



## CTX STAINLESS STEEL HOSES:

*Stainless steel hoses are typically used under the most challenging circumstances. These include applications as cryogenic temperatures, high temperatures, frequent vibrations or movements, transfer of gases, chemicals, solvents, aggressive hydrocarbons and many other challenging services. In process plants where fire safety is a concern for hose assemblies, stainless steel hoses are the preferred choice as well. This includes using stainless steel hoses as distribution hoses for fire fighting arrangements, like for external floating roof tanks. Depending on the application, required working pressure and conditions of operation, a single or double layer of wire braid can be applied externally to the annularly corrugated hose tube to restrain it. This will further increase its ability to withstand pressure, increase hoop strength and protect the hose tube from abrasion. The extent of braiding, gauge and angle of lay is calculated carefully to maximise CTX hose performance.*

### Hose Materials:

- **tube:**
  - 321S31 (standard material, equivalent to 1.4541) or 316S11 (according BS 1449 Part 2, 1983)
  - 1.4541 or 1.4404 (according EN 10088-2)
  - monel 400, Nickel alloy or bronze
- **braid:**
  - 304 (standard material), 304S31 or 316S19 BS 1554 (1990)

### Pressure shocks:

Pulsating, surge or shock pressures considerably affect hose longevity and if encountered, peak pressure must not exceed 50% of the maximum working pressure.

### Flow Velocity:

High velocities should be avoided as they can lead to premature fatigue failure of the hose.

An interlock hose should be used as a liner if velocity exceeds:

- non-braided hoses: 30 m/s (gas) or 15 m/s (liquid)
- braided hoses: 45 m/s (gas) or 22.5 m/s (liquid)

When the hose is installed in a bent condition, these values should be reduced by 50% for a 90° bend, 25% for a 45° bend and so on, proportionately to the angle.

### Pressure loss:

To achieve the same pressure loss as in steel pipes, the diameter of the corrugated hose should be increased by 15%.





### Product features:

- hoses suitable for static applications, occasional flexing, frequent flexing and vibrating circumstances
- hoses according ISO 10380, specifically designed to meet the requirements of ISO 10380 flexibility class 1
- will convey virtually all gases and liquids
- high strength hose composition
- long service life
- excellent corrosion characteristics
- suitable for temperatures from -200°C (cryogenic) to 600°C
- manufactured according to BS 6501 Part 1, 1991, Type B flexibility
- all hose assemblies are individually tested and certified prior to shipment
- available with an extensive range of fittings, including fixed flanges, floating flanges, different quick connect couplers, thread (BSP, NPT or others), swivel nuts, et cetera in different materials

### Hose specifications:

Diameter (mm)	(inches)	PN (bar)	Hose type	Outer diameter (mm)	(inches)	Min. Static Bending radius (mm)	(inches)	Min. Flexing Radius (mm)	(inches)	Max. Working Pressure (bar)	(psi)	Max. Test Pressure (bar)	(psi)	Min. Burst Pressure (bar)	(psi)	Hose weight (kg/m)	(lbs/ft)
6	1/4	10	CTX0	10.0	0.395	16	0.63	110	4.3	10	145	15	218	40	580	0.08	0.054
		150	CTX1	11.4	0.449	25	1.0	110	4.3	167	2420	250	3630	668	9680	0.16	0.11
		150	CTX2	12.8	0.504	25	1.0	110	4.3	220	3190	350	4790	880	12760	0.24	0.16
8	5/16	10	CTX0	12.0	0.335	20	0.80	130	5.1	10	145	15	218	40	580	0.12	0.081
		100	CTX1	13.4	0.528	32	1.3	130	5.1	136	1970	204	2960	544	7880	0.22	0.15
		150	CTX2	14.7	0.579	32	1.3	130	5.1	210	3045	315	4568	840	12180	0.32	0.21
10	3/8	4	CTX0	14.9	0.585	22	0.87	150	6.0	5.5	80	8.3	120	22	320	0.16	0.11
		100	CTX1	16.3	0.642	38	1.5	150	6.0	100	1450	150	2180	400	5800	0.27	0.18
		150z	CTX2	17.6	0.693	38	1.5	150	6.0	178	2580	267	3870	712	10320	0.38	0.25
12	1/2	4	CTX0	19.6	0.772	24	0.94	165	6.5	5.5	80	8.3	120	22	320	0.17	0.11
		63	CTX1	21.0	0.826	45	1.75	165	6.5	74	1075	111	1615	297	4300	0.36	0.22
		100	CTX2	22.4	0.880	45	1.75	165	6.5	103	1500	155	2250	412	6000	0.53	0.33
15	5/8	4	CTX0	22.0	0.864	28	1.1	195	7.7	5.0	70	7.5	105	20	280	0.28	0.18
		63	CTX1	23.3	0.917	50	2.0	195	7.7	70	1015	105	1523	280	4060	0.45	0.29
		100	CTX2	24.6	0.969	50	2.0	195	7.7	125	1810	188	2720	500	7240	0.62	0.40
20	3/4	4	CTX0	25.8	1.02	30	1.2	200	8.0	4.1	60	6.2	90	16.4	240	0.27	0.18
		63	CTX1	27.4	1.08	70	2.75	200	8.0	65	950	97	1425	260	3800	0.52	0.27
		63	CTX2	29.0	1.14	70	2.75	200	8.0	86	1250	129	1875	344	5000	0.77	0.39
25	1	4	CTX0	33.7	1.33	44	1.7	200	8.0	4.1	60	6.2	90	16.4	240	0.32	0.21
		50	CTX1	35.8	1.41	85	3.5	200	8.0	50	725	75	1088	200	2900	0.70	0.47
		63	CTX2	37.9	1.49	85	3.5	200	8.0	76	1110	114	1650	304	4440	1.1	0.57
32	1 1/4	2.5	CTX0	41.1	1.62	55	2.2	250	10	3.4	50	5.1	75	13.6	200	0.40	0.27
		25	CTX1	43.2	1.70	105	4.5	250	10	39	563	59	845	156	2250	0.86	0.57
		50	CTX2	45.3	1.78	105	4.5	250	10	57	825	85	1237	228	3300	1.3	0.93
40	1 1/2	0.5	CTX0	47.9	1.89	70	2.7	250	10	2.4	35	3.6	53	9.6	140	0.67	0.45
		25	CTX1	50.0	1.97	127	5.0	250	10	35	500	53	750	140	2000	1.2	0.80
		50	CTX2	52.2	2.06	127	5.0	250	10	55	800	82	1200	220	3200	1.7	1.1
50	2	0.5	CTX0	62.1	2.45	90	3.5	350	14	1.0	15	1.5	23	4.0	60	0.82	0.55
		25	CTX1	64.2	2.53	160	6.3	350	14	30	435	45	653	120	1740	1.5	1.0
		40	CTX2	66.3	2.61	160	6.3	350	14	44	638	66	957	176	2550	2.3	1.5
65	2 1/2	0.5	CTX0	76.5	3.01	110	4.5	410	16	1.0	15	1.5	23	4.0	60	1.9	1.3
		25	CTX1	78.6	3.09	200	7.9	410	16	26	377	39	720	104	1920	2.8	1.9
		40	CTX2	80.7	3.18	200	7.9	410	16	46	667	69	1000	184	2670	3.7	2.5
80	3	0.5	CTX0	89.8	3.54	130	5.1	450	18	1.0	15	1.5	23	4.0	60	2.3	1.5
		20	CTX1	91.9	3.62	230	9.0	450	18	22	320	33	480	88	1280	3.4	2.2
		40	CTX2	94.1	3.70	230	9.0	450	18	40	580	60	870	160	2320	4.5	3.0
90	3 1/2	0.5	CTX0	114	4.52	175	7.0	510	20	0.75	11	1.13	17	3.0	44	2.5	1.7
		20	CTX1	117	4.62	220	8.5	510	20	20.6	300	30.9	450	82.4	1200	4.1	2.8
		25	CTX2	120	4.72	220	8.5	510	20	27.0	390	40.5	585	108	1560	5.7	3.9
100	4	0.5	CTX0	126	4.98	200	8.0	560	22	0.69	10	1.04	15	2.8	40	2.8	1.9
		16	CTX1	129	5.08	230	9.0	560	22	18.4	267	27.6	400	73.6	1068	4.6	3.1
		25	CTX2	132	5.18	230	9.0	560	22	33.0	480	49.5	720	132	1920	6.4	4.3
125	5	0.5	CTX0	151	5.93	250	10	710	28	0.69	10	1.04	15	2.8	40	4.7	3.2
		10	CTX1	153	6.03	280	11	710	28	11.5	167	17.3	250	46.0	668	6.6	4.5
		20	CTX2	156	6.13	280	11	710	28	20.7	300	31.0	450	82.8	1200	8.5	5.8
150	6	0.5	CTX0	178	7.00	290	11.4	815	32	0.55	8.0	8.3	12	2.2	32	5.5	3.7
		10	CTX1	180	7.10	320	12.5	815	32	11.2	-	16.8	243	44.8	648	7.7	5.2
		20	CTX2	183	7.20	320	12.5	815	32	20.0	290	30.0	435	80.0	1160	9.9	6.7
200	8	CTX0	232	9.15	400	16	1015	40	0.31	4.5	4.6	6.8	1.24	18	7.3	4.9	
		6	CTX1	235	9.24	435	17	1015	40	7.0	102	11.0	153	28.0	408	10	6.8
		10	CTX2	237	9.34	435	17	1015	40	10	145	15	218	40.0	580	13	8.7
250	10	CTX0	287	11.28	490	19	1220	48	0.25	3.6	3.7	4.8	1.0	14.4	9.2	6.2	
		6	CTX1	292	11.5	560	22	1220	48	9.6	140	14.4	210	38.4	560	14.7	10.0



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