

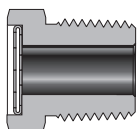


Other Fittings

VP, TCF, DF, GCC and FUF Series

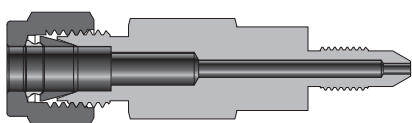
Contents

Vent Protectors (VP Series)



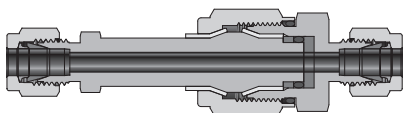
200

Transmitter Calibration Fittings (TCF Series)



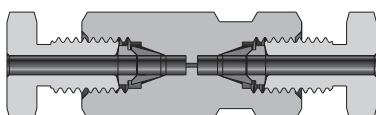
200

Dielectric Fittings (DF Series)



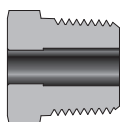
201

Gaugeable Chromatograph and Column End Fittings (GCC Series)



202

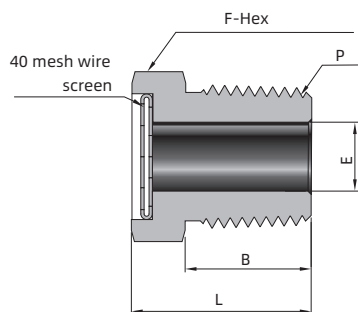
Fusible Fittings (FUF Series)



205

Vent Protectors

VP Series



❖ 40 mesh 316 series stainless steel wire screen assembly

NPT Thread

P-NPT Size	Ordering Number	Dimension, in.(mm)			
		L	F	B	E
1/8	VP-NPT2-	0.56 (14.2)	1/2	0.38 (9.7)	0.19 (4.8)
1/4	VP-NPT4-	0.78 (19.8)	9/16	0.56 (14.2)	0.28 (7.1)
3/8	VP-NPT6-	0.81 (20.6)	11/16	0.56 (14.2)	0.41 (10.4)
1/2	VP-NPT8-	1.03 (26.2)	7/8	0.75 (19.1)	0.50 (12.7)
3/4	VP-NPT12-	1.06 (26.9)	1 1/16	0.76 (19.2)	0.72 (18.3)
1	VP-NPT16-	1.37 (34.8)	1 3/8	0.94 (23.9)	0.88 (22.4)

How to Order

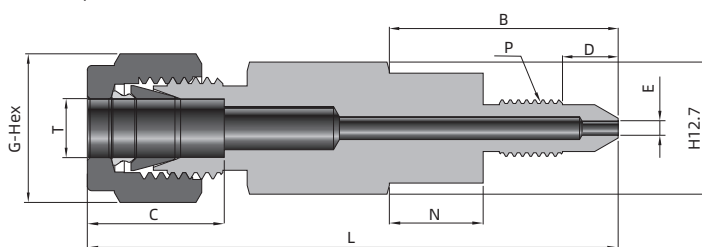
VP — NPT2 — 316

Configuration Designator	Port 1 Type	Port 1 Size	Material
VP Vent Protectors	NPT Male NPT MBT Male BSPT	2 1/8 4 1/4 6 3/8 8 1/2 12 3/4 16 1	316 316 S.S.

Transmitter Calibration Fittings

TCF Series

- ❖ The calibration fittings can be connected directly with the bleed port of the transmitter so that the calibration process can be simplified.
- ❖ Two types are available to fit the bleed ports of the transmitters.



T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, in. (mm)							Transmitter Type
			L	B	C	D	E	G	N	
1/4	1/4-28	F4-MC-TCF4-	1.69(42.9)	0.78(19.8)	0.60(15.2)	0.43(10.9)	0.06(1.5)	9/16	-	Honeywell
1/4	5/16-24	F4-MC-TCF5-	2.32(58.9)	1.41(35.8)	0.60(15.2)	0.40(10.2)	0.06(1.5)	9/16	0.41(10.4)	Rosemount/Foxboro

How to Order

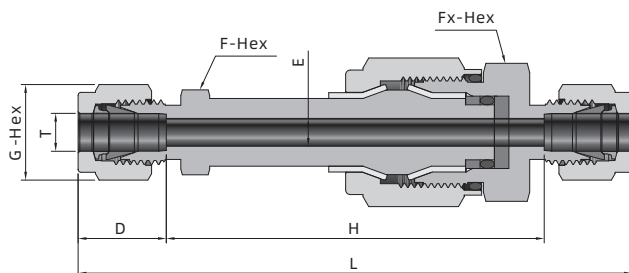
F4 — MC — TCF4 — 316

Port 1 Type	Port 1 Size	Configuration Designator	Port 2 Type	Port 2 Size	Material
F Fractional Ferrule	4 1/4 in.	MC	TF Transmitter Calibration Fittings	4 1/4-28 5 5/16-24	316 316 S.S.

Dielectric Fittings

DF Series

- ❖ Electrical Resistance of Insulators at 70°F (20°C): $10 \times 10^7 \Omega$ at 10 V
- ❖ Maximum working pressure: 5000 psig (344 bar)
- ❖ Working temperature from -40°F to 200°F (-40°C to 93°C)



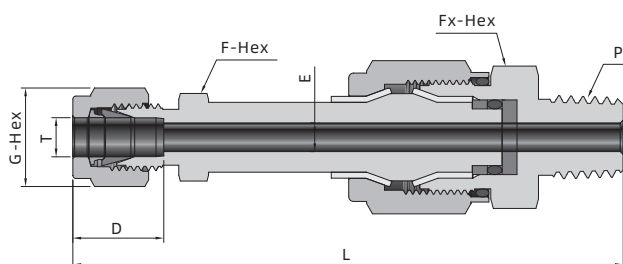
component	Material
Insulator	Polyamide-imide
O-Ring	70 Durometer FKM
Backup Ring	Virgin PTFE

Fractional Tube

T-Tube O.D. (in.)	Basic Ordering Number	Dimension, in. (mm)						
		L	D	G	H	E	F	Fx
1/4	F4-DF-F4-	3.77(95.7)	0.60(15.2)	9/16	2.57(65.3)	0.19(4.8)	1/2	13/16
3/8	F6-DF-F6-	3.92(99.6)	0.66(16.8)	11/16	2.59(65.8)	0.28(7.1)	5/8	13/16
1/2	F8-DF-F8-	4.17(106.0)	0.90(22.9)	7/8	2.37(60.2)	0.28(7.1)	13/16	13/16

Metric Tube

T-Tube O.D. (mm)	Basic Ordering Number	Dimension, in. (mm)						
		L	D	G	H	E	F	Fx
12	M12-DF-M12-	107.0(4.21)	22.8(0.90)	7/8	61.7(2.43)	7.1(0.28)	7/8	7/8



Fractional Tube

NPT Thread

T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, in. (mm)					
			L	D	G	E	F	Fx
3/8	1/4	F6-DF-NPT4-	3.73(94.7)	0.66(16.8)	11/16	0.28(7.1)	5/8	7/8

How to Order

F4		— DF —		F4 — 316	
Port 1 Type	Port 1 Size	Configuration Designator	Port 2 Type	Port 2 Size	Material
M Metric Ferrule	4 1/4 in. or 4mm	DF	Same as part 1	4 1/4	316 316 S.S.
F Fractional Ferrule	6 3/8 in. or 6mm		NPT Male NPT	8 1/2	
	8 1/2 in. or 8mm		MBT Male BSPT		

Gaugeable Chromatograph and Column End Fittings

GCC Series

Features

- ❖ Suitable for liquid or gas chromatography
- ❖ 316 stainless steel construction
- ❖ Offered in sizes from 1/16 to 1/2 in

Cleaning

- ❖ Fitting components are cleaned to remove machine oil, grease, and loose particles. For more information, see Hikelok Standard Cleaning and Packaging.

Pressure-Temperature Ratings

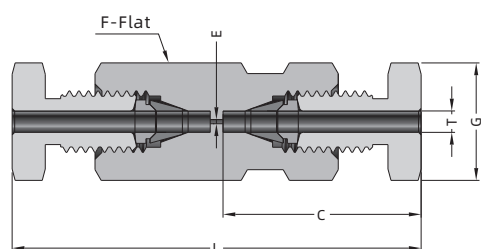
- ❖ Gaugeable Chromatograph and Column End Fittings are rated to the working pressure of tubing as listed in Hikelok Tubing and Pipe.

Materials Standards

Material	Bar Stock	Forgings
316 stainless steel	ASTM A276 ASME SA479	ASTM A182 ASME SA182

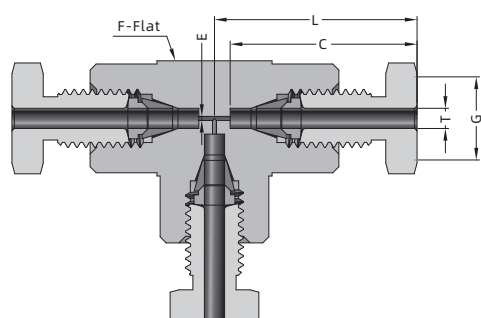
Dimensions

Gaugeable Chromatograph Fittings



Union-Low Dead Volume

T-Tube OD (in.)	Basic Ordering Number	Dimensions, in. (mm)					Dead Volume
		L	C	E	F	G	
1/16	GCF1-U-GCF1-316	1.26 (32)	0.61 (15.5)	0.013 (0.3)	5/16	5/16	6.6×10 ⁻⁵ cm ³



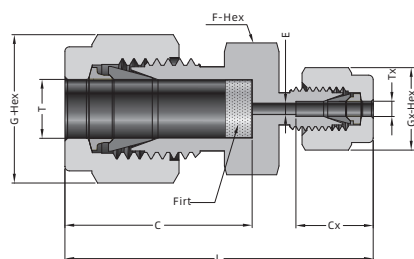
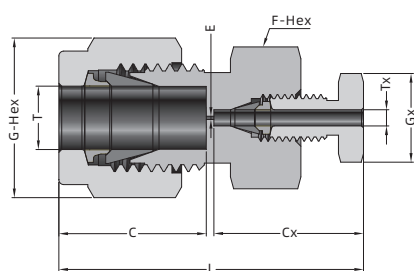
Union Tee-Low Dead Volume

T-Tube OD (in.)	Basic Ordering Number	Dimensions, in. (mm)					Dead Volume
		L	C	E	F	G	
1/16	GCF1-UT-GCF1-GCF1-316	0.66 (16.8)	0.61 (15.5)	0.013 (0.3)	3/8	5/16	2.8×10 ⁻⁴ cm ³

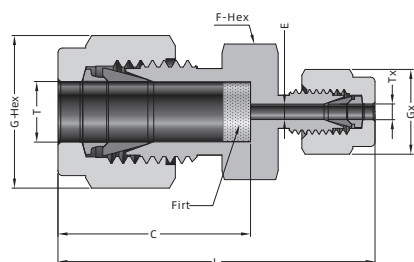
How to Order

GCF1 — U — GCF1 — 316					
Port 1 Type	Port 1 Size	Configuration Designator	Port 2 Type	Port 2 Size	Material
GCF Gaugeable Chromatograph Fittings	1 1/16 in.	U Union UT Union Tee	Same as part 1	Same as part 1	316 316 S.S.

Column End Fittings



Low Volume



Zero Volume

Fractional Tube

T-Tube OD (in.)	Tx-Tube OD (in.)	Basic Ordering Number	Dimensions, in. (mm)							Dead Volume
			L	C	Cx	E	F	G	Gx	
1/4	1/16	F4-U-GCF1-316	1.24 (31.5)	0.6 (15.2)	0.61 (15.5)	0.013 (0.3)	1/2	9/16	5/16	6.8×10 ⁻⁵ cm ³
3/8	1/16	F6-U-GCF1-316	1.3 (33)	0.66 (16.8)	0.61 (15.5)	0.013 (0.3)	5/8	11/16	5/16	6.8×10 ⁻⁵ cm ³

Fractional Tube

T-Tube OD (in.)	Tx-Tube OD (in.)	Basic Ordering Number	Dimensions, in. (mm)							Dead Volume
			L	C	Cx	E	F	G	Gx	
1/8	1/16	F2-LVU-F1-	1.22 (31)	0.72 (18.3)	0.34 (1.3)	0.052 (1.3)	7/16	7/16	5/16	5.4×10 ⁻³ cm ³
1/4	1/16	F4-LVU-F1-	1.35 (34.3)	0.82 (20.8)	0.34 (1.3)	0.052 (1.3)	1/2	9/16	5/16	6.7×10 ⁻³ cm ³
3/8	1/16	F6-LVU-F1-	1.44 (36.6)	0.91 (23.1)	0.34 (1.3)	0.052 (1.3)	5/8	11/16	5/16	6.5×10 ⁻³ cm ³

Fractional Tube

T-Tube OD (in.)	Tx-Tube OD (in.)	Basic Ordering Number	Dimensions, in. (mm)						Dead Volume
			L	C	E	F	G	Gx	
1/8	1/16	F2-ZVU-F1-	1.22 (31)	0.73 (18.3)	0.06 (1.7)	7/16	7/16	5/16	0
1/4	1/16	F4-ZVU-F1-	1.35 (34.3)	0.82 (20.8)	0.06 (1.7)	1/2	9/16	5/16	0
3/8	1/16	F6-ZVU-F1-	1.44 (36.6)	0.92 (23.1)	0.06 (1.7)	5/8	11/16	5/16	0
1/2	1/16	F8-ZVU-F1-	1.58 (40.1)	1.04 (26.4)	0.06 (1.7)	13/16	7/8	5/16	0

- ❖ The dead volume in the low-volume fitting is equal to the volume of the 0.052 in. bore.
- ❖ The tubing in the zero-volume fitting is inserted to the frit.
- ❖ Both low- and zero-volume column end fittings are available with stainless steel sintered frits. Frits are loosely installed to facilitate removal and replacement.

How to Order

F2		LVU		F1		S01		316
Port 1 Type	Port 1 Size	Configuration Designator		Port 2 Type	Port 2 Size	Frit Type	Frit Nominal Pore Size	Material
F Fractional Ferrule	2 1/8 in.	LVU	Low Volume	F Fractional Ferrule Chromatograph Fitting	1 1/16 in.	S Stainless steel sintered frits	01 0.1µm	316 316 S.S.
	4 1/4 in.	ZVU	Zero Volume				05 0.5µm	
	6 3/8 in.	U	Union				1 1µm	
	8 1/2 in.						2 2µm	
							3 3µm	
							5 5µm	
							7 7µm	
							10 10µm	
							15 15µm	
							20 20µm	
							25 25µm	

Note: The S0 series selection is only applicable to the LVU, ZVU models