



AZMYA INDUSTRIAL Flexible Metal Hose

European Technology



Flexible Metal hose Stainless Steel

The Stainless steel corrugated hose is especially designed to achieve several objectives in pipe work design. These include, absorption or vibration, operate under vacuum, handle temperature extremes, suppress rigid pipe noise transmitted, accommodate reciprocating and flexing movement, operate effectively under high pressures and adjust or correct for misalignment.

Stainless steel corrugated hose is a general purpose industrial hose and is available in different grades of stainless steel including 304, 316, 321, Monel & Inconel.

Corrugation Design

The corrugated hose is manufactured from a cylindrical, thin walled tube formed from rolled strip and welded at the seam. Impressed into this tube is a corrugated annular profile. Annular corrugation means each convolution is perpendicular to the centre line of the hose giving a distinct advantage of movement with each corrugation being relatively independent of movement from each other.

When the corrugations are closely spaced, the hose is referred to as 'closed pitch' hose. Conversely, when the corrugations are more widely spaced, the hose is referred to as 'open pitch'.

Annular



Omega



High Pressure



Monel





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Flexibility

The flexibility of the corrugated hose is the result of the bending of the metal corrugations. Service life varies depending upon the severity of the flexing, temperature, corrosive conditions, pressure and vibration to which the hose is subjected.

Unless restrained, corrugated hose will elongate when subjected to increased internal pressure. Restraint is provided by a braided covering, consisting of a tubular sheath of woven metal wires fitted tightly over the corrugated hose and secured at each end. Bending and flexibility of the corrugated hose is not appreciably affected by the wire braid covering

Our braided stainless steel hose assemblies are able to handle applications from cryogenic (Liquid Nitrogen, Carbon Dioxide and others) to high temperature (Steam, Hot Oil, Engine Exhaust), as well as corrosive media and pressures from full vacuum to 3,000 psi or greater – while still remaining flexible. We offer single braid and double braid assemblies, as well as assemblies with fire-sleeve heat & flame protection. Floppy guard stainless steel external protection to limit over-bending is available as well.

Stainless Steel Hose and Braid Specifications

NOMINAL I.D	MINIMUM BAND RADIUS		WITHOUT BRAIDS		SINGLE BRAID		DOUBLE BRAIDS	
	Static	Flexing	Max Working Pressure	Test Pressure	Max Working Pressure	Test Pressure	Max Working Pressure	Test Pressure
mm	mm	mm	Kg / cm ²	Kg / cm ²	Kg / cm ²	Kg / cm ²	Kg / cm ²	Kg / cm ²
8	25	100	4.0	6.0	100	150.0	160.0	240.0
10	40	150	4.0	6.0	90	135.0	144.0	216.0
12	50	200	3.0	4.5	80	120.0	128.0	192.0
20	70	200	2.0	3.0	64	96.0	102.0	153.0
25	90	200	2.0	3.0	50	75.0	80.0	120.0
32	110	250	1.5	2.3	40	60.0	64.0	96.0
40	130	300	1.5	2.3	30	45.0	48.0	72.0
50	175	350	1.0	1.5	28	42.0	44.0	66.0
65	200	410	1.0	1.5	24	36.0	38.0	57.0
76	205	450	1.0	1.5	18	27.0	28.0	42.0
100	230	560	0.8	1.2	16	24.0	26.0	39.0
125	280	660	0.6	0.9	12	18.0	20.0	30.0
150	320	815	0.6	0.9	10	15.0	16.0	24.0
200	435	1015	0.5	0.75	8	12.0	12.0	18.0

Tolerances

The nominal length refers to the hose complete with end fittings and indicates the total length. Unless otherwise arranged when ordering, the following length tolerances must be taken into account when checking the nominal length :

Nominal Lengths	up to 500	up to 500	over 500 up to 1000	over 500 up to 1000	over 1000 up to 2000	over 1000 up to 2000
Tolerances	Min.	Max.	Min.	Max.	Min.	Max.
ISO 10380:2012	495	515	990	1030	1980	2060

- The "End to End" or "Seat to Seat" length of a hose assembly shall be the length as ordered to a tolerance of +3% / -1.
- Smaller length tolerances are possible, but must be specially agreed when ordering.



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Applicable Standards

- If required your hoses can be manufactured for use with gas and water.
- ISO 10380:2012
- ISO 9001:2008
- AS 2475 Threaded Hose Connection Fittings for Bituminous Materials
- AGA Approved: AS 4631:2005 (upon requirement)
- Watermark Approved (upon requirement)
- Welding Compliant to: AS 4041
- Class 1 (upon requirement)