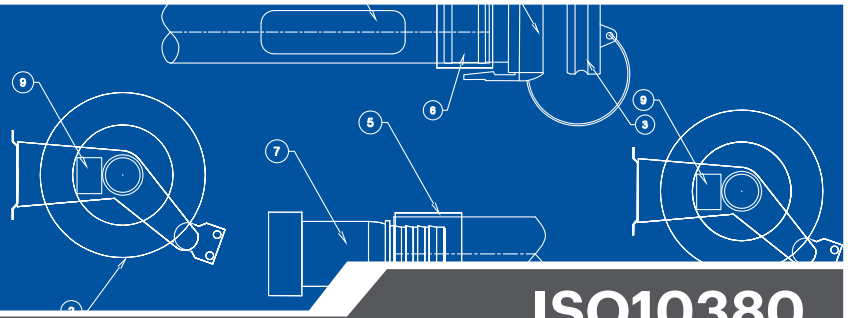




FLEXIBLE ENGINEERING SOLUTIONS



ISO10380

HOSES

AMNITEC ISO 10380 TYPE 1-50 STAINLESS STEEL HOSE
DOUBLE BRAID CORRUGATED HOSE



APPLICATION	Stainless steel corrugated hoses are suitable for a wide range of applications including Cryogenic, Chemical, Petroleum, Marine and High temperature industrial functions.
TUBE	316 stainless steel (high flexibility)
COVER	Double braid 316 stainless steel (high flexibility)
TEMPERATURE	-200°C to +600°C
SAFETY	4:1
SPECIFICATIONS	ISO 10380:2012 Type 1-50

HOSE SPECIFICATIONS FOR AMNITEC ISO 10380 TYPE 1-50 STAINLESS STEEL HOSE

Part No.	Nominal Bore		Hose OD mm	Bend Radius mm	Maximum Pressure			
	inch	mm			Working		Test	
					bar	psi	bar	psi
30-CC012AB2AU	1/2	12	24.7	150	205	2973	308	4460
30-CC020AB2AU	3/4	20	32.3	200	150	2176	230	3264
30-CC025AB2AU	1	25	39.3	200	120	1740	180	2611
30-CC032AB2AU	1-1/4	32	50.7	250	89	1291	134	1936
30-CC040AB2AU	1-1/2	40	58.8	250	71	1030	107	1545
30-CC050AB2AU	2	50	70.9	350	50	725	75	1088
30-CC065AB2AU	2-1/2	65	90.7	410	50	725	75	1088
30-CC080AB2AU	3	80	103	450	50	725	75	1088
30-CC100AB2AU	4	100	132	560	34	493	51	740

WA

Midvale
 49 Farrall Road
 Midvale WA 6056
 p: +61 8 6274 9333

Canning Vale
 27B Baile Road
 Canning Vale WA 6155
 p: +61 8 9235 7500

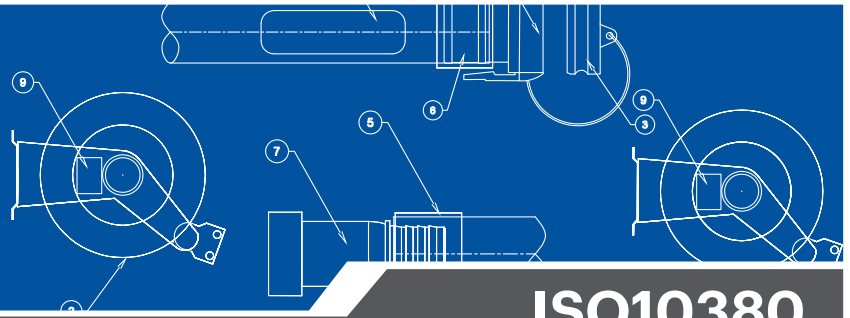
Welshpool
 Unit 11, 64 Kewdale Road
 Welshpool WA 6106
 p: +61 8 9251 2255

NT

Darwin
 18 Callanan Road
 Yarrowonga NT 0830
 p: +61 8 8936 7698

QLD

Brisbane
 51 Robinson Road East
 Virginia QLD 4014
 p: +61 7 3868 1656



Installation Data

Construction

The hoses are annularly corrugated formed from butt welded rigid tube. 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 hose to restrain it, increasing its ability to withstand pressure, increasing hoop strength and protection from abrasion. The extent of braided, gauge and angle lay is calculated carefully to maximise performance.

Materials

Tube: BS EN 10088-2:2005 1.4541 (321S31) or 1.4404 (316S11)

Braid: BS EN 10099-3:2005 1.4301 (304S31) or 1.4401 (316S31)

Shock pressure

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.

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

Unbraided: 30m/s (gas); 15m/s (liquid)

Braided: 45m/s (gas); 22.5m/s (liquid)

When the hose is installed in a bend condition, these values should be reduced by 50% for a 90° bend, 25% for a 45° and so on, proportionally to the angle. With higher velocity, the next larger hose with liner should be used.

Pressure loss

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

Pressure derating factors

The pressure ratings given apply to hose with welded end connections at room temperatures. The following derating factors must be applied at higher temperatures.

Operating Temperature (°C)	321S31 Stainless Steel	316S11 Stainless Steel
-200 to 50	1.00	1.00
100	0.96	0.94
150	0.92	0.90
200	0.88	0.86
250	0.84	0.82
300	0.80	0.78
350	0.76	0.74
400	0.72	0.70
450	0.66	-
500	0.60	-
550	0.54	-
600	0.44	-

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