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Teflon hoses

Hybridflex
Teflon hoses / Teflon coating

The most useful characteristic of Teflon is chemical resistance. It also excels in water repellency, non-tackiness, low friction and electrical insulating properties. Utilizing the features of Teflon, we have developed Hybridflex and Teflon hoses.

※Teflon is a registered trademark of Du Pont.

300
APPROX

250

200

150

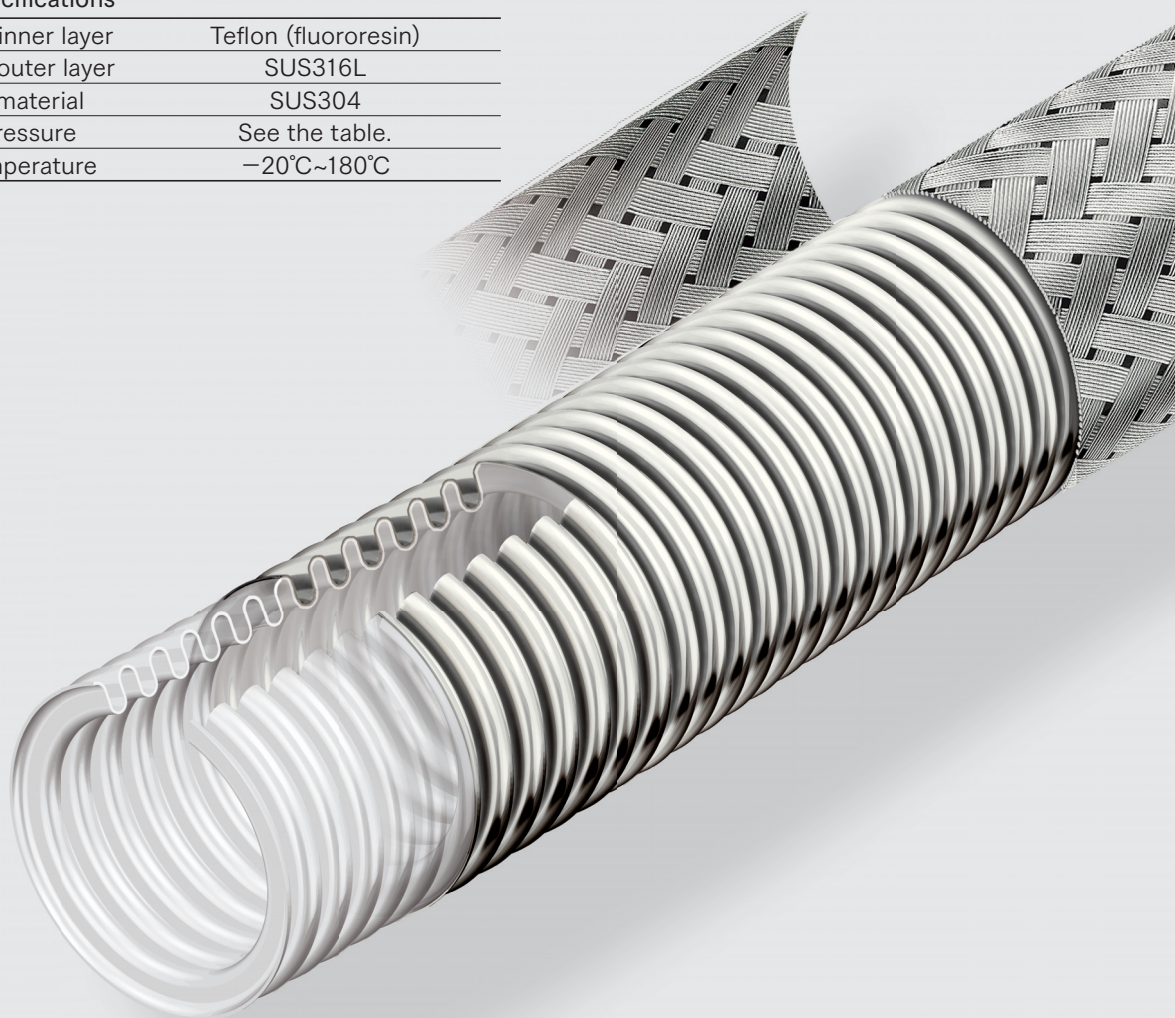
※We are ready to produce models not listed in the catalog. Please feel free to consult us.

Hose specifications

■ Hybridflex is a flexible hose consisting of two corrugated pipes, Teflon inner pipe and stainless steel outer pipe. The Teflon inner layer excels in corrosion resistance and ensures flexibility. The stainless steel outer layer ensures pressure resistance.

Standard specifications

Flexible hose inner layer	Teflon (fluororesin)
Flexible hose outer layer	SUS316L
Wire braid material	SUS304
Working pressure	See the table.
Working temperature	-20°C~180°C



Standard dimensions and performance

Nominal diameter		Inner diameter (mm)	Thickness(mm)		Outer diameter (mm)		Min. bending radius (mm)		Max. working pressure (MPa) ^{※1}
A	B		SUS	Teflon	No braid	Single braid	Constant bending	Repeated bending	
20	3/4	19	0.2	1.0	29	31	50	210	2.0
25	1	24	0.2	1.0	36	38	70	250	2.0
32	1 1/4	30	0.2	1.5	44	46	80	270	1.7
40	1 1/2	37	0.26	1.5	54	56	100	330	1.5
50	2	45	0.26	2.0	64	66	130	350	1.4
65	2 1/2	61	0.3	2.0	82	84	170	510	1.2
80	3	73	0.3	2.0	98	100	200	600	1.0
100	4	96	0.3	2.2	123	125	240	750	1.0

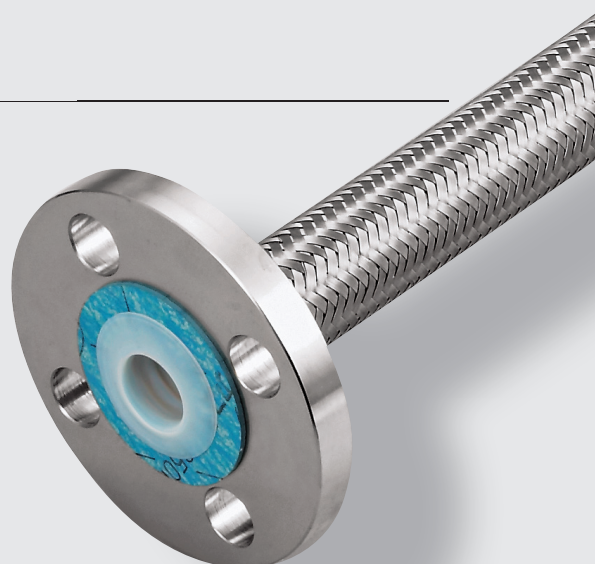
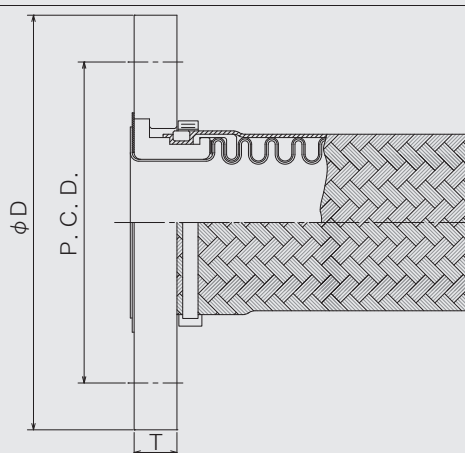
※Maximum length to be manufactured is 2000mm.

※The specifications are subject to change for product improvement without prior notice.

※Maximum working pressure may vary depending on design conditions.

※1 : pressure at working temperature 40°C, safety factor of 3 and weld efficiency of 1.

Flange



Standard specifications

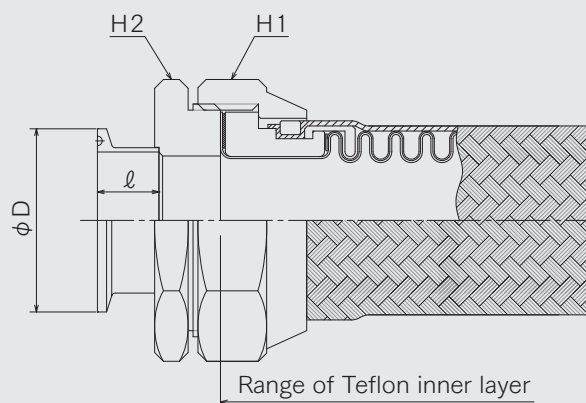
Nominal diameter		D	P.C.D.	T
A	B			
20	3/4	100	75	14
25	1	125	90	14
32	1-1/4	135	100	16
40	1-1/2	140	105	16
50	2	155	120	16
65	2-1/2	175	140	18
80	3	185	150	18
100	4	210	160	18

※Joint material: SUS304 (For other materials, please consult us.)

※The dimensions of flanges conforming to JIS 10K are shown.

※Other flanges can be fabricated.

Ferrule (NW)

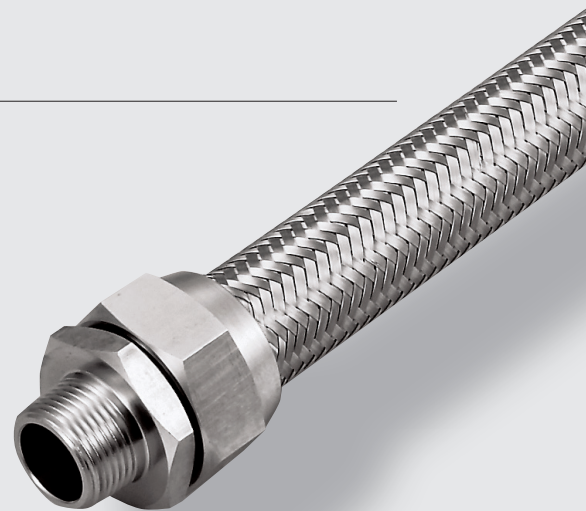
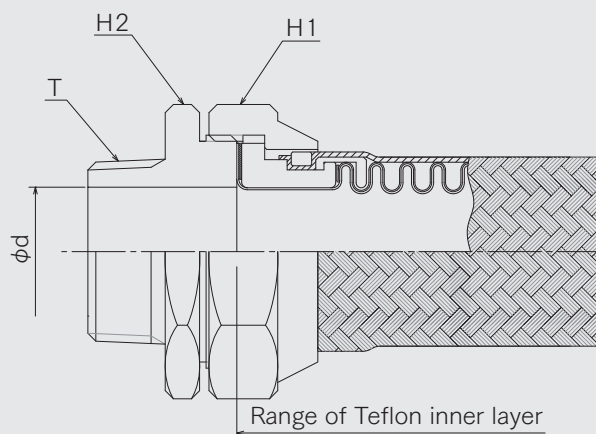


Standard specifications

Nominal diameter		D	ℓ	H1	H2
A	B				
20	3/4	50.5	20.5	Hexagonal, flat46	Hexagonal, flat46
25	1	50.5	20.5	Hexagonal, flat54	Hexagonal, flat50
32	1-1/4	50.5	20.5	Hexagonal, flat60	Hexagonal, flat58
40	1-1/2	50.5	20.5	Octagonal, flat71	Octagonal, flat71
50	2	64.0	20.5	Octagonal, flat80	Octagonal, flat80

※Joint material: SUS304 (For other materials, please consult us.)

Male screw

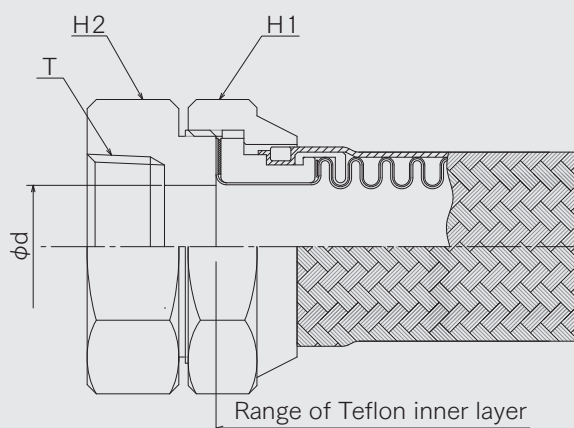


Standard specifications

Nominal diameter		T	d	H1	H2
A	B				
20	3/4	R3/4	19	Hexagonal, flat46	Hexagonal, flat46
25	1	R1	24	Hexagonal, flat54	Hexagonal, flat50
32	1 1/4	R1 1/4	30	Hexagonal, flat60	Hexagonal, flat58
40	1 1/2	R1 1/2	37	Octagonal, flat71	Octagonal, flat71
50	2	R2	45	Octagonal, flat80	Octagonal, flat80

※Joint material: SUS304 (For other materials, please consult us.)

Female screw



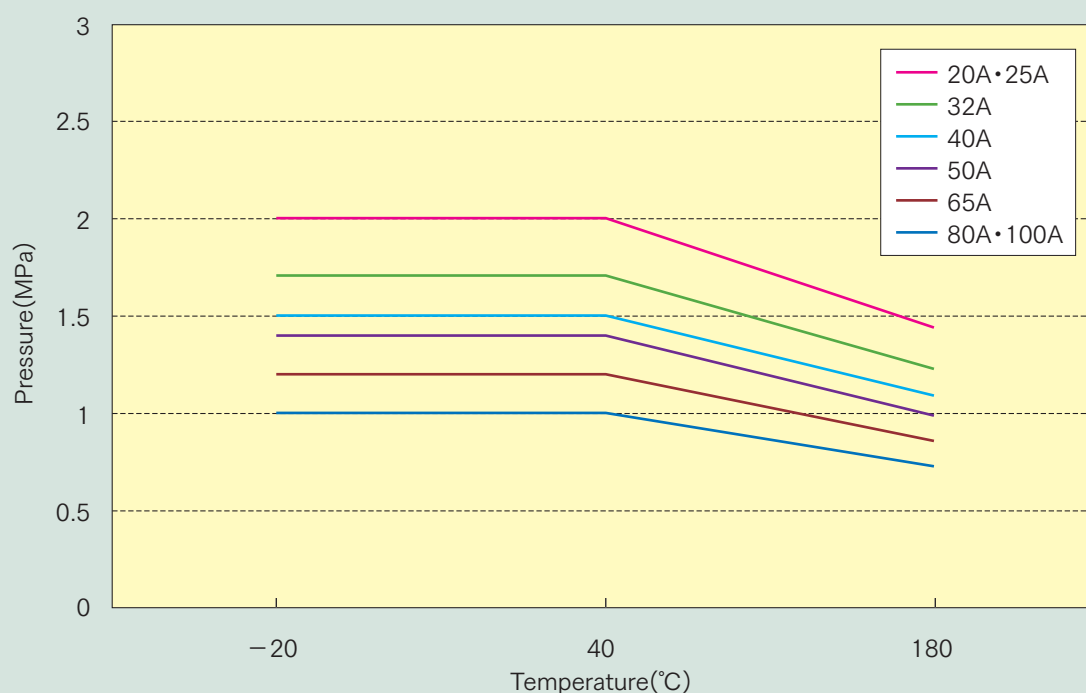
Standard specifications

Nominal diameter		T	d	H1	H2
A	B				
20	3/4	Rc3/4	19	Hexagonal, flat46	Hexagonal, flat46
25	1	Rc1	24	Hexagonal, flat54	Hexagonal, flat50
32	1 1/4	Rc1 1/4	30	Hexagonal, flat60	Hexagonal, flat58
40	1 1/2	Rc1 1/2	37	Octagonal, flat71	Octagonal, flat71
50	2	Rc2	45	Octagonal, flat80	Octagonal, flat80

※Joint material: SUS304 (For other materials, please consult us.)

Reference materials

① Relationship between temperature and pressure resistance



② Vacuum resistance performance

Results of heating test under vacuum

Size	Pressure	Temperature	Heating time	Result
20A	Vacuum	150°C	1 hour	No change
25A	Vacuum	150°C	1 hour	No change
32A	Vacuum	150°C	1 hour	No change
40A	Vacuum	150°C	1 hour	No change
50A	Vacuum	150°C	1 hour	No change
65A	Vacuum	150°C	1 hour	No change
80A	Vacuum	100°C	1 hour	No change
100A	Vacuum	100°C	1 hour	No change

※The above table shows the results of observation of the inside of the hoses after they are held in the furnace for 1 hour while they are being vacuumized.

③ Cautions for handling

- When fitting Hybridflex, take care not to bend it at a sharp angle or twist it.
- Do not remove the protective plate for shipping until just before fitting the hoses.
- When using Hybridflex at a high temperature, pay great attention to the pressure resistance.

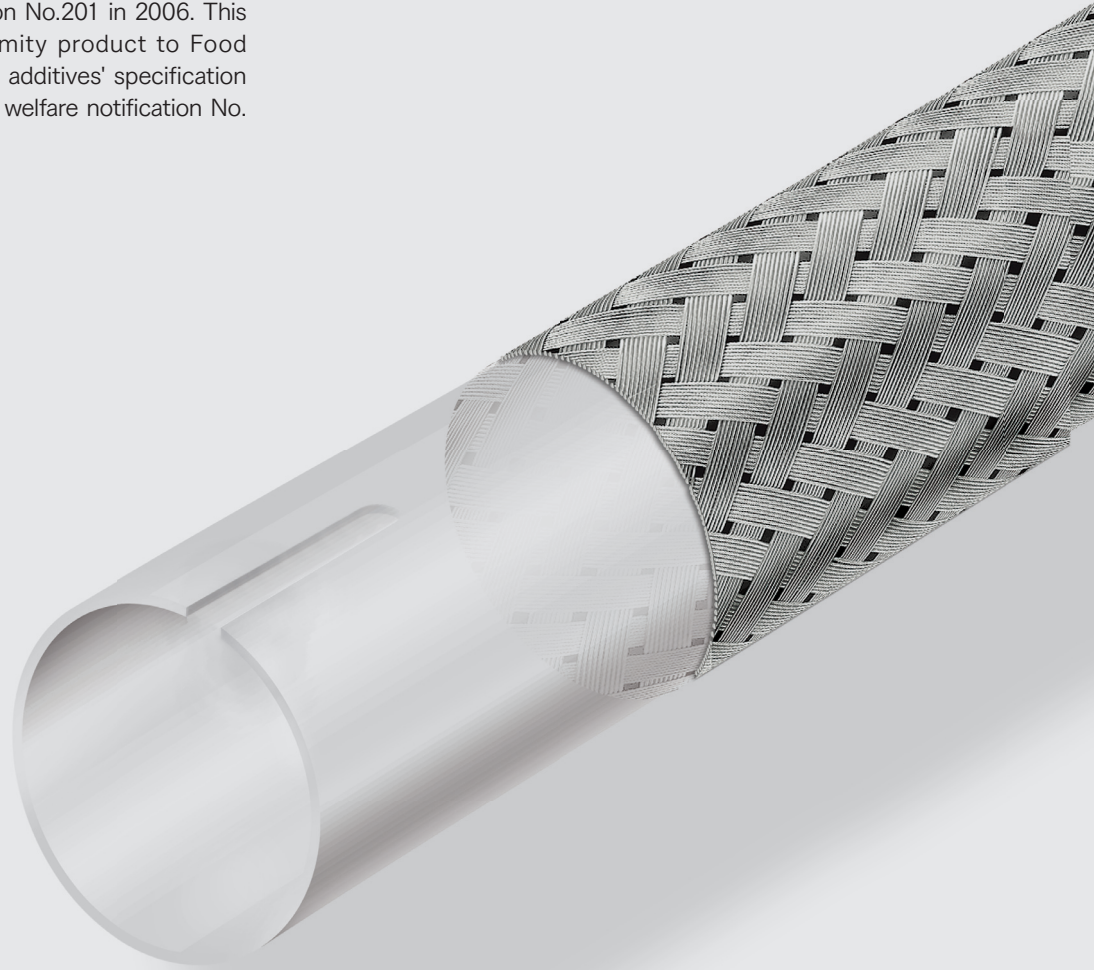
Teflon hoses

■ Teflon hoses are straight Teflon hoses covered with braids. Their inner surfaces are smooth and they are suitable for transferring fluids having high viscosity.

■ This teflon hose uses teflon(PTFE) which passed the test by ministry of health, labour and welfare notification No.201 in 2006. This product is a conformity product to Food Sanitation Law・food, additives' specification standard. (Ministry of welfare notification No. 370 in 1959.)

Standard specifications

hoses	Teflon (fluororesin)
Braid material	SUS304
Max. working pressure(MPa)	See the following table.
Max. working temperature	204°C

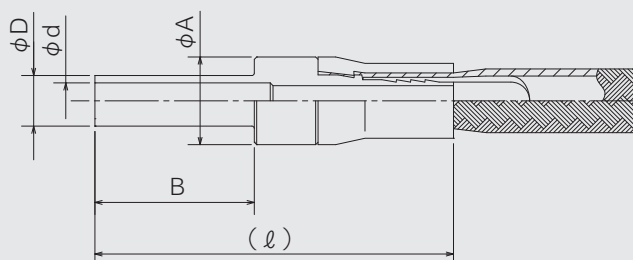


Standard dimensions and performance

Nominal diameter		Inner diameter (mm)	Outer diameter (mm)	Max. working pressure (MPa)				Min. burst pressure (MPa)				Min. bending radius (mm)	Weight (Kg/m)
				Normal temperature		204°C		Normal temperature		204°C			
				fluid	gas	fluid	gas	fluid	gas	fluid	gas		
A	B												
8A	1/4	4.7	8.0	20.6	14.4	10.3	7.2	96.1	67.3	37.8	26.5	50	0.10
10A	3/8	8.0	11.3	17.2	12.1	8.6	6.0	68.6	48.0	24.3	17.0	100	0.165
15A	1/2	10.3	14.0	13.7	6.9	10.3	5.2	68.6	48.0	34.3	24.0	130	0.18
20A	3/4	16.0	20.0	8.6	4.3	6.5	3.3	34.3	17.2	19.6	9.8	195	0.26
25A	1	22.2	26.2	6.0	3.0	6.0	3.0	24.0	12.0	18.0	9.0	225	0.40

※Please be careful that maximum working pressure is different in fluid or in gas.

Tube end (PS type joint)

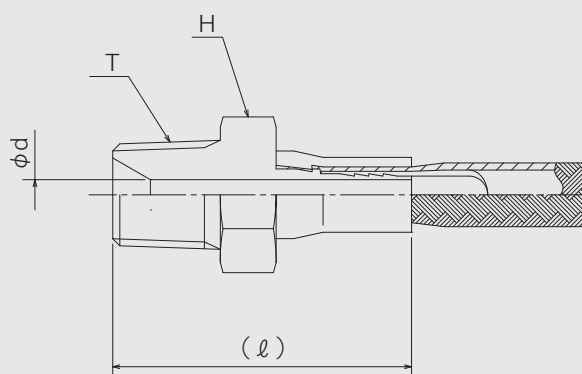


Standard specifications

Nominal diameter		d	D	A	B	ℓ
A	B					
8	1/4	4.5	6.35	11	20	45
10	3/8	7.4	9.52	14	25	55
15	1/2	10.3	12.7	17	30	62
20	3/4	15.7	19.05	25	40	79
25	1	22.1	25.4	30	40	85

※Joint material: SUS304 (For other materials, please consult us.)

Male fixed screw (Type SM joint)

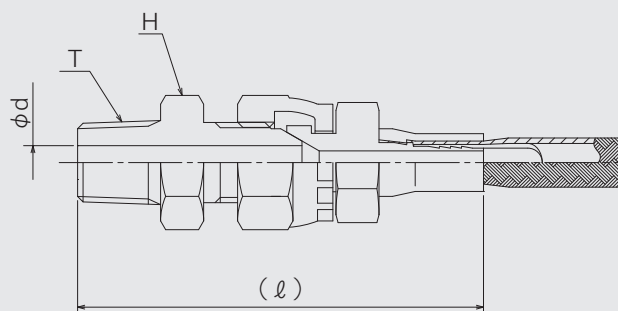


Standard specifications

Nominal diameter		d	T	H	ℓ
A	B				
8	1/4	4.0	R1/4	Hexagonal, flat17	38.0
10	3/8	7.0	R3/8	Hexagonal, flat19	44.0
15	1/2	9.0	R1/2	Hexagonal, flat24	48.0
20	3/4	15.0	R3/4	Hexagonal, flat32	57.5
25	1	20.5	R1	Hexagonal, flat38	67.0

※Joint material: SUS304 (For other materials, please consult us.)

Male loose screw (Type SNM joint)

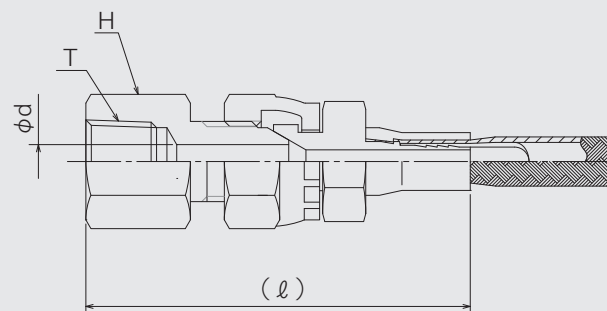


■ Standard specifications

Nominal diameter		d	T	H	ℓ
A	B				
8	1/4	4.5	R1/4	Hexagonal, flat19	67.5
10	3/8	7.0	R3/8	Hexagonal, flat22	75.5
15	1/2	10.0	R1/2	Hexagonal, flat27	81.0
20	3/4	16.0	R3/4	Hexagonal, flat32	95.0
25	1	21.5	R1	Hexagonal, flat41	105.0

※Joint material: SUS304 (For other materials, please consult us.)

Female loose screw (Type SNF joint)

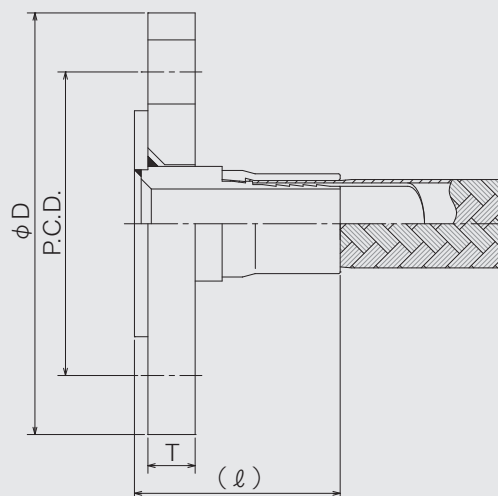


■ Standard specifications

Nominal diameter		d	T	H	ℓ
A	B				
8	1/4	5.5	Rc1/4	19	62.5
10	3/8	8.0	Rc3/8	22	71.5
15	1/2	10.0	Rc1/2	27	77.0
20	3/4	16.0	Rc3/4	36	89.0
25	1	22.0	Rc1	41	99.0

※Joint material: SUS304 (For other materials, please consult us.)

Flange



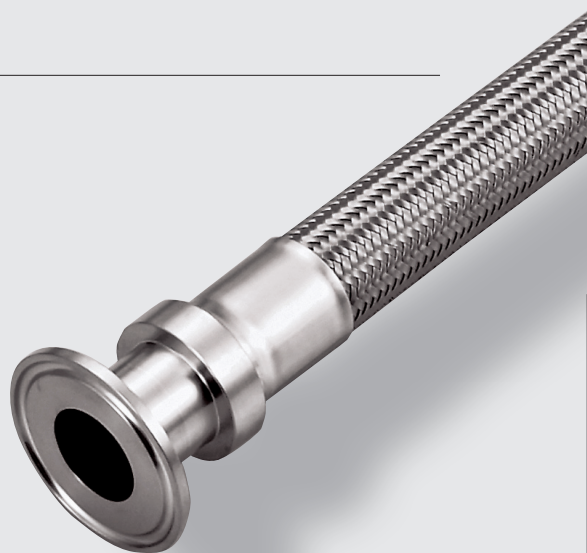
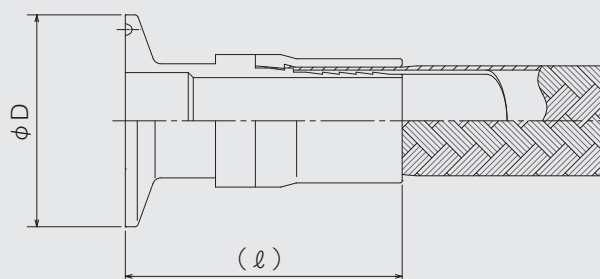
Standard specifications

Nominal diameter		D	P.C.D.	T	ℓ
A	B				
10	3/8	90	65	12	33.0
15	1/2	95	70	12	46.0
20	3/4	100	75	14	54.5
25	1	125	90	14	61.0

※Joint material: SUS304 (For other materials, please consult us.)

※The dimensions of flanges conforming to JIS 10K are shown.

Ferrule



Standard specifications

Nominal diameter		D	ℓ
A	B		
25	1	50.5	66.0

※Joint material: SUS304 (For other materials, please consult us.)

Teflon (fluororesin) coating

■ The Teflon (fluororesin) coating can form a Teflon film on the base metal surface through a firing process. The coating can be applied to complicated shapes without losing the features of Teflon.

■ Standard specifications

Diameter	15 A or more
Thermal resistance	150°C
Film thickness	100 μm~200 μm

■ Remarks

Products with coating resisting to up to 260°C are available. Both the inner and outer surfaces can be coated.

