

PERFLEX

WHY USE METAL HOSE

Perflex is a leading manufacturer of corrugated metal hose and braided products. Perflex has been a pioneer from the beginning and continues today in the design and manufacture of flexible metal hose. With a significant know-how, Perflex also designs and manufacture hose production line and turn key hose production facilities.

Perflex hoses, known for their durability and resistance to corrosion, are used in many industries by hundreds of companies.

Quality Management System

Perflex is proud of its Quality Management System

Perflex operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the scope of design and manufacture of flexible metal hose and braid products for uses including critical applications.

Perflex is dedicated to providing superior quality in all it does, from manufacturing high quality products to providing unsurpassed customer service to its distributors and end-users. Its Quality Management System is Perflex's commitment to each customer and end-user that quality and customer satisfaction come first.

Perflex Quality Management System (Perflex QMS) is made up of the following parts:

- *Quality Policy
- *Quality Objectives
- *Manual
- *Procedures
- *Forms
- *Instructions



Gas Hoses



Water & HVAC Hoses



Solar Energy Hoses



Industrial Hoses



Sprinkler Hoses



Suitable for Combi Boilers



Suitable for cookers



Suitable for natural gas Meters



Threaded Connection



Suitable for gaseous media



Seismic Protection Joint



Flange Standards



Standard Corrugation



Open Pitched Corrugation



Semi-Closed Pitched



Closed Pitched Corrugation



Suitable for hot water



Suitable for drinking water



Max. Operating Pressure



Max. Operating Temperature



Suitable for oils



Suitable for water heaters



Suitable for washing machines



Suitable for sanitary applications

STANDART FITTINGS



FS
Female swivel



MF
Male



FU
Female union



SS
Smooth Sleeve



FLS
Flange Swivel



FLF
Flange Fixed



**INDUSTRIAL HOSES
BRAIDED AND NON-BRAIDED HOSES**



HOSE DIMENSIONS	BOBBIN	DN	LENGTH (m)
		COIL	6-25
		32-50	25
		100	10
	BOBBIN	12	1000
		16	750
		20	500
		25	320

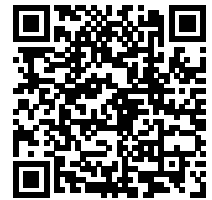
APPLICATION AREAS

Heating, air conditioning and ventilization applications
 Chemical and petrochemical plants
 Oil and gas processing ship building and drilling
 Food processing



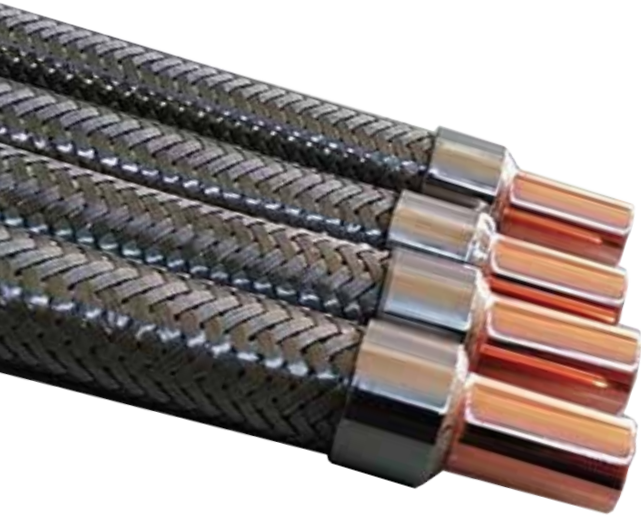
PRODUCT SPECIFICATION

Hose Type Standard and open pitch corrugated metal hose
 Hose Material Stainless Steel AISI 316L / 304
 AISI 321 also available upon request

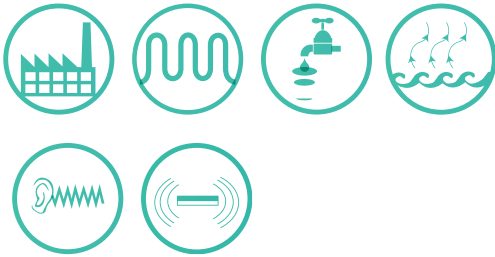


STANDARD CORRUGATED HOSE DIMENSIONS							
DN	Model	Internal Diameter	Outer Diameter	Tolerance	Minimum Bending Radius	Nominal Bending Radius	Nominal Pressure (PN) DIN EN ISO 10380/SF4
		mm	mm	mm	rmin (mm)	rn (mm)	
6	Non-braided	6,3	9,9	0,2	15	80	25
	Braided		11		25		150
8	Non-braided	7,7	11,3	0,2	16	120	20
	Braided		12,3		32		100
10	Non-braided	10,1	14,4	0,2	18	130	16
	Braided		15,5		38		100
12	Non-braided	12,2	16,2	0,2	20	140	10
	Braided		17,5		45		65
16	Non-braided	15,6	20,8	0,2	28	160	6
	Braided		22,1		58		65
20	Non-braided	18,8	24,9	0,2	32	170	4
	Braided		26,2		70		40
25	Non-braided	24,6	31,3	0,2	40	190	4
	Braided		32,7		85		50
32	Non-braided	33,7	41,1	0,3	50	260	2,5
	Braided		42,8		105		25
40	Non-braided	40,8	49,8	0,3	60	300	2,5
	Braided		51,2		130		40
50	Non-braided	51,5	60,4	0,3	70	320	0,5
	Braided		62,7		160		25
65	Non-braided	66,1	78,2	1	115	460	0,5
	Braided		81,5		200		25
80	Non-braided	80,7	94,8	1	130	660	0,5
	Braided		98		240		16
100	Non-braided	99,5	115,4	1	160	750	0,5
	Braided		118,8		290		10

OPEN PITCH CORRUGATED HOSE DIMENSIONS							
12	Non-braided	11,8	15,8	0,2	20	165	16
16	Non-braided	16,6	21,4	0,2	25	195	10
20	Non-braided	20,9	26,4	0,2	30	225	10
25	Non-braided	25,1	31,8	0,3	35	260	6
32	Non-braided	32,8	39,6	0,3	40	300	4



	DN	CONNECTION	LENGTH (mm)	TS(C)		PS (bar)
				Min	Max	
HOSE DIMENSIONS	6	M6	230±5	-100	+250	35
		1/4"	230±5			
	8	M8	230±5			
		3/8"	230±5			
	10	M10	230±5			
		M12	230±5			
	12	1/2"	230±5			
		M15	255±5			
		M16	255±5			
	16	5/8"	255±5			
		M18	255±5			
		3/4"	255±5			
		M22	290±5			
	20	7/8"	290±5			
		M28	330±5			
	25	1 1/8"	330±5			
		M35	375±5			
	32	1 3/8"	375±5			
		M42	430±5			
	40	1 5/8"	430±5			
M54		510±5				
50	2 1/8"	510±5				



APPLICATION AREAS

- Vibration absorption of refrigerating units
- Pressured systems
- Pumps, motors, machines, compressors
- Gas and water supply



PRODUCT SPECIFICATION

- Hose Type: Standard corrugated metal hose
- Hose Material: Stainless Steel AISI 316L / 304
- Braiding Material: Stainless Steel AISI 304
- Fittings Material: Copper
- Fittings Types: Welded End

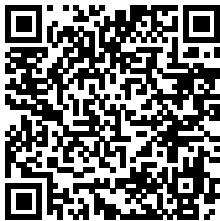


APPLICATION AREAS

- Hot and cold water applications
- Super-heated steam and oil applications
- Heating of manufacturing lines
- Pipeline bridges
- Heating of pressured vessels and tanks
- Cooling systems and transporting relevant fluids
- Gas applications

PRODUCT SPECIFICATION

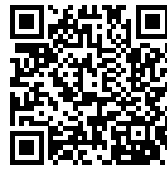
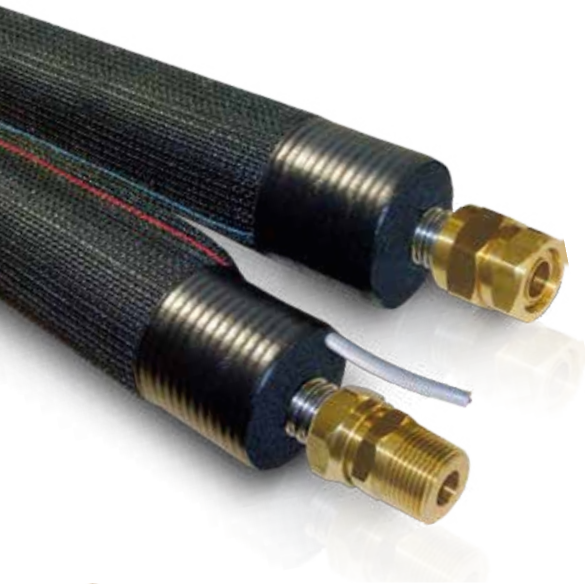
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|--|--------------------|
| Standard corrugated metal hose | Hose Type |
| Stainless Steel AISI 316L / 304 | Hose Material |
| Stainless Steel AISI 304 | Braiding Material |
| Threaded Connections in Malleable Iron | Fittings Materials |
| Carbon Steel St. 37.2 | Fittings Types |
| Internal Threaded (Female) Connection | |
| External Threaded (Male) Nipple Connection | |
| Fixed and Swivel Flanged | |



HOSE DIMENSIONS									
	Type	DN/R	Minimum Bending Radius (rmin) mm	Nominal Bending Radius (rmin) mm	Hose Diameter		Temperature Range (°C)	Max. Operating Pressure	
					Di (mm)	Do (mm)		Gas (bar)	Air Water (bar)
Threaded	DN10 x 3/8"		38	130	10,2	15,7	-10/+300	4	16
	DN16 x 1/2"		58	160	16,2	23,3	-10/+300	4	16
	DN20 x 3/4"		70	170	20,2	28,3	-10/+300	4	16
	DN25 x 1"		85	190	25,5	34,2	-10/+300	4	16
	DN32 x 1 1/4"		105	260	34,2	48,0	-10/+300	4	16
	DN40 x 1 1/2"		130	300	40,1	52,0	-10/+300	4	16
	DN50 x 2"		160	320	50,4	62,6	-10/+300	4	16
Flanged	DN65 x DN65		200	160	65,8	81,2	-10/+300	16	16
	DN80 x DN80		240	660	80,2	98,0	-10/+300	16	16
	DN100 x DN100		290	750	100,0	119,4	-10/+300	16	16



SOLAR FLEX

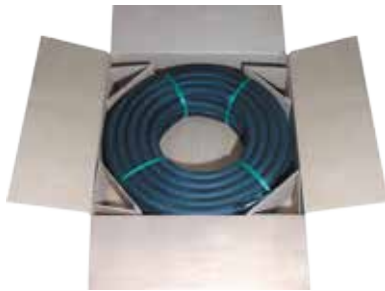


APPLICATION AREAS

- Solar energy applications
- Collector and solar boiler connections
- Hot water applications
- Drinking water connections

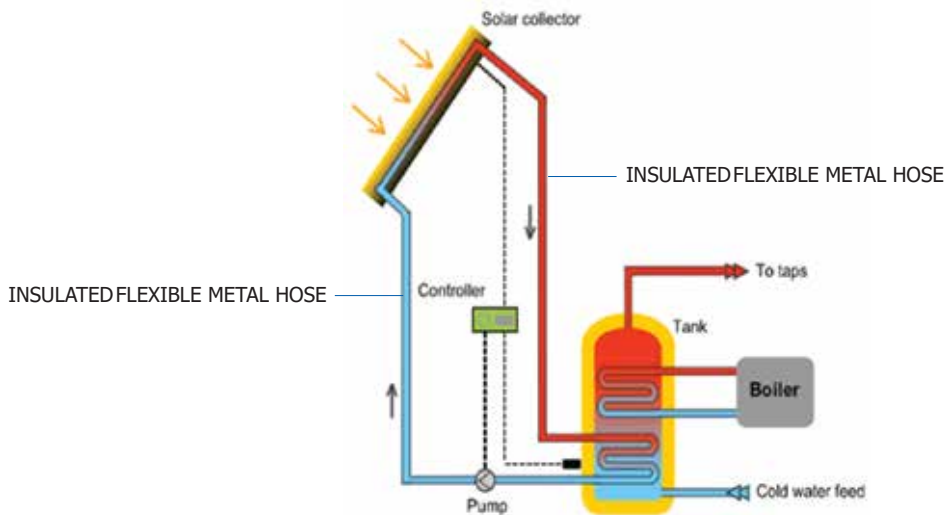
PRODUCT SPECIFICATION

Standard or open pitch corrugated metal hose	Hose Type
Stainless Steel AISI 316L / 304	Hose Material
Separable Polyamide braiding or non braided	Braiding Material
Silicone Cable	Sensor Cable
EPDM, rubber based insulation	Insulation Material
9mm/13mm	Insulation Thickness



COIL				
Diameter (DN)	DN12	DN16	DN20	DN25
Max. Length (m)	10-50	10-50	10-50	10-50

BOBBIN				
Diameter (DN)	DN12	DN16	DN20	DN25
Max. Length (m)	150	150	125	100



STANDARD CORRUGATED HOSE DIMENSIONS							
DN	Model	Internal Diameter	Outer Diameter	Tolerance	Minimum Bending Radius	Nominal Bending Radius	Nominal Pressure (PN) DIN EN ISO 10380/SF4
		mm	mm				
OPEN PITCH CORRUGATED HOSE DIMENSIONS							
12	Non-braided	11,8	15,8	0,2	20	165	16
16	Non-braided	16,6	21,4	0,2	25	195	10
20	Non-braided	20,9	26,4	0,2	30	225	10
25	Non-braided	25,1	31,8	0,3	35	260	6
32	Non-braided	32,8	39,6	0,3	40	300	4



SOLAR FLEX
SOLAR FITTINGS



PRODUCT SPECIFICATION

Fittings Material MS 58 Brass

Fittings Types:

- Externally Threaded
- Internally Threaded
- Adapter
- Welded End
- Ermeto Nut

Male		Female		Adapter		Welded End		Ermeto Nut		
Hose Dia.	Con. Size	Hose Dia.	Con. Size	Hose Dia.	Con. Size	Hose Dia.	Con. Size	Hose Dia.	Con. Size	Hose Dia.
DN12 x 1/2"		DN12 x 1/2"		DN12 x DN12		DN12 x 15 mm		DN12 x 15 mm		DN20 x 18 mm
DN12 x 3/4"		DN12 x 3/4"		DN16 x DN16		DN16 x 15 mm		DN12 x 18 mm		DN20 x 20 mm
DN16 x 1/2"		DN16 x 1/2"		DN20 x DN20		DN16 x 18 mm		DN12 x 22 mm		DN20 x 22 mm
DN16 x 3/4"		DN16 x 3/4"		DN25 x DN25		DN16 x 22 mm		DN16 x 15 mm		DN25 x 18 mm
DN16 x 1"		DN16 x 1"				DN20 x 18 mm		DN16 x 18 mm		DN25 x 22 mm
DN20 x 3/4"		DN20 x 3/4"				DN20 x 22 mm		DN16 x 22 mm		
DN20 x 1"		DN20 x 1"				DN25 x 22 mm				
DN25 x 1"		DN25 x 1"								
DN25 x 1 1/4"		DN25 x 1 1/4"								



SOLAR FLEX
SOLAR PANEL FITTINGS

HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)
	12	1/2"x1/2"	50
	16	3/4"x3/4"	
	20	1"x1"	100



APPLICATION AREAS

Solar collector connections



PRODUCT SPECIFICATION

Hose Type Closed pitch corrugated highly flexible metal hose
Hose Material Stainless Steel AISI 316L
Fittings Material MS 58 Brass
Fittings Types Female-Female, Male-Male, Welded Ends, Push Connector, Press Type





FIRE HOSES



APPLICATION AREAS

Fire protection systems

PRODUCT SPECIFICATION

Standard corrugated metal hose
Stainless Steel AISI 316L
Stainless Steel AISI 304
Male-Internal threaded pipe
Carbon Steel St. 37.2/Stainless Steel (Optional)
200mm

Hose Type
Hose Material
Braiding Material
Fittings Types
Fittings Materials
Min. Bending Radius

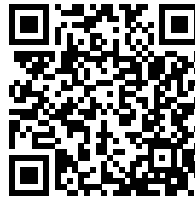


DN	CONNECTION		LENGTH (mm)
	Main Pipeline	Sprinkler	
20	DN20 (3/4") x 1/2"		500
	DN20 (1") x 1/2"		700
25	DN25 (1") x 1/2"		1000
			1200
			1500
			2000



GAS HOSES

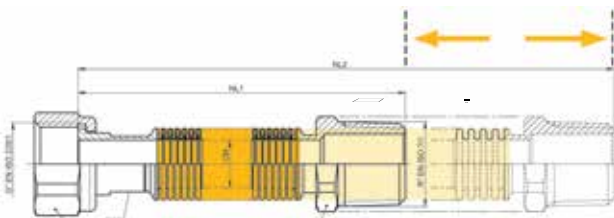
GAS HOSES GAS FLEX (FULLY EXTENSIBLE)



APPLICATION AREAS
 Natural gas applications
 Kitchen appliances
 Combi boilers and water heaters
 Cookers and grills

PRODUCT SPECIFICATION
 Closed pitch corrugated extensible metal hose
 Stainless Steel AISI 316L
 Female-Male/Female-Female
 Nut in Stainless Steel AISI 304/303 EN ISO 228/1
 (Brass Ms58 Opt.)
 Nipple in Stainless Steel AISI 304/303 EN ISO 7/1
 Polyolefin Cover in Yellow or coverless
 With heat treatment
 UNI 11353

Hose Type
Hose Material
Fittings Types
Fittings Materials
Cover
Gasket
Other
 Norm

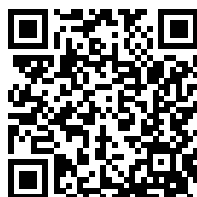


HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)
	12	1/2"x1/2" 1/2"x3/4"	90X140
			130X220
	20	3/4"x3/4"	220X420
25	1"x1"	300X600	
		500X1000	
		750X1500	
		1000X2000	

GAS HOSES SEMI EXTENSIBLE

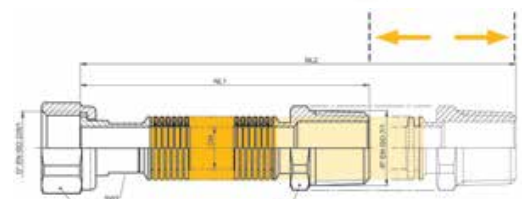
APPLICATION AREAS

Natural gas applications
 Kitchen appliances
 Combi boilers and water heaters
 Cookers and grills

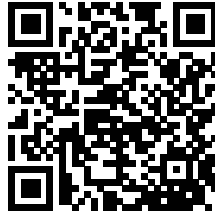


PRODUCT SPECIFICATION

Hose Type Semi Closed pitch corrugated extensible metal hose
Hose Material Stainless Steel AISI 316L
Fittings Types Female-Male/Female-Female
Fittings Materials Nut in Nickel Coated Brass EN ISO 228/1
 Nipple in Stainless Steel EN ISO 7/1
Cover Polyolefin Cover in yellow or coverless
Gasket NBR / Aluminium
Other With heat treatment



HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)
	12	1/2"x1/2" 1/2"x3/4"	110X185
			220X375
	16	3/4"x3/4"	300X510
20	1"x1"	500X850	
		750X1275	
		1000X1700	

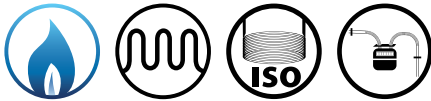


PRODUCT SPECIFICATION

PRS 6/E

Standard corrugated metal hose
Stainless Steel AISI 316L / AISI 321
Female-Male, Male-Male
Male in threaded Carbon Steel St. 37.2 pipe EN 10226
Nut in brass (BS 746)
Coverless

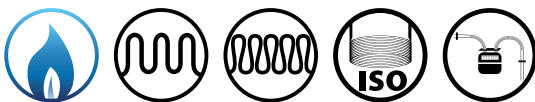
Hose Type
Hose Material
Fittings Types
Fittings Materials
Cover



HOSE DIMENSIONS (PRS 6/E)		
DN	CONNECTION	LENGTH (mm)
20	3/4"x3/4" 3/4"x1"	242
		250
		330
25	1"x1"	400
		440

GAS HOSES
COUNTER-FLEX

Standard/closed pitch corrugated extensible metal hose
Stainless Steel AISI 316L
Female-Male/Female-Female
Male (EN ISO 7/1) and int. parts in CrNi coated Carbon Steel St. 37.2
Nut in brass / Carbon Steel St. 37.2 EN ISO 228/1
Polyolefin Cover in Yellow or Coverless



HOSE DIMENSIONS		
DN	CONNECTION	LENGTH (mm)
20	3/4"x3/4"	150
		170
25	3/4"x1"	130x220
	3/4"x1/4"	220x420
32	1"x1 1/4"	300x600





GAS HOSES
GAS FLEX EKO

APPLICATION AREAS

Natural gas applications
Kitchen appliances
Cookers and grills



PRODUCT SPECIFICATION

Hose Type Standard corrugated metal hose
Hose Material Stainless Steel AISI 316L
Fittings Types Female-Male, Female-Female
Fittings Materials Nipple in Ni Coated Carbon Steel St. 37.2 EN ISO 7/1
Nut in Ni Coated Carbon Steel St. 37.2 EN ISO 228/1
Cover Polyolefin Cover in Yellow or Coverless



HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)
	12	1/2"x1/2" 1/2"x3/4"	All sizes are available in between 300-5000
	16	3/4"x3/4"	
	20	1"x1"	



GAS HOSES

BURN-FLEX

APPLICATION AREAS

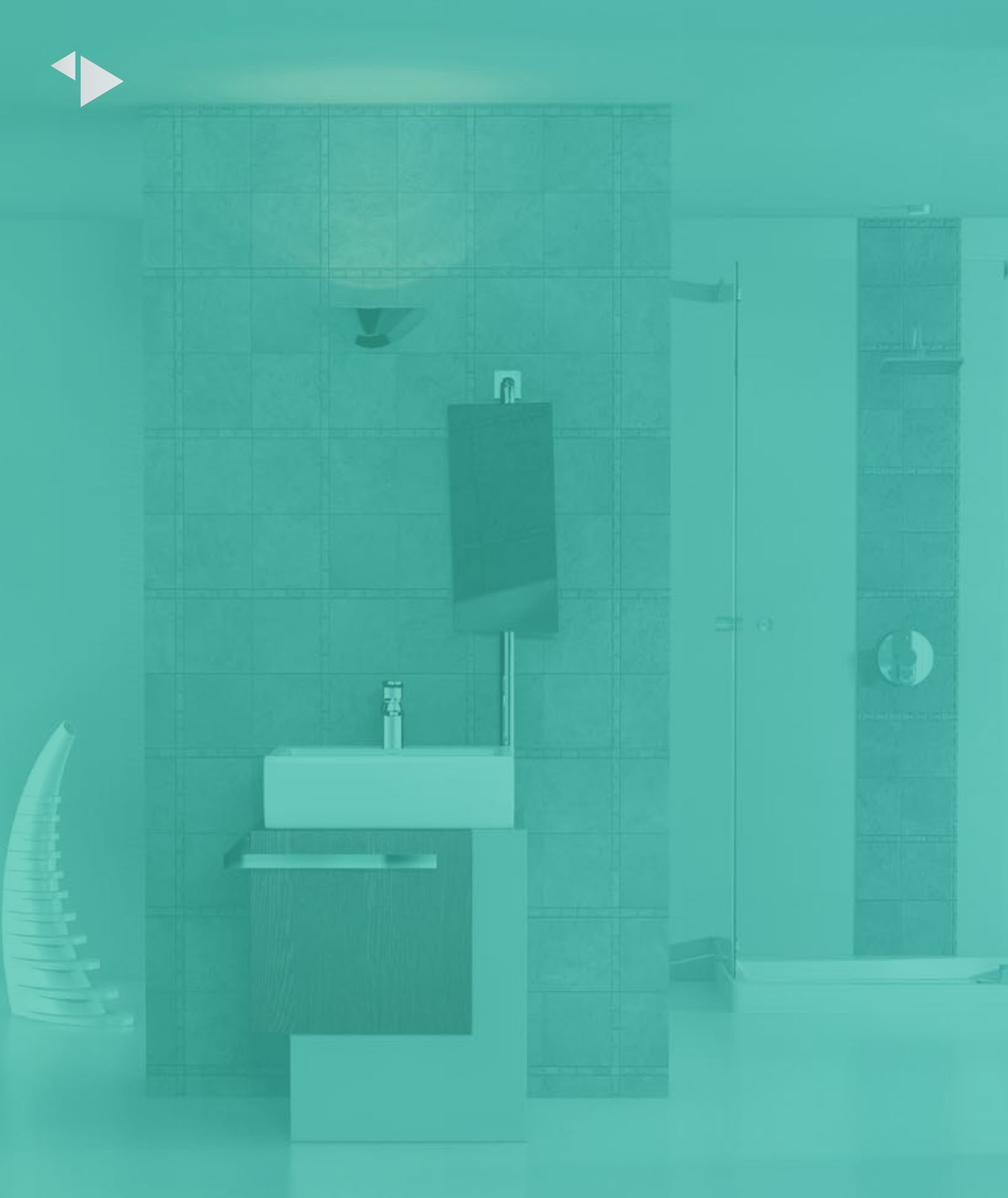
Natural gas applications
Kitchen appliances
Gas burners and heaters

PRODUCT SPECIFICATION

Hose Type Semi Closed pitch corrugated metal hose
Hose Material Stainless Steel AISI 316L
Fittings Types External threaded pipe EN ISO 7/1
Fittings Materials CrNi Coated Carbon Steel St. 37.2/Stainless Steel
Cover Polyolefin Cover in Yellow or Coverless



HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)
	12	1/2"	145
	16	3/4"	150
	25	1"	165
	32	1 1/4"	165
	40	1 1/2"	210
	50	2"	230



SANITARY HOSES



PRODUCT SPECIFICATION

Closed pitch corrugated extensible metal hose
 Stainless Steel AISI 316L
 Female-Male
 Male and internal parts are stainless steel
 Nut in Stainless Steel / Brass
 Hose with Polyolefin Cover in Yellow
 Water Hoses are coverless
 Klingerit / Aluminium

Hose Type
 Hose Material
 Fittings Types
 Fittings Materials

 Cover
 Gasket



APPLICATION AREAS

Complete hose set includes hoses
 For combi boilers, gas and water connections



HOSE DIMENSIONS	DN	QTY	CONNECTION	LENGTH (mm)
	12	2	1/2"x1/2" MF	220x420
	20	2	3/4"x3/4" MF	
	20	1	3/4"x3/4" MF	

SANITARY HOSES

AQUAFLEX - FULLY EXTENSIBLE

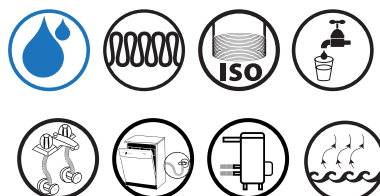
APPLICATION AREAS

Sanitary applications
 Dish washers and washing machines
 Boiler and hot water tank connections
 Radiator connections

PRODUCT SPECIFICATION

Hose Type Closed pitch corrugated extensible metal hose
 Hose Material Stainless Steel AISI 316L
 Fittings Types Female-Female, Female-Male
 Fittings Materials Nipple in stainless steel EN ISO 7/1
 Nut in Brass Ms58, EN ISO 228/1
 Internal parts in stainless steel
 Polyolefin Cover in White or Coverless
 UNI 7129

Cover
 Norm



HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)
	12	1/2"x1/2" 1/2"x3/4"	90x140
			130x220
	20	3/4"x3/4"	220x420
300x600			
25	1"x1"	500x1000	
		750x1500	
		1000x2000	



APPLICATION AREAS

Sanitary applications
Dish washers and washing machines
Boiler and hot water tank connections
Radiator connections



PRODUCT SPECIFICATION

Standard corrugated metal hose
Stainless Steel AISI 316L / AISI 304
Nut-Nut (Male adapters are available)
Nut in Brass EN ISO 228/1
Non-covered
Klingerit

Hose Type
Hose Material
Fittings Types
Fittings Materials
Cover
Gasket

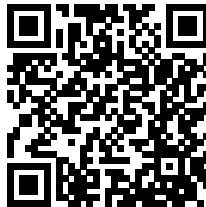
HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)
	12	1/2"	All sizes are available in between 200-5000
	16	3/4"	



SANITARY HOSES
MIX - FLEX

APPLICATION AREAS

Kitchen Faucet connections
Bathroom Mixer tap connections
Domestic Water connections
Sanitary



PRODUCT SPECIFICATION

Hose Type Standard corrugated metal hose
Hose Material Stainless Steel AISI 316L
Fittings Type Male-Female
Fittings Materials Nipple in Stainless Steel M10x1
Nut in Ni Coated Brass EN ISO 228/1
Inner Parts in Stainless Steel
Kes-tak Female Connection
Cover Normally coverless, polyolefin cover in customized colours is optional
Gasket Klingerit or NBR



HOSE DIMENSIONS		
DN	Connection	Length (mm)
8	M10x1 x 3/8" M10x1 x 1/2"	All sizes are available in between 300 - 1000





HVAC HOSES



APPLICATION AREAS

Heating, air conditioning and ventilation applications
Combi and fan heating connections
Water heaters
Radiator connections

**BRAIDED AND NON-BRAIDED HOSES WITH FITTINGS
PRODUCT SPECIFICATION**

Standard corrugated metal hose	Hose Type
Stainless Steel AISI 316L - 304	Hose Material
Stainless Steel AISI 304 (Braiding is optional)	Braiding Material
Carbon Steel St. 37.2/Stainless Steel	Fittings Materials
Female-Male	Fittings Type
Rubber based special insulation (9-13 mm)	Insulation Material



HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)
	12	1/2"x1/2" 1/2"x3/4"	All sizes are available in between 300-5000
	16	3/4"x3/4"	
	20	1"x1"	

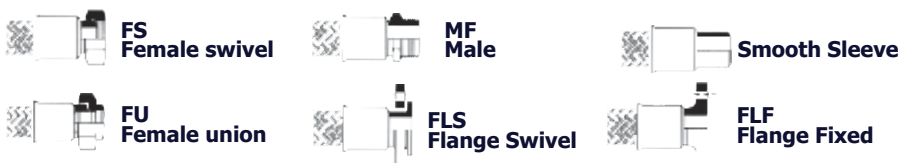
**HVAC
HOSES WITH FITTINGS**

APPLICATION AREAS

Heating, air conditioning and ventilation applications
Chemical and petrochemical plants
Oil and gas processing
Ship building and drilling
Food processing

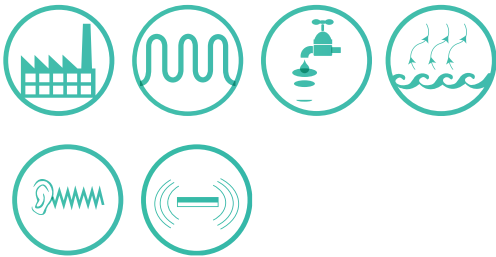
PRODUCT SPECIFICATION

Hose Type	Standard corrugated metal hose
Hose Material	Stainless Steel AISI 316L - AISI 321 / 304
Braiding Material	Stainless Steel AISI 304
Fittings Types	Flange, Welded ends, Threaded
Fittings Materials	Carbon Steel St. 37.2 / Stainless Steel (Optional)





HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)	TS(C)		PS (bar)
				Min	Max	
6		M6	230±5	-100	+250	35
		1/4"	230±5			
8		M8	230±5			
		3/8"	230±5			
10		M10	230±5			
12		M12	230±5			
		1/2"	230±5			
		M15	255±5			
16		M16	255±5			
		5/8"	255±5			
		M18	255±5			
		3/4"	255±5			
20		M22	290±5			
		7/8"	290±5			
25		M28	330±5			
		1 1/8"	330±5			
32		M35	375±5			
		1 3/8"	375±5			
40		M42	430±5			
		1 5/8"	430±5			
50		M54	510±5			
		2 1/8"	510±5			



APPLICATION AREAS

- Vibration absorption of refrigerating units
- Pressured systems
- Pumps, motors, machines, compressors
- Gas and water supply



PRODUCT SPECIFICATION

- Hose Type: Standard corrugated metal hose
- Hose Material: Stainless Steel AISI 316L / 304
- Braiding Material: Stainless Steel AISI 304
- Fittings Material: Copper
- Fittings Types: Welded End



Selection Criteria

The selection of flexible metal hose for a particular application is influenced by six primary considerations:

- Temperature
- Pressure
- Media
- Size
- End Fittings
- Motion

To make the best choice for a specific application, consider all the relevant operating factors against the properties of the various types of flexible metal hoses.

Temperature

The physical properties of any material varies with temperature. Limits for operating temperature are affected by the working pressure, the type of media being conveyed and the nature of the application. By careful selection of material, it is possible to provide flexible metal hose for a wide range of operating temperatures. The choice of hose type, metal alloy, end fitting and method of fitting attachment determines the temperature limit.

Pressure

The nominal pressure ratings of flexible metal hose varies according to type, material and size. Specific pressure ratings for each type of flexible metal hose are found in each section of this catalog. Under actual working conditions, pressure is affected by many other factors such as temperature, pulsating conditions and bending stresses.

Media

The type of media being conveyed is an important consideration in the selection process. Metal hose is subject to corrosion by both the material flowing through it and the outside environment. For almost all applications, a metal hose can be selected that is resistant to the intended media. Since metal hose is a thin-walled product, it will not have the same total life as heavier walled tube or pipe of the same material.

For Corrosion Resistance of Materials to different environment, refer to a chart posted on our web site:

www.perflex.net

Size

The size of flexible metal hose is specified by the nominal diameter. The existing piping will normally dictate the size of the metal hose for a particular application. However, flow rate, velocity and pressure drop considerations may also influence the selection of the hose size.

End Fittings

The use of flexible metal hose is complimented by the extensive range of end fittings that are available. Such end fittings may be male or female pipe threads, unions, flanges, flared tube fittings or other specially designed connectors. End fittings are attached by welding, silver brazing, soldering and occasionally by mechanical means, depending on the type of hose and the alloy. For further detail on the appropriate type of end fitting please consult your fabricating distributor.

Motion

Flexible metal hose is generally used in four types of applications.

- To correct problems of misalignment.
- To provide flexibility in manual handling operations.
- To compensate for regular or constant movement.
- To absorb vibration.

In all types, careful hose selection, design of the assembly and installation are important for optimal service life. The flexibility of a hose is determined by its mechanical design and the inherent flexibility of its material.



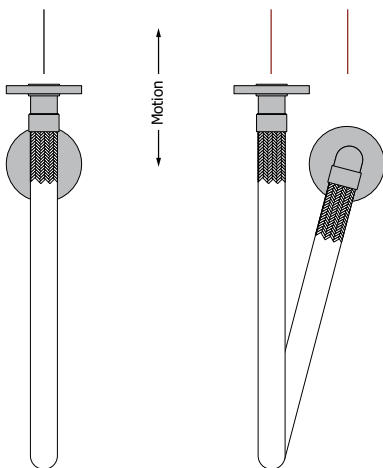
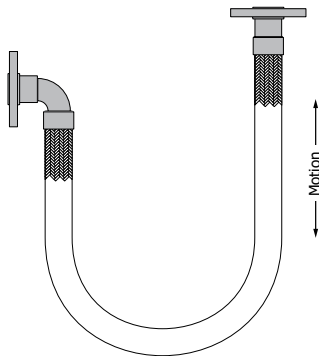
Assembly Installation

Perflex corrugated hose is engineered to provide maximum service life when properly installed. 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.

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 lap joint flanges or pipe unions will minimize this condition. It is recommended that two wrenches be used in making the union connection; one to prevent the hose from twisting and the other to tighten the coupling.

In plane traveling loop installation

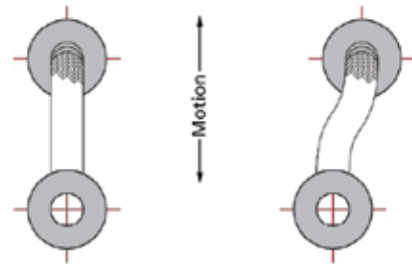


Correct
in plane
flexing

Wrong
out of plane
flexing

In plane lateral offset installation

Prevent out-of-plane flexing in an installation. 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.

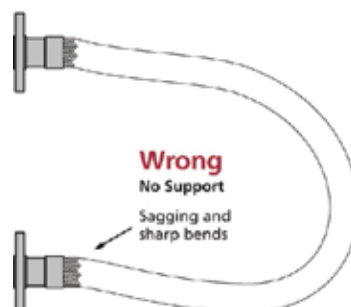
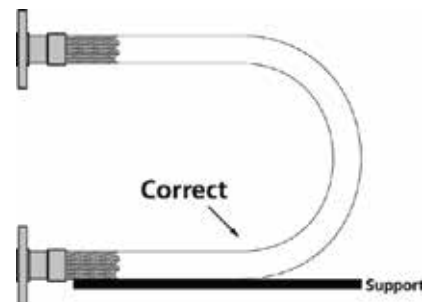


Correct
in plane
flexing

Wrong
out of plane
flexing

Provide support.

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

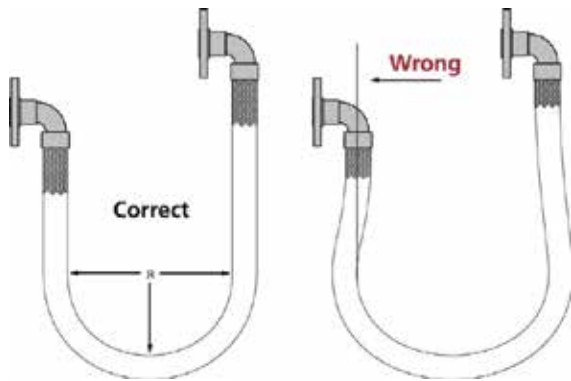




Assembly Installation (continued)

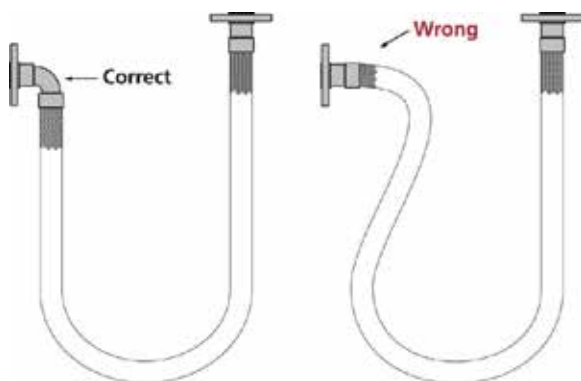
Avoid over bending.

The repetitive bending of a hose to a radius smaller than the radius listed in the specification tables for corrugated hose will result in premature hose failure. Always provide sufficient length to prevent over bending and to eliminate strain on the hose.



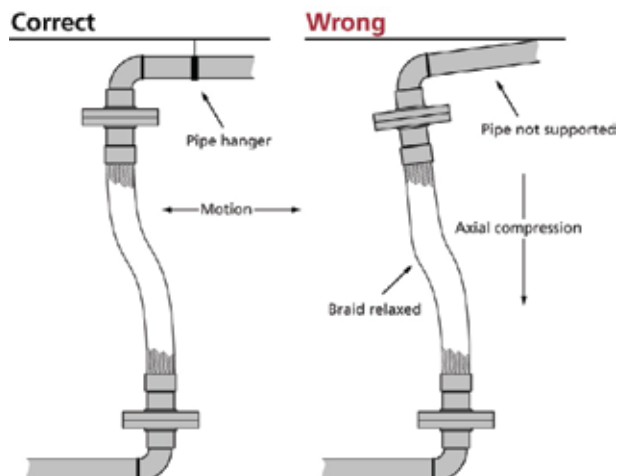
Avoid sharp bends.

Utilize sound geometric configurations that avoid sharp bends, especially near the end fittings of the assembly.



Do not extend or compress axially.

A piping system which utilizes metal hose 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.



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 metal hose assemblies away from areas where it can be subjected to spillage, corrosive fumes or sprays, weld splatter, etc.

Maximizing the Safety and Effectiveness of an Assembly

Do...

- follow any printed instructions included with the flexible connector.
- follow industry-recommended practices and use care in handling and installing flexible connector.
- install flexible connectors so that the bend is as close to the center of the connector as possible.
- observe the minimum bend radius as specified by the connector manufacturer.
- trial-fit threaded connections by hand, unmake and then make permanent.
- use a flexible connector of proper length to suit the installation.
- only wrench on the fitting hex flats as provided.
- design the installation to allow for ground movement after installation, such as settling or frost heave.
- install the proper length connector to allow a 2" straight run of hose at each end fitting.
- use pipe wrenches on both mating hexes to avoid twisting the hose.
- keep hose free from all objects and debris.
- handle and store connectors carefully prior to installation.
- check for leaks before covering the installation.
- install in such a manner that the connector can be removed.
- make sure the pressure rating of connector is not exceeded.

Don't...

- apply a wrench 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 flexible connector to limber it up. Over-bending could cause damage and result in leakage.
- over-bend a flexible connector. A 45°-90° bend should be sufficient to install any flexible connector.
- install a flexible connector with the bend next to the end fittings. This could cause damage and result in leakage.
- lay the flexible connector on rocks or objects which could puncture the hose and cause leakage.
- attempt to stretch or compress a flexible connector to fit an installation.
- restrict flexibility by allowing connector to come into contact with other components or equipment during installation.

PERFLEX

Perfect Flexibility

Metal Flexible Hoses



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