



从虹桥机场到特扶利五金制品的行车指南

虹桥机场
↓
G50 沪渝公路
↓
G15 沈海高速公路
↓
向叶新公路出口方向
进入叶新公路
↓
参考右图



从浦东国际机场到特扶利五金制品的行车指南

浦东机场
↓
S32 申嘉湖高速公路
↓
G15 沈海高速公路
↓
向叶新公路出口方向
进入叶新公路
↓
参考左图

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Pharma

Biotech

Chemical

Food

Flavor

Fragrance



PTFE Flexible Hose
Flexible METAL Hose

特扶利五金制品(上海)有限公司
TOFLE FLEXIBLE METAL HOSE (SHANGHAI)CO., INC.

トーフレ株式会社

www.tofle.com

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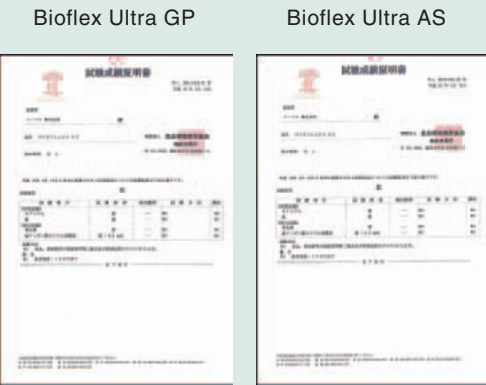
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証明書 (国際規格)



食品環境検査協会



公司简介

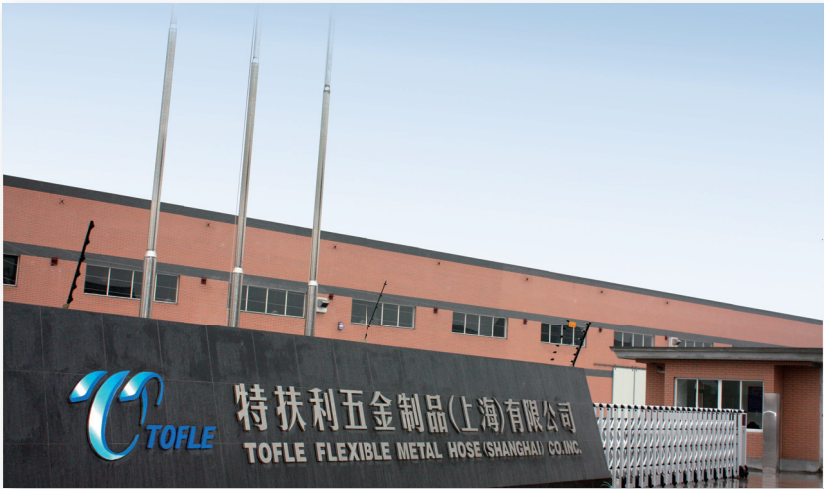
特扶利五金制品（上海）有限公司由日本 TOFLE CO., INC 全额投资，作为 PTFE 软管和 SUS 不锈钢软管的综合性厂家，能满足所有客户的需求。
特别是 PTFE 软管有 40 年的业绩，能满足制药、医药、精细化工、食品等客户的特殊要求，拥有良好的 [洗净性能、柔软性] 能提供要求的证明及丰富的接头种类。

Company Profile

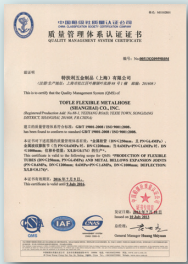
Tofle Flexible Metal Hose (Shanghai) Company Incorporation were invested and solely owned by Tofle Company Incorporation. We are the manufacturer of PTFE hoses and stainless steel flexible tubes which are applied and used in every industrial field.
We have 40 years history of supplying the PTFE hoses to the pharmaceutical, medical, fine chemical, food industries, etc. We produce the high quality products as requested by the users in the world, We ensure the hygienic, the flexibility and excellent flow rate of our products. We can satisfied our customers with the most of the required certification with different varieties of hose covers and the hose fittings.



日本特扶利株式会社
TOFLE CO., INC.



TOFLE FLEXIBLE METAL HOSE (SHANGHAI) CO., INC.



中国船级社质量认证公司
质量管理体系认证证书



压力管道 中华人民共和国
特种设备许可证



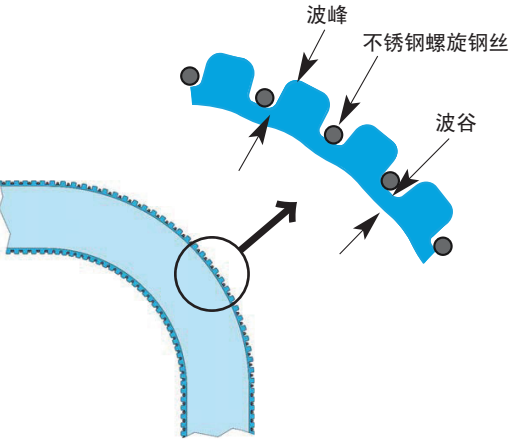
中国石油和石化化工设备工业协会
膨胀节分会 会员证书

PTFE软管的特长

Bioflex Ultra

口径: 3/8" - 3"

避免液体积存的平滑状
内表面及波纹状外表面的设计

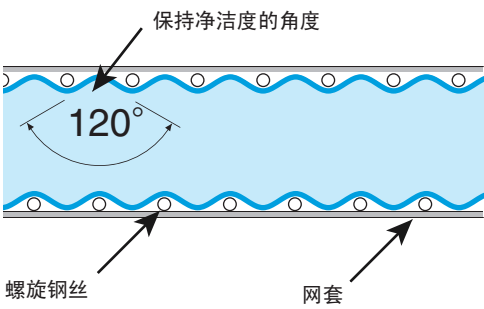


- 因内表面为平滑，外表面为波纹状，故能保持柔软性的划时代的软管。
- 备有一般用途和抗静电用途的两种内衬。
- 附带各种网套和软管外套。

Corroflon

口径: 1/2" - 6"

强化钢丝以及广角设计
以提高柔软性和洗净度。



- 用钢丝加强波纹状软管的外表面凹部。
- 螺旋角度改良成120度，液体排出性能极佳。
- 备有一般用途和抗静电用途的两种内衬。
- 附带各种网套和软管外套。

Hyperline

备有3种形状的内衬，以满足广泛的要求

SB型
口径: 1/4" - 1"



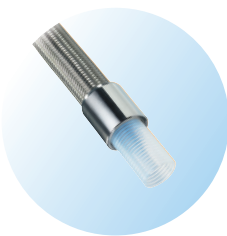
- 内表面平滑的软管。

V型
口径: 3/8" - 2"



- 波纹状的软管。

FX型
口径: 1/4" - 1"

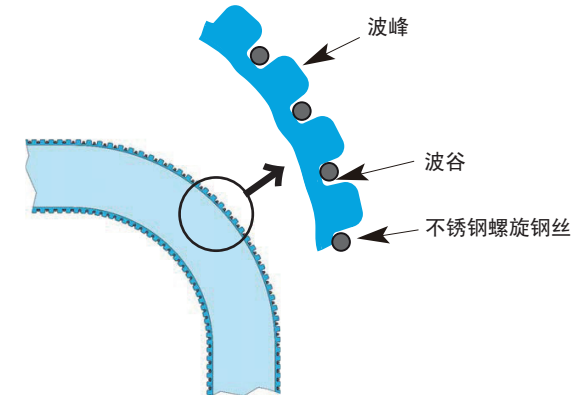
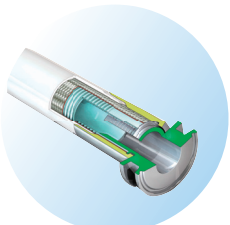


- 与Bioflex相同，内衬的内表面为平滑，外表面为波纹状。

Pharmaline N and X

口径: 1/4" - 3"

最外层采用了硅胶外套，
易于洗净内表面和外表面

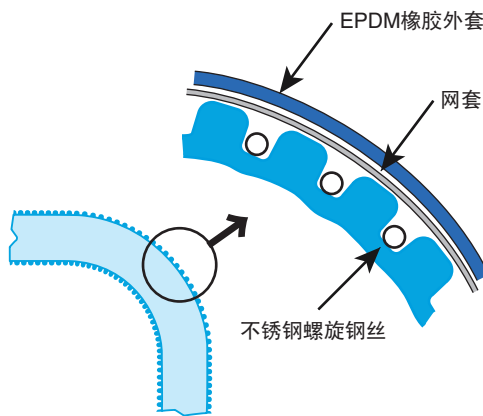
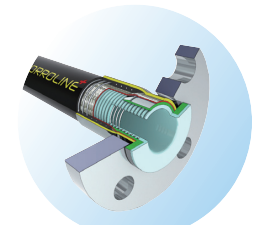


- 适用于制药和生物化学规格，具有优异的柔软性和洁净性。
- Pharmaline上的低压规格产品称为Pharmalex。
- 与Bioflex相同，内衬的内表面为平滑，外表面为波纹状。

Corroline+

口径: 1/2" - 3"

用于化工设备用途
而开发的输送软管



- 将末端部加工成卫生洁净的PTFE喇叭形。
- 采用EPDM橡胶外套，非常光滑的表面。
- 与Bioflex相同，内衬的内表面为平滑，外表面为波纹状。

R-160

为配合超高压的一般产业用软管

口径: 1/4" - 1"

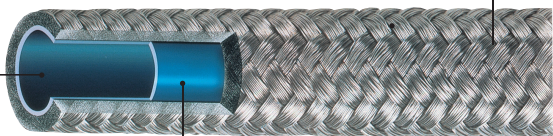
最内层使用抗静电PTFE内衬，
并用高张力不锈钢网套加强外层。

用途
油压配管・空压机器
粘着剂等高粘度流体输送配管

使用温度
-54°~+204°

最内层是导电性软管。
(按照MIL-I-22129C导电规格)

高张力不锈钢网套
(SUS304)



抗静电PTFE内衬

口 径		软管尺寸	软管内径	软管外径	最小弯曲半径	常温最高使用压力	破坏压力(MPa)		每米重量
A	B		mm	mm	mm	MPa	常 温	204℃	kg/m
6A	1/4	04	5.4	9.5	38.1	34.47	110.32	82.74	0.163
10A	3/8	06	7.8	12.1	63.5	34.47	110.32	82.74	0.267
15A	1/2	08	10.2	15.2	73.2	34.47	110.32	82.74	0.357
20A	3/4	12	15.7	24.6	101.6	34.47	110.32	82.74	0.982
25A	1	16	22.0	31.8	127.0	34.47	110.32	62.05	1.517

※不管什么口径，使用压力均为34.48MPa。

BIOFLEX ULTRA

BIOFLEX 是领先世界的 PTFE软管
The World's Leading PTFE Flexible Hose.

BIOFLEX ULTRA是一种具有平滑内表面,非常柔软的PTFE软管。
其设计克服了传统的平滑的内表面与螺旋型软管设计的各自不足之处,在许多个别的技术性能参数上都有了飞跃的提高。
BIOFLEX ULTRA is a smoothbore, highly flexible, PTFE lined hose. Its design overcomes the disadvantages of conventional smoothbore and convoluted flexible hose designs, dramatically improving on many of their individual technical performance parameters.

Comparison with convoluted PTFE Hose

与波纹状PTFE软管的比较

Hygienic Cleanability 清洁卫生

Vastly improved, due to smooth bore and hygienically polished surface finish.
有平滑的内表面并进行了为满足卫生要求的表面抛光处理,卫生和易清洁程度得到很好改善。

Fully Self Draining 液体完善排出

Unlike conventional convoluted hose, which pools fluid in the convolutions when at an angle.

与传统的螺旋型软管在凹凸处积聚液体情况不同,液体能全部顺畅流出。

Flow Rates 流量

More than 100 % higher.

提高了100%以上。

Pressure Ratings 耐压性

More than 50 % higher.

提高了50%以上。

Gas Permeation Resistance 耐气体的渗透性

More than 150 % higher.

提高了150%以上。

Flex Life at Temperature and Pressure

在温度和压力下的寿命

More than 50 times the life, dependent upon test conditions.

根据试验条件,高于50倍以上。

Comparison with Silicone Rubber Hose

与硅胶软管的比较

Hygienic Cleanability 清洁卫生

Much better, due to highly polished inner surface finish.

由于通过高度抛光内表面处理,卫生和易清洁程度得到很好改善。

Chemical Resistance 耐化学物质性

Considerably improved, particularly to strong oxidizing acids and bases.

耐化学物质性能,特别在强氧化酸和碱的物质上,有明显的提高。

Temperature & Pressure Ratings 耐温度和压力

Much higher temperature and pressure capability.

能承受较高的温度和压力。

Steam Resistance 耐蒸气

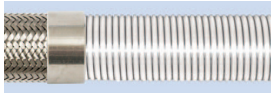
Permanently resistant to steam sterilizing (unlike silicone hose, which has a limited life).

永久承受蒸气杀菌。(与寿命有限的硅胶软管不一样)

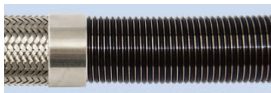
尺寸范围和参数 Size Range and Specifications

软管口径 Nominal Hose Bore Size	实质内径 Actual Bore Size	网套种类 Braid Type	网套或橡胶管的外径 O/D of Braid or Rubber	最小弯曲半径 Minimum Bend Radius	最大使用压力 MWP of Hose	最小破坏压力 Minimum Burst Pressure	最大连续长度 Maximum Continuous Hose Length	重量 Weight per Unit Length
in	mm		mm	mm	Bar	Bar	m	kg/m
3/8	10	9.5	TO	12.0	35	5	20	0.06
			SS	12.8	19	80	500	0.14
			RC/BK/SI	17.4	19	80	500	0.22
1/2	15	13.5	TO	16.4	60	5	20	0.15
			SS	17.8	38	70	400	0.29
			PB	20.5	38	35	140	0.22
			RC/BK/SI	21.4	35	70	400	0.39
5/8	16	16.5	TO	20.1	64	5	20	0.17
			SS	21.6	45	65	380	0.35
			PB	24.3	45	33	130	0.25
			RC/BK/SI	25.2	45	65	380	0.47
3/4	20	19.8	TO	23.4	75	5	20	0.20
			SS	24.9	50	60	300	0.40
			PB	27.6	50	30	120	0.28
			RC/BK/SI	28.5	50	60	300	0.55
7/8	22	22.2	TO	26.4	90	4	16	0.34
			SS	27.7	55	55	220	0.60
			PB	31.5	55	27.5	110	0.44
			RC/BK/SI	32.0	55	55	220	0.82
1	25	26.1	TO	30.5	110	4	16	0.36
			SS	31.9	70	50	200	0.63
			PB	37.0	70	25	100	0.47
			RC/BK/SI	37.0	70	50	200	0.92
1 1/4	32	32.5	TO	37.8	140	3	12	0.45
			SS	39.5	100	45	180	0.85
			PB	44.2	100	23	90	0.72
			RC/BK/SI	44.6	100	45	180	1.15
1 3/8	35	34.9	TO	40.3	160	2	8	0.68
			SS	42.3	100	40	160	1.14
			PB	47.0	100	20	80	1.00
			RC/BK/SI	47.4	100	40	160	1.51
1 1/2	40	38.8	TO	44.5	180	2	8	0.66
			SS	46.7	140	40	160	1.10
			PB	51.4	140	20	80	0.90
			RC/BK/SI	51.7	140	40	160	1.55
1 7/8	48	47.6	TO	54.4	280	2	8	1.12
			SS	56.4	170	35	140	1.70
			PB	61.3	170	18	72	1.40
			RC/BK/SI	61.3	170	35	140	2.22
2	50	51.5	TO	58.9	300	2	8	1.25
			SS	60.7	200	30	120	1.90
			PB	65.4	200	15	60	1.60
			RC/BK/SI	65.6	200	30	120	2.56
2 1/2	65	63.7	TO	73.2	450	4	16	1.99
			SS	75.3	300	20	80	2.58
			PB	80.8	300	12	48	2.38
			RC/BK/SI	80.5	300	20	80	3.59
3	80	76.8	TO	86.2	525	3	12	2.45
			SS	87.8	350	15	60	3.13
			PB	94.8	350	10	40	3.02
			RC/BK/SI	92.8	350	15	60	4.30

GP: 普通用途内衬
General Purpose Liner



AS: 抗静电内衬
Anti-Static Liner



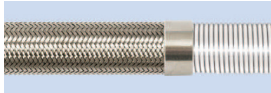
TO: 软管 (无编织网)
Tube Only (no braid)



PB: 聚丙烯编织网
Polypropylene Braid



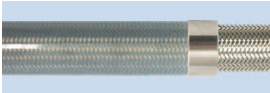
SS: 不锈钢丝编织网
Stainless Steel



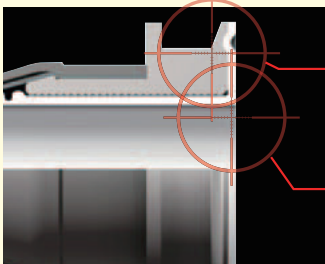
RC: 橡胶外套
Rubber Covered



SI: 硅胶外套
Silicone Rubber Cover

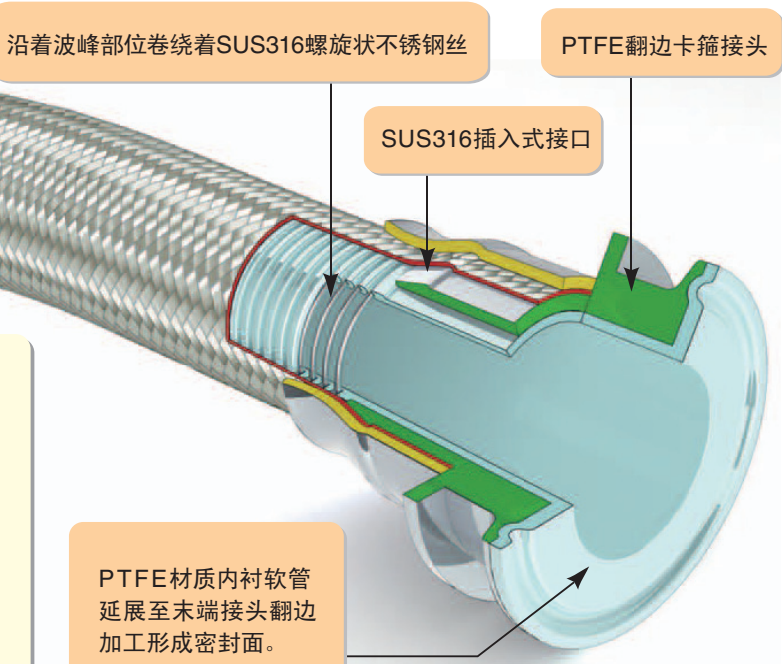


特扶利的PTFE软管的特征



特长1
紧密连接的
翻边技术

特长2
外观美丽的
90度锐角



PTFE材质内衬软管
延展至末端接头翻边
加工形成密封面。

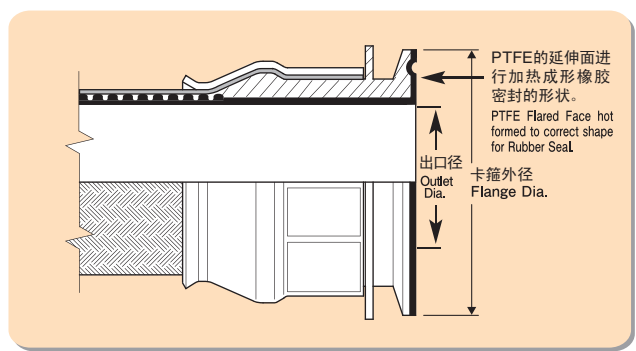
BIOFLEX ULTRA PTFE Lined

卡箍接头 Triclover fitting integral



最大使用压力和温度
所有尺寸的使用压力为1.0MPa（测试压力：1.5MPa）
但是，局限于橡胶密封耐温温度。

Maximum Working Pressures and Temperatures
All sizes 1.0 Mpa. (Test Pressure = 1.5 Mpa).
Only up to the temperature limit of the rubber seal.



材质
卡箍接头: SUS316L 压网环: SUS304或SUS316L
Materials
Spigots Grade 316LSS. Ferrules Grade 304 SS. some sizes in Grade 316LSS.

软管尺寸 Hose Size	口径 Nominal Dia	标准卡箍接头外径 Standard Triclover Flange Dia.	出口径 Outlet Dia.	接头尺寸 Fitting Size
in	mm	mm	mm	mm
7/8	22	50.5	22.2	1S
1 3/8	35	50.5	34.9	1.5S
1 7/8	48	64.0	47.6	2S

※如两端接头为卡箍接头时，请选用Bioflex软管。
* When triclovers are attached at both ends, please use bioflex hose.

BIOFLEX ULTRA

软管尺寸 Hose Size	口径 Nominal Dia	标准卡箍接头外径 Standard Triclover Flange Dia.	出口径 Outlet Dia.	接头尺寸 Fitting Size
in	mm	mm	mm	mm
1	25	50.5	26.0	1S
1 1/2	40	50.5	38.0	1.5S
2	50	64.0	47.6	2S

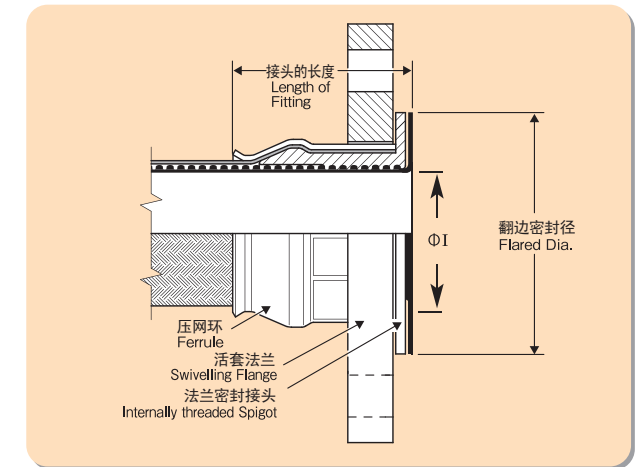
※如一端为卡箍接头，另一端为法兰等组合时，请选用Bioflex Ultra软管。
* When hose is with triclover at one end and with flange etc. at the other end, please use bioflex hose.

标准法兰接头 Standard Flange integral



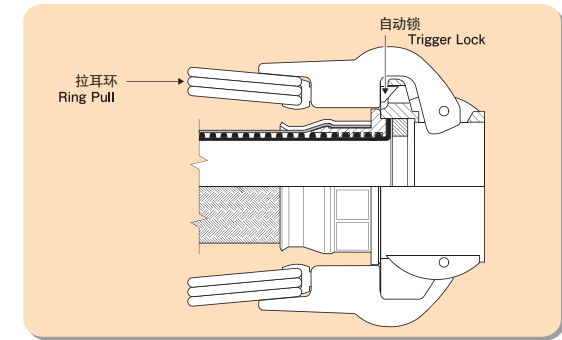
材质
法兰密封接头: SUS316 压网环: SUS304
法兰: 标准为SUS304

Materials
Grade 316 SS spigot, Grade 304 SS, Flange and most Ferrule in Grade 304SS, some sizes in Grade 316SS.
Alternative options include grade 316SS flanges polypropylene flanges mounted on SS spigots, zinc or nickel plated mild steel flanges, and other materials to special order.



带自动锁快速接头(固定/松套) BIOFLEX ULTRA Saflok Cam Action Fittings(Fixed or Swivel)

快速接头(带自锁母头) Saflok Cam Action Fitting

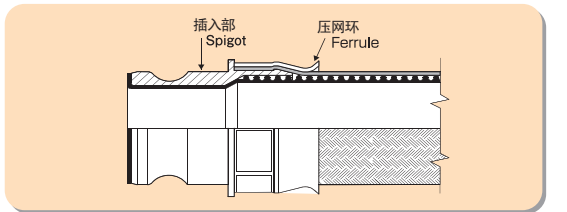


最大使用压力
所有尺寸按照1.0MPa（测试压力：1.5MPa）

Maximum Working Pressures
All sizes 10 Bar (Test Pressure = 15 Bar).
Higher Working Pressures up to 18 Bar are available to special order.

快接头尺寸 Cam Action Adaptor Size	翻边径 Flare Dia.	接头长度 Length	接头内径 Through Bore
in	mm	mm	mm
1	50	105	21
1 1/2	73	118	34
2	92	131	43

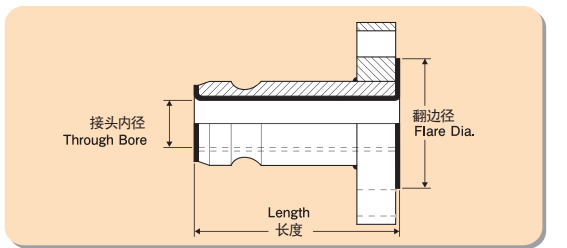
快速接头(公头) Cam Action Coupler (Male) Fitting



软管尺寸 Hose Size	软管内径 Actual Bore Size	接头的长度 Length of Fitting (non rubber covered grades only)	接头重量 Weight of Fitting
in	mm	mm	kg
1	25.4	63	0.59
1 1/2	38.0	70	1.15
2	50.8	70	1.40

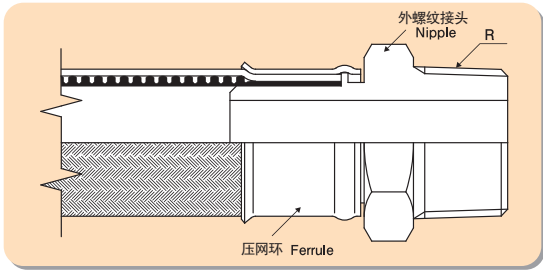
其他尺寸也能提供。 Other sizes are also available.

法兰带快接公头转接头
Cam Action Adaptor to Flange Connector



BIOFLEX ULTRA 其他接头

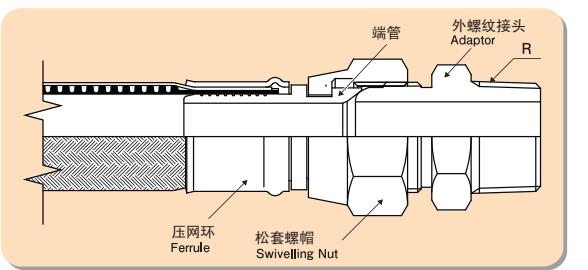
固定外螺纹接头 Fixed Male Fitting



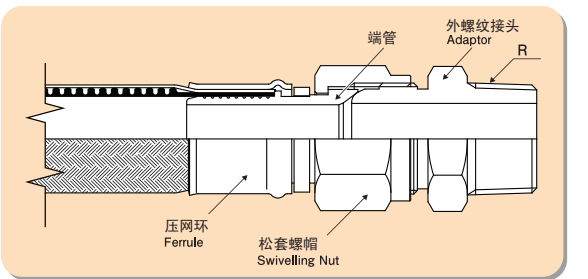
最大使用压力 (MWP)
耐压性能达到使用软管的最大使用压力
(测试压力=最大使用压力的1.5倍)
Maximum Working Pressures (MWP)
As given for the hose. (Test Pressures = MWP x 1.5).

材质
游任接头: SUS304、SUS316 压网环: SUS304
Materials
All components are either Grade 316 SS or 304 SS with an Grade 304 Ferrule.

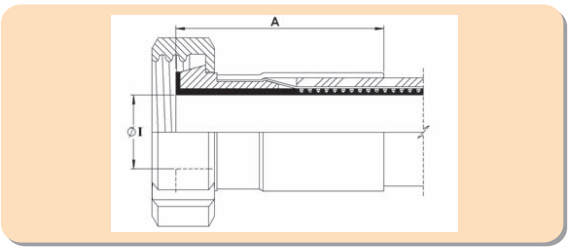
外螺纹游任接头 Female union fitting 3/8" ~ 1"



1 1/4" ~ 2"



PTFE翻边SMS / DIN内螺纹接头 PTFE Lined SMS / DIN Female Fitting



加强螺旋波型的PTFE内衬软管
Convolutd, Reinforced PTFE Lined Hose.

在市场上,Corroflon软管的设计与其他螺旋波型PTFE内衬软管的设计有明显不同,这归结于它有独特卓越的性能和可靠的安全性。

Corroflon’s design differs from every other convoluted PTFE hose on the market, which results in distinctive and measurable performance and safety advantages.

第一，Corroflon在市场上与其他螺旋波型PTFE内衬软管相比,都具有更良好的易清洗和流体排出性。其原因是Corroflon设计是以很浅的角度80° 到120° 来成型螺旋波并生产。相比之下,其他螺旋波型PTFE内衬软管设计仅按角度45° 到65° 来生产。

Firstly, Corroflon will give better cleanability and drainability than any other convoluted PTFE hose on the market. This is because Corroflon is designed and manufactured in such a way that the angle of the convolutions is extremely shallow - 80° to 120°,compared with only 45° to 65° in other convoluted hose designs.

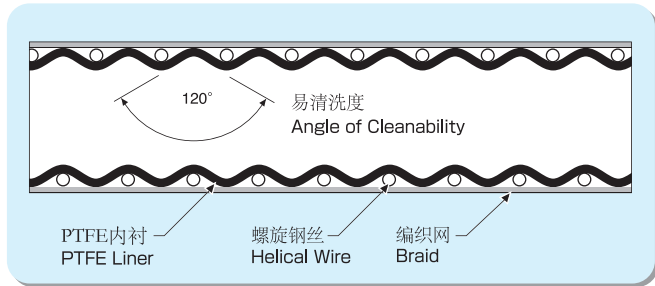
第二，在市场上,Corroflon是一种在高压·高温状况下,唯一使用的螺旋波型PTFE内衬软管,用于完全耐扭结和抗真空。这是因为Corroflon的设计,配上了有一定厚度的外层加强螺旋不锈钢丝,该不锈钢丝为了保证最大的强度而提供了必要径向的支撑。同时,Corroflon的设计维持了软管适当的柔软性和具有易清洗的性能。该螺旋不锈钢丝与两端的末端接头直接焊接,确保了Corroflon软管密封面的安全性和带电的连续性。

Secondly, Corroflon is the only PTFE lined convoluted hose on the market to be fully kink and vacuum resistant at high pressures and temperatures. This is because Corroflon’s design incorporates a thick section external helical reinforcement wire which gives the radial support necessary to ensure maximum strength, whilst maintaining optimum flexibility and cleanability. The helix wire is welded directly to the end fittings at each end, ensuring security of attachment and electrical continuity.

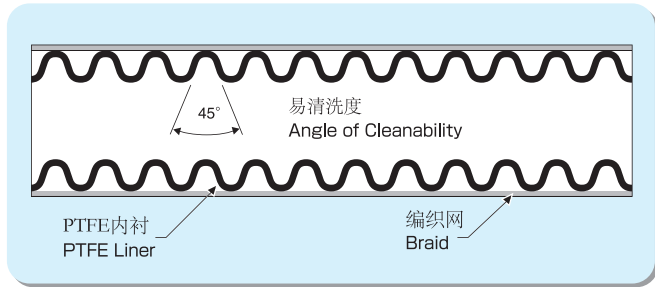
第三，Aflex公司是唯一一家能保证1英寸和1英寸以上软管的PTFE最小厚度为1.5mm的PTFE内衬软管的厂家,该厚度确保了足够的强度以防止软管因其内部压力导致正弦波形状变形为伸长的正方形形状,正方形形状会产生渗透,引起整根软管过早和彻底的损坏。由于内衬软管有了一定厚度,将渗透性能也减至最低程度,而且延伸到两端末端接头,避免了接头与软管间的接缝,提高了流速。

And thirdly, Aflex is the only PTFE hose manufacturer to guarantee a minimum PTFE liner thickness of 1.5mm for hose sizes 1” and above, which ensures sufficient strength to prevent the tube from being internally pressurised from a sine wave shape into an extended square wave shape, which would lead to porosity, and eventually premature failure of the tube. This thick wall liner also minimises permeation, and is extended through the end fittings to give an uninterrupted clean flow of fluid through the fitting.

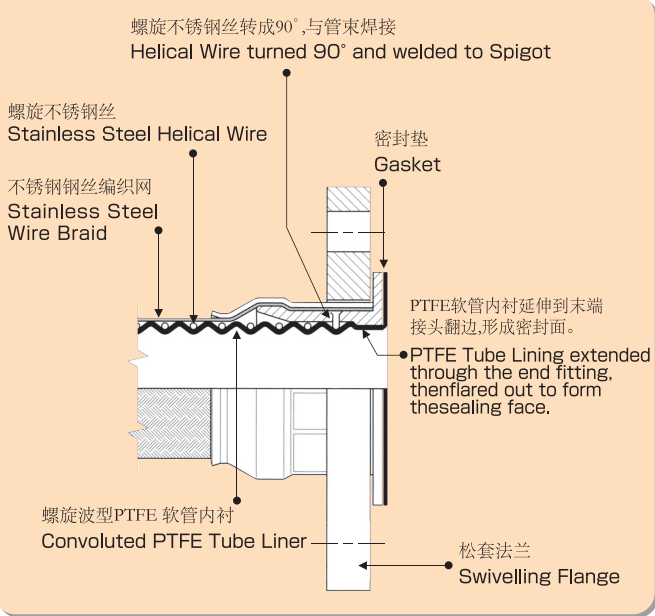
Corroflon GP PTFE软管
Corroflon GP PTFE Hose



传统的螺旋波型PTFE内衬软管
Typical Convoluted PTFE Hose



Corroflon GP, SS软管和PTFE内衬法兰接头
Corroflon GP, SS Hose and PTFE Lined Flange Fitting



Corroflon AS 是一种符合电阻介质用途的软管，主要用于输送如燃料、溶媒、纯净干燥气体或氟利昂等电阻介质的。该软管起到防止由软管内部静电积聚所带来损害的作用。

Corroflon AS is suitable for use in applications where electrically resistive media, such as fuels, solvents, pure dry gases or freons are being conveyed, in order to prevent a damaging electrostatic charge build-up inside the hose.

Corroflon SP 用于承受高温和高压，有更大的柔软性，不易折断和压裂，同时也用于耐完全真空2寸以上口径的软管。

Corroflon SP is for applications requiring a higher temperature/pressure rating, greater flexibility and improved kink and crush resistance. Also for applications requiring full vacuum resistance for hose sizes larger than 2".

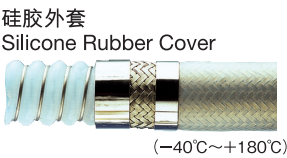
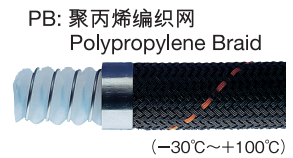
SP: 特殊用途内衬
Special Purpose Liner



AS: 抗静电内衬
Anti-Static Liner

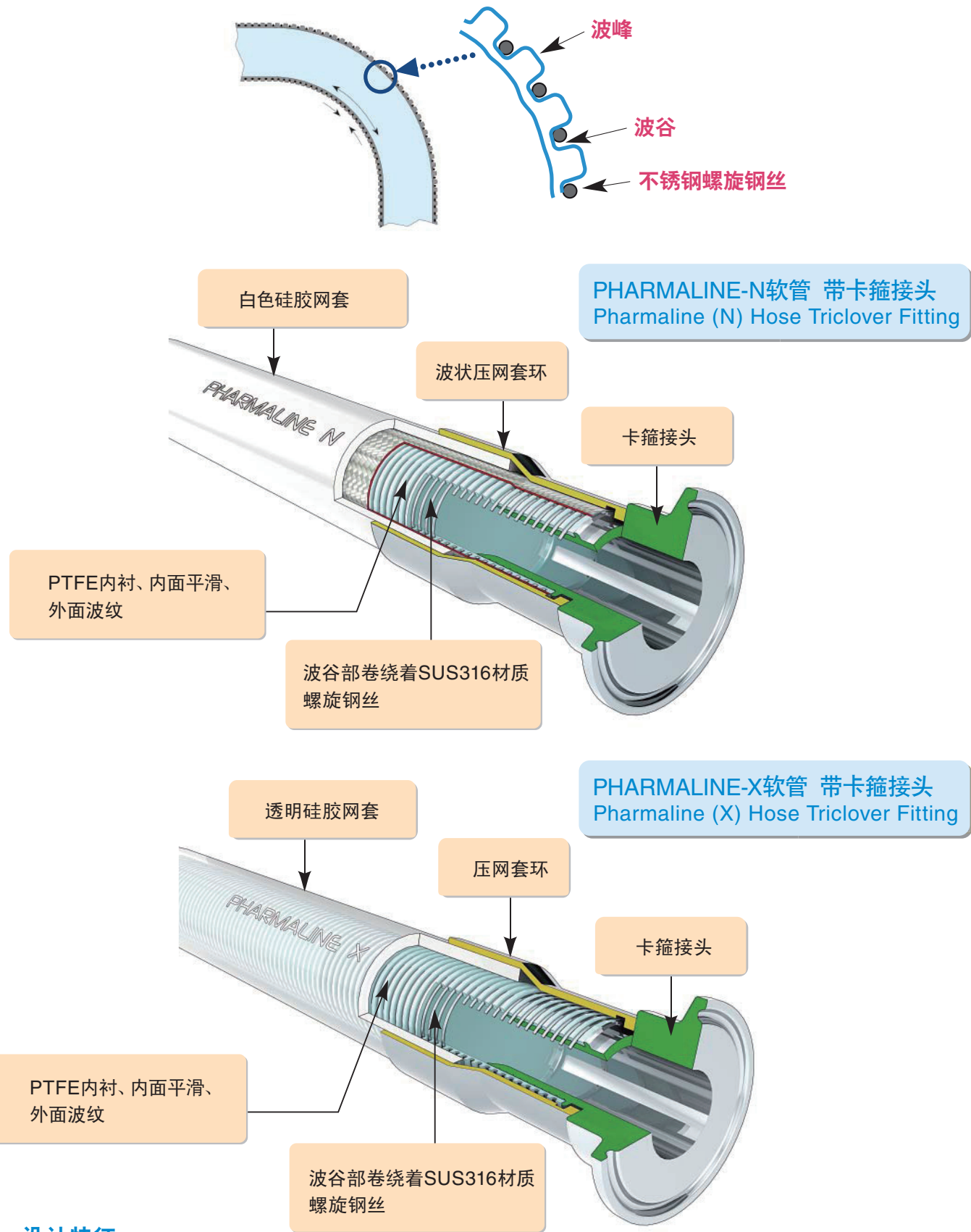
尺寸范围和参数 Size Range and Specifications

软管口径 Nominal Hose Bore Size	实质内径 Actual Bore Size	软管外径 O/D of Tube	网套种类 Braid Type	网套或橡胶管的外径 O/D of Braid or Rubber	最小弯曲半径 Minimum Bend Radius	最大使用压力 MWP of Hose	最小破坏压力 Minimum Burst Pressure	最大连续长度 Maximum Continuous Hose Length	重量 Weight per Unit Length
in	mm	mm		mm	mm	MPa	MPa	m	kg / m
1/2	11.2	16.00	TO	-	38	0.6	1.8	25	0.21
			SS	17.5	38	4.1	12.3	25	0.33
			PB	19.1	38	4.1	12.3	25	0.26
			SS,RC/FP	23.5	57	4.1	12.3	20	0.49
			RC,SI	23.5	57	4.1	12.3	10	0.49
			KYB	19.1	38	2.05	6.15	25	0.23
3/4	15.7	21.40	TO	-	51	0.525	1.575	25	0.29
			SS	23.1	51	3.5	10.5	25	0.45
			PB	26.0	51	3.5	10.5	25	0.36
			SS,RC/FP	29.6	76	3.5	10.5	20	0.56
			RC,SI	29.6	76	3.5	10.5	10	0.56
			KYB	26.0	51	1.75	5.25	25	0.31
1	21.5	29.40	TO	-	70	0.465	1.395	40	0.45
			SS	31.7	70	3.1	9.3	40	0.70
			PB	34.0	70	3.1	9.3	40	0.56
			SS,RC/FP	36.6	105	3.1	9.3	20	0.98
			RC,SI	36.6	105	3.1	9.3	10	0.98
			KYB	34.0	70	1.55	4.65	40	0.49
1 1/4	27.5	37.00	TO	-	82	0.405	1.215	22	0.53
			SS	38.4	82	2.7	8.1	22	0.82
			PB	43.6	82	2.7	8.1	22	0.66
			SS,RC/FP	42.8	123	2.7	8.1	20	1.12
			RC,SI	42.8	123	2.7	8.1	10	1.12
			KYB	43.6	82	1.35	4.05	22	0.57
1 1/2	32.0	42.70	TO	-	100	0.345	1.035	20	0.97
			SS	44.6	100	2.3	6.9	20	1.50
			PB	48.6	100	2.3	6.9	20	1.20
			SS,RC/FP	55.8	150	2.3	6.9	20	1.90
			RC,SI	55.8	150	2.3	6.9	10	1.90
			KYB	48.6	100	1.15	3.45	20	1.05
2	43.0	56.50	TO	-	140	0.3	0.9	18	1.36
			SS	59.0	140	2.0	6.0	18	2.10
			PB	62.0	140	2.0	6.0	18	1.68
			SS,RC/FP	68.0	210	2.0	6.0	18	2.72
			RC,SI	68.0	210	2.0	6.0	10	2.72
			KYB	62.0	140	1.0	3.0	18	1.47
2 1/2	54.0	71.00	TO	-	178	0.24	0.72	13	1.68
			SS	73.0	178	1.6	4.8	13	2.58
			PB	77.0	178	1.6	4.8	13	2.06
			SS,RC/FP	79.0	267	1.6	4.8	13	3.10
			RC,SI	79.0	267	1.6	4.8	10	3.10
			KYB	77.0	178	0.8	2.4	13	1.81
3	64.0	83.60	TO	-	230	0.21	0.63	10	2.14
			SS	86.0	230	1.4	4.2	10	3.29
			PB	90.0	230	1.4	4.2	10	2.63
			SS,RC/FP	95.0	345	1.4	4.2	10	3.95
			RC,SI	95.0	345	1.4	4.2	10	3.95
			KYB	90.0	230	0.7	2.1	10	2.30
4	98.0	123.30	TO	-	300	0.15	0.45	10	3.46
			SS	125.0	300	1.0	3.0	10	5.33
			PB	128.0	300	1.0	3.0	10	4.26
			SS,RC/FP	131.0	450	1.0	3.0	10	6.40
			RC,SI	131.0	450	1.0	3.0	3	6.40
			KYB	-	-	-	-	-	-
6	130.0	161.20	TO	-	600	0.075	0.225	5	6.50
			SS	170.0	600	0.5	1.5	5	10.00
			PB	173.0	600	0.5	1.5	5	8.00
			SS,RC/FP	176.0	900	0.5	1.5	5	12.00
			RC,SI	176.0	900	0.5	1.5	3	12.00
			KYB	-	-	-	-	-	-



上述温度是内部液体的最大作用温度。
Mentioned above is Max. Operating Temperatures (internal fluid only).

PHARMALINE N and X



设计特征

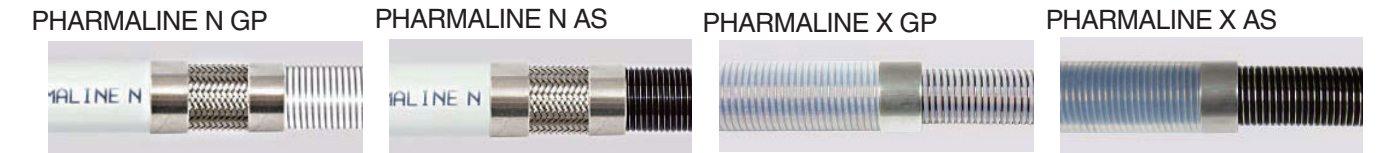
- PHARMALINE-N含有强化抵抗高内压得SUS316材质不锈钢丝编织网套。
- PHARMALINE-X不含有不锈钢丝编织网套，轻量版和低压使用来设计。
- PHARMALINE-N/X软管是设计来替代使用在制药、生物、医药行业的工厂和研究所。的硅胶软管的优秀供应品。PTFE内衬的优越化学抵抗和清洗蒸汽杀菌等简易抵抗性能为其重要特长。

Specifications - PHARMALINE N

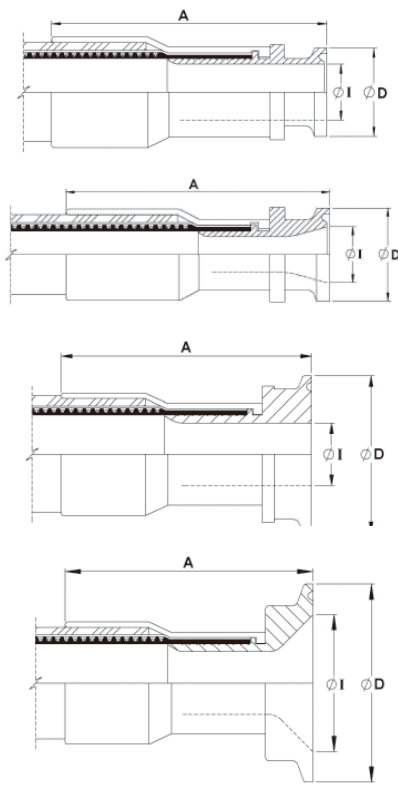
软管口径		实质内径		螺旋钢丝	外装外径		最小弯曲半径		最大使用压力		破坏压力		质量	
in	mm	in	mm		in	mm	in	mm	Psi	Bar	Psi	Bar	lb/ft	Kg/m
1/4	6.4	0.270	6.8	无	0.460	11.6	3/4	19	1100	80	4641	320	0.11	0.17
3/8	9.5	0.375	9.5	无	0.610	15.5	1	25	1000	70	4061	280	0.14	0.22
1/2	12.7	0.530	13.5	有	0.845	21.4	1 1/2	38	870	60	3480	240	0.25	0.37
5/8	16.0	0.650	16.5	有	0.990	25.2	2	50	725	50	2900	200	0.35	0.52
3/4	19.0	0.780	19.8	有	1.120	28.5	2 1/2	63	650	45	2610	180	0.42	0.65
1	25.4	1.030	26.1	有	1.455	37.0	4	100	580	40	2320	160	0.57	0.88
1 1/4	32.0	1.280	32.5	有	1.755	44.6	5 1/4	130	500	35	2030	140	0.85	1.30
1 1/2	38.0	1.530	38.8	有	2.035	51.7	6.7	170	430	30	1740	120	1.14	1.698
2	50.0	2.030	51.5	有	2.580	65.6	8.27	210	400	28	1624	112	1.58	2.355
2 1/2	65.0	2.508	63.7	有	3.169	80.5	11.81	300	290	20	1100	80	2.41	3.59
3	80.0	3.024	76.8	有	3.654	92.8	13.78	350	218	15	870	60	2.96	4.40

Specifications - PHARMALINE X

软管口径		实质内径		螺旋钢丝	外装外径		最小弯曲半径		最大使用压力		破坏压力		质量	
in	mm	in	mm		in	mm	in	mm	Psi	Bar	Psi	Bar	lb/ft	Kg/m
1/4	6.4	0.270	6.8	无	0.456	11.6	1 1/4	30	109	7.5	435	30	0.06	0.09
3/8	9.5	0.375	9.5	无	0.610	15.5	1 1/2	38	87	6.0	348	24	0.09	0.14
1/2	12.7	0.530	13.5	有	0.845	21.4	2 3/8	60	84	5.8	334	23	0.21	0.32
5/8	16.0	0.650	16.5	有	0.990	25.2	2 1/2	64	72	5.0	290	20	0.19	0.29
3/4	19.0	0.780	19.8	有	1.120	28.5	3	75	72	5.0	290	20	0.37	0.55
1	25.4	1.030	26.1	有	1.455	37.0	4 3/4	110	60	4.0	240	16	0.44	0.81
1 1/4	32.0	1.280	32.5	有	1.755	44.6	5 1/2	120	43	3.0	175	12	0.50	0.75
1 1/2	38.0	1.530	38.8	有	2.035	51.7	7	180	29	2.0	116	8	0.74	1.11
2	50.0	2.030	51.5	有	2.580	65.6	12	300	29	2.0	116	8	1.28	1.91



	软管口径	接头外径		接头内径		接头长度		规格	
	in	in	mm	in	mm	in	mm	ASME BPE	DIN 32676
迷你卫生级 卡箍接头	1/4	0.984	25.0	0.172	4.37	2.4	61	-SF4	-
	1/4	0.984	25.0	3/8	9.53	2.4	61	-SF4	Type C
	3/8	0.984	25.0	0.305	7.75	2.6	66	-SF4	-
	3/8	0.984	25.0	3/8	9.53	2.6	66	-SF4	Type C
	1/2	0.984	25.0	5/8	15.88	2.8	72	-SF4	Type C
	1/2	0.984	25.0	3/8	9.50	2.8	72	-SF4	Type C
	3/4	0.984	25.0	5/8	15.85	3.1	79	-SF4	Type C
卫生级 卡箍接头	3/4	1.340	34.0	5/8	15.88	3.0	77	-SF4	Type C
	3/4	1.340	34.0	0.630	16.00	3.0	77	-	Type A
	1/2	1.984	50.5	7/8	22.20	2.8	72	-SF4	Type C
	1/2	1.984	50.5	13/8	34.80	2.8	72	-SF4	Type C
	3/4	1.984	50.5	0.713	18.10	3.0	77	ISO112	Type B
	3/4	1.984	50.5	7/8	22.10	3.0	77	7	Type C
	3/4	1.984	50.5	5/8	15.88	3.0	77	-SF4	Type C
	1	1.984	50.5	7/8	22.20	3.2	82	-SF4	Type C
	1	1.984	50.5	1 3/8	34.80	3.2	82	-SF4	Type C
	1 1/2	1.984	50.5	1 3/8	34.80	3.9	98	-SF4	Type C
	1 1/2	2.516	64.0	1 7/8	47.60	3.9	98	-SF4	Type C
	2	2.516	64.0	1 7/8	47.60	4.1	103	-SF4	Type C
								-SF4	Type C



外部保护构造

- 根据需要，可以增加外部保护构造。
外部保护构造的备有如下：
- * 双层软管末端保护用途的橡胶外套
 - * 陶瓷纤维，硅胶橡胶防火用端管
 - * 防止摩擦用途的HDPE螺旋包套
 - * 螺旋状重厚外部保护不锈钢丝网

压力试验

软管交货前，选择软管或接头较低的最大压力为基准，以它的1.5倍的压力对全套组装软管实施水压试验。根据需要能发行试验证明书。

外部温度范围

上述的使用温度是软管内部温度。RC的软管外部的使用温度是度是121度。

真空限定

完全真空环境的可能使用温度达130度（内部温度）。

EXTERNAL PROTECTION SYSTEMS

If required, additional external protection systems can be applied to special order. These include:

- *Double Rubber Cover hose end protection cuffs.
- *Ceramic Fibre and Silicone Rubber Fire Sleeve.
- *HDPE spiral-wrap for abrasion protection.
- *Helically wound, heavy gauge Stainless Steel Wire outer protection coil.

PRESSURE TESTING

Before despatch, all hose assemblies are hydrostatically pressure tested to 1.5 times the Maximum Working Pressure of either the hose or the end fitting, whichever has the lower M.W.P. A Test Certificate can be issued if required.

External Temperature Range

As for Internal above, except Maximum for RC Grade is 121°C.

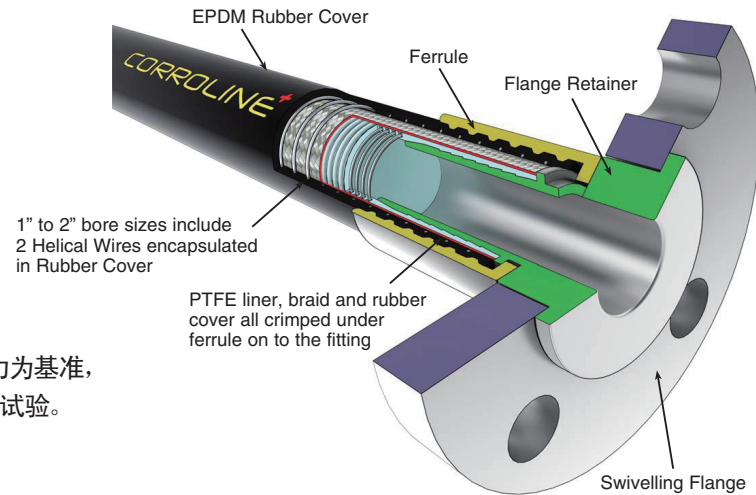
VACUUM LIMITATIONS

SS and RC Grades - Useable at full vacuum up to 130°C/266°F internal temperature.

压力及温度 PRESSURE AND TEMPERATURE LIMITATIONS

	软管内部 Internal Temperature Range	最大使用温度的限度 Maximum Working Pressure (MWP) Limits
SS	-70°C to +260°C / -94°F to +500°F	超过 130 度，随着每一度上升，最大使用压力下降百分之一。 As listed above up to 130°C/266°F, then reduce the MWP by 1% for every 1°C/1.8°F above 130°C/266°F.
RC	-40°C to +140°C / -40°F to +284°F	

软管口径 Hose Size	软管内径 Bore Size	软管外径 Outside Diameter	最小弯曲半径 Minimum Bend Radius	最大使用压力 Maximum Working Pressure	最大能制造的 软管长度 Max cont. length
in	mm	mm	mm	MPa	m
1/2	13.5	SS 17.4 RC 21.4	60	4.5	18
3/4	19.8	SS 24.1 RC 28.1	65	4.3	18
1	26.1	SS 31.7 RC 36.7	100	4.1	18
1-1/2	38.8	SS 46.7 RC 51.7	170	3.8	17
2	51.5	SS 60.85 RC 65.7	210	2.8	13
2-1/2	63.7	80.5	300	2.0	18
3	76.8	92.8	350	1.5	15



跟现有的软管比较 Comparison with The existing Chemical Hose Products

FEP, PFA, 塑料或氟气塑料在橡胶软管内侧粘接形成一层很薄的管壁表面。
Competitors FEP, PFA or another Plastic or Fluoroplastic thin wall hose liner bonded inside a Rubber hose.

“布状加工”橡胶外套
“Cloth Finish” Rubber Cover

网眼补强
Textile reinforcement

螺旋碳钢丝
Carbon steel helical wire

FEP或其他塑料的软管
FEP or other liner

结合软管和橡胶外套的贴紧层
Adhesive layer bonding liner to rubber carcass

Corroline+ 软管，付有螺旋状不锈钢丝，不锈钢网套和橡胶外套。
Corroline+ PTFE lined hose, Stainless steel wire helix and braid, outer Rubber cover.

不锈钢网套
Stainless steel wire braid

螺旋状不锈钢丝
Stainless steel helical wire

内表面平滑
外表面为波纹状PTFE软管
PTFE liner internally smooth externally convoluted

表面平滑加工的黑色EPDM橡胶外套
Smooth finish black EPDM rubber cover

	其他公司产品 Competitors's Products		Corroline +	
加工流体的污染危险性 Process Fluid ContaminationRisk	风险高 High Risk · 导致管壁破漏，软管材料会渗入及污染加工流体。 · adhesive layer can leach in to contaminate the process fluid through pinholes in the liner, caused by static discharge, hose kinking etc.	×	没风险 No Risk · 没有粘接层 · 现在的软管构造上使用的材质没有不是美国食品医药局认定的。 · no adhesive layer · no non-FDA approved materials present in the hose construction	○
柔软性 Flexibility	一般或更差 Fair to Poor · 坚硬，最小弯曲半径大。 · Stiff, large minimum bend radius	×	良好 Good · 更柔软，拥有更小的最小弯曲半径。 · More flexible, reduced minimum bend radius	○
弯曲寿命*(“弯曲U”试验) Flex Life (“Rolling U” Test)	差 Poor · 通常从50到10,000的范围内破损 · Typically from 50 to 10,000 cycles to failure	×	优秀 Excellent · 没有破坏能来回转150,000回以上 · 150,000+ cycles without failure	○
扭曲抵抗力 Kink Resistance	一般 Fair	△	良好 Good	○
螺旋钢丝 Helical Wire	碳钢（会造成腐蚀） Carbon Steel (can corrode)	×	不锈钢 SUS304 Stainless Steel	○
切断或贯通对抗力 Cut Through or Puncture Resistance	一般 Fair (网状保护网套) (Textile Braid Protection)	△	良好 Good (不锈钢丝保护网套) (Stainless Steel Wire Braid Protection)	○
根据FDA规制 抗静电软管品质 (未满足2.5%的高纯度碳素) Antistatic Liner Quality To FDA Requirements (<2.5% High Purity Black)	大部份含有2.6%以上的碳素，不能均等分散。结果造成碳素凝集，污染加工流体。 Often more than 2.5% Black, often unevenly dispersed, leading to carbon agglomerates which contaminate Process Fluid.	×	一直含有未满足2.5%的碳素，均匀分散并保证没有凝集状态。 Always less than 2.5% Black, very evenly dispersed and guaranteed agglomerate-free	○

*关于“运动U”试验，参考AFLEX的网站“Aflex News”→“Bioflex and Corroflon compared with Competitor's Products”
The “Rolling U” test is shown on the Aflex Hose website “Aflex News” → “Bioflex and Corroflon compared with Competitor's Products”.

外层保护套 External Protections

高密度聚乙烯安全保护环带
SG - Safeguard Protection

不锈钢保护螺旋钢丝
PC - Protection Coil

双层橡胶网套
DBK 300 - Double Rubber Cover

使用温度 -40°C ~ 110°C (符合EN16643导静电要求) 可替代高密度聚乙烯，在高温环境上使用 保护两端接头免于机械外力过度拉扯，同时能对防火起到一定保护作用。

HYPERLINE

The Hyperline range of hose products includes three product groups, which is SB (Smooth Bore PTFE lined hose), V (Convolutd PTFE lined hose), FX (Smooth bore, externally convoluted PTFE lined hose).

Hyperline 软管产品的范围包含了3种产品,分别是SB(内表面平滑的PTFE内衬软管),V(螺旋波型PTFE内衬软管)和FX(内表面平滑,外表面是螺旋波型的PTFE内衬软管)。

Hyperline Hose Liner

Hyperline 软管内衬

Standard (Natural) Type 标准(白色)型

Standard Hyperline Hose linings are made from "Natural",100% virgin PTFE, which is translucent white in colour.

标准Hyperline软管内衬本身是白色,半透明的,由100%高纯度PTFE组成。

Antistatic Type (AS) 抗静电型(AS)

Black, antistatic (AS) grade PTFE Linings are, however, an essential requirement in applications where there is the risk of an electrostatic charge build-up on the inside surface of the PTFE tube which may then discharge harmfully, for example,through the PTFE tube wall, to form a leak path.

抗静电(AS)黑色的PTFE内衬在应用方面是必不可缺。静电积聚在PTFE内衬软管内表面时会产生放电,造成损害的危险,例如,通过PTFE软管壁,形成释放静电的路径。

Hose name 软管名称	S B	V	F X
Hose Grade 软管级别	SB-SS	V-TO V-AS-TO V-SS V-AS-SS	FX-TO FX-AS-TO FX-SS FX-AM FX-AS-SS FX-AS-AM

Hyperline SB

Purpose 目的

This range of Hyperline SB PTFE hose has been developed for general purpose use.

HyperlineSB PTFE软管是为满足普通用途而设计的。

Hyperline V

Purpose 目的

HyperlineV is very flexible and kink resistant, but has a convoluted bore which limits fluid flow rates, and reduces internal "cleanability".

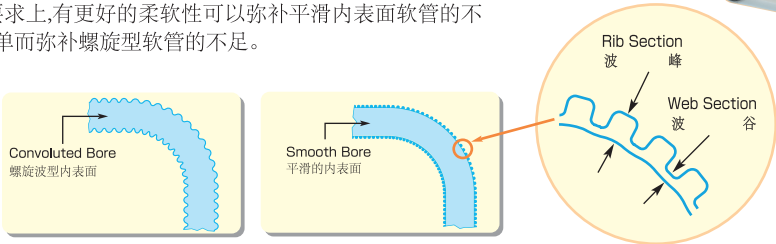
Hyperline V 具有柔软性和耐扭结的特征。但是,螺旋内径限制了液体的流速,且降低了软管内部的“清洁度”。

Hyperline FX

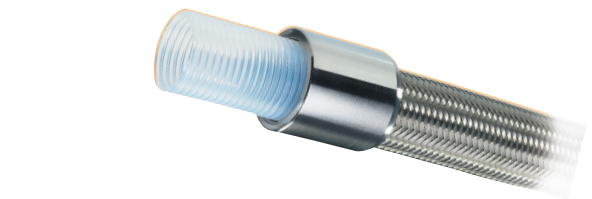
Purpose 目的

Hyperline FX is designed to be used in place of Smoothbore Hose when improved flexibility is required,and to replace Convoluted Hose when improved flow characteristics or easier assembly is required.

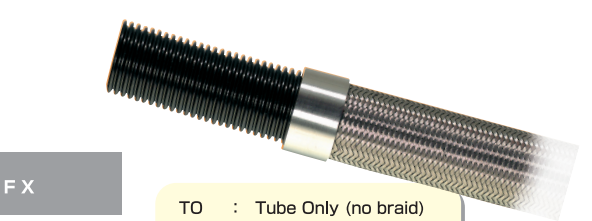
HyperlineFX 软管在设计要求上,有更好的柔软性可以弥补平滑内表面软管的不足,有更大的流量和组装简单而弥补螺旋型软管的不足。



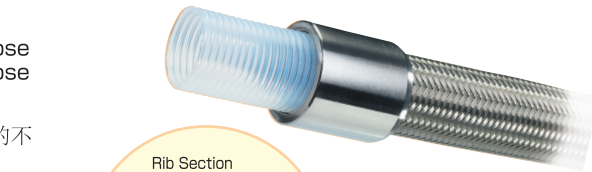
NATURAL PTFE LININGS FOR HYPERLINE HOSES
白色的PTFE内衬HYPERLINE软管



ANTISTATIC PTFE LININGS FOR HYPERLINE HOSES
抗静电PTFE内衬HYPERLINE软管



- TO : Tube Only (no braid)
软管(无编织网)
- SS : Stainless Steel
不锈钢
- AM : Polyaramid Fibre Braid
聚丙烯纤维网套



Hyperline SB

Hyperline SB 是一种内表面平滑,壁厚薄适中,经挤压为无缝PTFE软管,且软管外覆304级别不锈钢钢丝编织网。

Hyperline SB is a smoothbore, medium wall premium grade, seamless extruded PTFE Tube with a Grade304 Stainless Steel Wire Braid.

尺寸范围和参数 Size Range and Specifications Hyperline SB, SS Only

软管口径 Hose Size	实质内径 Actual Bore Size	网套外径 O/D of Braid	最小弯曲半径 Minimum Bend Radius	最大使用压力 Maximum Working Pressure	破坏压力 Burst Pressure	重量 Weight/metre
in	mm	mm	mm	MPa	MPa	kg / m
1/4	6.7	9.3	60	19.3	77.3	0.110
3/8	10.0	12.7	80	17.2	69.1	0.166
1/2	13.6	16.3	130	12.3	49.4	0.210
3/4	19.8	19.5	180	8.5	34.1	0.327
1	26.4	30.2	230	7.6	30.5	0.524

Hyperline V

Hyperline V 是为满足大多数普通产业而设计的螺旋波型PTFE内衬软管。

Hyperline V is Convoluted PTFE Hose designed for use in a wide variety of general purpose industrial applications.

尺寸范围和参数 Size Range and Specifications Hyperline V, SS or V, AS, SS Only

软管口径 Hose Size	实质内径 Actual Bore Size	网套外径 O/D of Braid	最小弯曲半径 Minimum Bend Radius	最大使用压力 Maximum Working Pressure	破坏压力 Burst Pressure	重量 Weight/metre
in	mm	mm	mm	MPa	MPa	kg / m
3/8	6.30	13	20	7.60	22.9	0.13
1/2	9.50	17	25	5.60	17.0	0.20
3/4	16.0	24	50	4.60	13.8	0.34
1	22.2	29	63	3.25	9.8	0.47
1 1/4	28.2	36	70	2.75	8.3	0.63
1 1/2	35.0	47	115	2.20	6.6	0.90
2	47.0	61	130	1.83	5.5	1.25

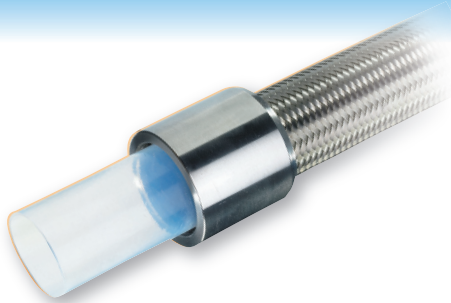
Hyperline FX

Hyperline FX 与其他PTFE软管产品不一样。PTFE内衬软管是内表面平滑,外表面为螺旋波型的PTFE内衬软管,组装方便。该产品的特点是内表面平滑,流量大,有良好的柔软性,且具有螺旋波型软管特有的不断折性能。

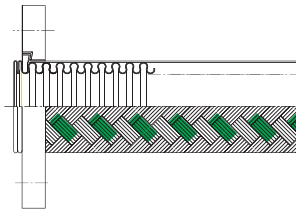
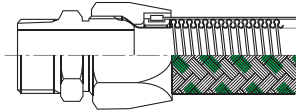
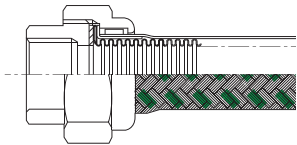
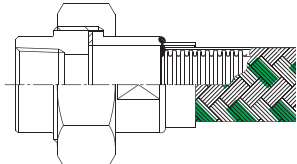
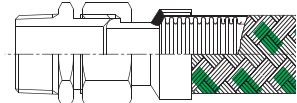
Hyperline FX is unlike any other PTFE hose product currently available. The PTFE liner tube is smooth bore on the inside but conboluted on the outside, to combine the ease of assembly and high flow rates of a smooth bore hose with the flexibility and kink resistance of a convoluted hose in one product.

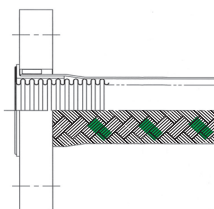
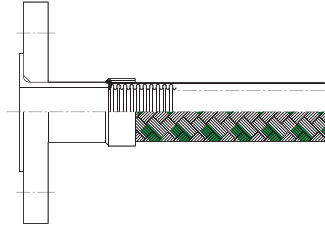
尺寸范围和参数 Size Range and Specifications Hyperline FX, SS Only

软管口径 Hose Size	实质内径 Actual Bore Size	软管外径 O/D of Tube	最小弯曲半径 Minimum Bend Radius	最大使用压力 Maximum Working Pressure	破坏压力 Burst Pressure	软管外径 O/D of Braid
in	mm	mm	mm	MPa	MPa	mm
1/4	6.80	8.6	19	8.8	35	9.6
3/8	10.0	12.5	25	8.0	32	13.5
1/2	13.6	16.4	32	6.0	24	17.5
3/4	19.8	23.8	60	4.2	17	25.1
1	26.4	30.0	73	4.0	16	31.3



Metal Flexible Tubes

	TF-20000	型式略称 : NW Code Address	法兰型 非焊接接合 Non Welded Flange Type
		● 构造: 软管非焊接接合的法兰型 ● 特长: 优秀的吸收振动能力 ● 通径: 20A~300A ● 接头材质: 法兰 碳钢・不锈钢 Construction: Non welded flange type Features: Excellent absorption of vibration Nominal dia.: 20A~300A Fitting materials: Flange Carbon Steel, Stainless steel	使用软管 Tubes Ω型环形软管 Tuf Omega Tube
	TF-1600	型式略称 : MT Code Address	锥管螺纹型 非焊接型接合 Non Welded Screw Type
		● 构造: 非焊接型软管接合 ● 特长: 小型的锥管螺纹 ● 通径: 8A~25A ● 接头材质: 法兰 碳钢・不锈钢 Construction: Flange nut is connected with tube without welding. Features: Compact design, screw type Nominal dia.: 8A~25A Fitting materials: Flange Carbon Steel, Stainless steel	使用软管 Tubes 优秀螺旋软管 Excellent Tube 柔软螺旋软管 Soft Tube
	TF-1800	型式略称 : Super UNW Code Address	锥管螺纹型 非焊接型接合 Non Welded Screw Type
		● 构造: 软管不焊接的由任型号 ● 特长: 不焊接, 优秀的振动吸收能力 ● 通径: 15A~50A ● 接头材质: FCMB (由任接头) Construction: Non welded, union type. Features: Non welded, excellent absorption of vibration Nominal dia.: 15A~50A Fitting materials: FCMB (Union)	使用软管 Tubes 超柔软环形管 Super Annular
	TF-1100	型式略称 : SSE・SUSE・EF (R式) Code Address	锥管螺纹型 焊接型接合 Screw Welded Type
		● 构造: 由任接头与管焊接。 ● 特长: SUSE的接液部耐腐蚀性优越。 ● 通径: 10A~50A ● 接头材质: SSE : 碳钢 SUSE : 不锈钢 EF (R式) : FCMB ※其他的由任接头也能焊接, 请联系。 Construction: Union fitting is welded to tube Features: As wetted part is stainless steel, it is good corrosion resistance. Nominal dia.: 10A~50A Fitting materials: SSE Carbon steel SUSE Stainless steel EF (R-type) FCMB * Other union welding type are available. Please contact us.	使用软管 Tubes Ω型环形软管 Tuf Omega Tube 超柔软环形管 Super Annular 超薄柔软环形管 Super Bellow 优秀螺旋软管 Excellent Tube 柔软螺旋软管 Soft Tube 3层超耐压柔软螺旋管 UFO Flex BOA-DUO 2层超柔软螺旋管 Ultra Soft Flex
	TF-7000	型式略称 : SSNM・SSNF・SUSSNM・SUSSNF Code Address	锥管螺纹型 焊接型接合 Screw Welded Type
		● 构造: 螺帽接头与软管焊接。 ● 特长: 用扳手把螺母夹紧, 能够容易与配管安装和拆卸。 ● 通径: 8A~50A ● 接头材质: SSNM・SSNF : 碳钢 SUSSNM・SUSSNF : 不锈钢 ● 锥管螺纹: M : 螺纹管接头 R F : 螺纹管插座 Rc Construction: Female unit fitting tube is butt welded to tube. Features: Female nut can be easily fastened with wrench. Nominal dia.: 8A~50A Fitting materials: SSNM・SSNF : Carbon steel SUSSNM・SUSSNF: Stainless Steel Fitting screw: M : Male Nipple R F : Female Socket Rc	使用软管 Tubes Ω型环形软管 Tuf Omega Tube 超柔软环形管 Super Annular 超薄柔软环形管 Super Bellow 优秀螺旋软管 Excellent Tube 柔软螺旋软管 Soft Tube 3层超耐压柔软螺旋管 UFO Flex BOA-DUO 2层超柔软螺旋管 Ultra Soft Flex

	TF-48000	型式略称 : Super NW Code Address	法兰型 非焊接接合 Non Welded Flange Type
		● 构造: 软管非焊接 ● 特长: 面压大, 密封更能确实 ● 通径: 20A~50A ● 接头材质: 法兰 碳钢・碳钢・不锈钢 Construction: Non welded type Features: Large seal surface assures a firm seal Nominal dia.: 20A~50A Fitting materials: Flange Mild Steel, Carbon steel, Stainless steel	使用软管 Tubes 超柔软环形管 Super Annular
	TFR-2000・3000・4000	型式略称 : SB・SUSB・SUSBSUS Code Address	法兰型 焊接接合 Welded Flange Type
		● 构造: 互搭接头与软管对接焊接。 ● 特长: 两端法兰不固定, 容易配管。 ● 通径: 10A~50A ● 接头材质: SB: 互搭接头是碳钢 SUSB: 互搭接头是不锈钢 (接流体部SUS) SUSBSUS: 互搭接头和法兰都是不锈钢 (all SUS) ● 连接接头: TFR-2000 (JIS5K法兰) TFR-3000 (JIS10K法兰) TFR-4000 (JIS20K法兰) ※65A以上的尺寸也能制作, 请查询。 也采用不锈钢钢带拉紧式来焊接。 Construction: The tube is butt-welded to the lap joint. Features: As the both ends flanges are loose, pipe laying work is easily done. Nominal dia.: 10A~50A Fitting materials: SB Lap joint Carbon steel SUSB Lap joint Stainless steel (Wetted part SUS) SUSBSUS Lap joint and flange Stainless steel (all SUS) Fittings: TFR-2000 JIS5K Flange Fittings: TFR-3000 JIS10K Flange Fittings: TFR-4000 JIS20K Flange ※About over 65A and bigger sizes, please contact us. Band welded type is also available.	使用软管 Tubes Ω型环形软管 Tuf Omega Tube 超柔软环形管 Super Annular 超薄柔软环形管 Super Bellow 优秀螺旋软管 Excellent Tube 柔软螺旋软管 Soft Tube 3层超耐压柔软螺旋管 UFO Flex BOA-DUO 2层超柔软螺旋管 Ultra Soft Flex

焊接式卡箍接头 Welded Type Ferrule Fitting

焊接式卡箍接头

型号 卡箍接头
Model Ferrule

- 构造 Construction:
 - 卡箍接头与软管对接式焊接
Ferrule is welded with tubes
- 特长 Features:
 - 接头小型、轻量, 拆卸、维修、点检、组装都非常容易。
As ferrule are small, and light, easy for disassemble maintenance, inspection and assemble.
- 口径 Nominal diameter: IDF:1S~61/2S
- 材质 Materials: 不锈钢 Stainless steel

焊接式卡箍接头 (I・D・F)

口径	φA	φB	φC	φD	E	F	质量kg	软管口径	软管内径	软管种类
1S	50.5	43.5	23.0	25.4	21.5	2.85	0.072	20A	20.0	Super Annular 超柔软环形管
1-1/4S	50.5	43.5	29.4	31.8	21.5	2.85	—	25A	25.4	
1-1/2S	50.5	43.5	35.7	38.1	21.5	2.85	0.050	32A	32.0	
2S	64.0	56.5	47.8	50.8	21.5	2.85	0.078	40A	40.0	
2-1/2S	77.5	70.5	59.5	63.5	21.5	2.85	0.113	50A	50.0	Tuf Omega Tube Ω型环形软管
3S	91.0	83.5	72.3	76.3	21.5	2.85	0.138	65A	67.0	
3-1/2S	106.0	97.0	85.1	89.1	21.5	2.85	0.175	80A	78.5	
4S	119.0	110.0	97.6	101.6	28.0	2.85	0.235	90A	92.5	
4-1/2S	130.0	122.0	108.3	114.3	28.0	2.85	0.342	100A	103.5	
5-1/2S	155.0	148.0	133.8	139.8	28.0	5.60	0.477	125A	128.5	
6-1/2S	183.0	174.0	159.2	165.2	28.0	5.60	0.630	150A	152.0	

软管正确使用 Proper Handling of Flexible Tubes

选定适合使用条件的软管，正确安装。这是为了延长产品寿命的秘诀。
The key to extending the service life is to select the model best suited for the operating conditions and handle it correctly.

安装软管时注意 Precautions

请忽扭曲!
软管不能吸收扭曲。
· 扳紧旋转接头时，请用两枝扳子。
· 弯曲要在同一平面上。

Do not twist the tubing!
No twist or torque can be absorbed by flexible tubing.
• Be sure to fasten the screw metal fittings using two wrenches.
• Bend the tubing only within one plane.

请忽过度弯曲!
过度弯曲会降低耐压性。
有反复动作时，弯曲半径越大越好。
· 请严守弯曲半径。

Do not bend the tubing excessively.
An extremely small bend decreases pressure resistance.
• Strictly observe the specified bending radius of the tubing.

保持适当的长度!
拉伸承受重量会降低附有网套的软管的耐压性。
· 保持适当的余留。

Use a sufficient length of tubing.
A tensile load applied to wire-braided tubing decreases pressure resistance.
• Use a sufficient length of tubing to avoid tensile load.

支撑软管的连接软管 Support Any Hose Located Next to the Tube

没支撑的配管可能会增加振动幅度。
• Any unsupported vibrating hose may amplify vibration.

✗ 误 Incorrect
○ 正 Correct

1

安装软管时，要尽量避免弯曲，保持竖直。
Use an elbow if possible.

2

软管两端部不能弯曲，要竖直安装。
Avoid sharp bends. Maintain a sufficient bend radius.

3

使用支撑导论对弯曲配管有效。
Use pipe guides and support wheels.

4

防止扭曲（同时使用能旋转的接头也有效）
Avoid torque by using swivel fittings and floating flanges.

使用PTFE软管时，不能使用的流体 Liquid not to be used

绝对不能使用的流体

No condition allow to be used for these liquid.

高温、连续冲击抵抗、
温度、压力造成安全
性疑虑的流体

Some conditions would allow to be used for these liquid.

※选择金属软管时，关于使用流体的限制请与我司另行商谈。

1 钠 sodium

2 钾 potassium

3 锂 lithium

4 氟F₂ fluorine, F₂

5 三氟化氯 chlorine trifluoride, ClF₃

6 氢氧化钠 sodium hydroxide

7 氢氧化钾 potassium hydroxide

8 溴 bromine

9 氯化铝 aluminium chloride

10 氨 ammonia, NH₃

11 胺类 amines, R-NH₂

12 亚胺 imines

13 70%硝酸 (局限在-249℃压力下缓慢酸化)
70 % sulphuric acid : Slowly oxidized under the pressure -249℃.

软管使用条件记录表 Using Application

请在下方方框内打勾： Please check below boxes

☐ 想进一步了解特扶利的产品，希望得到特扶利的访问和产品介绍
I want to know about TOFLE products more or want explanation by visit.

☐ 希望邮送产品资料
I want Tofle to send catalogues.

现在使用的，或今后打算使用的软管种类：

Type of product that you use now, or you would like to use:

☐ 不锈钢软管 Stainless Flexible Tubes

☐ PTFE软管 PTFE Hoses

☐ 其他 () Others ()

软管使用条件： Application in detail

软管材质 Material	用途 Application		
口径 Nominal dia.	全长 Over all length		介质 Media
使用温度 Operating temperature	最高温度 Maximum temperature		
使用压力 Operating pressure	最高压力 Maximum pressure		
接头 Connection	种类 Type	尺寸 Size	
	材质 Material	规格 Standard	
位移量 Deflection	X方向 Axial Deflection	Y方向 Lateral Deflection	变化角度 Angular Deflection
最多使用次数 Expected life cycle	要求卫生级标准 Sanitary Grade Requirements		

软管安装略图或其他使用条件：

Please draw a rough sketch or specify other applications if any.

如果贵公司在机械设备，管道安装等方面有需要改善或解决问题，请详细记录具体情况：

If you have any problems to improve or solve about machines, or piping system, please specify the details.

公司名称 Company name:

TEL:

地址 Adress:

FAX:

担当者 Person in charge:

E-mail: