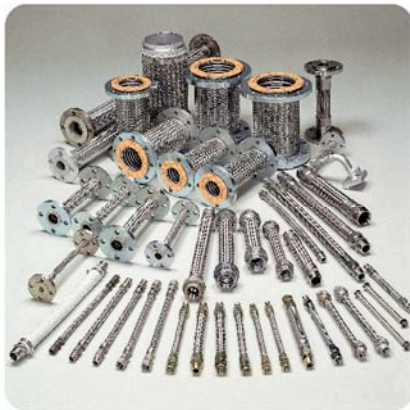




特扶利五金制品(上海)有限公司  
TOFLE FLEXIBLE METAL HOSE (SHANGHAI) CO., INC.

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金属软管  
Metal Flexible Tubes



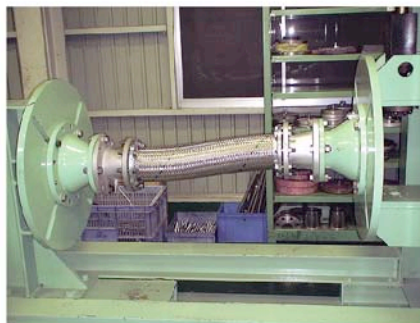
PTFE软管  
PTFE Hoses

TOFLE用可靠的技术维持用户能安心, 安全, 安定地使用产品

TOFLE support your SECURITY, SAFETY, STABILITY with our refined technology.



振动试验极  
Vibration Durability Test



反复变位试验机  
Displacement Test



材料检查  
(手提式成分分析)  
Material Inspection  
(Portable Component Analyzer)





## 公司简介

特扶利五金制品（上海）有限公司是在2002年12月12日由 TOFLE CO., INC. 全额投资，建立在上海市松江区的日本独资企业。特扶利五金制品利用在日本的螺旋管综合厂家所积蓄的技术，以高层建筑使用的连接软管为中心，生产在所有领域都能应用的产品。尤其是以Ω（欧美雅）形状的环形软管和超柔软环型软管为主，贡献于各种产业。软管产品出口欧洲、美国、东南亚和大洋洲。

今后，以上海为据点，为了满足日益增加的社会需要，为顾客提供能安心使用的产品，特扶利五金制品永无止境地一直在向各领域不断挑战。

## Company Profile

We situated in Songjiang, Shanghai were invested and established solely by the Japanese Company, Tofle Co., Inc. on December 12 2002.

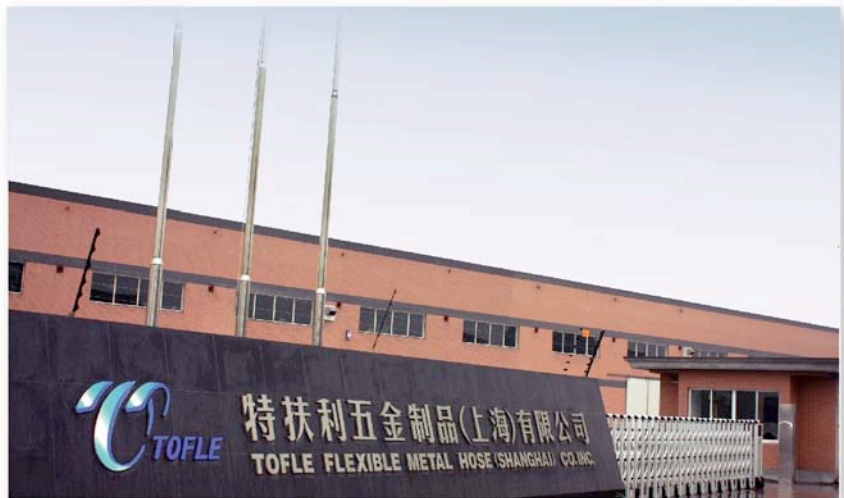
We have been producing the products, which are applied and used in every industrial field, mainly as the high quality building piping materials, having made use of much accumulated technology and technique by the above global integrated flexible tube manufacturer in Japan.

We have been exporting various kinds of Flexible Tube to Europe, U.S.A., South-East Asia, Oceania, as well as to Japan. Our main products are Omega type tube and Super Annular tube, having much contributed for great development of various industries.

We, TOFLE would continue to strive, based in Shanghai, to manufacture and supply the products, which can be applied and used with safety and reliability by all possible customers and users, satisfying social sophisticated needs.



日本特扶利株式会社  
TOFLE CO., INC.



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

# 软管 Flexible Tubes

## 单环形状 Annular type

### 超柔软环形管 Supper Annular

材质 Material : SUS304 · SUS316L

- 管壁薄, 波纹多的单环状软管。
- 波谷波峰均一, 管壁厚度一致。
- 耐压, 持久性能非常高。



- Thin wall, numerous annular corrugations.
- Even thickness throughout the corrugations.
- Excellent durability and excellent pressure resistance.

口径 (A) Nominal dia.	内径 In. dia.	外径 Out. Dia.	最小弯曲半径 (mm) Minimum bending radius		使用压力 Working Pressure (Mpa)	破坏压力 Brust Pressure (Mpa)
			固定 Fix	反复 Repetition		
8A	8.0	11.7	20	60	6.6	9.9
10A	10.0	14.3	30	100	7.4	11.0
15A	15.0	20.0	35	125	4.3	6.5
20A	20.0	26.2	40	130	3.3	5.0
25A	25.4	31.5	70	190	4.5	6.7
32A	32.0	38.6	90	205	3.1	4.7
40A	40.0	48.9	125	235	2.9	4.3
50A	50.0	59.3	190	270	2.0	3.0

### 超薄柔软环形管 Super Bellow

材质 Material : SUS316L

- 管壁很薄, 波纹多的单环状软管。
- 柔软, 振动吸收性能优越, 反复寿命非常高。



- Extra-thin wall, numerous annular corrugation.
- Flexibility, excellent absorption of vibration, excellent durability against repetition.

口径 (A) Nominal dia.	内径 In. dia.	外径 Out. Dia.	最小弯曲半径 (mm) Minimum bending radius		使用压力 Working Pressure (Mpa)	破坏压力 Brust Pressure (Mpa)
			固定 Fix	反复 Repetition		
10A	8.0	11.7	20	60	6.6	9.9
15A	10.0	14.3	30	100	7.4	11.0
20A	15.0	20.0	35	125	4.3	6.5
25A	20.0	26.2	40	130	3.3	5.0
32A	25.4	31.5	70	190	4.5	6.7
40A	32.0	38.6	90	205	3.1	4.7
50A	40.0	48.9	125	235	2.9	4.3

### Ω型环形软管 Tuf Omega Tube

材质 Material : SUS304 · SUS316L · SUS321

- 持久性, 耐压性高的广泛应用的软管。
- Excellent durability and excellent pressure resistance.



口径 (A) Nominal dia.	内径 In. dia.	外径 Out. Dia.	最小弯曲半径 (mm) Minimum bending radius		使用压力 Working Pressure (Mpa)	破坏压力 Brust Pressure (Mpa)
			固定 Fix	反复 Repetition		
25A	27.0	38.5	90	170	3.77	18.2
32A	32.5	48.5	110	180	2.45	17.7
40A	41.0	56.5	120	200	3.02	12.1
45A	46.0	63.5	130	215	2.38	9.6
50A	53.5	72.5	135	225	1.79	7.2
65A	67.0	87.4	150	260	2.25	9.0
80A	78.5	103.0	220	275	1.62	6.5
90A	92.5	119.0	240	300	1.19	4.8
100A	103.5	129.0	280	350	1.22	4.9
125A	128.5	156.5	425		1.17	4.7
150A	152.0	183.5	500		0.85	3.4
175A	177.5	209.5	600		1.24	5.0
200A	203.0	238.0	750		0.95	3.8
225A	227.0	264.0	850		0.92	3.7
250A	251.0	290.0	900		0.75	3.0
275A	276.0	317.0	1050		0.90	3.6
300A	300.5	342.5	1200		0.77	3.1

### Ω型密波环形软管 Tuf Omega Bellows

材质 Material : SUS304 · SUS316L · SUS321

- 波距夹, 适合于振动大, 频率多的配管用途。
- Closed pitch, strong against repetitions bending and vibration.



口径 (A) Nominal dia.	内径 In. dia.	外径 Out. Dia.	最小弯曲半径 (mm) Minimum bending radius		使用压力 Working Pressure (Mpa)	破坏压力 Brust Pressure (Mpa)
			固定 Fix	反复 Repetition		
25A	26.5	39.0	80	160	4.31	18.2
32A	32.0	49.0	100	170	1.90	17.7
40A	40.5	57.0	110	180	3.02	12.1
45A	45.0	64.0	115	190	2.40	9.6
50A	53.0	73.0	120	200	1.79	7.2
65A	66.5	87.9	140	225	2.11	9.0
80A	78.0	103.5	200	250	1.37	6.5
90A	92.0	119.5	220	275	1.09	4.8
100A	103.0	129.5	240	300	1.22	4.9
125A	128.0	157.0		350	1.17	4.7
150A	151.5	184.0		400	0.85	3.4
175A	177.0	210.0		500	1.15	5.0
200A	202.5	238.5		600	0.95	3.8
225A	226.5	264.5		650	0.92	3.7
250A	250.5	290.5		700	0.75	3.0
275A	275.5	317.5		800	0.90	3.6
300A	300.0	343.0		900	0.77	3.1

### 2层Ω型环形软管 Omega 2ply Bellows

材质 Material

内层 Inner : SUS316L

外层 Outer : SUS304

- 柔软性非常高, 耐压性高, 2层构造的安全设计。



- Safety is higher according to 2ply constructions.

口径 (A) Nominal dia.	内径 In. dia.	外径 Out. Dia.	最小弯曲半径 (mm) Minimum bending radius		使用压力 Working Pressure (Mpa)	破坏压力 Brust Pressure (Mpa)
			固定 Fix	反复 Repetition		
40A	40.5	56.5	200	270	2.77	11.1
50A	53.5	73.0	250	280	3.87	15.5
65A	67.0	88.5	300	320	2.55	10.2
80A	78.5	103.0		400	1.85	7.4
100A	103.5	130.5		700	2.52	10.1
125A	128.5	157.5		750	1.67	6.7
150A	152.0	184.5		800	1.19	4.8
200A	203.0	238.0		900	1.10	4.4
250A	251.0	291.0		1100	1.25	5.0
300A	300.5	343.5		1300	1.20	4.8
350A	346.0	391.0		1500	0.65	2.6
400A	396.0	442.0		1800	0.50	2.0



2层Ω型环形软管  
Omega 2ply Bellows



## 螺旋形状 Spiral Type

### 优秀螺旋软管 Excellent Tube

材质 Material : SUS304 · SUS316L

- 耐压性，持久性高的广泛应用的软管。
- Excellent durability and excellent pressure resistance.



口径 (A) Nominal dia.	内径 In. dia.	外径 Out. Dia.	最小弯曲半径 (mm) Minimum bending radius		使用压力 Working Pressure (Mpa)	破坏压力 Burst Pressure (Mpa)
			固定 Fix	反复 Repetition		
8A	6.8	10.8	25	80	11.7	58.4
10A	10.0	15.0	30	100	9.7	38.8
15A	13.0	18.7	50	140	6.1	24.3
20A	18.7	25.3	70	150	4.2	16.9
25A	24.8	32.6	80	160	5.6	22.2
32A	32.0	41.2	100	170	3.4	13.7
40A	37.3	47.7	150	240	3.8	15.2
50A	50.0	62.0	200	270	2.2	8.8

### 柔软螺旋软管 Soft Tube

材质 Material : SUS316L

- 反力低的广泛应用的软管。
- Small spring rate multipurpose tube.



口径 (A) Nominal dia.	内径 In. dia.	外径 Out. Dia.	最小弯曲半径 (mm) Minimum bending radius		使用压力 Working Pressure (Mpa)	破坏压力 Burst Pressure (Mpa)
			固定 Fix	反复 Repetition		
10A	10.5	15.5	25	80	6.5	26.0
15A	13.5	19.0	30	90	4.1	16.5
20A	19.1	26.2	35	120	2.8	11.2
25A	25.3	33.5	45	130	3.5	14.2
32A	32.6	42.5	50	160	2.2	8.8
40A	38.5	49.0	85	170	2.5	10.1
50A	51.5	63.0	120	220	1.5	6.0

### 3层超耐压柔软螺旋管 UFO Flex BOA-DUO

材质 Material : SUS321

- 把二层不锈钢板做螺旋波状，外面第3层不锈钢用电焊接。
- 耐超高压，吸收激烈的振动。
- Corrugate the thin plate of stainless in spiral, and weld the 3ply in top the of corrugation continuously by Electric Welding.
- Resistance for high pressure and absorption for vibration



口径 (A) Nominal dia.	内径 In. dia.	外径 Out. Dia.	最小弯曲半径 (mm) Minimum bending radius		使用压力 Working Pressure (Mpa)	破坏压力 Burst Pressure (Mpa)
			固定 Fix	反复 Repetition		
8A	8.1	13.8	20	210	10.7	43.0
10A	10.2	16.1	25	220	9.7	40.1
15A	12.2	18.8	30	225	7.0	27.9
20A	20.2	28.3	40	270	3.7	14.8
25A	25.2	33.8	50	315	5.6	22.5
32A	32.3	43.3	60	405	3.4	13.4
40A	40.3	51.4	70	480	3.4	13.8
50A	50.3	63.3	90	570	2.2	8.8

### 2层超柔软螺旋管 Ultra Soft Flex

材质 Material : SUS321

- 柔软性及振动吸收性能卓越。
- 把不锈钢板做螺旋状，外面第2层不锈钢用电焊接。
- Excellent flexibility and excellent absorption of vibration.
- Corrugate the thin plate of stainless in spiral, and weld the top of corrugation continuously by Electric Welding.



口径 (A) Nominal dia.	内径 In. dia.	外径 Out. Dia.	最小弯曲半径 (mm) Minimum bending radius		使用压力 Working Pressure (Mpa)	破坏压力 Burst Pressure (Mpa)
			固定 Fix	反复 Repetition		
8A	8.2	13.8	20	45	4.2	44.0
10A	10.2	15.8	25	55	4.4	37.1
15A	12.2	18.6	30	60	4.0	28.8
20A	20.2	27.9	40	95	3.8	15.2
25A	25.2	33.4	50	110	3.2	20.7
32A	32.3	42.5	60	115	2.0	14.0
40A	40.3	50.5	70	135	2.1	14.1
50A	50.3	62.7	90	160	1.8	9.0

※ 使用压力及破坏压力数值是使用1层金属网套的数值。

Working pressure and Burst pressure showed calculated figures with single braid at ambient.



超柔软环形管  
Supper Annular



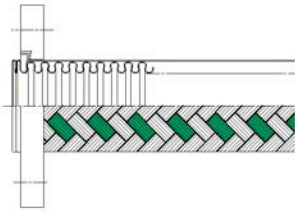
Ω型环形软管  
Tuf Omega Tube



3层超耐压柔软螺旋管  
UFO Flex BOA-DUO

# 接头型号 End fitting list

## TF-20000



型式略称 : NW  
Code Address

- 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

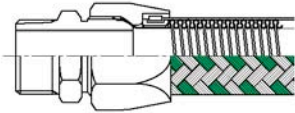
Construction: Non welded flange type  
Features: Excellent absorption of vibration  
Nominal dia.: 20A~300A  
Fitting materials: Flange Carbon steel, Stainless steel

法兰型 非焊接接合  
Non Welded Flange Type

使用软管  
Tubes

Ω型环形软管  
Tuf Omega Tube

## TF-1600



型式略称 : MT  
Code Address

- 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

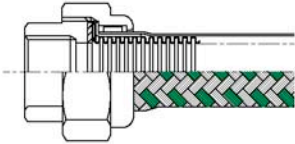
锥管螺纹型 非焊接型接合  
Non Welded Screw Type

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

- 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)

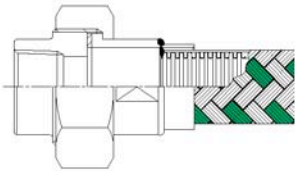
Construction: Non welded, union type.  
Features: Non welded, excellent absorption of vibration  
Nominal dia.: 15A~50A  
Fitting materials: FCMB (Union)

锥管螺纹型 非焊接型接合  
Non Welded Screw Type

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

- 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.

锥管螺纹型 焊接型接合  
Screw Welded Type

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

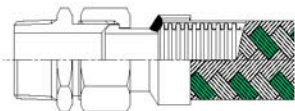
优秀螺旋软管  
Excellent Tube

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

- 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 nut 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

锥管螺纹型 焊接型接合  
Screw Welded Type

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

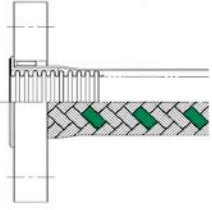
2层超柔软螺旋管  
Ultra Soft Flex



## 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

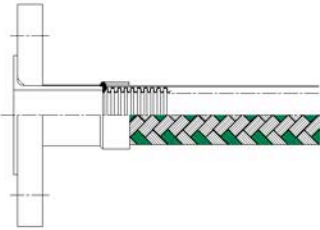
使用软管  
Tubes

超柔软环形管  
Super Annular

## TFR-2000 · 3000 · 4000

型式略称 : SB · SUSB · SUSBSUS  
Code Address

法兰型 非焊接接合  
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: 互搭接头是碳素钢  
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  
TFR-3000 JIS10K Flange  
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

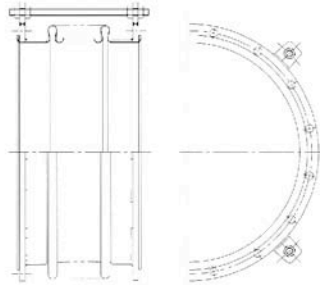
3层超耐压柔软螺旋管  
UFO Flex BOA-DUO

2层超柔软螺旋管  
Ultra Soft Flex

## TX-10005

型式略称 : ENW  
Code Address

非焊接排气伸缩接头  
Expansion Joint for Engine Exhaust



- 构造: 非焊接式排气管
- 特长: 弹性反力小, 长寿命型
- 通径: 50A ~ 1200A
- 接头材质: 法兰 碳钢 · 不锈钢

Structure: Non welded type for piping exhaust  
Features: small spring rate, long durability  
Nominal dia.: 50A~1200A  
Fitting materials: Flange Carbon steel, Stainless steel

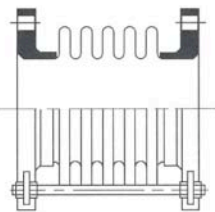
使用软管  
Tubes

Ω型波纹管  
Omega Bellows

大口径伸缩接头  
Bellows Expansion

## TX-20010

焊接自由型伸缩接头  
Expansion Joint in Free Type



- 构造: 最标准广用型
- 特长: 弹性反力小, 长寿命型
- 通径: 50A ~ 600A
- 接头材质: 法兰 碳钢 · 不锈钢

Structure: multipurpose tube  
Features: small spring rate, long durability  
Nominal dia.: 50A~600A  
Fitting materials: Flange Carbon steel, Stainless steel

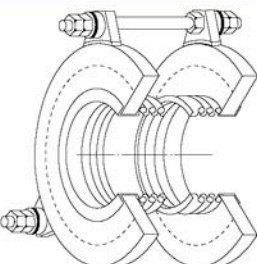
使用软管  
Tubes

Ω型波纹管  
Omega Bellows

## TX-83000

型式略称 : VJ  
Code Address

非焊接防振接头  
Non Welded Versa Joints



- 构造: 内层SUS316L 外层SUS304的2层
- 特长: 非焊接2层式的防振接头
- 通径: 50A ~ 400A
- 接头材质: 法兰 碳钢 · 不锈钢

Structure: 2 ply type ( Inner SUS316L, Outer SUS304 )  
Features: Non welded 2 ply vibration absorber.  
Nominal dia.: 50A~400A  
Fitting materials: Flange Carbon steel, Stainless steel

使用软管  
Tubes

2层Ω型波纹管 ( 10K )  
Omega 2ply Bellows