NOV Quality Tubing

Product Datasheet

QT-800

Coiled Tubing Manufactured Product

REFERENCE	REFERENCE DESCRIPTION
QT-800	Coiled Tubing

National-Oilwell Varco, L.P.
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Houston, Texas 77049
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NOV NATIONAL OILWELL VARCO

www.nov.com

REVISION HISTORY

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CHANGE DESCRIPTION

Revision	Change Description
01	First issue
02	Updated Logo
03	Changed Copper Specification

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1 MATERIAL SPECIFICATIONS

Chemistry	
Carbon (C)	0.10 – 0.16
Manganese (Mn)	0.70 – 1.00
Phosphorus (P)	0.025 max
Sulfur (S)	0.006 max
Silicon (Si)	0.30 – 0.50
Chromium (Cr)	0.50 – 0.70
Copper (Cu)	0.35 max
Nickel (Ni)	0.20 max
Molybdenum (Mo)	0.23 max
Physical Properties	
Minimum Yield Strength, psi (N/mm²)	80,000 (552)
Minimum Tensile Strength, psi (N/mm²)	90,000 (621)
Minimum Elongation	26%
Maximum Hardness	Rockwell C22

2 DATA TABLES

The following tables provide physical data for non-True-Tapered work-strings in US and SI (Metric) units.

2.1 US Units

Specified Outside Diameter, D (in)	Specified Wall Thickness, t(in)	Calculated Inside Diameter, d (in)	Plain End Mass, Mpe (lb/ft)	Pipe Metal Cross Sectional Area, A (in^2)	Pipe Body Yield Load, Ly (lb)	Tensile Load, Lt (lb)	Internal Yield Pressure, Pr (psi)	Hydro Test Pressure, Pt (psi)	Torsional Yield Strength, Tf (lb/ft)
0.750	0.087	0.576	0.617	0.181	14500	16310	17490	14000	210
0.750	0.095	0.560	0.665	0.195	15640	17590	19200	15000	220
1.000	0.087	0.826	0.849	0.250	19960	22460	13120	10500	400
1.000	0.095	0.810	0.919	0.270	21610	24310	14400	11500	430
1.000	0.102	0.796	0.979	0.288	23020	25900	15520	12400	450
1.000	0.109	0.782	1.038	0.305	24410	27460	16640	13300	470
1.000	0.118	0.764	1.113	0.327	26160	29430	18080	14500	500
1.000	0.125	0.750	1.169	0.344	27490	30930	19200	15000	520
1.250	0.087	1.076	1.082	0.318	25430	28610	10500	8400	670
1.250	0.095	1.060	1.173	0.345	27580	31020	11520	9200	710
1.250	0.102	1.046	1.252	0.368	29430	33110	12420	9900	750
1.250	0.109	1.032	1.330	0.391	31260	35160	13310	10600	790
1.250	0.118	1.014	1.428	0.420	33570	37770	14460	11600	840
1.250	0.125	1.000	1.503	0.442	35340	39760	15360	12300	870
1.250	0.134	0.982	1.599	0.470	37580	42280	16510	13200	910
1.250	0.145	0.960	1.713	0.503	40270	45300	17920	14300	960
1.250	0.156	0.938	1.824	0.536	42890	48250	19330	15000	1010
1.250	0.175	0.900	2.011	0.591	47280	53190	21760	15000	1080
1.500	0.095	1.310	1.427	0.419	33550	37740	9600	7700	1070
1.500	0.102	1.296	1.524	0.448	35840	40320	10350	8300	1130
1.500	0.109	1.282	1.621	0.476	38110	42870	11090	8900	1190
1.500	0.118	1.264	1.743	0.512	40990	46110	12050	9600	1260
1.500	0.125	1.250	1.837	0.540	43200	48600	12800	10200	1320
1.500	0.134	1.232	1.957	0.575	46000	51750	13760	11000	1390
1.500	0.145	1.210	2.100	0.617	49380	55550	14930	11900	1470
1.500	0.156	1.188	2.241	0.659	52690	59280	16110	12900	1550
1.500	0.175	1.150	2.479	0.728	58280	65560	18130	14500	1670
1.500	0.188	1.124	2.637	0.775	61990	69740	19520	15000	1750
1.500	0.203	1.094	2.815	0.827	66170	74440	21120	15000	1830
1.750	0.109	1.532	1.912	0.562	44950	50570	9510	7600	1670
1.750	0.118	1.514	2.059	0.605	48400	54450	10330	8300	1780
1.750	0.125	1.500	2.171	0.638	51050	57430	10970	8800	1860
1.750	0.134	1.482	2.315	0.680	54420	61230	11790	9400	1970
1.750	0.145	1.460	2.488	0.731	58490	65800	12800	10200	2090
1.750	0.156	1.438	2.658	0.781	62500	70310	13810	11000	2200
1.750	0.175	1.400	2.946	0.866	69270	77930	15540	12400	2390
1.750	0.188	1.374	3.139	0.923	73800	83030	16730	13400	2510
1.750	0.203	1.344	3.357	0.987	78930	88790	18100	14500	2640

Specified Outside Diameter, D (in)	Specified Wall Thickness, t(in)	Calculated Inside Diameter, d (in)	Plain End Mass, Mpe (lb/ft)	Pipe Metal Cross Sectional Area, A (in^2)	Pipe Body Yield Load, Ly (lb)	Tensile Load, Lt (lb)	Internal Yield Pressure, Pr (psi)	Hydro Test Pressure, Pt (psi)	Torsional Yield Strength, Tf (lb/ft)
2.000	0.125	1.750	2.505	0.736	58900	66270	9600	7700	2500
2.000	0.134	1.732	2.673	0.786	62840	70700	10320	8300	2650
2.000	0.145	1.710	2.875	0.845	67600	76050	11200	9000	2810
2.000	0.156	1.688	3.075	0.904	72300	81340	12080	9700	2980
2.000	0.175	1.650	3.414	1.003	80270	90300	13600	10900	3250
2.000	0.188	1.624	3.642	1.070	85620	96320	14640	11700	3420
2.000	0.203	1.594	3.900	1.146	91680	103140	15840	12700	3610
2.375	0.134	2.107	3.210	0.943	75470	84910	8690	7000	3850
2.375	0.145	2.085	3.457	1.016	81270	91430	9430	7500	4110
2.375	0.156	2.063	3.700	1.088	87000	97880	10170	8100	4360
2.375	0.175	2.025	4.116	1.210	96760	108860	11450	9200	4770
2.375	0.188	1.999	4.395	1.292	103330	116250	12330	9900	5040
2.375	0.203	1.969	4.713	1.385	110810	124670	13340	10700	5340
2.625	0.156	2.313	4.117	1.210	96800	108900	9200	7400	5430
2.625	0.175	2.275	4.583	1.347	107760	121230	10360	8300	5960
2.625	0.188	2.249	4.898	1.439	115150	129540	11150	8900	6300
2.625	0.203	2.219	5.256	1.545	123570	139020	12070	9700	6690
2.875	0.145	2.585	4.232	1.244	99490	111920	7790	6200	6220
2.875	0.156	2.563	4.534	1.333	106600	119930	8400	6700	6620
2.875	0.175	2.525	5.051	1.484	118750	133600	9460	7600	7270
2.875	0.188	2.499	5.400	1.587	126960	142830	10180	8100	7710
2.875	0.203	2.469	5.798	1.704	136320	153360	11020	8800	8190
3.250	0.156	2.938	5.160	1.516	121310	136470	7430	5900	8620
3.250	0.175	2.900	5.753	1.691	135250	152150	8370	6700	9500
3.250	0.188	2.874	6.154	1.808	144680	162760	9010	7200	10080
3.250	0.203	2.844	6.612	1.943	155460	174890	9750	7800	10730
3.500	0.156	3.188	5.577	1.639	131110	147500	6900	5500	10100
3.500	0.175	3.150	6.220	1.828	146240	164520	7770	6200	11140
3.500	0.188	3.124	6.656	1.956	156490	176050	8370	6700	11840
3.500	0.203	3.094	7.155	2.103	168210	189240	9050	7200	12610

Note:
1. Minimum wall thickness is 0.005” less than specified wall thickness
2. Pressures calculated based on (t – 0.005) in.
3. Maximum hydrostatic test pressure is 15000 psi
4. True-Tapered® Designs Available

2.2 SI Units

Specified Outside Diameter, D (mm)	Specified Wall Thickness, t (mm)	Calculated Inside Diameter, d (mm)	Plain End Mass, Mpe (kg/m)	Pipe Metal Cross Sectional Area, A (mm^2)	Pipe Body Yield Load, Ly (kg)	Tensile Load, Lt (kg)	Internal Yield Pressure, Pr (MPa)	Hydro Test Pressure, Pt (MPa)	Torsional Yield Strength, Tf (N-m)
19.1	2.2	14.6	0.918	116.9	6580	7400	120.6	96.5	280
19.1	2.4	14.2	0.990	126.1	7090	7980	132.4	103.4	300
25.4	2.2	21.0	1.264	161.0	9050	10190	90.5	72.4	540
25.4	2.4	20.6	1.368	174.3	9800	11030	99.3	79.3	580
25.4	2.6	20.2	1.457	185.6	10440	11750	107.0	85.5	610
25.4	2.8	19.9	1.545	196.8	11070	12460	114.7	91.7	640
25.4	3.0	19.4	1.656	210.9	11870	13350	124.7	100.0	680
25.4	3.2	19.1	1.740	221.7	12470	14030	132.4	103.4	710
31.8	2.2	27.3	1.610	205.1	11530	12980	72.4	57.9	910
31.8	2.4	26.9	1.746	222.4	12510	14070	79.4	63.4	960
31.8	2.6	26.6	1.863	237.3	13350	15020	85.6	68.3	1020
31.8	2.8	26.2	1.979	252.1	14180	15950	91.8	73.1	1070
31.8	3.0	25.8	2.125	270.7	15230	17130	99.7	80.0	1140
31.8	3.2	25.4	2.237	285.0	16030	18030	105.9	84.8	1180
31.8	3.4	24.9	2.379	303.1	17050	19180	113.8	91.0	1230
31.8	3.7	24.4	2.549	324.7	18270	20550	123.6	98.6	1300
31.8	4.0	23.8	2.715	345.9	19450	21890	133.3	103.4	1370
31.8	4.4	22.9	2.993	381.3	21450	24130	150.0	103.4	1460
38.1	2.4	33.3	2.124	270.5	15220	17120	66.2	53.1	1450
38.1	2.6	32.9	2.269	289.0	16260	18290	71.4	57.2	1530
38.1	2.8	32.6	2.412	307.3	17290	19450	76.5	61.4	1610
38.1	3.0	32.1	2.595	330.5	18590	20920	83.1	66.2	1710
38.1	3.2	31.8	2.735	348.4	19600	22040	88.3	70.3	1790
38.1	3.4	31.3	2.912	371.0	20870	23470	94.9	75.8	1880
38.1	3.7	30.7	3.126	398.2	22400	25200	102.9	82.0	1990
38.1	4.0	30.2	3.336	425.0	23900	26890	111.1	88.9	2100
38.1	4.4	29.2	3.689	470.0	26440	29740	125.0	100.0	2260
38.1	4.8	28.5	3.924	499.9	28120	31630	134.6	103.4	2370
38.1	5.2	27.8	4.189	533.6	30010	33770	145.6	103.4	2480
44.5	2.8	38.9	2.846	362.5	20390	22940	65.6	52.4	2260
44.5	3.0	38.5	3.064	390.3	21950	24700	71.2	57.2	2410
44.5	3.2	38.1	3.232	411.7	23160	26050	75.6	60.7	2520
44.5	3.4	37.6	3.445	438.9	24680	27770	81.3	64.8	2670
44.5	3.7	37.1	3.703	471.7	26530	29850	88.3	70.3	2830
44.5	4.0	36.5	3.956	504.0	28350	31890	95.2	75.8	2980
44.5	4.4	35.6	4.385	558.6	31420	35350	107.1	85.5	3240
44.5	4.8	34.9	4.672	595.2	33480	37660	115.3	92.4	3400
44.5	5.2	34.1	4.997	636.5	35800	40270	124.8	100.0	3580

Specified Outside Diameter, D (mm)	Specified Wall Thickness, t (mm)	Calculated Inside Diameter, d (mm)	Plain End Mass, Mpe (kg/m)	Pipe Metal Cross Sectional Area, A (mm^2)	Pipe Body Yield Load, Ly (kg)	Tensile Load, Lt (kg)	Internal Yield Pressure, Pr (MPa)	Hydro Test Pressure, Pt (MPa)	Torsional Yield Strength, Tf (N-m)
50.8	3.2	44.5	3.729	475.0	26720	30060	66.2	53.1	3390
50.8	3.4	44.0	3.978	506.8	28500	32070	71.2	57.2	3590
50.8	3.7	43.4	4.280	545.2	30660	34500	77.2	62.1	3810
50.8	4.0	42.9	4.577	583.0	32790	36900	83.3	66.9	4040
50.8	4.4	41.9	5.081	647.3	36410	40960	93.8	75.2	4410
50.8	4.8	41.2	5.420	690.5	38840	43690	100.9	80.7	4640
50.8	5.2	40.5	5.804	739.4	41590	46780	109.2	87.6	4890
60.3	3.4	53.5	4.778	608.6	34230	38510	59.9	48.3	5220
60.3	3.7	53.0	5.145	655.4	36860	41470	65.0	51.7	5570
60.3	4.0	52.4	5.508	701.6	39460	44400	70.1	55.8	5910
60.3	4.4	51.4	6.126	780.3	43890	49380	78.9	63.4	6470
60.3	4.8	50.8	6.542	833.3	46870	52730	85.0	68.3	6830
60.3	5.2	50.0	7.015	893.7	50260	56550	92.0	73.8	7240
66.7	4.0	58.8	6.128	780.7	43910	49400	63.4	51.0	7360
66.7	4.4	57.8	6.822	869.0	48880	54990	71.4	57.2	8080
66.7	4.8	57.1	7.290	928.6	52230	58760	76.9	61.4	8540
66.7	5.2	56.4	7.823	996.5	56050	63060	83.2	66.9	9070
73.0	3.7	65.7	6.298	802.3	45130	50770	53.7	42.7	8430
73.0	4.0	65.1	6.749	859.7	48350	54400	57.9	46.2	8980
73.0	4.4	64.1	7.518	957.7	53860	60600	65.2	52.4	9860
73.0	4.8	63.5	8.037	1023.9	57590	64790	70.2	55.8	10450
73.0	5.2	62.7	8.630	1099.4	61830	69560	76.0	60.7	11100
82.6	4.0	74.6	7.679	978.3	55030	61900	51.2	40.7	11690
82.6	4.4	73.7	8.562	1090.7	61350	69010	57.7	46.2	12880
82.6	4.8	73.0	9.159	1166.8	65630	73830	62.1	49.6	13670
82.6	5.2	72.2	9.841	1253.7	70520	79330	67.2	53.8	14550
88.9	4.0	81.0	8.300	1057.3	59470	66900	47.6	37.9	13690
88.9	4.4	80.0	9.258	1179.4	66330	74630	53.6	42.7	15100
88.9	4.8	79.3	9.907	1262.0	70980	79860	57.7	46.2	16050
88.9	5.2	78.6	10.649	1356.5	76300	85840	62.4	49.6	17100

Note:
1. Minimum wall thickness is 0.13 mm less than specified wall thickness
2. Pressures calculated based on (t – 0.13) mm
3. Maximum hydrostatic test pressure is 103.4 MPa
4. True-Tapered® Designs Available

For data table footnotes and other engineering information, please consult the Engineering Data document