

## Product Datasheet

QT-900

Coiled Tubing Manufactured Product

REFERENCE QT-900	REFERENCE DESCRIPTION Coiled Tubing	
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<p>DOCUMENT NUMBER <b>QT-900-DAS-001</b></p>		<p>REV <b>03</b></p>

## **REVISION HISTORY**

Rev	Date (dd.mm.yyyy)	Reason for issue	Prepared	Checked	Approved
03	08.10.2007	Reissued	CH	CH	JM
02	06.09.2007	Reissued	PG	CH	PM
01	09.02.2007	Issued for Implementation	PG	CH	PM

## **CHANGE DESCRIPTION**

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

**TABLE OF CONTENTS**

**1 MATERIAL SPECIFICATIONS..... 4**

**2 DATA TABLES..... 5**

    2.1 US Units ..... 5

    2.2 SI Units ..... 8

## 1 MATERIAL SPECIFICATIONS

<b>Chemistry</b>	
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
<b>Physical Properties</b>	
Minimum Yield Strength, psi (N/mm <sup>2</sup> )	90,000 (621)
Minimum Tensile Strength, psi (N/mm <sup>2</sup> )	98,000 (676)
Minimum Elongation	<p>Calculated from the formula:</p> $E = 850,000 (Aw)^{0.2} / (Lu)^{0.9} \text{ percent}$ <p>where: Aw = Pipe Metal Cross Section, (in<sup>2</sup>)  and: Lu = Specified Minimum Tensile Strength (psi).</p>
Maximum Hardness	Rockwell HRC22

## 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 <sup>2</sup> )	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	16310	17760	19680	15000	230
0.750	0.095	0.560	0.665	0.195	17590	19160	21600	15000	250
1.000	0.087	0.826	0.849	0.250	22460	24450	14760	11800	450
1.000	0.095	0.810	0.919	0.270	24310	26470	16200	13000	480
1.000	0.102	0.796	0.979	0.288	25900	28200	17460	14000	510
1.000	0.109	0.782	1.038	0.305	27460	29900	18720	15000	530
1.000	0.118	0.764	1.113	0.327	29430	32040	20340	15000	560
1.000	0.125	0.750	1.169	0.344	30930	33670	21600	15000	580
1.250	0.087	1.076	1.082	0.318	28610	31150	11810	9400	750
1.250	0.095	1.060	1.173	0.345	31020	33780	12960	10400	800
1.250	0.102	1.046	1.252	0.368	33110	36050	13970	11200	850
1.250	0.109	1.032	1.330	0.391	35160	38290	14980	12000	890
1.250	0.118	1.014	1.428	0.420	37770	41120	16270	13000	940
1.250	0.125	1.000	1.503	0.442	39760	43300	17280	13800	980
1.250	0.134	0.982	1.599	0.470	42280	46040	18580	14900	1030
1.250	0.145	0.960	1.713	0.503	45300	49330	20160	15000	1080
1.250	0.156	0.938	1.824	0.536	48250	52540	21740	15000	1130
1.250	0.175	0.900	2.011	0.591	53190	57920	24480	15000	1210
1.500	0.095	1.310	1.427	0.419	37740	41090	10800	8600	1200
1.500	0.102	1.296	1.524	0.448	40320	43900	11640	9300	1270
1.500	0.109	1.282	1.621	0.476	42870	46680	12480	10000	1340
1.500	0.118	1.264	1.743	0.512	46110	50210	13560	10800	1420
1.500	0.125	1.250	1.837	0.540	48600	52920	14400	11500	1490
1.500	0.134	1.232	1.957	0.575	51750	56350	15480	12400	1560
1.500	0.145	1.210	2.100	0.617	55550	60490	16800	13400	1650
1.500	0.156	1.188	2.241	0.659	59280	64550	18120	14500	1740
1.500	0.175	1.150	2.479	0.728	65560	71390	20400	15000	1880
1.500	0.188	1.124	2.637	0.775	69740	75940	21960	15000	1960
1.500	0.203	1.094	2.815	0.827	74440	81060	23760	15000	2060

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 <sup>2</sup> )	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)
1.750	0.109	1.532	1.912	0.562	50570	55070	10700	8600	1880
1.750	0.118	1.514	2.059	0.605	54450	59290	11620	9300	2000
1.750	0.125	1.500	2.171	0.638	57430	62540	12340	9900	2100
1.750	0.134	1.482	2.315	0.680	61230	66670	13270	10600	2210
1.750	0.145	1.460	2.488	0.731	65800	71650	14400	11500	2350
1.750	0.156	1.438	2.658	0.781	70310	76560	15530	12400	2480
1.750	0.175	1.400	2.946	0.866	77930	84860	17490	14000	2690
1.750	0.188	1.374	3.139	0.923	83030	90410	18820	15000	2820
1.750	0.203	1.344	3.357	0.987	88790	96690	20370	15000	2970
2.000	0.125	1.750	2.505	0.736	66270	72160	10800	8600	2810
2.000	0.134	1.732	2.673	0.786	70700	76980	11610	9300	2980
2.000	0.145	1.710	2.875	0.845	76050	82810	12600	10100	3170
2.000	0.156	1.688	3.075	0.904	81340	88560	13590	10900	3350
2.000	0.175	1.650	3.414	1.003	90300	98330	15300	12200	3650
2.000	0.188	1.624	3.642	1.070	96320	104880	16470	13200	3840
2.000	0.203	1.594	3.900	1.146	103140	112310	17820	14300	4060
2.375	0.134	2.107	3.210	0.943	84910	92450	9780	7800	4330
2.375	0.145	2.085	3.457	1.016	91430	99550	10610	8500	4620
2.375	0.156	2.063	3.700	1.088	97880	106580	11440	9200	4910
2.375	0.175	2.025	4.116	1.210	108860	118530	12880	10300	5370
2.375	0.188	1.999	4.395	1.292	116250	126590	13870	11100	5670
2.375	0.203	1.969	4.713	1.385	124670	135750	15010	12000	6010
2.625	0.156	2.313	4.117	1.210	108900	118580	10350	8300	6110
2.625	0.175	2.275	4.583	1.347	121230	132000	11660	9300	6700
2.625	0.188	2.249	4.898	1.439	129540	141060	12550	10000	7090
2.625	0.203	2.219	5.256	1.545	139020	151370	13580	10900	7530
2.875	0.145	2.585	4.232	1.244	111920	121870	8770	7000	7000
2.875	0.156	2.563	4.534	1.333	119930	130590	9450	7600	7440
2.875	0.175	2.525	5.051	1.484	133600	145470	10640	8500	8180
2.875	0.188	2.499	5.400	1.587	142830	155530	11460	9200	8670
2.875	0.203	2.469	5.798	1.704	153360	167000	12400	9900	9210
3.250	0.156	2.938	5.160	1.516	136470	148600	8360	6700	9690
3.250	0.175	2.900	5.753	1.691	152150	165680	9420	7500	10680
3.250	0.188	2.874	6.154	1.808	162760	177230	10140	8100	11340
3.250	0.203	2.844	6.612	1.943	174890	190430	10970	8800	12070
3.500	0.156	3.188	5.577	1.639	147500	160610	7770	6200	11360
3.500	0.175	3.150	6.220	1.828	164520	179150	8740	7000	12540
3.500	0.188	3.124	6.656	1.956	176050	191700	9410	7500	13320
3.500	0.203	3.094	7.155	2.103	189240	206060	10180	8100	14190

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 <sup>2</sup> )	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	7400	8060	135.7	103.4	310
19.1	2.4	14.2	0.990	126.1	7980	8690	148.9	103.4	340
25.4	2.2	21.0	1.264	161.0	10190	11090	101.8	81.4	610
25.4	2.4	20.6	1.368	174.3	11030	12010	111.7	89.6	650
25.4	2.6	20.2	1.457	185.6	11750	12790	120.4	96.5	690
25.4	2.8	19.9	1.545	196.8	12460	13560	129.1	103.4	720
25.4	3.0	19.4	1.656	210.9	13350	14530	140.2	103.4	760
25.4	3.2	19.1	1.740	221.7	14030	15270	148.9	103.4	790
31.8	2.2	27.3	1.610	205.1	12980	14130	81.4	64.8	1020
31.8	2.4	26.9	1.746	222.4	14070	15320	89.4	71.7	1080
31.8	2.6	26.6	1.863	237.3	15020	16350	96.3	77.2	1150
31.8	2.8	26.2	1.979	252.1	15950	17370	103.3	82.7	1210
31.8	3.0	25.8	2.125	270.7	17130	18650	112.2	89.6	1270
31.8	3.2	25.4	2.237	285.0	18030	19640	119.1	95.1	1330
31.8	3.4	24.9	2.379	303.1	19180	20880	128.1	102.7	1400
31.8	3.7	24.4	2.549	324.7	20550	22380	139.0	103.4	1460
31.8	4.0	23.8	2.715	345.9	21890	23830	149.9	103.4	1530
31.8	4.4	22.9	2.993	381.3	24130	26270	168.8	103.4	1640
38.1	2.4	33.3	2.124	270.5	17120	18640	74.5	59.3	1630
38.1	2.6	32.9	2.269	289.0	18290	19910	80.3	64.1	1720
38.1	2.8	32.6	2.412	307.3	19450	21170	86.0	68.9	1820
38.1	3.0	32.1	2.595	330.5	20920	22770	93.5	74.5	1930
38.1	3.2	31.8	2.735	348.4	22040	24000	99.3	79.3	2020
38.1	3.4	31.3	2.912	371.0	23470	25560	106.7	85.5	2120
38.1	3.7	30.7	3.126	398.2	25200	27440	115.8	92.4	2240
38.1	4.0	30.2	3.336	425.0	26890	29280	124.9	100.0	2360
38.1	4.4	29.2	3.689	470.0	29740	32380	140.7	103.4	2550
38.1	4.8	28.5	3.924	499.9	31630	34450	151.4	103.4	2660
38.1	5.2	27.8	4.189	533.6	33770	36770	163.8	103.4	2790
44.5	2.8	38.9	2.846	362.5	22940	24980	73.8	59.3	2550
44.5	3.0	38.5	3.064	390.3	24700	26890	80.1	64.1	2710
44.5	3.2	38.1	3.232	411.7	26050	28370	85.1	68.3	2850
44.5	3.4	37.6	3.445	438.9	27770	30240	91.5	73.1	3000
44.5	3.7	37.1	3.703	471.7	29850	32500	99.3	79.3	3190
44.5	4.0	36.5	3.956	504.0	31890	34730	107.1	85.5	3360
44.5	4.4	35.6	4.385	558.6	35350	38490	120.6	96.5	3650
44.5	4.8	34.9	4.672	595.2	37660	41010	129.8	103.4	3820
44.5	5.2	34.1	4.997	636.5	40270	43860	140.4	103.4	4030

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 <sup>2</sup> )	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	30060	32730	74.5	59.3	3810
50.8	3.4	44.0	3.978	506.8	32070	34920	80.0	64.1	4040
50.8	3.7	43.4	4.280	545.2	34500	37560	86.9	69.6	4300
50.8	4.0	42.9	4.577	583.0	36900	40170	93.7	75.2	4540
50.8	4.4	41.9	5.081	647.3	40960	44600	105.5	84.1	4950
50.8	4.8	41.2	5.420	690.5	43690	47570	113.6	91.0	5210
50.8	5.2	40.5	5.804	739.4	46780	50940	122.9	98.6	5500
60.3	3.4	53.5	4.778	608.6	38510	41930	67.4	53.8	5870
60.3	3.7	53.0	5.145	655.4	41470	45160	73.2	58.6	6260
60.3	4.0	52.4	5.508	701.6	44400	48340	78.9	63.4	6660
60.3	4.4	51.4	6.126	780.3	49380	53760	88.8	71.0	7280
60.3	4.8	50.8	6.542	833.3	52730	57420	95.6	76.5	7690
60.3	5.2	50.0	7.015	893.7	56550	61580	103.5	82.7	8150
66.7	4.0	58.8	6.128	780.7	49400	53790	71.4	57.2	8280
66.7	4.4	57.8	6.822	869.0	54990	59870	80.4	64.1	9080
66.7	4.8	57.1	7.290	928.6	58760	63980	86.5	68.9	9610
66.7	5.2	56.4	7.823	996.5	63060	68660	93.6	75.2	10210
73.0	3.7	65.7	6.298	802.3	50770	55280	60.5	48.3	9490
73.0	4.0	65.1	6.749	859.7	54400	59230	65.2	52.4	10090
73.0	4.4	64.1	7.518	957.7	60600	65980	73.4	58.6	11090
73.0	4.8	63.5	8.037	1023.9	64790	70550	79.0	63.4	11750
73.0	5.2	62.7	8.630	1099.4	69560	75750	85.5	68.3	12490
82.6	4.0	74.6	7.679	978.3	61900	67400	57.6	46.2	13140
82.6	4.4	73.7	8.562	1090.7	69010	75150	64.9	51.7	14480
82.6	4.8	73.0	9.159	1166.8	73830	80390	69.9	55.8	15370
82.6	5.2	72.2	9.841	1253.7	79330	86380	75.6	60.7	16360
88.9	4.0	81.0	8.300	1057.3	66900	72850	53.6	42.7	15400
88.9	4.4	80.0	9.258	1179.4	74630	81260	60.3	48.3	17000
88.9	4.8	79.3	9.907	1262.0	79860	86950	64.9	51.7	18060
88.9	5.2	78.6	10.649	1356.5	85840	93470	70.2	55.8	19240

**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.