Engineering Perfection | Delivering Strength

HydroFlex Pipe (P.) Ltd.

AN ISO 9001 : 2015 CERTIFIED COMPANY
PED 2014/68/EU CERTIFIED COMPANY

World Class S.S. Corrugated Hoses & Assemblies

Inside the Company

Hydroflex Pipe Pvt. Ltd. initiated the trading business in 1974 with various types of hoses in the name of B. N. Traders. This journey continued with the year 1982 marking the establishment of fabrication unit in the name of Hydroflex hose industries, fabrication of end connection of various types of hoses & stainless steel hoses assemblies. Hydroflex hose industries supplies rubber, teflon & stainless steel hose assemblies to reputed industries in the Global market.

The year 2004 signalled the beginning of a well organized manufacturing unit of stainless steel annular corrugated metallic flexible hose, braiding & hose assemblies. A large variety of stainless steel annular corrugated metallic flexible hoses & hose assemblies are manufactured in austenitic AISI 321, 316, 316L & 304 grades conform to international quality standards. Hydroflex Pipe Pvt. Ltd. is an ISO 9001:2015 certified company and all hoses conform to BS 6501, PART-1:2004 /ISO 10380:2012. We can supply the hose assembly with "CE" marking.


MANAGEMENT SYSTEM CERTIFICATE

Hydroflex Pipe Pvt. Ltd.


FULL QUALITY ASSURANCE CERTIFICATE

Hydroflex Pipe (Private) Ltd.

About the Quality

Hydroflex Pipe Pvt. Ltd. gives utmost importance to quality standards and assures that every stage of production is constantly monitored by a qualified team of QC engineers. The infrastructure is complete with in-house testing facilities for various types of tests, as per international standards specified for metallic flexible hoses.

We Regularly Conduct:

- Flex fatigue / cycle life test
- Burst pressure / yield test
- Bend radius test
- Flame test.

Every single hose - assembly is tested hydraulically at 1.5 times of working pressure before dispatching. Pneumatic testing is also carried out whenever necessary. All raw material used in the manufacture of hoses, braiding and end-connections undergo rigid inspection by trained & experienced engineers to ensure highest quality standards.

Quality Policy

We, at Hydroflex Pipe Pvt. Ltd. are committed to serve our customer by providing stainless steel flexible corrugated hose with and without stainless steel wire braidings, stainless steel flexible hose assemblies & related end fittings as per their specifications, adopting latest technology, following Quality standard of international level and considering user & environmental safety on mind.

Stainless Steel Hose

Stainless steel annular corrugated metallic flexible hoses are manufacturing in austantic steel ANSI 321, 316, 316L & 304 grades conforming to BS 6501, Part-1: 2004 / ISO 10380:2012. The annular corrugated metallic hose body provided the flexibility and pressure tight core of the assembly. We also manufacture highly flexible close - pitch hoses for special applications. Stainless steel annular corrugated metallic flexible hose are offered from Size:1/4" (DN 6) to 12"(DN 300).

Braid

When pressure is applied, unbraided hose tends to elongate axially; to restrain this, an external layer of SS wire braid is provided. The braid also makes the assembly pressure compatible.

Sometimes two or even three layers of braiding are provided for high pressure applications. The braiding is highly flexible and follows the movement of the hose. The braid is normally manufactured in SS 304 wire. However SS 316 and 321 braids can also be manufactured. We also supply wire braid in different configurations as per customer specifications.

Hose Technical Data:- Table - 1

Nominal Size DN		Without Braid		Single Braid		Double Braid		Minimum Bend Radius Static	Minimum Bend Radius Flexing	
		Max. Working Pressure	Test Pressure	Max. Working Pressure	Test Pressure	Max. Working Pressure	Test Pressure		Type-1	Type-2
Inch	mm	Kg/cm2	Kg/cm2	Kg/cm2	Kg/cm2	Kg/cm2	Kg/cm2	mm	mm	mm
1/4	6	4	6	100	150	160	240	25	110	140
5/16	8	4	6	100	150	160	240	32	130	165
3/8	10	4	6	90	135	144	216	38	150	190
1/2	12	3	4.5	80	120	128	192	45	165	210
5/8	16	3	4.5	70	105	112	168	58	195	250
3/4	20	2	3	64	96	102	153	70	225	285
1	25	2	3	50	75	80	120	85	260	325
1.1/4	32	1.5	2.3	40	60	64	96	105	300	380
1.1/2	40	1.5	2.3	30	45	48	72	130	340	430
2	50	1	1.5	28	42	44	66	160	390	490
2.1/2	65	1	1.5	24	36	38	57	200	460	580
3	80	1	1.5	18	27	28	42	240	660	800
4	100	0.8	1.2	16	24	26	39	290	750	1000
5	125	0.6	0.9	12	18	20	30	350	1000	1250
6	150	0.6	0.9	10	15	16	24	400	1250	1550
8	200	0.5	0.75	8	12	12	18	520	1600	2000
10	250	0.25	0.36	6	9	9	14	620	2000	2500
12	300	0.20	0.30	4	6	6	9	720	2400	3000

Note:
- The above technical details are subject to change without notice.
- We can also supply the above hoses for higher pressures.
- The above values apply only to braided hoses and assemblies at ambient temperature of 20 Deg. C.
- The burst pressure is 4 times of the max. working pressure.

Advantages of Flexible Metal Hose

- High physical strength combined with light weight.
- Suitable for wide temperature range (-200°C to + 550°C)
- Good corrosion resistance. Resistance to fire, moisture, abrasion and penetration.
- Absorbs vibration and noise from pumps, compressors, engines etc.
- Compensates for intermittent or constant movement.
- Compensates for thermal expansion of contraction of piping.
- Corrects problems of misalignment.
- A flexible and quick alternative for rigid piping in difficult locations.

Stainless Steel Braided Flexible Pump Connectors

Stainless Steel Flexible Pump Connectors are designed for mechanical equipment to isolate vibration, relieve stresses, reduce noise, absorb small movements and to facilitate installation. Flexible pump connectors to use suppress vibration from pump, to absorb intermittent lateral movements in pipelines and to compensate for subsidence when pipelines cross building movement lines.

Stainless Steel Flexible Pump Connectors are manufacturing in austenitic steel ANSI 321 (DIN EN 1.4541) & ANSI 316L (DIN EN 1.4404) grades with over ANSI 304 (DIN EN 1.4301) / ANSI 316L (DIN EN 1.4404) single or double wire braided. Hoses conform to BS 6501, Part-1:2004 / ISO 10380 : 2012.

Stainless Steel Braided Flexible Pump Connectors -
Male Threaded / Hexagonal Fixed Male Threaded

	Specification
Hose Material	AISI 321 (DIN EN 1.4541) / AISI 316L (DIN EN 1.4404)
Braid Material	AISI 304 (DIN EN 1.4301) / AISI 316L (DIN EN 1.4404)
Braid Type	Single wire braid / Double wire braid for higher pressure
Hose Size	DN 6 (1/4" NB) to DN 100 (4" NB)
Hose Length Overall	10", 11", 12", 13", 14", 15", 16", 18"
End Fittings	Male fix type SCH 40 pipe threads BSP/BSPT/ NPT threads, Hexagonal Male fix type pipe threads BSP/BSPT/ NPT
End Fittings Material	CS / AISI 304 (DIN EN 1.4301) / AISI 316L (DIN EN 1.4404)
Working Pressure	1800 PSI (124 BAR) @ 20° C to 232 PSI (16 BAR) @ 20° C
Offset Motion Static	3/4" to 1/4"

Stainless Steel Braided Flexible Pump Connectors Flange End

	Specification
Hose Material	AISI 321 (DIN EN 1.4541) / AISI 316L (DIN EN 1.4404)
Braid Material	AISI 304 (DIN EN 1.4301) / AISI 316L (DIN EN 1.4404)
Braid Type	Single wire braid / Double wire braid for higher pressure
Hose Size	DN 15 (½" NB) To DN 300 (12" NB)
Hose Length Overall	8", 9", 10", 11", 12", 14", 15", 16", 18"
End Fittings	Fixed Flange / Swivel Flange as per ANSI B16.5 150#, 300# / DIN PN 10 / PN 16 / PN 40
End Fittings Material	CS A105 / AISI 304 (DIN EN 1.4301) A182 / AISI 316L (DIN EN 1.4404) A182
Working Pressure	507 PSI (35 BAR) @ 20° C to 160 PSI (11 BAR) @ 20° C
Offset Motion Static	3/4" to 1/4"

Note:
- Flexible pump connector are designed the test pressure is 1.5 times of the max. Working pressure.
- The burst pressure is 4 times of the working pressure.
- They are use for full vacuum and operating temperature of -200° C to +550° C.
- Flexible Pump Connectors are not suitable for absorbing AXIAL Movement.
- We are also manufacturing higher pressure Pump Connectors as per customer's specification.

Advantages of Flexible pump connector:

- Absorbs misalignment, vibration and sound.
- Withstands high pressure.
- Excellent corrosion-resistance.
- Excellent for use with moderate many solvents, chemicals, most oils and grease.

Jacketed Flexible Hose

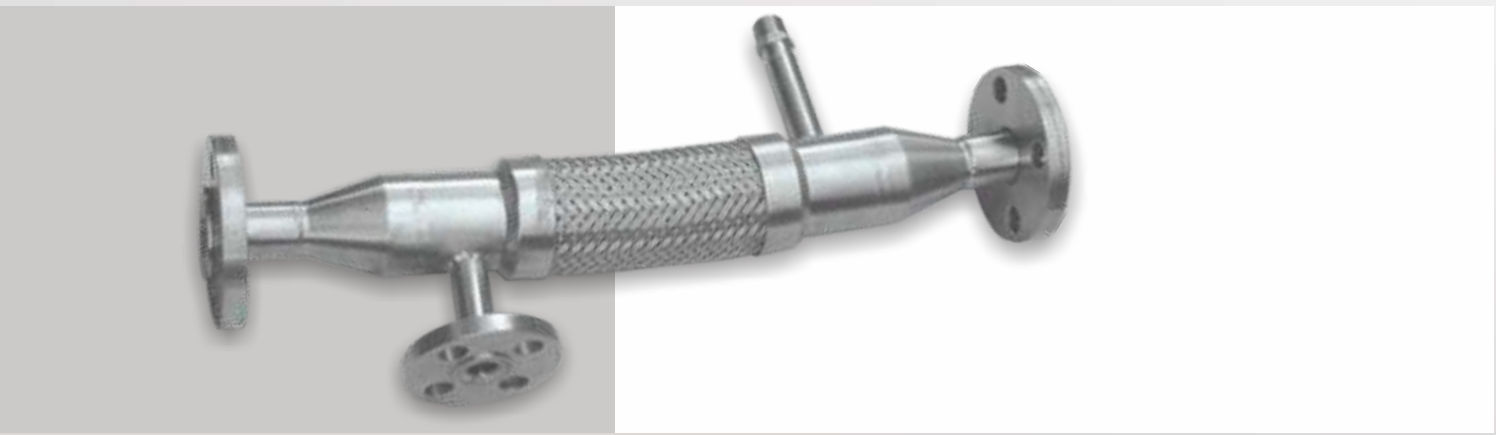
Hydroflex Pipe Pvt Ltd. is manufacturing jacketed flexible hose assemblies. The Inner annular corrugated stainless steel flexible metallic hose conveys the fluid and jackets annular corrugated stainless steel flexible metallic hose for heating or coolant fluid or protective the hose and both Inner and jacketed hoses are highly flexible.

We are using our annular corrugated stainless steel flexible metallic hoses ANSI 321 / 316L with ANSI 304 single wire braiding. We will provide both the end flange fittings swivel or fixed type and for inlet & outlet heating or cooling fluid end connection we will provide flange end or threaded end at an offset angle of 180°, Hoses conform to BS 6501, Part-1:2004 / ISO 10380:2012.

Application: Fertilizer Industries, Refineries Industries, Petrochemicals Industries, Chemical and Pharmaceuticals Industries.

Jacketed Flexible Hose Assemblies

	Specification
Hose Material	AISI 321 (DIN EN 1.4541) / AISI 316L (DIN EN 1.4404)
Braid Material	AISI 304 (DIN EN 1.4301) / AISI 316L (DIN EN 1.4404)
Braid Type	Single Wire Braid
Inner Hose Size	3/4" NB | 1" NB | 2" NB | 2.1/2" NB | 3" NB | 4" NB | 5" NB
Jacketed Hose Size	1.1/2" NB | 2"NB | 3" NB | 4" NB | 5" NB | 6" NB | 8" NB
Hose Length Overall	1 Mtr. to 3 Mtr.
End Fittings on Inner Hose	Flange End Swivel Type / Fix Type as per ANSI B16.5 150# , 300# / DIN PN 10, 16.
End Fittings on Jacketed Hose	Flange End Swivel Type / Fix Type as per ANSI B16.5 150#, 300# / DIN PN 10, PN 16, PN 40 or Fix Male Threaded BSP/BSPT/NPT.
End Fittings Material	CS A105 / AISI 304 (DIN EN 1.4301) A182 / AISI 316L (DIN EN 1.4404) A182
Offset Angle	0° or 180°
Jacketed Hose Fittings Permissible Operating Temperature for Inner & Jacketed Hose	300° C



Annular Corrugated Metallic Flexible Hose with PTFE Lining

Hydroflex Pipe Pvt Ltd. is manufacturing annular corrugated stainless steel flexible metallic hose with inner lining of PTFE this hoses are applied for chemical industry, Flexible Hose with plain interior surface PTFE lining are the ideal hose version for application in conveying and filling processes. Hoses conform to BS 6501, Part-1 :2004 / ISO 10380:2012.

We will provide completely PTFE lined smooth interior surface of the metal hose and sealing areas also.

Our PTFE liner is available minimum 2 mm wall thickness and also available 3 & 4 mm wall thickness.

Size: DN 25 (1" ID) to DN 200 (8" ID) maximum length 3 mtr.

Annular Corrugated Metallic Flexible Hose with PTFE Lining

	Specification
Hose Material	AISI 304 (DIN EN 1.4301) / AISI 321 (DIN EN 1.4541) /AISI 316L (DIN EN 1.4404)
Hose Inner Lining	PTFE
Thickness of PTFE Lining	2 mm to 4 mm
Braid Material	AISI 304 (DIN EN 1.4301) / AISI 316L (DIN EN 1.4404)
Braid Type	Single Wire Braid
Hose Size	DN 25 (1" NB) to DN 200 (8" NB)
Hose Length	0.300 Mtr. to 3 Mtr.
End Fittings	Fixed Flange / Swivel Flange as per ANSI B16.5 150#, 300# / DIN PN 10, PN 16, PN 40
End Fittings Material	CS A105 / AISI 304 (DIN EN 1.4301) A182 / AISI 316L (DIN EN 1.4404) A182

High Pressure Flexible Hose Assemblies for Gases

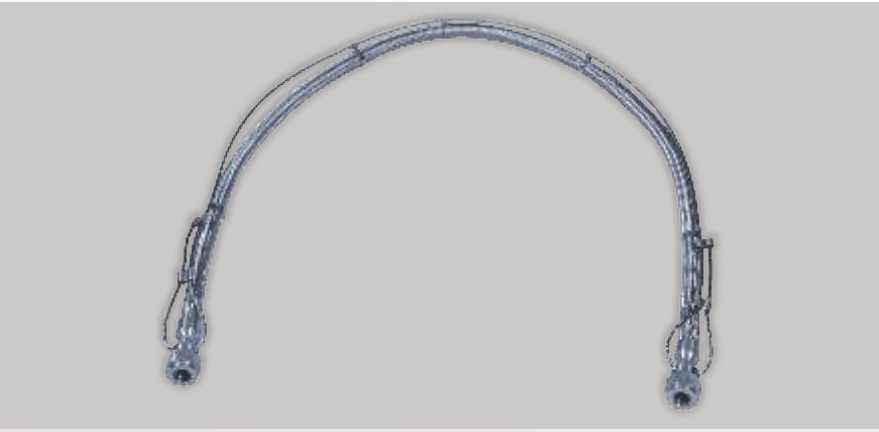
(Liquid Gases / Industrial Gases / Corrosive Gases / High Purity Gases)

Hydroflex Pipe Pvt Ltd. is manufacturing annular corrugated stainless steel flexible hoses for high pressure gases,

We are using highly flexible annular corrugated stainless steel flexible metallic hoses ANSI 316L with ANSI 304 double wire braiding Size: DN 6 is 400 bar working pressure and busting pressure is 1200 bar. We will provide end fittings both end 1/4" NPT female type and also provide fittings suitable for gas cylinders valve, Hose conform to BS 6501, Part-1:2004 / ISO 10380:2012.

High Pressure Flexible Hose Assemblies for Gases

	Specification
Hose Material	AISI 316L (DIN EN 1.4404)
Braid Material	AISI 304 (DIN EN 1.4301) / AISI 316L (DIN EN 1.4404)
Braid Type	Double Wire Braided
Hose Size	DN 6 (1/4" NB / 6.4 MM ID)
Hose Length Overall	500 mm, 750 mm, 1000 mm, 1500 mm, 2000 mm, 3000 mm
End Fittings	1/4" NPT Female Fixed / Suitable for Gas Cylinders Valve
End Fittings Material	AISI 316L (DIN EN 1.4404)
Over Wire Rope	AISI 304 (DIN EN 1.4301) / AISI 316L (DIN EN 1.4404)
Max. Working Pressure	400 BAR @ 20° C
Testing Pressure	600 BAR
Burst Pressure	1200 BAR



Lance Hose for Steel Plant

Hydroflex Pipe pvt ltd manufacturer of Stainless steel annular corrugated metallic flexible hose for blast lance in steel plant, with double wire braided with or without inner interlocked hose with flange connection and all parts will be cleaned, oil and grease free, Lance hose application in steel plant and we have supplied Oxygen lance hoses to many steel plant in India.

Temperature Correction Factor

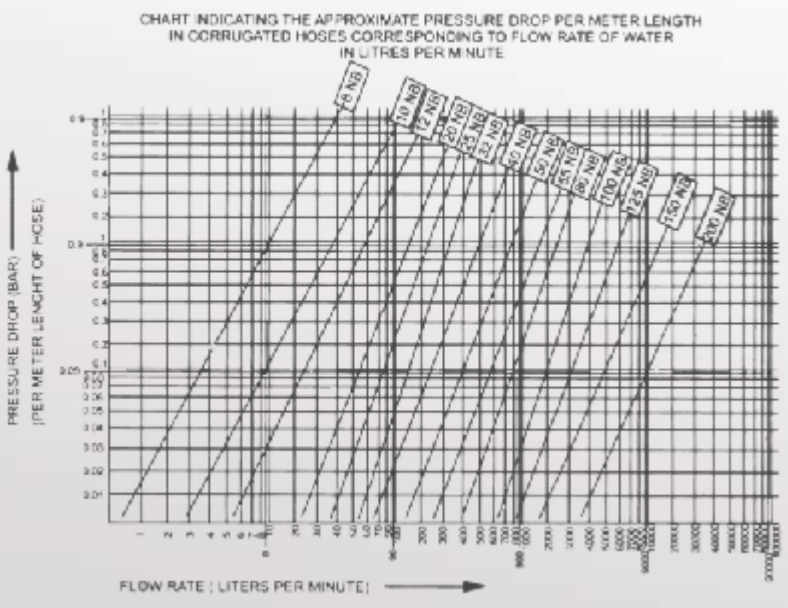
Where hoses are required to work at higher temperatures, the working pressure given in table-1 should be multiplied by the correction factor. This will determine the pressure rating of the hoses at the higher temperature.

Temperature Range	Derating Factors "f", Material				
°C	1.4541 (SS321)	1.4304 (SS304)	1.4404 (SS316L)	1.4306 (SS304L)	Carbon Steel
-200 to -20	1	1	1	1	1
20	1	1	1	1	1
50	0.92	0.88	0.88	0.87	0.97
100	0.83	0.73	0.74	0.72	0.91
150	0.78	0.66	0.67	0.65	0.84
200	0.74	0.60	0.62	0.59	0.77
250	0.71	0.56	0.58	0.55	0.71
300	0.67	0.52	0.54	0.51	0.65
350	0.64	0.50	0.52	0.48	0.60
400	0.62	0.48	0.50	0.46	0.57
450	0.61	0.47	0.48	0.45	0.29
500	0.60	0.46	0.47	0.44	0.18
550	0.59	0.42	0.47	0.43	-
600	-	-	-	-	-
650	-	-	-	-	-

Pressure Loss

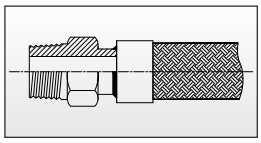
The pressure loss in corrugated hoses is 100% higher than in new welded steel pipes, because the bore of a corrugated hose is not smooth. This means that in the case of corrugated hoses an increase in diameter of 15% is required to reduce the pressure loss to the value of the pressure loss in steel pipes.

The chart shows the approximate pressure drop for each size of corrugated hose related to a flow rate where water is the fluid. To utilize the chart, read off on the base line the flow rate required. Where vertical line from the selected point on the base line intersects the nominal bore line, the pressure drop is shown on the vertical axis, corresponding to the point inter section.

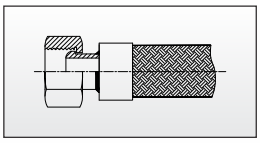


Various Types of End Connections

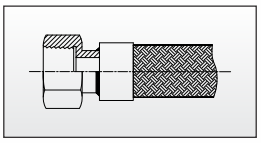
Hydroflex Pipe Pvt. Ltd. manufactures various type of end fittings form Carbon steel, mild steel, stainless steel & brass for stainless steel annular corrugated metallic flexible hoses. The end connections are either TIG (argon) welded or brazed.



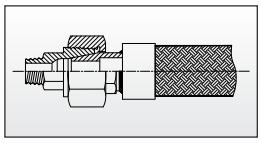
FIXED MALE (HEXAGON)
HF01



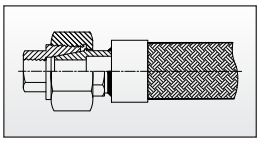
FEMALE SWIL NUT (UNION) TYPE
HF02



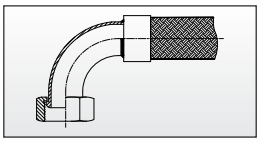
FIXED FEMALE TYPE
HF03



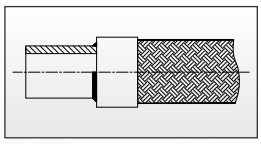
MALE UNION TYPE
HF04



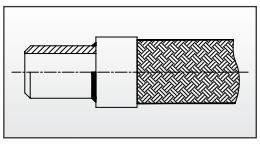
FEMALE UNION TYPE
HF05



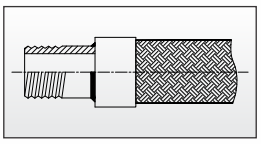
90° ELBOW FEMALE SWIVEL TYPE
HF06



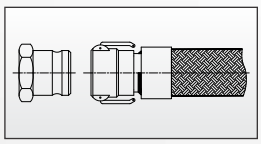
PLAIN PIPE TYPE
HF07



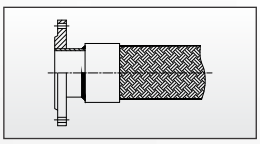
WELDING PIPE (STUB) TYPE
HF08



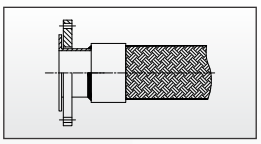
THREADED PIPE TYPE
HF09



CAMLOCK COUPLING TYPE
HF10



FIXED RF FLANGE TYPE
HF11



SWIVEL FLANGE WITH STUB END TYPE
HF12

Assemblies & Welding

Hydroflex Pipe Pvt. Ltd. hose assemblies are engineered to perfection in flexibility, strength and reliability. We can provide a corrugated stainless steel hose assembly that meets your most demanding technical specification. We can supply the hose complete with all types of end connections in various types of materials. The end connections are TIG welded to hose. HOSE ASSEMBLIES CAN BE SUPPLIED UNDER ANY THIRD PARTY INSPECTION.

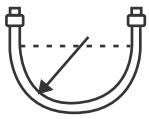
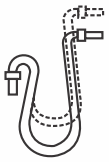
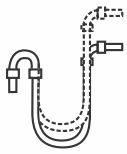
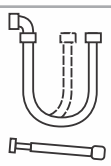
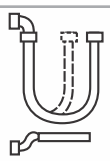
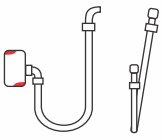
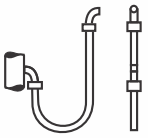
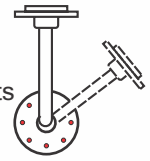
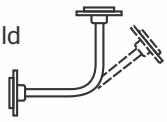
Welding procedures and welders are qualified as per (ASME section-IX) by Moody International & as per ISO 15609-1:2004 by DNV-GL.

Application

• Refineries • Power Plants • Steel Plants • Nuclear Installations • Fertilizer Industry • Pharmaceutical Industry • Cryogenic Services • Chemical Industry • Boilers • Paper Plants • Lubrication Systems • Automotive Industry • Steam, Hot water, Pneumatic Services • Vacuum Systems • Air Conditioning & Refrigeration • Ports & Ship Yards • Defense Industry • Piping • Vibration Absorption • Railways

Installation

In order to get satisfactory service and longer life from stainless steel flexible hose, the hoses assembly should be installed in the right manner. The sharp bending a hose assembly, particularly at the welded ends, stressed and twisted mounting and excessive fatigue are main causes of premature failure. See installation chart for correct and incorrect modes.

Incorrect	Correct
Dimension the hose adequately 	Take care that the flexible length is not too short 
Avoid excessive bending of the hose 	Use pipe bends 
Do not allow the hose to sag 	Use a support 
Do not move the hose obliquely to the installation plane 	Movement should be along 
Avoid torsional twist when fittings are not in line 	Install in one plane only 
Avoid torsion due to Angular movements 	All movements should be only along the axis of the hose 

Testing & Certification

- All unbraided hoses are subjected to leak detection test using compressed air.
- All assemblies are checked for dimensional accuracy and pressure tested.
- Test certificates for pressure tests carried out will be provided.
- Test stipulated by BS 6501, Part-1:2004/ISO 10380:2012 are conduced periodically.
- Raw material test certificates showing the physical and chemical properties will be furnished on request.
- Radiography, D.P. test, will be carried out against specific customer requirements.
- The products can be supplied under any third party inspection.
- We can supply the hose assembly with “CE” marking against customers requirements.

*Hydroflex Pipe Pvt. Ltd. reserves the right to change the printed data of this catalouge considering continues development in the product range.

HydroFlex
Pipe (P.) Ltd.

AN ISO 9001 : 2015 CERTIFIED COMPANY
PED 2014/68/EU CERTIFIED COMPANY

HYDROFLEX PIPE PVT LTD
Office: 3, Suflam Estate,
Nr. Avtar Hotel, Isanpur Highway,
Isanpur, Ahmedabad - 382 443,
Gujarat, INDIA.
Phone +91-79 2571 6213
+91-79 2571 6157
Email info@hydroflexpipes.com
hydroflexpipe@gmail.com
Website www.hydroflexpipes.com

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