The technical information contained herein is for reference only and should not be considered as a recommendation. The user is fully responsible for the accuracy and suitability of use of this technical information. NOV IntelliServ cannot assume responsibility for the results obtained through the use of this material. Assembly properties are based on uniform diameters and wall thickness. No safety factor is applied. It is the responsibility of the customer and end user to determine the appropriate performance ratings, determine acceptable use of the product, maintain safe operating practices, and to apply a prudent safety factor suitable for the application.

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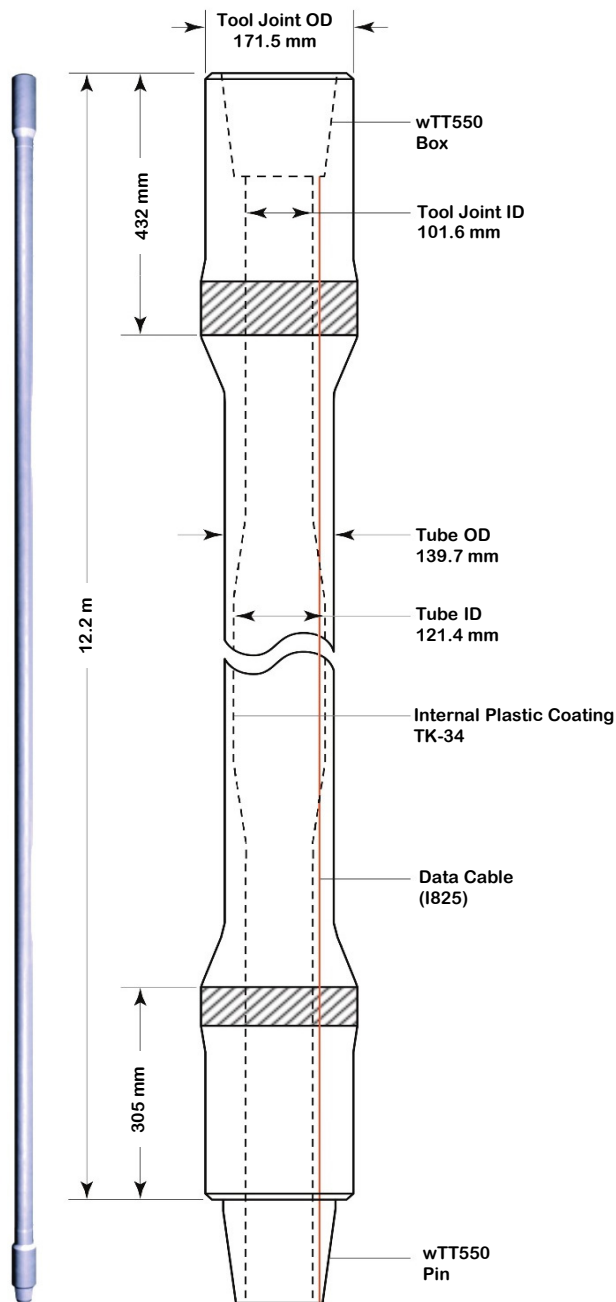
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wTT550-DP-A0001

wTT550-DP-A0001-FS.pdf Rev. 1

Combined Loading for Drill Pipe			
Connection: wTT550, 6.75" OD X 4" ID (130,000 PSI SMYS) Friction Factor: 1.0			
Pipe: 5.5" OD, 0.361" Wall Thickness, S-135, Premium (80%) Inspection Class			
At Max MUT (51,100 ft-lbs)		At Min MUT (42,600 ft-lbs)	
Operational Torque (ft-lbs)	Assembly Max Tension (lbs)	Operational Torque (ft-lbs)	Assembly Max Tension (lbs)
0	620,600	0	620,600
2,500	620,200	2,100	620,300
5,100	619,100	4,100	619,600
7,600	617,100	6,200	618,300
10,100	614,400	8,200	616,500
12,700	610,900	10,300	614,200
15,200	606,500	12,400	611,300
17,700	601,400	14,400	607,900
20,200	595,400	16,500	604,000
22,800	588,500	18,600	599,500
25,300	580,700	20,600	594,400
27,800	572,000	22,700	588,800
30,400	562,300	24,700	582,500
32,900	551,500	26,800	575,700
35,400	539,600	28,900	568,200
38,000	526,600	30,900	560,000
40,500	512,300	33,000	551,100
43,000	496,600	35,000	541,500
45,600	479,500	37,100	531,200
48,100	460,600	39,200	520,000



Specifications and Dimensions¹

Telemetry Drill Pipe Performance Specifications

Nominal Size and Weight	139.7 mm 21.90 IEU
Drill Pipe Length	Range 3
Pipe Body Grade	S-135
Connection Type	wTT550

PIPE BODY (931 MPa MATERIAL YIELD STRENGTH)

	Nominal	Premium	Class 2
Pipe Body OD	139.7 mm	136.0 mm	134.2 mm
Wall Thickness	9.17 mm	7.34 mm	6.42 mm
Pipe Body ID	121.4 mm	121.4 mm	121.4 mm
Burst Pressure²	106.9 MPa	87.8 MPa	77.9 MPa
Collapse Pressure²	87.4 MPa	51.7 MPa	37.7 MPa
Slip Crushing Capacity⁵	2,360 kN	1,880 kN	1,640 kN

TOOL JOINT (896 MPa MATERIAL YIELD STRENGTH)

	Nominal	Premium	Class 2
Tool Joint OD⁹	171.5 mm	161.6 mm	160.4 mm
Tool Joint ID	101.6 mm	101.6 mm	101.6 mm
Max Make-up Torque^{3,7,8}	69,300 N-m	51,500 N-m	48,900 N-m
Min Make-up Torque^{3,7,8}	57,800 N-m	42,800 N-m	40,800 N-m
Box Tool Joint Length⁶	432 mm		
Pin Tool Joint Length⁶	305 mm		

DRILL PIPE ASSEMBLY WITH wTT550 CONNECTIONS

Adjusted Weight	37.18 kg/m
Approximate Length	12.2 m
Approx. Fluid Displacement	4.730 liter/m
Approx. Fluid Capacity	11.229 liter/m
Drift Size⁴	98.4 mm
IntelliCoil Generation	V2 Coil

¹ All measurements listed are nominal unless otherwise specified. Redressed or worn pipe values may vary.

² Differential Pressure. Assumes no axial load or bending in string.

³ Value includes impact of coil groove.

⁴ Value includes impact of DataCable.

⁵ Slip crushing capacity is for new pipe with an assumed slip length of 16.5 in. and a transverse load factor (K) of 4.2. Value is for reference only and assumes no axial load or bending in string. Consult with the slip manufacturer for additional information.

⁶ Hard banding reduces the length of tool-joint outside diameter available for tong placement.

⁷ The maximum make-up torque should be applied when possible. To determine proper MUT, consult the specification sheet of the mating component. The lesser of the two max MUT values shall not be exceeded.

⁸ Make up torque and torsional strength are calculated based on the use of a thread compound with a friction factor of 1.0.

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Combined Loading for Drill Pipe			
Connection: wTT550, 6.75" OD X 4" ID (130,000 PSI SMYS) Friction Factor: 1.0			
Pipe: 5.5" OD, 0.361" Wall Thickness, S-135, Premium (80%) Inspection Class			
At Max MUT (69,282 N-m)		At Min MUT (57,758 N-m)	
Operational Torque (N-m)	Assembly Max Tension (kN)	Operational Torque (N-m)	Assembly Max Tension (kN)
0	2,760	0	2,760
3,400	2,760	2,800	2,760
6,900	2,750	5,600	2,760
10,300	2,750	8,400	2,750
13,700	2,730	11,200	2,740
17,200	2,720	14,000	2,730
20,600	2,700	16,800	2,720
24,000	2,680	19,600	2,700
27,500	2,650	22,400	2,690
30,900	2,620	25,200	2,670
34,300	2,580	28,000	2,640
37,700	2,540	30,700	2,620
41,200	2,500	33,500	2,590
44,600	2,450	36,300	2,560
48,000	2,400	39,100	2,530
51,500	2,340	41,900	2,490
54,900	2,280	44,700	2,450
58,300	2,210	47,500	2,410
61,800	2,130	50,300	2,360
65,200	2,050	53,100	2,310

IntelliServ™ 5-1/2" Drill Pipe
wTT550 Connection, 6.75" OD, 4" ID, V2 Coil
S-135, 5.5" OD, 0.361" Wall, Range 3

Torque-Tension Graph

