



## Metallic Hose Assemblies Product Overview

Core Product Range



The name may sound new but the knowledge and experience of the team certainly isn't! With decades of experience in the hose industry our team of experts is ready to meet your every need."

"As an approved ISO9001 certified manufacturer our hoses are made to ISO10380. We are focused on delivering customer satisfaction and meeting all of our customers needs. With our welders fully coded to ASME IX and EN9606-1 and our unique welding procedures you can be assured of product quality, availability, fast delivery, with excellent technical support always available to help.

We pride ourselves on being able to meet your deadlines and your requirements. Offering support and design recommendations to build assemblies of the highest quality at competitive prices"

Warren Beattie  
Director

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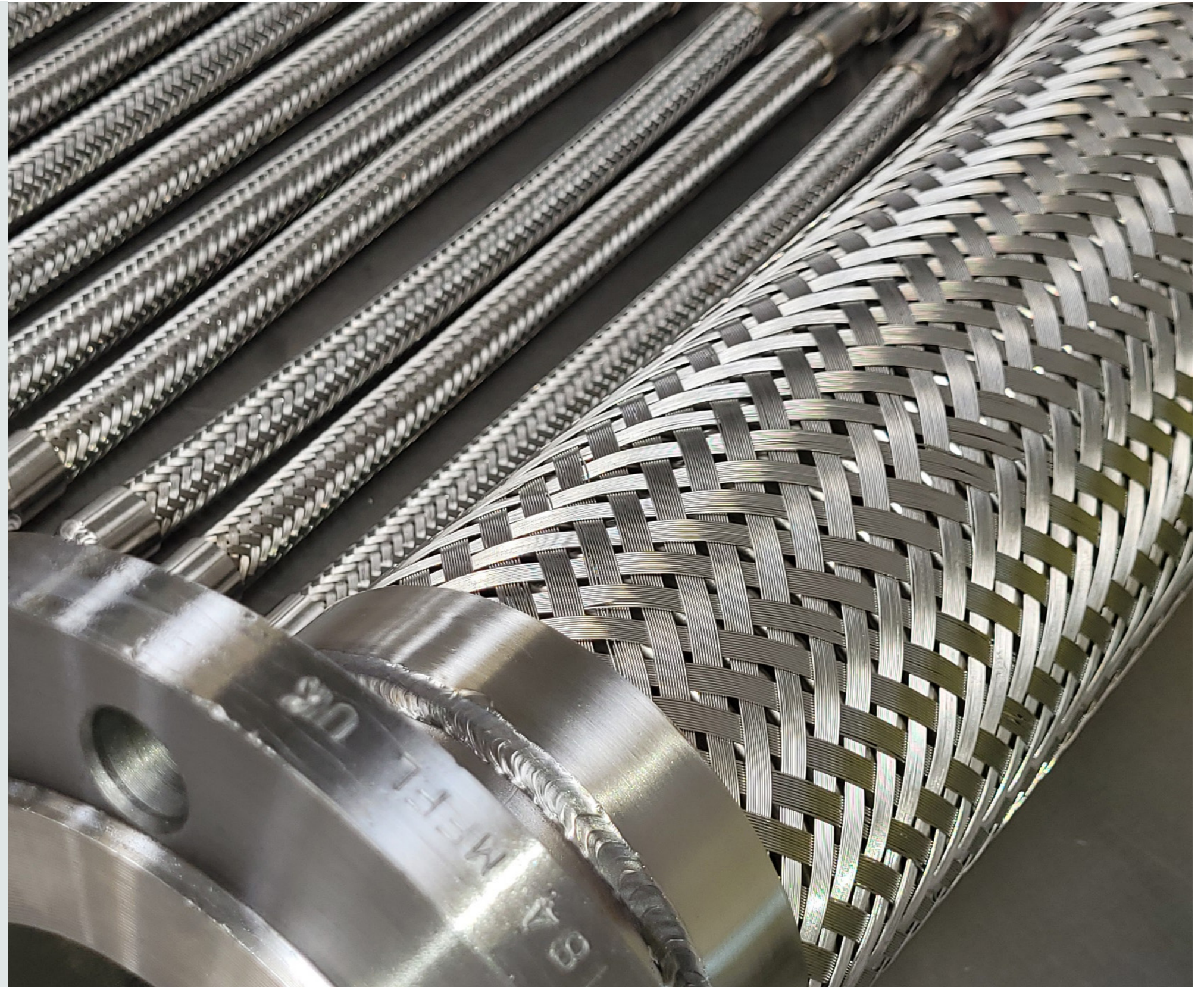
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# Company

Our decades of knowledge and experience in the metallic hose industry has seen us develop and manufacture a very diverse range of assemblies with our finished products being made from only the highest quality materials. We are able to produce specific assemblies designed to meet your most stringent applications in sizes from ¼" to 12" internal diameter from our UK manufacturing plant. Where we have full control of quality, supply and logistics.

Metallic hose assemblies are ideal for specialist applications requiring either temperatures from -200c up to +600c, or from 8000 to 50000 flexing cycles, gas applications requiring zero leakage or simply your peace of mind that when installed they could have up to 20 years guarantee(application dependant) thus reducing unnecessary costly maintenance and down times.

We can help you technically by designing bespoke flexible hose assemblies for manufacturing and distributing high performing products. Our comprehensive services provide value to many businesses and we pride ourselves on constantly changing and adapting to meet increasing industry demands.





01.

### 01. Consultation

FMI exist to solve your hose problems, advise on hose material, quality, application & safety issues, and much more.

### 02. Design

We have the resources, facilities and design capabilities to design you a completely bespoke metallic hose solution.

### 03. Manufacturing

Our metallic hose assemblies are designed and manufactured in a purpose built plant in Northampton, England, United Kingdom

### 04. Welding

At FMI we use an argon backed unique method to weld our standard range of fittings for extra corrosion resistance.

### 05. Traceability

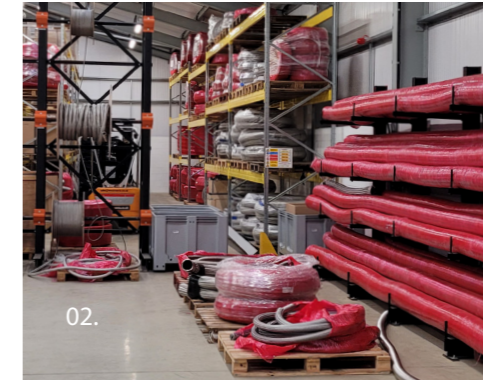
All of our hoses can be etched in accordance with customer requirements to match certification with specific hose assemblies, Using certificate numbers for traceability on our ferrules and collars containing information such as DOM, FMI SO details, Asset No. etc in order to match certification to specific hose assemblies.

### 06. Certification

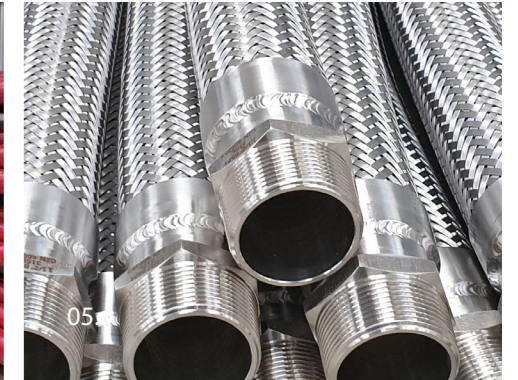
Full 3.1B material certification is available to ensure that, when required you know the origin of the materials for your products.

### 07. Testing

Test pressure certificates can be provided when required. We also offer additional testing methods such as NDT, X-Ray, Helium, Nitrogen, available upon request.



02.



05.



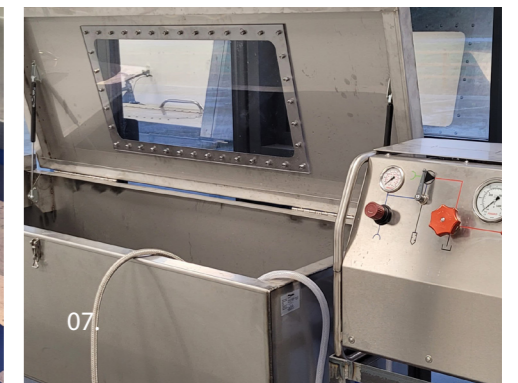
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06.



04.



07.

## 7010 - Unbraided Metallic Hose



A low pressure, standard pitch metallic hose. Standard sizes range between 6mm to 300mm but are also available up to 450mm. Suitable for up to 8,000 flexing cycles. 316L SS Liner.

### Applications

Applications with extreme conditions or variables such as temperature extremes, chemical compatibility, permeation concerns etc; High Temperature Hydraulic Oils, Steam, Chemicals and Petroleum products, Corrosive liquids & Gases, Compressed Air & Pneumatic liners, Cryogenic applications, Food & Beverage production, Nuclear plants and Steam lines, Fluids associated with high temperature and pressure in paper plants, Tyre moulds and Textile Machinery, Oil Refineries and Toxic applications.

### Construction

- Liner: 316 Stainless Steel Currugated Tube
- Reinforcement: N/A
- Cover: N/A

### Standards

- ISO 10380:2012

### Temperature

-200°C to +600°C

Size	ID (mm)	OD (mm)	Bend (mm) Static / Dynamic	WP/BP	Product Code
1/4"	6.2	9.6	25/85	12/48	T7010-006
5/16"	8.2	12.1	32/125	10/40	T7010-008
3/8"	10.3	14.3	38/140	9/36	T7010-010
1/2"	12.2	16.7	45/140	9/36	T7010-012
5/8"	16.2	21.6	58/160	8/32	T7010-016
3/4"	20.2	26.8	70/170	4/16	T7010-020
1"	25.4	32.2	85/190	3/12	T7010-025
1 1/4"	34.3	41.1	105/260	2/8.0	T7010-032
1 1/2"	40.1	49.5	130/300	1/4.5	T7010-040
2"	50.3	60.3	160/320	1/4.5	T7010-050
2 1/2"	65.6	81	180/410	1/4.0	T7010-065
3"	80.3	95	200/450	0.6/2.4	T7010-080
4"	100.8	117	290/560	0.5/2.0	T7010-100
5"	125.4	150	325/710	0.5/2.5	T7010-125
6"	150.8	175	380/915	0.3/1.2	T7010-150
8"	197	225	500/1015	0.3/1.2	T7010-200
10"	250.4	278	620/1270	0.2/0.8	T7010-250
12"	300.2	336	725/1525	0.2/0.8	T7010-300

## 7011 - Single Braided Metallic Hose



A medium pressure, standard pitch metallic hose. Standard sizes range between 6mm to 300mm but are also available up to 450mm. Suitable for up to 8,000 flexing cycles. 316L SS Liner & 316L SS Braid.

### Applications

Applications with extreme conditions or variables such as temperature extremes, chemical compatibility, permeation concerns etc; High Temperature Hydraulic Oils, Steam, Chemicals and Petroleum products, Corrosive liquids & Gases, Compressed Air & Pneumatic liners, Cryogenic applications, Food & Beverage production, Nuclear plants and Steam lines, Fluids associated with high temperature and pressure in paper plants, Tyre moulds and Textile Machinery, Oil Refineries and Toxic applications.

### Construction

- Liner: 316 Stainless Steel Currugated Tube
- Reinforcement & Cover: One layer of 316L stainless steel over braid

### Standards

- ISO 10380:2012

### Temperature

-200°C to +600°C

Size	ID (mm)	OD (mm)	Bend (mm) Static / Dynamic	WP/BP	Product Code
1/4"	6.2	10.8	25/85	120/480	T7011-006
5/16"	8.2	13.3	32/125	100/400	T7011-008
3/8"	10.3	15.5	38/140	90/360	T7011-010
1/2"	12.2	17.9	45/140	80/320	T7011-012
5/8"	16.2	23	58/160	70/280	T7011-016
3/4"	20.2	28.3	70/170	64/256	T7011-020
1"	25.4	33.7	85/190	50/200	T7011-025
1 1/4"	34.3	42.7	105/260	40/160	T7011-032
1 1/2"	40.1	51.1	130/300	35/140	T7011-040
2"	50.3	62.3	160/320	30/120	T7011-050
2 1/2"	65.6	83	180/410	24/96	T7011-065
3"	80.3	97	200/450	18/72	T7011-080
4"	100.8	119	290/560	16/64	T7011-100
5"	125.4	152.5	325/710	14/56	T7011-125
6"	150.8	177.5	380/915	10/40	T7011-150
8"	197	228	500/1015	8/32	T7011-200
10"	250.4	281.5	620/1270	7.5/30	T7011-250
12"	300.2	339.5	725/1525	6/24	T7011-300

### 7012 - Double Braided Metallic Hose



A high pressure standard pitch metallic hose. Standard sizes range between 6mm to 300mm but are also available up to 450mm. Suitable for up to 8,000 flexing cycles. 316L SS Liner & 2x 316L SS Braid.

#### Applications

Applications with extreme conditions or variables such as temperature extremes, chemical compatibility, permeation concerns etc; High Temperature Hydraulic Oils, Steam, Chemicals and Petroleum products, Corrosive liquids & Gases, Compressed Air & Pneumatic liners, Cryogenic applications, Food & Beverage production, Nuclear plants and Steam lines, Fluids associated with high temperature and pressure in paper plants, Tyre moulds and Textile Machinery, Oil Refineries and Toxic applications.

#### Construction

- Liner: 316 Stainless Steel Currugated Tube
- Reinforcement & Cover: Two layers of 316L stainless steel over braid

#### Standards

- ISO 10380:2012

#### Temperature

-200°C to +600°C

Size	ID (mm)	OD (mm)	Bend (mm) Static / Dynamic	WP/BP	Product Code
1/4"	6.2	12	25/85	192/768	T7012-006
5/16"	8.2	14.5	32/125	160/640	T7012-008
3/8"	10.3	16.7	38/140	144/576	T7012-010
1/2"	12.2	19.1	45/140	128/512	T7012-012
5/8"	16.2	24.4	58/160	112/448	T7012-016
3/4"	20.2	29.8	70/170	102/410	T7012-020
1"	25.4	35.2	85/190	80/320	T7012-025
1 1/4"	34.3	44.3	105/260	64/256	T7012-032
1 1/2"	40.1	52.7	130/300	56/224	T7012-040
2"	50.3	64.3	160/320	48/192	T7012-050
2 1/2"	65.6	85	180/410	40/160	T7012-065
3"	80.3	99	200/450	29/115	T7012-080
4"	100.8	121.5	290/560	26/102	T7012-100
5"	125.4	155	325/710	22/90	T7012-125
6"	150.8	180	380/915	16/64	T7012-150
8"	197	231	500/1015	13/51	T7012-200
10"	250.4	285	620/1270	12/48	T7012-250
12"	300.2	343	725/1525	9.5/38	T7012-300

### 7020A | 7021A | 7022A - Fine/Close Pitch Hose Types

A high pressure close pitch metallic hose. Standard sizes range between 6mm to 100mm but are also available up to 450mm. Suitable for up to 50,000 flexing cycles. 316L SS Liner.

#### Standards

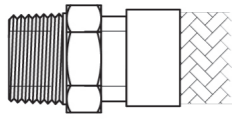
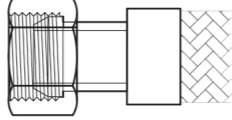
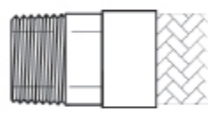
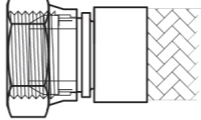
- ISO 10380:2012


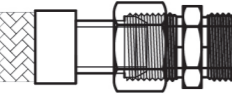
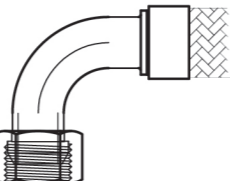
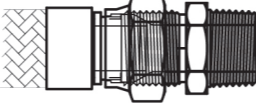
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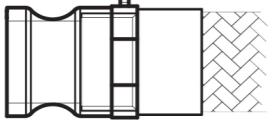
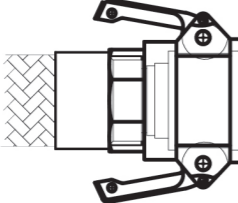
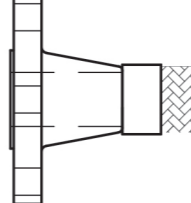
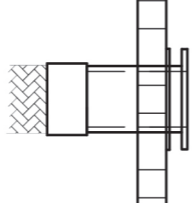
-200°C to +600°C

Size	ID (mm)	OD (mm)	Bend (mm) Static / Dynamic	WP/BP	Product Code
1/4"	6.2	9.6	25/70	12/-	7020A-006
		10.8		120/480	7021A-006
		12.0		192/768	7022A-006
5/16"	8.2	12.2	30/90	10/-	7020A-008
		13.5		100/400	7021A-008
		15.0		160/640	7022A-008
3/8"	10.3	14.4	35/100	9/-	7020A-010
		16.0		90/360	7021A-010
		17.5		144/576	7022A-010
1/2"	12.2	16.9	45/110	9/-	7020A-012
		18.2		80/320	7021A-012
		19.5		128/512	7022A-012
5/8"	16.2	21.8	50/120	8/-	7020A-016
		23.5		70/280	7021A-016
		25.0		112/448	7022A-016
3/4"	20.2	26.8	55/130	4/-	7020A-020
		28.3		64/256	7021A-020
		29.8		102/410	7022A-020
1"	25.1	32.5	65/150	3/-	7020A-025
		34.0		50/200	7021A-025
		35.5		80/320	7022A-025
1 1/4"	34.3	41.2	75/230	2/-	7020A-032
		43.3		40/160	7021A-032
		44.5		64/256	7022A-032
1 1/2"	40.1	49.9	90/240	1/-	7020A-040
		51.7		35/140	7021A-040
		53.8		56/224	7022A-040
2"	50.3	60.4	110/260	1/-	7020A-050
		62.7		30/120	7021A-050
		64.3		48/192	7022A-050

End Connections

				
Type	BSPT	BSPP (Slip-on Nut)	BSPT	BSPP (Crimp-back Nut)
Description	Fixed Male	Swivel Female	Barrel Male	Swivel Female

				
Type	Victuallic	BSP	BSP	BSP
Description	Grooved Ends	Swivel Female + Male/Male Adaptor	90° Swivel Female	Swivel Female + Male/Male Adaptor

				
Type	Camlock	Camlock	Flange	Flange
Description	Male	Female	Fixed	Swivel

Metallic Hose Assemblies

End Connections

Additional Fittings

Other fittings are available upon request.







# Additional Accessories

Other options are available to protect from crushing, kinking, abrasion, and thermal stress.



## Spring Guard

Spring Guard hose protection can be included to protect the hose from kinking depending on the application. It can be easily installed during manufacture. This type of guard consists of a stainless steel spring that is attached behind the end fitting.

## Lined Assemblies

An internal flexible metal liner is used when high conveyant velocities are required. This prevents damage and reduces abrasion. When the velocity of the fluid, which is transferred through the stainless steel corrugated hose, is more than 25 meters/second (for liquid) and 50 meters/second (for gases), it may create a turbulent flow that causes abrasion and extra pressure drop, damaging the hose. Thus, to prevent this, a flexible interlock liner is used.

## Heat Protection Sleeve

Protects the hose assembly from damage due to exposure to high heat. It also insulates against energy loss and offers protection from exposure injuries, such as heat related blisters and burns.

## External Guard

Use of external flexible armour/guard protects the stainless steel flexible corrugated hose from abuse due to rough handling, sharp bending, abrasion, etc. Sometimes glass fibre, ceramic covering or any other insulation material is used in external guard and armouring. These external guards are made of SS-304, SS-316L, galvanized steel. These can be easily installed during manufacture.

## Protective Cover

If the potential for impact or high temperature damage is not severe, or if the additional weight and bulk of a full metal guard is unacceptable, rubber or plastic scuff guards can be installed to protect the corrugated hose and braid.

## Specialist Assemblies



## Special Metallics

## Jacketed Assemblies

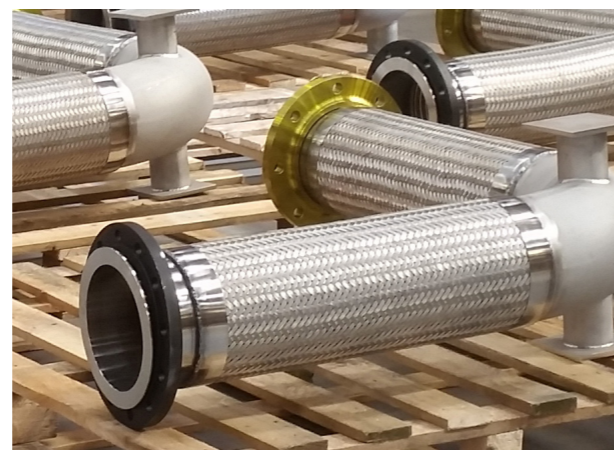
A Jacketed or Duplex hose assembly is a hose within a hose. Both inner and outer hoses act independently as separate pressure carriers. Vacuum Jacketed hose assemblies are typically found in cryogenic applications because of their insulation properties. Steam Jacketed hose assemblies are utilised when the media is viscous and steam is used to help reduce viscosity and increase flow.



## Special Metallics

## Dog leg Assemblies

Dog leg hose assemblies are made up of two lengths of flexible hose assemblies connected to one 90 elbow to permit movement in multiple planes and absorb vibrations.



## Testing

To avoid distortion of the convoluted hose the maximum test pressures quoted in this literature must not be exceeded. Hoses are tested in accordance with ISO10380 unless otherwise stated.

- Hoses are tested to x1.5 customers stated working pressure.
- If pressure is not stated then standard assembly test procedures will apply.

Leak and proof Testing: To ensure our assemblies meet critical applications requirements, all assemblies are 100% tested.

## Pneumatic Testing

Compressed Air (as standard), Helium or Nitrogen (upon request)

Flexmetallic can fulfil all your certification needs. Records can be produced for all of our testing including full traceability on materials and full certification packs if required.

## Hydrostatic Testing

Hydrostatic tests are performed to 1.5x working pressure which not only checks for leaks but also the structural integrity of the hose. with reverse osmosis water or deionised water upon request.

- Certificate of Conformance
- Testing Certification
- Certificates of Testing Chart Recorded Data
- EN10204 3.1 Material Certificates
- Welders certification records
- Manufacturing Data Records (MDR Books)
- Inspection and Testing Control Plans (ITPs)

To guard against corrosion deionised water is used. The assembly shall be pressurised with water to the maximum test pressure of the assembly maintained for a sufficient length of time to permit a visual examination.

## Non-Destructive Testing

(NDT)

A variety of non-destructive testing options are available and follow American Society for Non-destructive Testing (ASNT) recommended practice SNT-TC-1A:

- Dye penetrant testing (visible and fluorescent)
- Fluorescence Positive Material Identification (XFR PMI)
- Radiographic examination (X-Ray)

Technical data

Flow Velocity

Corrugated metal flexible hoses have limitations in case of fluids with high-flow velocities. This is because high-velocity causes resonant vibrations, resulting in premature failure of the assembly. Whenever flow velocity exceeds 50 m/sec for gas and 25 m/sec for liquids, an interlock hose liner should be used in the hose assemblies. The above flow velocity values get reduced to 50% for 90 bends and 25% for 45 bends.

Temperature Correction Factor

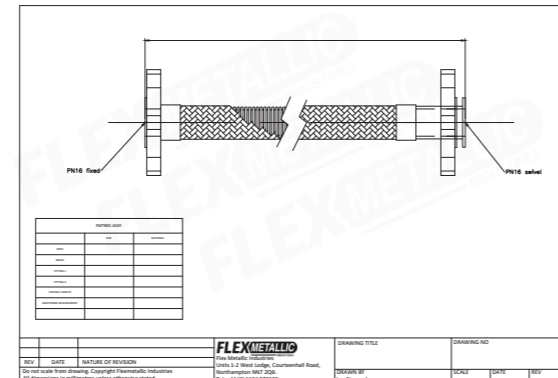
When hoses are needed to work at higher temperatures, the working pressure given should be multiplied by the correction factor. This provides the pressure rating of hoses for higher temperatures.

Example:

- Design Pressure of 50 NB hose is required at temperature of 200°C, if Hose material SS316L
- Then specified pressure for 50 NB single wire braid hose, as per the table (Series T7011), is 30 bar.
- The correction factor at 200°C is 0.62
- Thus, the permissible working pressure is 30 x 0.62=18.6 bar.

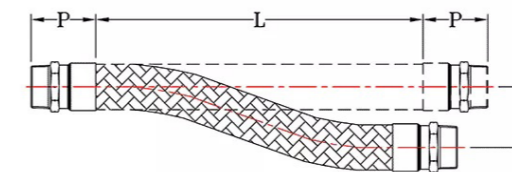
Recommended design pressure of SS316L DN50 Hose with single wire braiding at 200 degree Celsius will be 18.6 bar.

Material	Temperature											
	20	50	100	150	200	250	300	350	400	450	500	550
	De-rating Factors											
SS304L	1	0.87	0.72	0.65	0.59	0.55	0.51	0.48	0.46	0.45	0.44	0.43
SS304	1	0.88	0.73	0.66	0.60	0.56	0.52	0.50	0.48	0.47	0.46	0.42
SS321	1	0.92	0.83	0.78	0.74	0.71	0.67	0.64	0.62	0.61	0.60	0.59
SS316L	1	0.88	0.74	0.67	0.62	0.58	0.54	0.52	0.50	0.48	0.47	0.47
SS316	1	0.90	0.78	0.71	0.66	0.62	0.58	0.56	0.53	0.52	0.51	0.51

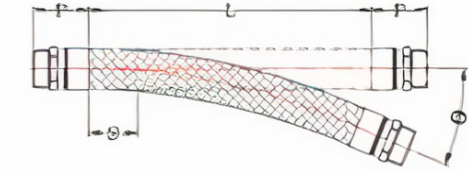


Technical data

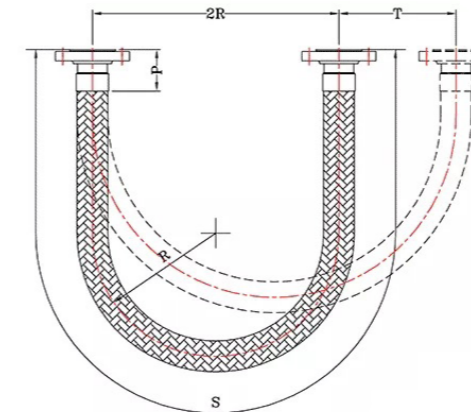
Size	Bend Radius	Displacement											
		15	25	35	50	75	100	125	150	175	200	225	250
6	85	160	206	244	292	357	412	461	505	545	583	618	652
8	125	194	250	296	354	433	500	559	612	661	707	750	791
10	140	205	265	313	374	458	529	592	648	700	748	794	837
12	140	205	262	313	374	458	529	592	648	700	748	794	837
16	160	219	283	335	400	490	566	632	693	748	800	849	894
20	170	226	292	345	412	505	583	652	714	771	825	875	922
25	190	239	308	365	436	534	616	689	755	815	872	925	975
32	260	279	361	427	510	624	721	806	883	954	1020	1082	1140
40	300	300	387	458	548	671	775	866	949	1025	1095	1162	1225
50	320	310	400	473	566	693	800	894	980	1058	1131	1200	1265
65	410	351	453	536	640	784	906	1012	1109	1198	1281	1358	1432
80	450	367	474	561	671	822	949	1061	1162	1255	1342	1423	1500
100	560	410	529	626	748	917	1058	1183	1296	1400	1497	1587	1673
125	710	462	596	705	843	1032	1192	1332	1459	1576	1685	1787	1884
150	815	494	638	755	903	1106	1277	1427	1564	1689	1806	1915	2019
200	1015	552	712	843	1007	1234	1425	1593	1745	1885	2015	2137	2253
250	1270	617	797	943	1127	1380	1594	1782	1952	2108	2254	2391	2520
300	1525	676	873	1033	1235	1512	1746	1953	2139	2310	2470	2620	2761



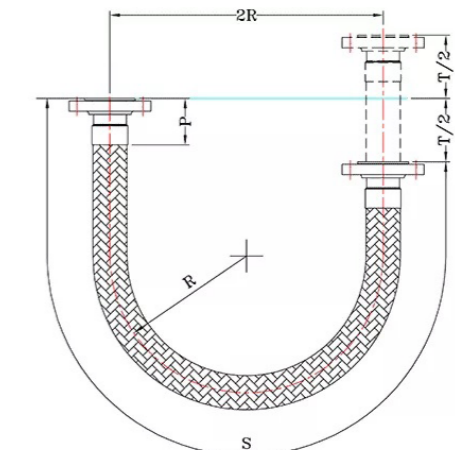
LATRAL OFFSET  
 FORMULA:  $L = \sqrt{(20R \times T)}$   
 $L_p = \sqrt{(L^2 - T^2)}$   
 R - Minimum dynamic bend radius  
 Quick Calculation of T as per table



ANGULAR DEFLECTION / OFFSET  
 FORMULA:  $L = 2S + ( / 57.3) R$   
 = Deflection angle



RADIAL MOVEMENT IN HORIZONTAL LOOP  
 FORMULA:  $S = 4R + 1.57 T + 2P$   
 DROP HEIGHT (BEFORE STRETCH) =  $1.43R + 0.785 T$   
 DROP HEIGHT (AFTER STRETCH) =  $1.43R + 0.5 T$



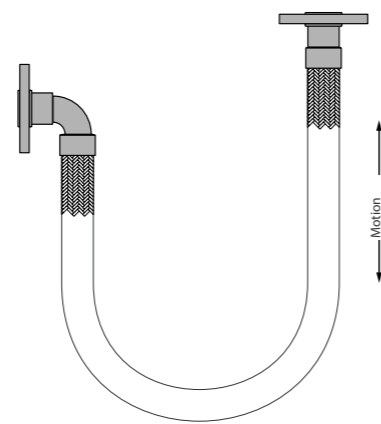
RADIAL MOVEMENT IN VERTICAL LOOP  
 FORMULA:  $S = 4R + \frac{1}{2} T + 2P$

Guidelines for the management of flexible hose assemblies

1.1 Installation

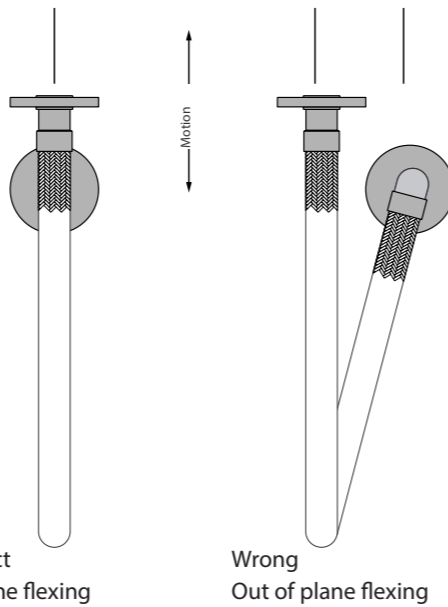
Flexible hose assemblies are engineered to provide maximum service life when properly installed. It is important to note that improper installation, incorrect flexing or careless Handling in an application will reduce the effective service life of the hose and cause premature failure of an assembly. The following installation and handling precautions should be observed to achieve optimum performance from your corrugated hose assemblies.

In plane travelling loop installation



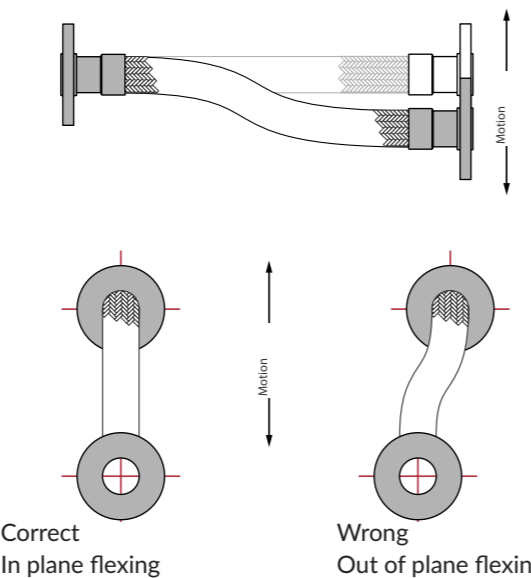
1.2 Avoid Torque

Do not twist the hose assembly during installation when aligning the bolt holes in a flange or in making up pipe threads. The utilization of swivel / lap joint flanges or pipe unions will minimize this condition. It is recommended that two spanners be used in making the union connection; For example; one to prevent the hose from twisting and the other to tighten the coupling.



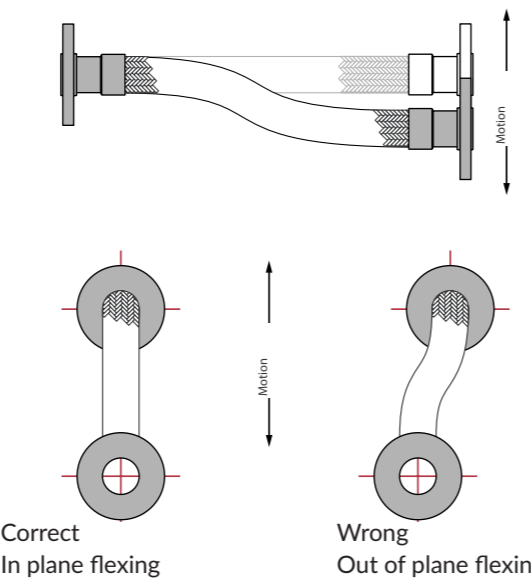
1.3 In Plane Lateral Offset Installation

Prevent out-of-plane flexing in every installation as this will cause hoses to twist; however it should be noted that this can be compensated by using rotary unions. Always install the hose so that the flexing takes place in only one plane. This plane must be the plane in which the bending occurs.



1.4 Installation Precautions

Do not Compress or extended axially: hose shall be installed in line with longitudinal axis of pipe system  
Do not torque during installation: hose assembly should not be twist, use two wrenches to keep away the hose from twisting during tightening the fitting.  
Do not sharp bend during unwinding or installation  
Maintained minimum bend radius to avoid premature failure.  
Do not allow hose movement in multiple plane.



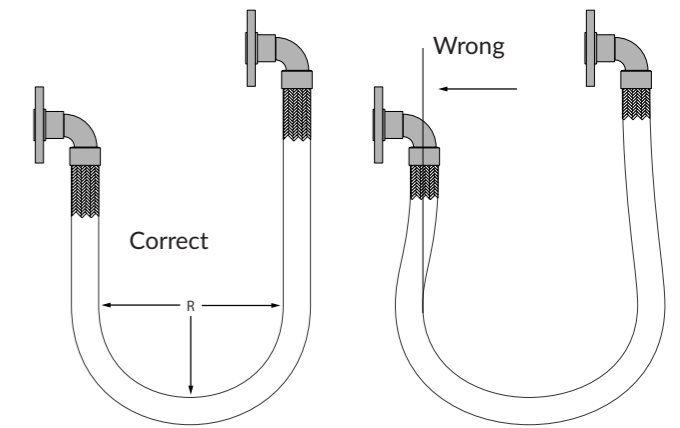
Do not allow hose movement in multiple plane.

Guidelines for the management of flexible hose assemblies

1.5 Avoid over bending

The repetitive bending of a hose to a radius smaller than the radius listed in the products data sheet found on the Flextech's website for corrugated metal hose assemblies will result in premature hose failure.

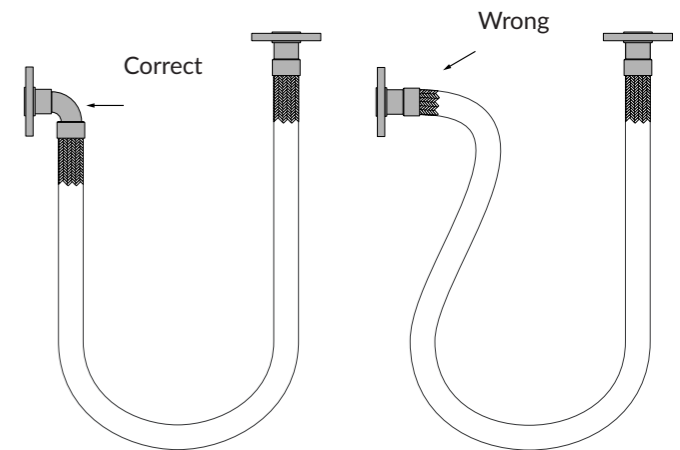
Always provide sufficient length to prevent over bending and to eliminate strain on the hose and the end connections.



1.6 Avoid Sharp Bends

Utilize sound geometric configurations that avoid sharp bends, especially near the end fittings of the assembly is essential for good installation practices. It should be noted that failure to comply to these requirements will result in un-necessary tension being generated and premature failure will occur.

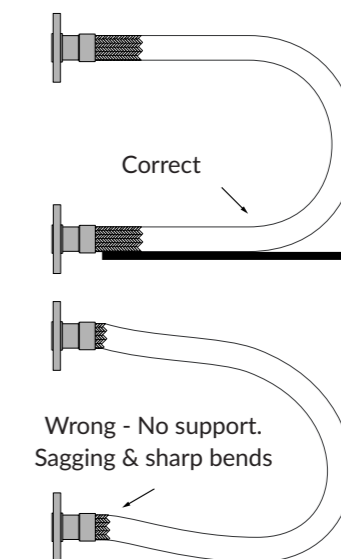
This is one of the most common causes of premature hose failure which can be easily eliminated. If in doubt then please contact our sales office for advice.



1.7 Provide Support

When installing the assembly in a horizontal loop, provide support for the arms to prevent the hose from sagging.

The weight of hose will put un-necessary tension on the hose connection ends and will reduce the life expectancy causing premature failure.



## Guidelines for the management of flexible hose assemblies

## 1.8 Installation

A piping system which utilizes flexible hose assemblies to absorb movement must be properly anchored and/or guided. Always support the piping to prevent excessive weight from compressing the hose and relaxing the braid tension.

## 1.9 Handle with Care

Avoid careless handling of the hose assembly. Always lift or carry metal hose to prevent abrasion damage particularly to braided corrugated hose. Store all hose assemblies away from areas where they can be subjected to spillage, corrosive fumes or sprays, weld splatter, or any other possibility which may cause damage to the hose. If the hose's external braid or covering becomes damaged then the hose assembly must be removed from service and tested at 1.5 times its max operating pressure to re-validate as safe for service.

## 2.1 Do not Depressurise

The system that the hose assembly is to be installed into shall be protected from over pressurization and from excessive temperature.

## 2.2 Do not expose to high temperatures

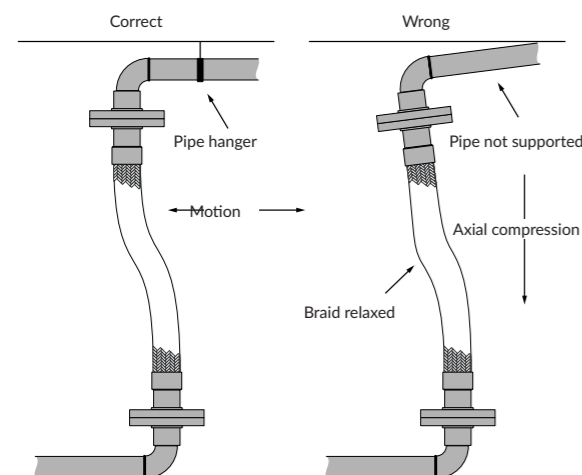
If a hose is exposed to either over pressurization or excessive temperatures outside of its recommended parameters then it must be removed from service and tested at 1.5 times its max operating pressure.

## 2.3 Do

- Follow any printed instructions included with the hose assemblies.
- Follow industry-recommended practices and use care in handling and installing all hose assemblies.
- Always install hose assemblies so that the bend is as close to the centre of the connector as possible.
- Observe the minimum bend radius as specified by the manufacturer.
- Trial-fit threaded connections by hand, unmake and then make permanent.
- Use a hose assembly of proper length to suit the installation.
- Only tighten up on the fitting hex flats as provided.
- Install vents and draws to permit the hose to be removed.
- Install the proper length hose assembly to allow a 2" straight run of hose at each end fitting.
- Use correct sized spanners on both mating hexes to avoid twisting the hose during installation.
- Visually inspect hose on a regular basis.
- Test hose at 1.5 times its maximum operating pressure annually.
- Check for leaks before covering the installation.
- Install in such a manner that the hose assembly can be removed easily when required.
- Make sure the pressure rating of a hose assembly is not exceeded.

## 2.4 Do Not

- Apply a spanner/grips to a hose, collar or assembly.
- Twist hose assemblies during installation or when aligning the bolt holes in a flange or when making up pipe threads.
- "Pre-flex" a hose assembly to loosen it up as over-bending could cause damage and result in leakage.
- Over-bend a hose assembly. A 45°-90° bend should be sufficient to install any flexible connector.
- Install a hose assembly with the bend next to the end fittings. This could damage and result in leakage.
- Lay the hose assembly on rocks or objects which could puncture the hose and cause leakage.
- Attempt to stretch or compress a hose assembly to fit an installation.
- Restrict flexibility by allowing the hose assembly to come into contact with other components or equipment during installation.



## Guidelines for the management of flexible hose assemblies

Provided the correct and full conditions of use have been given at the time of order placement and the assembly is subsequently installed within its design parameters, the flexible hose assembly (FHA) or pressure equipment can give many years of satisfactory service life. To help maximise this service life the following guidelines should be followed.

## 3.1 Integrity

The integrity of FHAs is very dependant on the correct selection of hose product and adherence to the installation procedures. Flextech suggest that all personnel required to install, inspect and maintain FHAs should be formally authorised, and fully conversant with the appropriate installation, test and maintenance procedures, failure criteria etc.

## 3.2 Safety Considerations

- Flexible hose assemblies should not be used where it is safer to install permanent pipe work.
- Design – Flexible hose assemblies suitability with systems piping and equipment.
- Application – suitability of the flexible hose assembly in relation to media, pressures, temperature and when used in suction applications, ability to withstand vacuum.
- External Environment - Flexible hose assemblies should only be used for duties for which they are approved.
- Installation - Flexible hose assemblies should be adequately supported and installed to the manufacturer guidelines, as applicable and consistent with the best practice principles contained within this guidance document.
- Length – Flexible hose assemblies should be kept to a minimum, consistent with flexibility and required function.
- Electricity – dangers of static electricity in the application and effects on all components associated with flexible hose assemblies continuity requirements.

## 3.3 Vibration &amp; Movement

Flexible hose assemblies may eliminate the transmission of vibration or movement in a specific application. Flexible hose assemblies will only efficiently eliminate the transmission of vibration, movement or noise if the adjacent pipe work is properly anchored on the downstream side of the hose. In the worst cases, failure to ensure this can lead to uncontrolled movement of the flexible hose assemblies and premature failure.

## 3.4 Misalignment

Flexible hose assemblies should not be used as a remedy for poor design or installation, eg to correct misalignment of rigid components.

## 3.5 Degradation

Degradation of flexible hose assemblies can be accelerated due to heat, environmental conditions or contamination of the outer coverings and braids due to chemicals, ultraviolet light, ozone, salt, water etc. It should be noted that the fluid composition could change over the expected lifecycle. Note: Heat tracing and insulation can considerably accelerate any corrosion mechanisms.

## 3.6 Storage

All flexible hose assemblies should be stored in clean, dry conditions and hoses of rubber and composite construction should be kept in a cool atmosphere protected from direct sunlight. Some hose linings, if not protected prior to putting into service, have a finite shelf-life.

## 3.7 Cleaning &amp; Flushing

All flexible hose assemblies used in a system should be cleaned and flushed prior to use, to prevent debris being carried, damaging the liner of the hose.

Note

Other Key Products available from our group of companies include:

- PTFE Lined smooth bore & tafted hose assemblies
- Brewery & Dairy Hygienic hose assemblies
- USP IV Silicone Food & Pharma hose assemblies
- Metallic Bellows / Compensators / Expansion Joints
- Neoprene & Silicone Ducting
- Shawlok range of stainless steel Hygienic fittings

If you can't find what you're looking for don't hesitate to give us a call as one of our sales team will be able to advise you whether we are able to source your desired goods. And if we can't get hold of an item for you, we will certainly point you in the direction that you can.

Generally, we are able to obtain most hose related goods and will be more than happy to help you find the solution you need.



Product Overview  
Metallic Hose Assemblies Product Guide

All technical data is correct at the time of going to print.

Disclaimer

The information contained in this document is to the best of our knowledge, true and accurate, from sources believed to be reliable, we reserve the right to alter specifications without notice. Since conditions under which the products may be used are beyond our control, our recommendations are made without warranty or guarantee and should only be used as a guide. It is however the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of this product, and to determine the suitability of the product for the intended application or use.

All technical data is subject to change according to technical updates.

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