

# VA Series Vacuum Adapter Fittings



**FITOK**

# Contents

## KF Adapter Fittings

KF to Female NPT  
KF to Male NPT  
KF to CF Flange Conical Reducing  
KF to Tube Fitting  
KF to CF Flange Straight Reducing  
KF to Rotatable Male FR Metal Gasket Face Seal Fitting  
KF to Vacuum Tube Fitting  
KF to Female FR Metal Gasket Face Seal Fitting

01

---

## CF Adapter Fittings

CF to Female FR Metal Gasket Face Seal Fitting  
CF to Vacuum Tube Fitting  
CF to Rotatable Male FR Metal Gasket Face Seal Fitting  
CF to Tube Fitting

06

---

## Other Adapter Fittings

BSPT Adapter

07

---

## Features

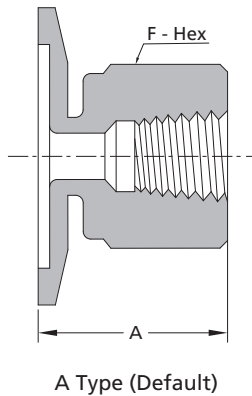
- ⦿ Vacuum Range:
  - Copper Seal:  $\geq 10^{-12}$  Torr
  - Elastomeric Seal:  $\geq 10^{-8}$  Torr
- ⦿ Working temperature:
  - Copper Seal: -325°F to 842°F (-200°C to 450°C)
  - Elastomeric Seal: -4°F to 302°F (-20°C to 150°C)
- ⦿ Materials:
  - 304, 304L, 316, 316L or Aluminum

## Applications

Adapter Vacuum products are generally used on vacuum chamber ports to connect vacuum flanges to various fittings.

## KF Adapter Fittings

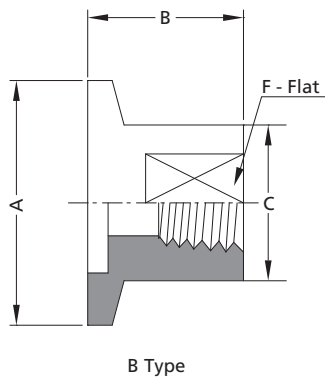
### KF to Female NPT



Pipe Size in.	Flange Size	Basic Ordering Number (For A Type)	A in. (mm)	F in. (mm)
1/8	KF10	-VA-KF10-FNS2	0.92(23.4)	9/16(14.3)
	KF16	-VA-KF16-FNS2		
	KF25	-VA-KF25-FNS2		
	KF40	-VA-KF40-FNS2		
	KF50	-VA-KF50-FNS2		
1/4	KF10	-VA-KF10-FNS4	1.07(27.2)	3/4(19.1)
	KF16	-VA-KF16-FNS4		
	KF25	-VA-KF25-FNS4		
	KF40	-VA-KF40-FNS4		
	KF50	-VA-KF50-FNS4		
1/2	KF16	-VA-KF16-FNS8	1.44(36.6)	1 1/16(27.0)
	KF25	-VA-KF25-FNS8	1.39(35.3)	
	KF40	-VA-KF40-FNS8		
	KF50	-VA-KF50-FNS8		
3/4	KF25	-VA-KF25-FNS12	1.45(36.8)	1 5/16(33.3)
	KF40	-VA-KF40-FNS12		
	KF50	-VA-KF50-FNS12		
1	KF25	-VA-KF25-FNS16	1.57(39.9)	1 5/8(41.3)
	KF40	-VA-KF40-FNS16		
	KF50	-VA-KF50-FNS16		

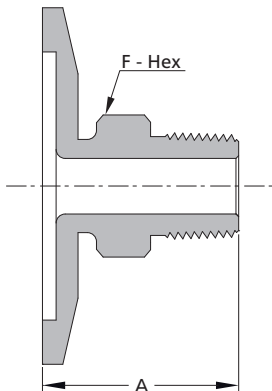
## 2 VA Series Vacuum Adapter Fittings

### KF to Female NPT



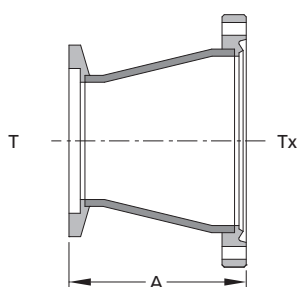
Pipe Size in.	Flange Size	Basic Ordering Number (For B Type)	A in.(mm)	B in.(mm)	C in.(mm)	F in.(mm)
1/8	KF10	-VA-KF10-FNS2-N	1.18(30.0)	0.75(19.1)	0.75(19.1)	0.63(16.0)
1/4		-VA-KF10-FNS4-N	1.18(30.0)	0.75(19.1)	0.75(19.1)	0.63(16.0)
1/8	KF16	-VA-KF16-FNS2-N	1.18(30.0)	0.75(19.1)	0.75(19.1)	0.63(16.0)
1/4		-VA-KF16-FNS4-N	1.18(30.0)	0.75(19.1)	0.75(19.1)	0.63(16.0)
1/8	KF25	-VA-KF25-FNS2-N	1.57(40.0)	0.75(19.1)	1.00(25.4)	0.87(22.0)
1/4		-VA-KF25-FNS4-N	1.57(40.0)	0.75(19.1)	1.00(25.4)	0.87(22.0)
1/2		-VA-KF25-FNS8-N	1.57(40.0)	1.00(25.4)	1.10(27.8)	0.94(24.0)
1/8	KF40	-VA-KF40-FNS2-N	2.17(55.0)	1.00(25.4)	1.50(38.1)	1.26(32.0)
1/4		-VA-KF40-FNS4-N	2.17(55.0)	1.00(25.4)	1.50(38.1)	1.26(32.0)
1/2		-VA-KF40-FNS8-N	2.17(55.0)	1.00(25.4)	1.50(38.1)	1.26(32.0)
3/4		-VA-KF40-FNS12-N	2.17(55.0)	1.00(25.4)	1.63(41.3)	1.34(34.0)
1/8	KF50	-VA-KF50-FNS2-N	2.92(75.0)	1.00(25.4)	2.00(50.8)	1.73(44.0)
1/4		-VA-KF50-FNS4-N	2.92(75.0)	1.00(25.4)	2.00(50.8)	1.73(44.0)
1/2		-VA-KF50-FNS8-N	2.92(75.0)	1.00(25.4)	2.00(50.8)	1.73(44.0)
3/4		-VA-KF50-FNS12-N	2.92(75.0)	1.00(25.4)	2.00(50.8)	1.73(44.0)

### KF to Male NPT



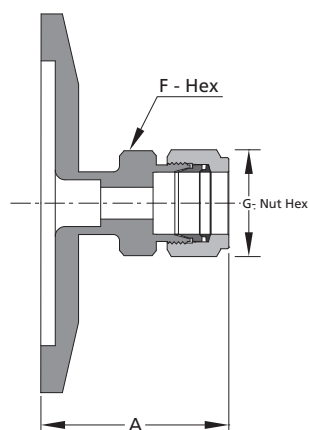
Pipe Size in.	Flange Size	Basic Ordering Number	A in.(mm)	F in.(mm)
1/8	KF10	-VA-KF10-NS2	0.89(22.6)	7/16(11.1)
	KF16	-VA-KF16-NS2		
	KF25	-VA-KF25-NS2		
	KF40	-VA-KF40-NS2		
	KF50	-VA-KF50-NS2		
1/4	KF10	-VA-KF10-NS4	1.10(27.9)	9/16(14.3)
	KF16	-VA-KF16-NS4		
	KF25	-VA-KF25-NS4		
	KF40	-VA-KF40-NS4		
	KF50	-VA-KF50-NS4		
1/2	KF16	-VA-KF16-NS8	1.35(34.3)	7/8(22.2)
	KF25	-VA-KF25-NS8		
	KF40	-VA-KF40-NS8		
	KF50	-VA-KF50-NS8		
3/4	KF25	-VA-KF25-NS12	1.35(34.3)	1 1/16(27.0)
	KF40	-VA-KF40-NS12		
	KF50	-VA-KF50-NS12		
1	KF25	-VA-KF25-NS16	1.64(41.7)	1 3/8(34.9)
	KF40	-VA-KF40-NS16		
	KF50	-VA-KF50-NS16		

## KF to CF Flange Conical Reducing



Flange Size	Tube OD in.		Basic Ordering Number	A in.(mm)
	T	Tx		
KF16-CF212	3/4	1/2	-VA-KF16-CF212-NCR	1.69(42.9)
KF16-CF275	3/4	1/2	-VA-KF16-CF275-NCR	2.73(69.3)
KF25-CF212	1	3/4	-VA-KF25-CF212-NCR	2.03(51.6)
KF25-CF275	1	3/4	-VA-KF25-CF275-NCR	2.73(69.3)
KF25-CF338	1	3/4	-VA-KF25-CF338-NCR	2.75(69.9)
KF40-CF133	1	3/4	-VA-KF40-CF133-NCR	3.03(77.0)
KF40-CF212	1 1/2	1	-VA-KF40-CF212-NCR	2.69(68.3)
KF40-CF338	1 1/2	1	-VA-KF40-CF338-NCR	2.75(69.9)
KF40-CF450	1 1/2	1	-VA-KF40-CF450-NCR	2.90(73.7)
KF40-CF462	1 1/2	1	-VA-KF40-CF462-NCR	4.06(103.1)
KF50-CF212	2	1	-VA-KF50-CF212-NCR	2.69(68.3)
KF50-CF275	2	1 1/2	-VA-KF50-CF275-NCR	2.73(69.3)
KF50-CF450	2	1 1/2	-VA-KF50-CF450-NCR	2.90(73.7)
KF50-CF462	2	1 1/2	-VA-KF50-CF462-NCR	4.06(103.1)
KF50-CF600	2	1 1/2	-VA-KF50-CF600-NCR	4.21(106.9)

## KF to Tube Fitting

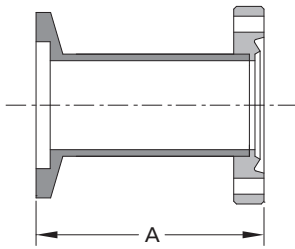


Tube OD in.	Flange Size	Basic Ordering Number	A in.(mm)	F in.(mm)	G in.(mm)
1/4	KF10	-VA-KF10-FL4	1.47(37.3)	1/2(12.7)	9/16(14.3)
	KF16	-VA-KF16-FL4			
	KF25	-VA-KF25-FL4			
	KF40	-VA-KF40-FL4			
	KF50	-VA-KF50-FL4			
3/8	KF10	-VA-KF10-FL6	1.63(41.4)	5/8(15.9)	11/16(17.5)
	KF16	-VA-KF16-FL6			
	KF25	-VA-KF25-FL6			
	KF40	-VA-KF40-FL6			
	KF50	-VA-KF50-FL6			
1/2	KF25	-VA-KF25-FL8	1.77(45.0)	13/16(20.6)	7/8(22.2)
	KF40	-VA-KF40-FL8			
	KF50	-VA-KF50-FL8			
3/4	KF25	-VA-KF25-FL12	2.14(54.4)	1 1/16(27.0)	1 1/8(28.6)
	KF40	-VA-KF40-FL12			
	KF50	-VA-KF50-FL12			
1	KF25	-VA-KF25-FL16	2.60(66.0)	1 3/8(34.9)	1 1/2(38.1)
	KF40	-VA-KF40-FL16			
	KF50	-VA-KF50-FL16			

\*To order straight fittings bored through, add T to the ordering number, eg:SS-TVA-KF25-FL4.

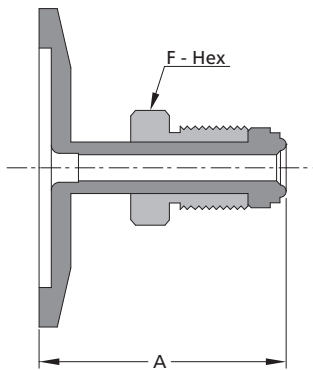
## 4 VA Series Vacuum Adapter Fittings

### KF to CF Flange Straight Reducing



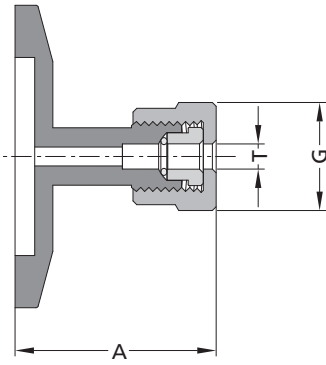
Flange Size	Tube OD in.	Basic Ordering Number	A in.(mm)
KF10-CF133	1/2	-VA-KF10-CF133-SR	1.75(44.5)
KF16-CF133	3/4	-VA-KF16-CF133-SR	1.75(44.5)
KF16-CF275	3/4	-VA-KF16-CF275-SR	1.78(45.2)
KF25-CF212	1	-VA-KF25-CF212-SR	1.75(44.5)
KF25-CF275	1	-VA-KF25-CF275-SR	1.78(45.2)
KF40-CF275	1 1/2	-VA-KF40-CF275-SR	1.78(45.2)
KF40-CF338	1 1/2	-VA-KF40-CF338-SR	1.80(45.7)
KF50-CF133	3/4	-VA-KF50-CF133-SR	1.95(49.5)
KF50-CF275	1 1/2	-VA-KF50-CF275-SR	1.95(49.5)
KF50-CF338	2	-VA-KF50-CF338-SR	1.80(45.7)
KF50-CF450	2	-VA-KF50-CF450-SR	1.95(49.5)

### KF to Rotatable Male FR Metal Gasket Face Seal Fitting



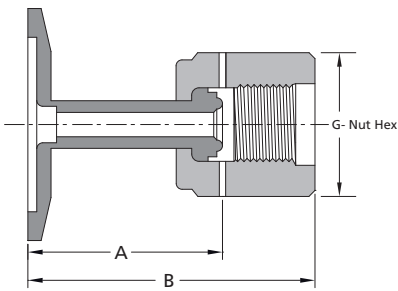
FR Size in.	Flange Size	Basic Ordering Number	A in.(mm)	F in.(mm)
1/4	KF10	-VA-KF10-RFR4	1.46(37.1)	5/8(15.9)
	KF16	-VA-KF16-RFR4		
	KF25	-VA-KF25-RFR4		
	KF40	-VA-KF40-RFR4		
	KF50	-VA-KF50-RFR4		
3/8	KF16	-VA-KF16-RFR6	1.65(41.9)	11/16(17.5)
	KF25	-VA-KF25-RFR6	1.55(39.4)	
	KF40	-VA-KF40-RFR6		
	KF50	-VA-KF50-RFR6		
1/2	KF16	-VA-KF16-RFR8	1.65(41.9)	15/16(23.8)
	KF25	-VA-KF25-RFR8	1.55(39.4)	
	KF40	-VA-KF40-RFR8		
	KF50	-VA-KF50-RFR8		
3/4	KF25	-VA-KF25-RFR12	2.15(54.6)	1 5/16(33.3)
	KF40	-VA-KF40-RFR12	2.05(52.1)	
	KF50	-VA-KF50-RFR12		
1	KF25	-VA-KF25-RFR16	2.26(57.4)	1 5/8(41.3)
	KF40	-VA-KF40-RFR16		
	KF50	-VA-KF50-RFR16		

**KF to Vacuum Tube Fitting**



T-Tube OD in.	Flange Size	Basic Ordering Number	A in.(mm)	G in.(mm)
1/4	KF10	-VA-KF10-VL4	1.48(37.6)	11/16(17.5)
3/8		-VA-KF10-VL6	1.62(41.1)	13/16(20.6)
1/4	KF16	-VA-KF16-VL4	1.48(37.6)	11/16(17.5)
3/8		-VA-KF16-VL6	1.62(41.1)	13/16(20.6)
1/2		-VA-KF16-VL8	1.79(45.5)	15/16(23.8)
1/4	KF25	-VA-KF25-VL4	1.48(37.6)	11/16(17.5)
3/8		-VA-KF25-VL6	1.62(41.1)	13/16(20.6)
1/2		-VA-KF25-VL8	1.79(45.5)	15/16(23.8)
3/4		-VA-KF25-VL12	1.93(49.0)	1 1/4(31.8)
1/4	KF40	-VA-KF40-VL4	1.48(37.6)	11/16(17.5)
3/8		-VA-KF40-VL6	1.62(41.1)	13/16(20.6)
1/2		-VA-KF40-VL8	1.79(45.5)	15/16(23.8)
3/4		-VA-KF40-VL12	1.93(49.0)	1 1/4(31.8)
1		-VA-KF40-VL16	1.95(49.5)	1 9/16(39.7)
1/4	KF50	-VA-KF50-VL4	1.48(37.6)	11/16(17.5)
3/8		-VA-KF50-VL6	1.62(41.1)	13/16(20.6)
1/2		-VA-KF50-VL8	1.79(45.5)	15/16(23.8)
3/4		-VA-KF50-VL12	1.93(49.0)	1 1/4(31.8)
1		-VA-KF50-VL16	1.95(49.5)	1 9/16(39.7)

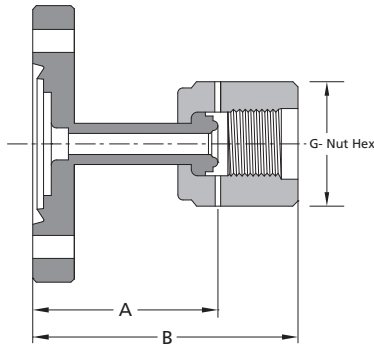
**KF to Female FR Metal Gasket Face Seal Fitting**



FR Size in.	Flange Size	Basic Ordering Number	A in.(mm)	B in.(mm)	G in.(mm)
1/4	KF10	-VA-KF10-FFR4	1.46(37.1)	1.96(49.8)	3/4(19.1)
	KF16	-VA-KF16-FFR4			
	KF25	-VA-KF25-FFR4			
	KF40	-VA-KF40-FFR4			
	KF50	-VA-KF50-FFR4			
1/2	KF16	-VA-KF16-FFR8	1.65(41.9)	2.21(56.1)	1 1/16(27.0)
	KF25	-VA-KF25-FFR8			
	KF40	-VA-KF40-FFR8			
	KF50	-VA-KF50-FFR8			

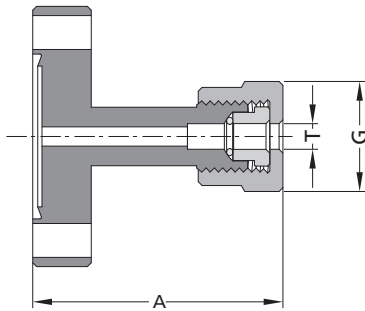
## CF Adapter Fittings

### CF to Female FR Metal Gasket Face Seal Fitting



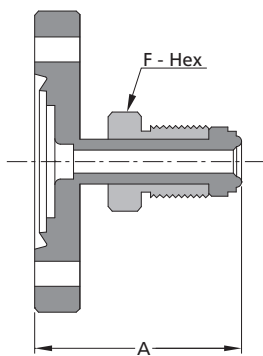
FR Size in.	Flange Size	Basic Ordering Number	A in.(mm)	B in.(mm)	G in.(mm)
1/4	CF133	-VA-CF133-FFR4	1.36(34.5)	1.86(47.2)	3/4(19.1)
1/2		-VA-CF133-FFR8	1.55(39.4)	2.11(53.6)	1 1/16(27.0)
1/4	CF275	-VA-CF275-FFR4	1.36(34.5)	1.86(47.2)	3/4(19.1)
1/2		-VA-CF275-FFR8	1.55(39.4)	2.11(53.6)	1 1/16(27.0)

### CF to Vacuum Tube Fitting



T-Tube OD in.	Flange Size	Basic Ordering Number	A in.(mm)	G in.(mm)
1/4	CF133	-VA-CF133-VL4	1.38(34.9)	11/16(17.5)
3/8		-VA-CF133-VL6	1.38(34.9)	13/16(20.6)
1/2		-VA-CF133-VL8	1.44(36.5)	15/16(23.8)
5/8		-VA-CF133-VL10	1.69(42.9)	1 1/8(28.6)
1/4	CF275	-VA-CF275-VL4	1.38(34.9)	11/16(17.5)
3/8		-VA-CF275-VL6	1.38(34.9)	13/16(20.6)
1/2		-VA-CF275-VL8	1.44(36.5)	15/16(23.8)
5/8		-VA-CF275-VL10	1.75(44.5)	1 1/8(28.6)
3/4		-VA-CF275-VL12	1.88(47.6)	1 1/4(31.8)
1		-VA-CF275-VL16	2.13(54.0)	1 9/16(39.7)

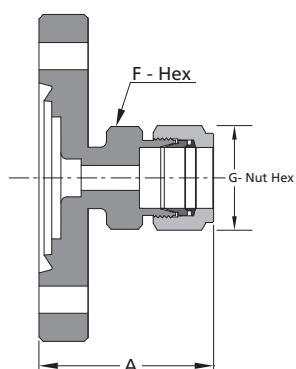
### CF to Rotatable Male FR Metal Gasket Face Seal Fitting



FR Size in.	Flange Size	Basic Ordering Number	A in.(mm)	F in.(mm)
1/4	CF133	-VA-CF133-RFR4	1.36(34.5)	5/8(15.9)
1/2		-VA-CF133-RFR8	1.55(39.4)	15/16(23.8)
1/4	CF275	-VA-CF275-RFR4	1.36(34.5)	5/8(15.9)
1/2		-VA-CF275-RFR8	1.55(39.4)	15/16(23.8)



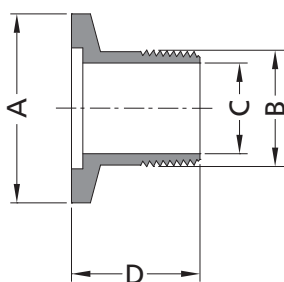
## CF to Tube Fitting



Tube OD in.	Flange Size	Basic Ordering Number	A in.(mm)	F in.(mm)	G in.(mm)
1/4	CF133	-VA-CF133-FL4	1.37(34.8)	1/2(12.7)	9/16(14.3)
3/8		-VA-CF133-FL6	1.58(40.1)	5/8(15.9)	11/16(17.5)
1/4	CF275	-VA-CF275-FL4	1.57(39.9)	1/2(12.7)	9/16(14.3)
3/8		-VA-CF275-FL6	1.73(43.9)	5/8(15.9)	11/16(17.5)

## Other Adapter Fittings

### Male ISO Tapered Thread



Flange Size	Basic Ordering Number	A in.(mm)	B in.(mm)	C in.(mm)	D in.(mm)	BSPT
KF10	-VA-KF10-RT4	1.18(30.0)	0.52(13.16)	0.35(9.0)	1.18 (30.0)	1/4" x 19 BSPT
	-VA-KF10-RT6	1.18(30.0)	0.66(16.66)	0.39(10.0)		3/8" x 19 BSPT
KF16	-VA-KF16-RT8	1.18(30.0)	0.83(20.96)	0.63(16.0)		1/2" x 14 BSPT
KF25	-VA-KF25-RT12	1.57(40.0)	1.04(26.44)	0.79(20.0)		3/4" x 14 BSPT
	-VA-KF25-RT16	1.57(40.0)	1.31(33.25)	0.94(24.0)		1" x 11 BSPT
KF40	-VA-KF40-RT20	2.17(55.0)	1.65(41.91)	1.38(35.0)		1 1/4" x 11 BSPT
	-VA-KF40-RT24	2.17(55.0)	1.88(47.8)	1.61(41.0)		1 1/2" x 11 BSPT
KF50	-VA-KF50-RT32	2.95(75.0)	2.35(59.61)	2.00(51.0)		2" x 11 BSPT

- ⦿ For details about fittings not listed, please contact us.
- ⦿ The performance of the adapter fitting is determined by the lower performing end connection.

## **FITOK Group**

### **FITOK GmbH (Headquarter)**

Sprendlinger Landstr. 115, 63069 Offenbach am Main, Germany  
Tel.: +49 69 8900 4498 Fax: +49 69 8900 4495

### **FITOK, Inc.**

13843 North Promenade Blvd., Suite 750, Stafford, Texas 77477, USA  
Tel.: +1 281 888 0077 Fax: +1 281 582 4051

### **FITOK Incorporated**

1-4F, Block C, Zone E, Yingtai Industrial Park, Dalang Street,  
Longhua District, Shenzhen, 518109, China  
Tel.: +86 755 2803 2500 Fax: +86 755 2803 2619

### **FITOK Middle East Oil Equipment Trading LLC**

208-209, Makateb Building, Airport Road, P.O.Box 185412, Deira, Dubai, UAE  
Tel.: +971 4 2959 853 Fax: +971 4 2959 854

[info@fitokgroup.com](mailto:info@fitokgroup.com)  
[www.fitokgroup.com](http://www.fitokgroup.com)

FK-IC-GF-09-EN-150507