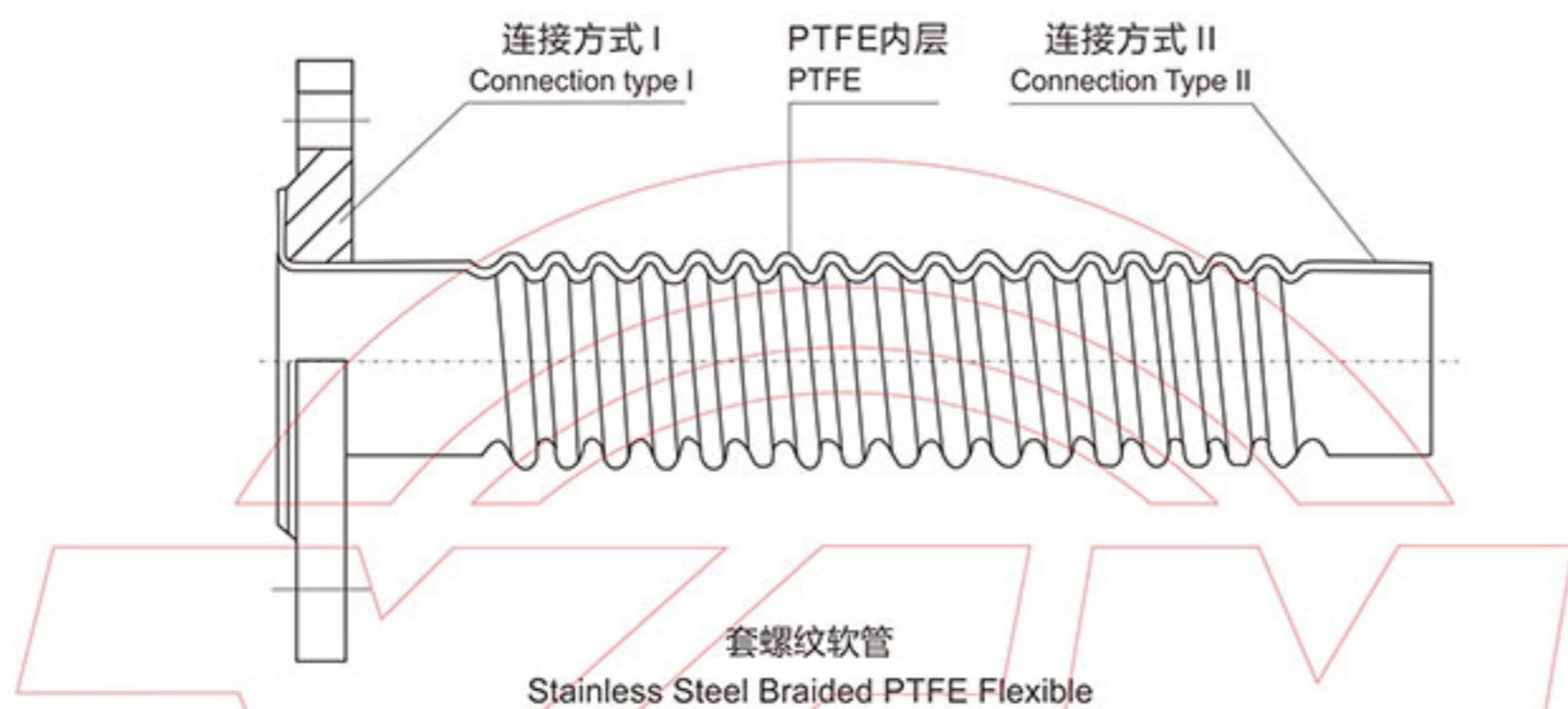


## PTFE波纹软管

- PTFE波纹软管通过特殊的加工方法，改变了以往管道不能挠曲的特性，它可连接机械强度较低的石墨，陶瓷或玻璃管道，可作槽车、贮罐、容器或反应釜的给、排料管，可进行管道错位连接，用于因气候及其他原因引起的管道位移，出现的部位尺寸变化或用来消除高频机械的振动。在特殊场合还可作管式反应器或热交换器等作用。此外，它还可作为飞机发动机的屏蔽电缆与保护电缆或高级导线的挠性绝缘套管之用。

## PTFE Flexible Hose

- PTFE flexible hose can be used to link low mechanical strength pipe such as graphite, ceramics or glass pipeline. It can be used as outlet pipe for cutting machining, storage tank, container, to conduct the pipe dislocation connection. Apply for pipe displacement caused by weather change or the other reasons. Also apply for pipe reactor and heat exchanger.

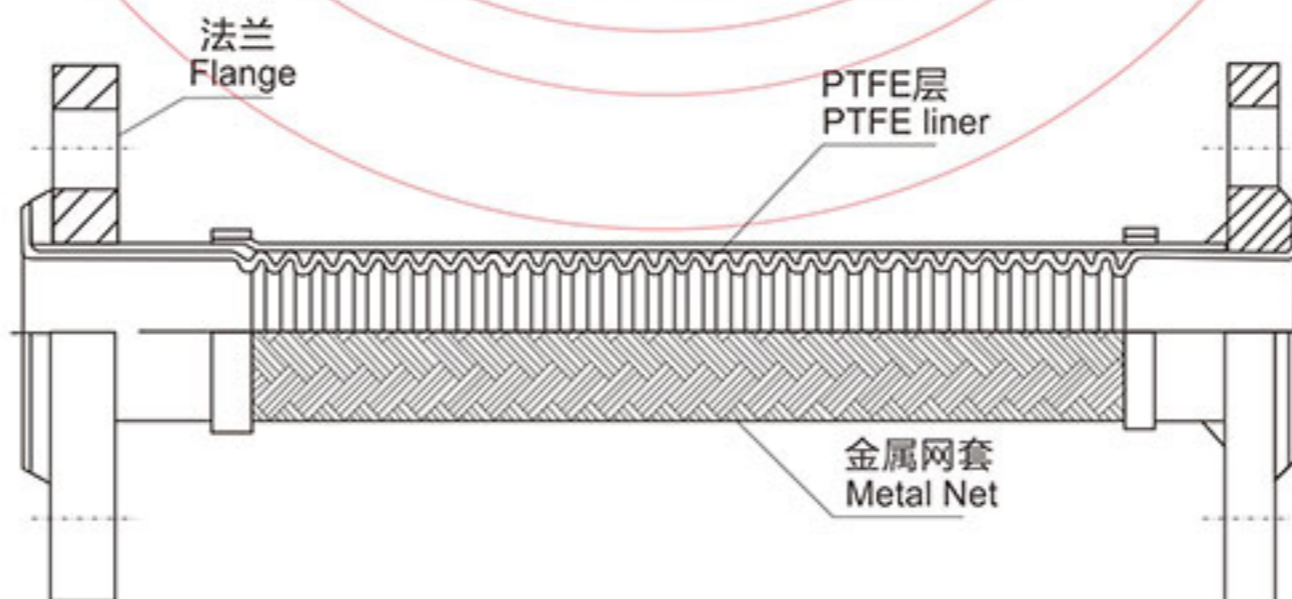


## PTFE-金属网套螺纹软管

- PTFE金属网套螺纹软管它是在PTFE螺纹软管处编织一层或多层钢丝网或钢带套(根据压力而定)，两端配有接头或法兰的柔性元件。它能吸收振动、补偿位移，尤其是在管路系统中有补偿大位移的能力。同时，具有重量轻、体积小、抗疲劳、柔性好、耐强蚀、耐高压等优点。适用于腐蚀强、压力高的管路系统。

## Stainless Steel Braided PTFE Flexible Hose

- It is PTFE hose knitting with a layer or multilayer steel net or steel sleeve (according to the pressure), and two sides with flange and quick connector. It is vibration absorption, movement compensation. Especially in the pipe system it has large compensation and movement ability. It features light weight, fatigue resistance, flexibility, corrosion resistant, and pressure resistant.





## 规格与技术参数表 Technical Specification

公称通径 Nominal Diameter	15	20	25	32	40	50	57	65	73	80	89	100	114	125	150	200	
连接口内径 Connector Inner Diameter	15	20	25	33	38	51	57	63	73	80	89	100	114	125	159	219	
连接口长度 Connector Length	30~50			40~60			50~70			60~80				60~100	100~150		
波纹管外径 Bellow Outer Diameter	17.0	22.4	27.6	35.8	40.8	54.0	60.2	66.2	76.4	83.6	92.6	105.8	117.8	129.0	164	225	
波纹管内径 Bellow Inner Diameter	10	15	20	25	30	40	45	52	63	68	75	90	102	113	140	-	
壁厚 Thickness	1.5	1.5	1.5	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.5	2.6	3.0	
承受压力 MPa Pressure (MPa)	普通 PTFE Hose	0.65	0.62	0.60	0.50	0.50	0.50	0.40	0.30	0.25	0.23	0.20	0.18	0.12	0.08	0.07	0.05
	带网套 SS Braided Hose	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.0	1.0	1.0	0.8	
	带加强筋 Reinforce SS Braided Hose	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5	1.2	1.0	1.0	0.8	
承受负压 (KPa) Applicable Vacuum (Kpa)	90	85	80	75	70	65	63	61	60	58	56	50	30	20			
极限挠曲 半径 Ultimate Deflection Radius	普通 PTFE Hose	5.0DN		4.5DN		4.0DN		3.5DN		3.0DN		5DN	5DN				
	带网套 SS Braided Hose	5DN															
	带加强筋 Reinforce SS Braided Hose	5DN															
热变形温度 Thermal Deformation Temperature	<150°C														<100°C	<100°C	
适用温度 Applicable Temper- ature	普通 PTFE Hose	-10°C~150°C										-10°C~150°C			-29°C~150°C		
	带网套 SS Braided Hose	-10°C~180°C				-10°C~160°C				-5°C~150°C				-29°C~180°C			
	带加强筋 Reinforce SS Braided Hose	-5°C~180°C				-5°C~170°C				-5°C~150°C				-29°C~180°C			
疲劳次数 Fatigue Times	≥ 10000次(常温) times(Ambient Temperature)																
可供管长 Length	可按客户需求定制 100~10000mm																

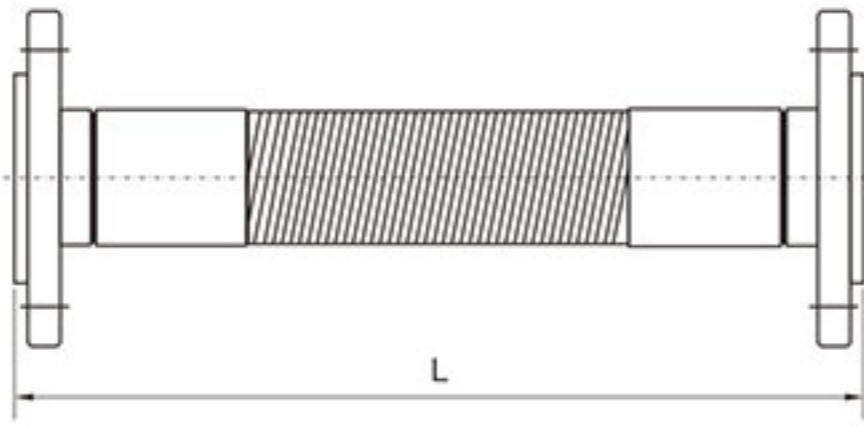
注：根据客户的需求以上数据仅做参考。 Note: The abovementioned parameters just for reference only.



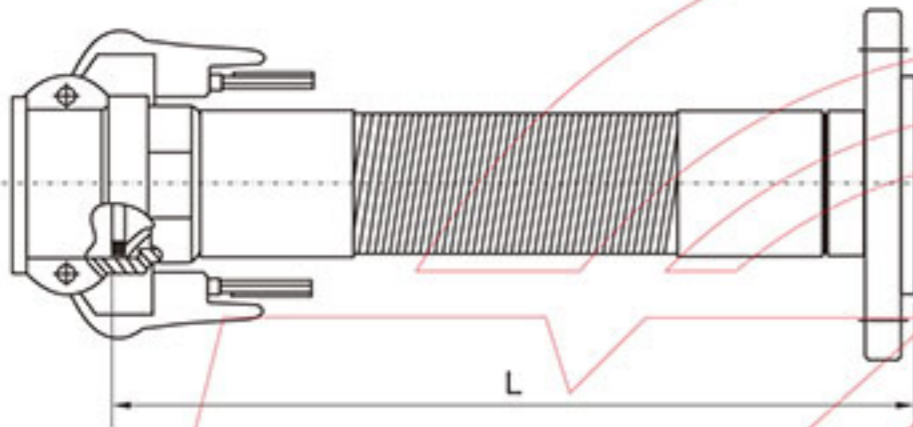
# PTFE软管 PTFE Flexible Hose

## 复合软管典型的连接方式组装图

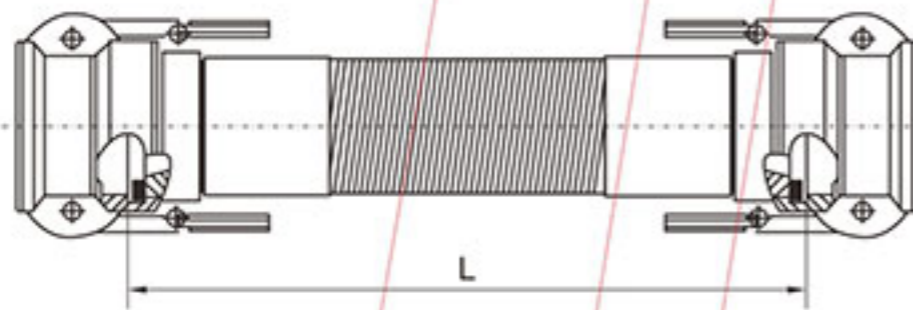
### Typical End Connections of Composite Hose Assemblies



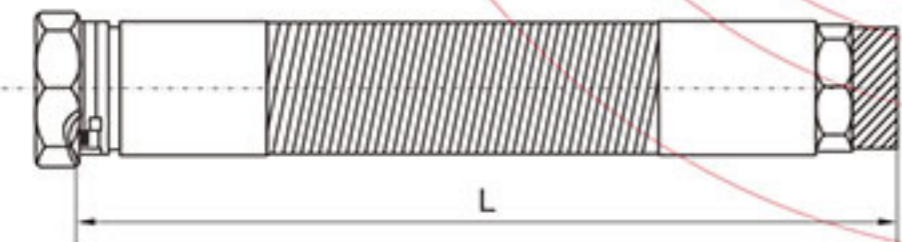
法兰连接 (一端固定+一端活套)  
Flange Connection(Fixed + Floating)



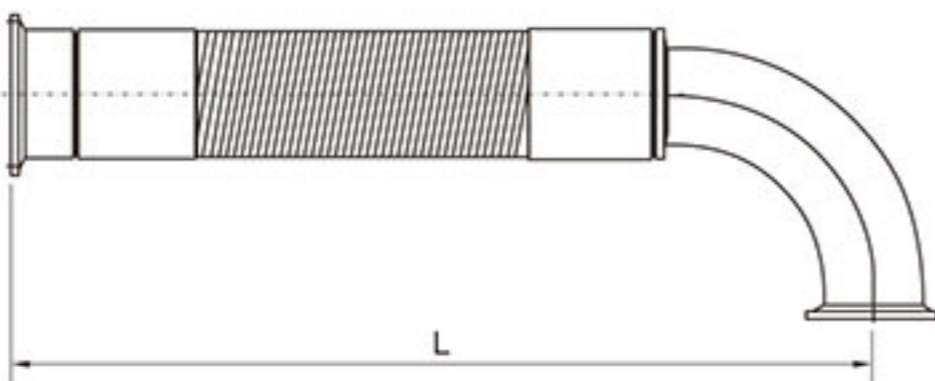
快装接头 (母接头) + 法兰连接  
Quick Coupling(Female) + Flange Connection



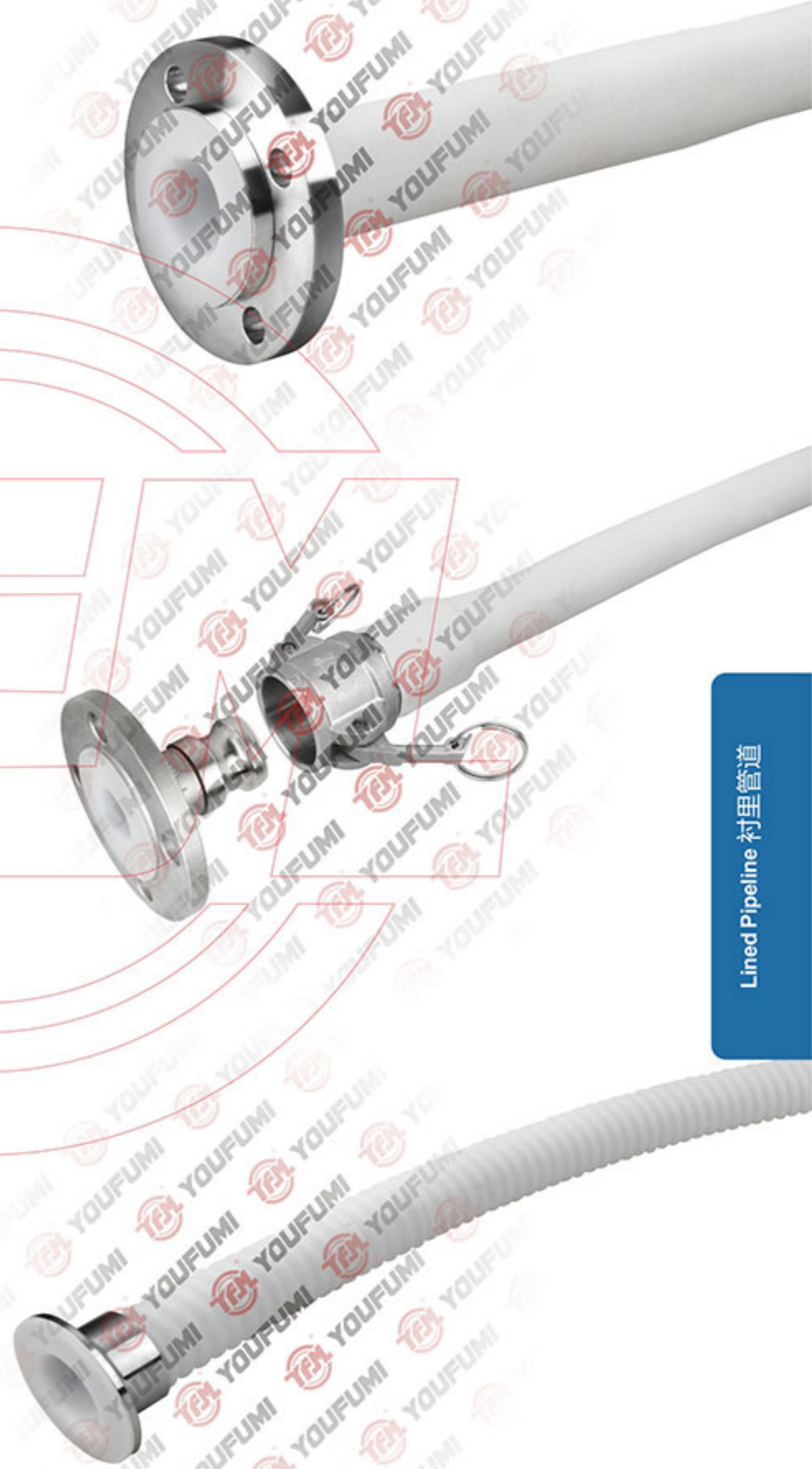
快装接头 (母接头)  
Quick Coupling(Female)



外螺纹+内螺纹  
MNPT + FNPT



快接  
Quick Coupling



Lined Pipeline 衬里管道



## 安装

- 软管装配应需要遵循下列安装指导：  
软管装配不应弯曲，在安装或使用的软管不应过度弯曲。  
或弯曲成直径小于规定的最小弯曲半径。  
软管装配时应使弯曲总是发生在同一平面上，建议法兰装配有一个浮动的法兰在一端，为了安装更容易和减少扭曲的可能性。

## Installation

- Incorrect installation of a hose assembly will create stresses within the assembly and result in a premature failure. The following guidelines should be followed:  
Hose assemblies must not be twisted either during installation or in use.  
Hoses must not be over flexed or bent into a smaller diameter than the specified minimum bend radius.  
Hose assemblies should be installed so that flexing always occurs in the same plane.  
It is recommended that flanged assemblies have a floating flange on one end for easier installation and to reduce the possibility of twist.

## 清洗

- 在储存之前，软管应排水和用干净的水冲洗，除去危险的气体，除了以用于输送如硫酸与水稀释时留下腐蚀性很强的残留物料，在这样的情况，排干，在清洗操作时软管必须电接地，软管可以清洗用低气压，然而开放式软管必须避免过度压力，蒸气是不推荐用于清洁，因为过高温度的（超过100°C）会破坏扭曲软管。

## Cleaning

- Before storage, hoses should be drained and flushed with clean water to remove dangerous vapours, the exception being hoses which have been used for conveyants such as sulphuric acid when dilution with water could leave a very corrosive residue. In such instances, drain dry. Hoses must be electrically earthed during cleaning operations. Hoses may be cleaned using low pressure air. However hoses must be opened to avoid excessive pressure build up. Be opened to avoid excessive pressure build up. Steam is not recommended for cleaning as the excessive temperature involved (over 100°C) will damage the hose fabrics.

## 操作

- 软管应存放在牢固的支架上的直线上。大口径软管应用起重机进行搬运。软管不能由一根钢丝绳或钢丝绳支撑。宽度带吊索应采用软管配套至少每3米。避免曲率小于软管的最小弯曲半径。不要让尖物靠近端部连接，这一区域是任何类型软管中最薄弱的部位。软管不应沿地面或过户栏拖动。不允许让软管对硬质表面或锋利边缘摩擦。

## Handling

- Hoses should be stored in a straight line on solid supports or racks. Large bore hoses should be carried on a dolly or moved by crane. Hoses must not be supported by a single rope or wire. A wide belt sling should be used, supporting the hose at least every 3 metres. Avoid curvatures that are less than the minimum bend radius of hose. Do not allow sharp bends adjacent to the end connection fitting - this area is the weakest spot in any type of hose. Hoses should not be dragged along the ground or over guard rails. Do not allow the hose to chafe (rub) against hard surfaces and/or sharp edges. If unavoidable, consider having the hoses rope lagged.

## 检验

- 至少每六个月检查软管，观察一下：
  1. 软管端接头的弱化。
  2. 织物的擦伤。
  3. 外丝磨损。
  4. 外丝的位移，通过不同宽度的每一轮导线长度的不同确定。
  5. 凹痕，打结或扭曲的部分。

## Inspection

- Inspect hose for visual damage at least every six months, more often if experience demands it. Look for:
  1. Weakening of the hose adjacent to the end fitting.
  2. Cuts and abrasions on the fabric cover.
  3. Abrasion of the outer wire.
  4. Displacement of the outer wire - identified by differing widths between each round of wire over the length.
  5. Dents, kinks or twisted sections.

## 测试

- 至少每十二个月，复合软管装配应进行水压试验和电气连续性测试。在适当情况下，至少每六个月测试一次。

## Testing

- Composite hose assemblies should be hydrostatically tested at least once every twelve (12) months and electrical continuity tested, where applicable, at least once every six (6) months.



错误安装 Incorrect Installation	正确安装 Correct Installation	说明 Description
		<p>180°弯曲安装，长度过短时，会产生过度弯曲，应大于最小弯曲半径安装。 For 180° bending installation, when length is too short and over bending will occur, the installation with more than the minimum bend radius should be adopted. For PTFE bellow hose, please check the table above.</p>
		<p>不允许小于最小弯曲半径，应安装刚性弯头。 If the minimum bend radius is unallowable, a rigid elbow should be installed.</p>
		<p>运动方向与软管轴线应在同一平面内，以避免产生扭曲应力。 Motion direction and hose axis should be in the same plane, lest occurrence of torsional stress.</p>
		<p>长度较长时，易出现下垂，应安装滚筒架。 For too long length, drooping is easy to occur, a cylinder rack should be installed.</p>
		<p>运动方向与软管轴线应在同一平面内，以避免产生扭曲应力。 Motion direction and hose axis should be in the same plane, lest occurrence of torsional stress.</p>
		<p>避免产生交变应力，安装刚性弯头以消除交变应力和过度弯曲。 Occurrence of alternating tension should be avoided. To eliminate alternating tension and over bending through installation of rigid elbow.</p>
		<p>运动方向与软管轴线应在同一平面内，以避免产生扭曲应力。 Motion direction and hose axis should be in the same plane, lest occurrence of torsional stress.</p>
		<p>自动弯曲安装时，软管应避免与墙壁，地面等物体摩擦。 For self-bending installation, it should be avoid the friction between hose and wall, ground etc.</p>
		<p>应安装滚轮架避免过度弯曲。 A cylinder rack should be installed, lest over bending.</p>
		<p>安装刚性弯头，避免过度弯曲。 Rigid elbows should be installed, lest over bending.</p>
		<p>如无法避免外部机械拉伸，应外覆保护层。 In case it is impossible to avoid external mechanical stretch, external protection should be avoid.</p>

更多详情，请咨询有氟密销售部 Note: For more information, please consult our engineer.