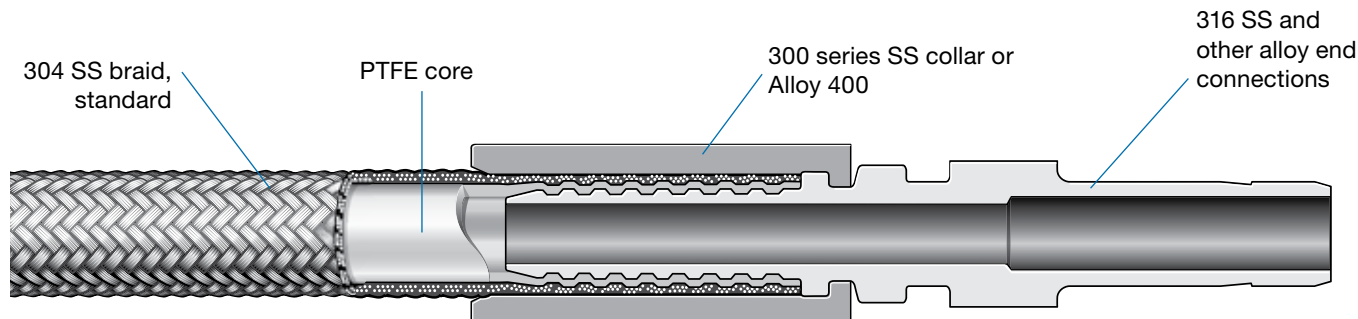


T Series PTFE Hose

Features

- PTFE hose with permeation-resistant features.
- Smooth-bore PTFE core.
- Size range of 1/4 through 1 in. and working pressures up to 3000 psig (206 bar).
- Single braid layer of 304 stainless steel (316L SS and alloy 400 available) ensures hose pressure containment and protects the core from abrasion.
- PTFE material complies with FDA regulation 21CFR Part 177.1550.
- Optional carbon black-filled PTFE core is available for applications that require static dissipation.
- Select static dissipative hose assemblies are approved to ECE R110; see page 362 for more information.
- Commonly used where chemical compatibility and permeation resistance is desired.
- Standard and custom assemblies available.
- Options include hose covers and hose tags. See page 360 for details.
- For electrical properties, see page 262 for details.



Technical Data

Nominal Hose Size in. (mm)	Inside Diameter in. (mm)	Outside Diameter in. (mm)	Minimum Inside Bend Radius in. (cm)		Temperature Range °F (°C)	Vacuum (28.5 in.Hg [96.5 kPa]) Rated to ... °F (°C)	Working Pressure at 70°F (20°C) psig (bar)	Minimum Burst Pressure at 70°F (20°C) psig (bar)	Bulk Hose Weight lb/ft (kg/m)
			Static	Dynamic					
304 SS Braid (TH and TC)									
1/4 (6.4)	0.19 (4.8)	0.31 (7.9)	1.50 (3.81)	2.00 (5.08)	-65 to 450 (-53 to 230)	450 (230)	3000 (206)	12 000 (826)	0.08 (0.12)
3/8 (9.5)	0.31 (7.9)	0.44 (11.1)	3.50 (8.89)	5.00 (12.7)		450 (230)	2500 (172)	10 000 (689)	0.12 (0.17)
1/2 (12.7)	0.41 (10.3)	0.56 (14.3)	4.50 (11.4)	6.00 (15.2)		450 (230)	2000 (137)	8 000 (551)	0.15 (0.22)
3/4 (19.0)	0.63 (15.9)	0.81 (20.6)	6.00 (15.2)	7.50 (19.0)		450 (230)	1500 (103)	6 000 (413)	0.28 (0.41)
1 (25.4)	0.88 (22.2)	1.03 (26.2)	9.00 (22.9)	11.3 (28.7)		400 (204)	1000 (68.9)	4 000 (275)	0.39 (0.58)
Alloy 400 Braid (TL4)									
1/4 (6.4)	0.19 (4.8)	0.31 (7.9)	1.50 (3.81)	2.00 (5.08)	-65 to 450 (-53 to 230)	450 (230)	1500 (103)	6 000 (413)	0.08 (0.12)

Pressure-Temperature Ratings

Ratings are based on burst testing.

Braid Material	304 SS (TH and TC)					Alloy 400 (TL4)
	1/4	3/8	1/2	3/4	1	
Nominal Hose Size in.	1/4	3/8	1/2	3/4	1	1/4
Temperature °F (°C)	Working Pressure, psig (bar)					
-65 (-53)	2250 (155)	2250 (155)	2000 (137)	1500 (103)	1000 (68.9)	1500 (103)
0 (-17) to 100 (37)	3000 (206)	2500 (172)	2000 (137)	1500 (103)	1000 (68.9)	1500 (103)
200 (93)	2250 (119)	1875 (129)	1500 (103)	1125 (77.6)	750 (51.7)	1500 (103)
300 (148) to 450 (230)	2250 (119)	1875 (129)	1500 (103)	1125 (77.6)	750 (51.7)	1215 (83.7)

Testing

Every Swagelok T series hose assembly is pressure tested with water for 30 to 60 seconds at 1.5 times the working pressure to a requirement of no visible leakage at ambient temperature.

Cleaning and Packaging

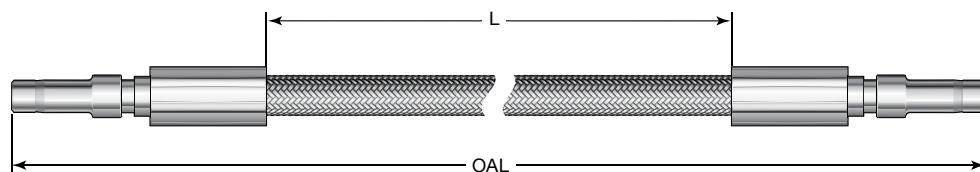
Swagelok T series hose components are cleaned in accordance with Swagelok *Standard Cleaning and Packaging (SC-10)* catalog, MS-06-62. Each hose is bagged individually and boxed; longer hoses are coiled, bagged, and boxed.

T Series PTFE Hose

Ordering Information and Dimensions

Standard Length Hose Assemblies

Select an ordering number.



Swagelok Tube Adapter End Connections

Nominal Hose Size	Tube Adapter Size	Overall Length OAL	Ordering Number	Dimensions		
				Live Length L	End Connection Inside Diameter	Maximum Outside Dimension
Dimensions, in.		in. (cm)		in. (cm)	in. (mm)	
1/4	1/4	8.00 (20.3)	SS-4BHT-6	3.92 (10.0)	0.13 (3.3)	0.49 (12.4)
		14.0 (35.6)	SS-4BHT-12	9.92 (25.2)		
		20.0 (50.8)	SS-4BHT-18	15.9 (40.4)		
		26.0 (66.0)	SS-4BHT-24	21.9 (55.6)		
		38.0 (96.5)	SS-4BHT-36	33.9 (86.1)		
		50.0 (127)	SS-4BHT-48	45.9 (117)		
		62.0 (157)	SS-4BHT-60	57.9 (147)		
		74.0 (188)	SS-4BHT-72	69.9 (178)		
		122 (310)	SS-4BHT-120	118 (300)		
3/8	3/8	14.0 (35.6)	SS-6BHT-12	9.64 (24.5)	0.23 (5.8)	0.59 (15.0)
		20.0 (50.8)	SS-6BHT-18	15.6 (39.6)		
		26.0 (66.0)	SS-6BHT-24	21.6 (54.9)		
		38.0 (96.5)	SS-6BHT-36	33.6 (85.3)		
		50.0 (127)	SS-6BHT-48	45.6 (116)		
		62.0 (157)	SS-6BHT-60	57.6 (146)		
		74.0 (188)	SS-6BHT-72	69.6 (177)		
1/2	1/2	14.5 (36.8)	SS-8BHT-12	9.04 (23.0)	0.34 (8.6)	0.78 (19.8)
		20.5 (52.1)	SS-8BHT-18	15.0 (38.1)		
		26.5 (67.3)	SS-8BHT-24	21.0 (53.3)		
		38.5 (97.8)	SS-8BHT-36	33.0 (83.8)		
		50.5 (128)	SS-8BHT-48	45.0 (114)		
		62.5 (159)	SS-8BHT-60	57.0 (145)		
		74.5 (189)	SS-8BHT-72	69.0 (175)		
		122.5 (311)	SS-8BHT-120	117 (297)		
3/4	3/4	26.5 (67.3)	SS-12BHT-24	20.7 (52.6)	0.54 (13.7)	1.04 (26.4)
		38.5 (97.8)	SS-12BHT-36	32.7 (83.1)		
		50.5 (128)	SS-12BHT-48	44.7 (114)		
Dimensions, mm		cm (in.)		cm (in.)	mm (in.)	
1/4 in.	6	35.6 (14.0)	SS-4MBHT-12	25.2 (9.92)	3.3 (0.13)	12.4 (0.49)
		66.0 (26.0)	SS-4MBHT-24	55.7 (21.9)		
		96.5 (38.0)	SS-4MBHT-36	86.2 (33.9)		
1/2 in.	12	67.3 (26.5)	SS-8MBHT-24	53.4 (21.0)	8.6 (0.34)	19.8 (0.78)
		97.8 (38.5)	SS-8MBHT-36	83.9 (33.0)		

 HOSE /
FLEXIBLE
TUBING

T Series PTFE Hose

Ordering Information

Custom Hose Assemblies

Build a hose assembly ordering number by combining the designators in the sequence shown below.

Typical Ordering Number

1 2 3 4 4 5 6 5 6
SS - TH 4 TA 4 SL 2 - 2 8 - Z or **7 1 CM - Z**
in. cm

1 Material

End Connections

SS = 316 stainless steel
M = Alloy 400
HC = Alloy C-276
TI = Titanium, grade 4

Only wetted components will be made of the requested material, with the exception of Alloy 400 on TL hoses. Contact your authorized Swagelok sales and service representative with component material questions.

2 Hose

TH = T series PTFE hose with 304 SS braid
TC = T series carbon black-filled PTFE hose with 304 SS braid
TL = T series PTFE hose with alloy 400 braid (1/4 in. hose size only)

3 Nominal Hose Size, in.

4 = 1/4
6 = 3/8
8 = 1/2
12 = 3/4
16 = 1

4 End Connections

See **End Connection Designator** column in tables on next page.

5 Overall Length

Inches or centimeters, in whole numbers. Include **CM** as shown for centimeter lengths.

6 Options

For multiple options, add designators with a dash between each designator.

CRN = Lanyard tag with CRN
F = Fire jacket
F1 = Thermosleeve
N3 = Nitrogen pressure test
S = 302 SS spring guard, hose-length
W = Hydrostatic test
Z = 316L SS braid material (1/4 and 3/8 in. TH series hoses only)
093 = ECE R110 approval, only on select end connections for TC hose. (See page 362 for additional information.)

Other Tags

T = Lanyard tag
T2 = Two lanyard tags
T5 = Clamp tag

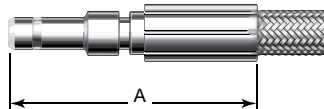
Specify text for tags. see **Hose Tag Text** table, page 361.

See page 360 for detailed descriptions of options.

T Series PTFE Hose

End Connections

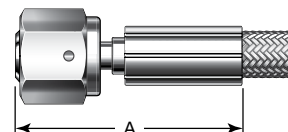
Swagelok Tube Adapters



Tube Adapter Size	Nominal Hose Size Designator	End Connection Designator	Dimensions		
			A	End Connection Inside Diameter	Maximum Outside Dimension
Dimensions, in. (mm)					
1/4	4	TA4 ^①	2.04 (51.8)	0.13 (3.3)	0.49 (12.4)
3/8	6	TA6 ^①	2.18 (55.4)	0.23 (5.8)	0.59 (15.0)
	8	TA6 ^①	2.47 (62.7)	0.26 (6.6)	0.78 (19.8)
1/2	8	TA8 ^①	2.73 (69.3)	0.34 (8.6)	
3/4	12	TA12	2.90 (73.7)	0.54 (13.7)	1.04 (26.4)
	16	TA12	3.37 (85.6)	0.58 (14.7)	1.35 (34.3)
1	12	TA16	3.25 (82.6)	0.54 (13.7)	1.24 (31.5)
	16	TA16	3.65 (92.7)	0.78 (19.8)	1.35 (34.3)
Dimensions, mm (in.)					
6	4	TM6 ^①	51.8 (2.04)	3.3 (0.13)	12.4 (0.49)
8	4	TM8 ^①	53.3 (2.10)		
10	6	TM10 ^①	55.4 (2.18)	5.8 (0.23)	15.0 (0.59)
12	8	TM12 ^①	69.3 (2.73)	8.6 (0.34)	19.8 (0.78)
18	12	TM18 ^①	73.7 (2.90)	13.7 (0.54)	26.4 (1.04)
25	16	TM25	92.7 (3.65)	19.8 (0.78)	34.3 (1.35)

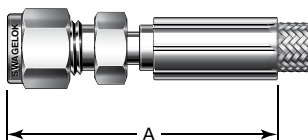
① ECE R110 approval available.

Female VCO O-Ring Face Seal Fittings



VCO Size in.	Nominal Hose Size Designator	End Connection Designator	Dimensions, in. (mm)		
			A	End Connection Inside Diameter	Maximum Outside Dimension
1/4	4	VF4	1.84 (46.7)	0.13 (3.3)	0.80 (20.3)
1/2	6	VF8	1.92 (48.8)	0.23 (5.8)	1.16 (29.5)
	8	VF8	2.18 (55.4)	0.34 (8.6)	
3/4	12	VF12	2.40 (61.0)	0.54 (13.7)	1.74 (41.2)
1	16	VF16	2.81 (71.4)	0.78 (19.8)	2.03 (51.6)

Swagelok Tube Fittings

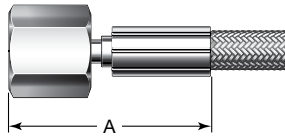


Tube Fitting Size	Nominal Hose Size Designator	End Connection Designator	Dimensions		
			A	End Connection Inside Diameter	Maximum Outside Dimension
Dimensions, in. (mm)					
1/8	4	SL2	2.00 (50.8)	0.09 (2.3)	0.51 (13.0)
1/4	4	SL4 ^①	2.10 (53.4)	0.13 (3.3)	0.66 (16.8)
3/8	6	SL6 ^①	2.27 (57.7)	0.23 (5.8)	0.80 (20.3)
1/2	8	SL8 ^①	2.64 (67.1)	0.34 (8.6)	1.02 (25.9)
3/4	12	SL12	2.74 (69.6)	0.54 (13.7)	1.30 (33.0)
Dimensions, mm (in.)					
6	4	SM6 ^①	54.1 (2.13)	3.3 (0.13)	16.8 (0.66)
10	6	SM10 ^①	57.9 (2.28)	5.8 (0.23)	22.1 (0.87)
12	8	SM12 ^①	67.1 (2.64)	8.6 (0.34)	25.9 (1.02)
18	12	SM18	69.6 (2.74)	13.7 (0.54)	34.8 (1.37)

① ECE R110 approval available.

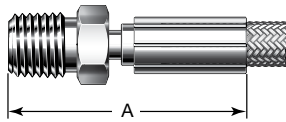
T Series PTFE Hose

Female Pipe Threads,
NPT and ISO/BSP Tapered
(ISO 7)



Female NPT and ISO/BSP Tapered Size in.	Nominal Hose Size Designator	End Connection Designator	Dimensions, in. (mm)		
			A	End Connection Inside Diameter	Maximum Outside Dimension
NPT					
1/4	4	PF4	1.91 (48.5)	0.13 (3.3)	0.87 (22.1)
	6	PF4	1.94 (49.3)	0.23 (5.8)	
3/8	6	PF6	2.01 (51.1)		
1/2	8	PF8	2.48 (63.0)	0.34 (8.6)	1.23 (31.2)
3/4	12	PF12	2.57 (65.3)	0.54 (13.7)	1.52 (38.7)
ISO/BSP Tapered					
1/4	4	FT4	1.91 (48.5)	0.13 (3.3)	0.87 (22.1)
1/2	8	FT8	2.48 (63.0)	0.34 (8.6)	1.23 (31.2)

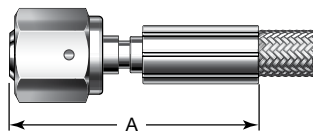
Male Pipe Threads,
NPT and ISO/BSP Tapered
(ISO 7)



Male NPT and ISO/BSP Tapered Size in.	Nominal Hose Size Designator	End Connection Designator	Dimensions, in. (mm)		
			A	End Connection Inside Diameter	Maximum Outside Dimension
NPT					
1/4	4	PM4 ^①	1.96 (49.8)	0.13 (3.3)	0.66 (16.8)
	6	PM4 ^①	2.04 (51.8)	0.23 (5.8)	
		8	PM4	2.31 (58.7)	0.28 (7.1)
3/8	6	PM6 ^①	2.07 (52.6)	0.23 (5.8)	
	8	PM6 ^①	2.31 (58.7)	0.34 (8.6)	
1/2	8	PM8 ^①	2.52 (64.0)		
	12	PM8	2.63 (86.8)	0.54 (13.7)	1.16 (29.5)
3/4	12	PM12			1.23 (31.2)
	16	PM12	3.11 (79.0)	0.63 (16.0)	1.45 (36.8)
1	16	PM16	3.32 (84.3)	0.78 (19.8)	1.60 (40.5)
ISO/BSP Tapered					
1/4	4	MT4 ^①	1.96 (49.8)	0.13 (3.3)	0.66 (16.8)
1/2	8	MT8 ^①	2.52 (64.0)	0.34 (8.6)	1.02 (25.8)
3/4	12	MT12	2.63 (66.8)	0.54 (13.7)	1.23 (31.2)
1	16	MT16	3.32 (84.3)	0.78 (19.8)	1.60 (40.5)

① ECE R110 approval available.

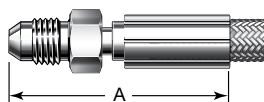
Female VCR Metal Gasket
Face Seal Fittings



VCR Size in.	Nominal Hose Size Designator	End Connection Designator	Dimensions, in. (mm)		
			A	End Connection Inside Diameter	Maximum Outside Dimension
1/4	4	RF4	2.16 (54.9)	0.13 (3.3)	0.87 (22.1)
1/2	8	RF8	2.40 (61.0)	0.34 (8.6)	1.23 (31.2)
3/4	12	RF12	2.71 (68.8)	0.54 (13.7)	1.74 (44.2)
1	16	RF16	3.48 (88.4)	0.78 (19.8)	2.03 (51.6)

T Series PTFE Hose

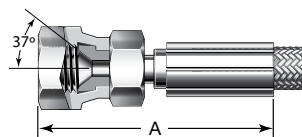
SAE 37° (JIC) Male Flare



JIC Flare Size in.	Nominal Hose Size Designator	End Connection Designator	Dimensions, in. (mm)		
			A	End Connection Inside Diameter	Maximum Outside Dimension
1/4	4	AN4 ^①	1.98 (50.3)	0.13 (3.3)	0.59 (15.0)
3/8	6	AN6 ^①	2.05 (52.1)	0.23 (5.8)	0.73 (18.5)
1/2	8	AN8 ^①	2.43 (61.7)	0.34 (8.6)	0.94 (23.9)

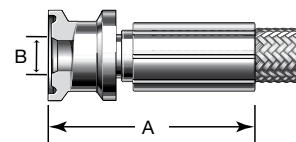
① ECE R110 approval available.

SAE 37° (JIC) Female Swivel



JIC Swivel Size in.	Nominal Hose Size Designator	End Connection Designator	Dimensions, in. (mm)		
			A	End Connection Inside Diameter	Maximum Outside Dimension
1/4	4	AS4	2.05 (52.1)	0.13 (3.3)	0.73 (18.5)
3/8	6	AS6	2.21 (56.1)	0.23 (5.8)	0.87 (22.1)
1/2	8	AS8	2.53 (64.3)	0.34 (8.6)	1.09 (27.6)

Sanitary Kwik-Clamps



Kwik-Clamp Size in.	Nominal Hose Size Designator	End Connection Designator	Dimensions, in. (mm)			
			A	End Connection Inside Diameter	Maximum Outside Dimension	B, Flange Face Inside Diameter
1/2	8	KC8	2.28 (57.9)	0.34 (8.6)	0.99 (25.2)	0.40 (10.2)
3/4	12	KC12	2.20 (55.9)	0.54 (13.7)	1.04 (26.4)	0.59 (15.0)
1	16	KC16	2.64 (67.0)	0.78 (19.8)	1.98 (50.3)	0.87 (22.1)
1 1/2	16	KC24	2.48 (63.0)			1.37 (34.8)

Working pressure and temperature ratings of hoses with sanitary Kwik-Clamp end connections may be limited by the gasket material and clamp. Maximum pressure rating is 300 psig (20.6 bar).