

# Vacuum Fittings



## Adapter Fittings

- KF to VCR® metal gasket face seal, VCO® O-ring face seal, NPT, Swagelok® tube fitting, and ultra-torr vacuum fitting
- CF to VCR metal gasket face seal and Swagelok tube fitting

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## Features

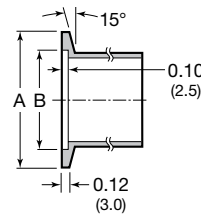
- Quick-release KF flange ends in accordance with ISO 2861/1
- Bakable CF flange ends in accordance with ISO 3669
- **Vacuum Range:**
  - Copper Seal:  $\geq 10^{-12}$  Torr
  - Elastomeric Seal:  $\geq 10^{-8}$  Torr
- **Operational Temperature Range:**
  - Copper Seal:  $-325$  to  $842^{\circ}\text{F}$  ( $-200$  to  $450^{\circ}\text{C}$ )
  - Elastomeric Seal:  $-4$  to  $302^{\circ}\text{F}$  ( $-20$  to  $150^{\circ}\text{C}$ )

## Applications

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

## KF Flange Dimensions

Dimensions, in inches (millimeters), are for reference only and are subject to change.



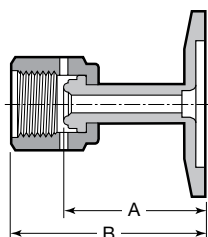
Flange Connection	Dimensions, in. (mm)	
	A	B
KF 10	1.18 (30.0)	0.48 (12.2)
KF 16	1.18 (30.0)	0.68 (17.2)
KF 25	1.57 (40.0)	1.03 (26.2)
KF 40	2.16 (55.0)	1.62 (41.2)
KF 50	2.95 (75.0)	2.06 (52.3)

## Ordering Information and Dimensions

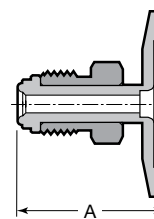
Dimensions, in inches (millimeters), are for reference only and are subject to change. For KF flange dimensions, see page 2.

### KF Adapter Fittings

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



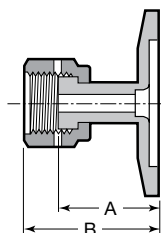
**KF to Male VCR  
Metal Gasket Face  
Seal Fitting**



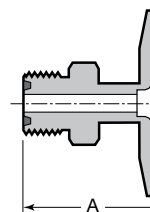
VCR Size in.	Flange Connection	Ordering Number	Dimensions, in. (mm)	
			A	B
1/4	KF 10	JNWFVCR1014	1.46 (37.1)	1.96 (49.8)
	KF 16	JNWFVCR1614		
	KF 25	JNWFVCR2514		
	KF 40	JNWFVCR4014		
1/2	KF 50	JNWFVCR5014	1.65 (41.9)	2.21 (56.1)
	KF 16	JNWFVCR1650		
	KF 25	JNWFVCR2550		
	KF 40	JNWFVCR4050		
3/4	KF 50	JNWFVCR5050	2.15 (54.6)	2.90 (73.7)
	KF 25	JNWFVCR2575		
	KF 40	JNWFVCR4075		
1	KF 50	JNWFVCR5075	2.47 (62.7)	3.39 (86.1)
	KF 25	JNWFVCR2510		
	KF 40	JNWFVCR4010		
	KF 50	JNWFVCR5010	2.37 (60.2)	3.29 (83.6)
	KF 40	JNWFVCR4010		

VCR Size in.	Flange Connection	Ordering Number	A in. (mm)
1/4	KF 10	JNWMVCR1014	1.46 (37.1)
	KF 16	JNWMVCR1614	
	KF 25	JNWMVCR2514	
	KF 40	JNWMVCR4014	
1/2	KF 50	JNWMVCR5014	1.65 (41.9)
	KF 16	JNWMVCR1650	
	KF 25	JNWMVCR2550	
	KF 40	JNWMVCR4050	
3/4	KF 50	JNWMVCR5050	2.15 (54.6)
	KF 25	JNWMVCR2575	
	KF 40	JNWMVCR4075	
1	KF 50	JNWMVCR5075	2.47 (62.7)
	KF 25	JNWMVCR2510	
	KF 40	JNWMVCR4010	
	KF 50	JNWMVCR5010	2.37 (60.2)

**KF to Female VCO O-Ring  
Face Seal Fitting**



**KF to Male VCO O-Ring  
Face Seal Fitting**



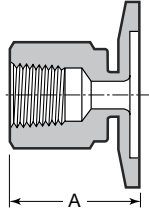
VCO Size in.	Flange Connection	Ordering Number	Dimensions, in. (mm)	
			A	B
1/4	KF 10	JNWFVCO1014	0.92 (23.4)	1.26 (32.0)
	KF 16	JNWFVCO1614		
	KF 25	JNWFVCO2514		
	KF 40	JNWFVCO4014		
1/2	KF 50	JNWFVCO5014	0.96 (24.4)	1.33 (33.8)
	KF 16	JNWFVCO1650		
	KF 25	JNWFVCO2550		
	KF 40	JNWFVCO4050		
	KF 50	JNWFVCO5050		
	KF 40	JNWFVCO4050		

VCO Size in.	Flange Connection	Ordering Number	A in. (mm)
1/4	KF 10	JNWMVCO1014	1.24 (31.5)
	KF 16	JNWMVCO1614	
	KF 25	JNWMVCO2514	
	KF 40	JNWMVCO4014	
1/2	KF 50	JNWMVCO5014	1.49 (37.8)
	KF 16	JNWMVCO1650	
	KF 25	JNWMVCO2550	
	KF 40	JNWMVCO4050	
	KF 50	JNWMVCO5050	

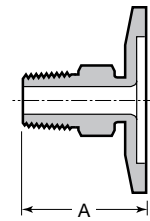
## Ordering Information and Dimensions

### KF Adapter Fittings

#### KF to Female NPT



#### KF to Male NPT



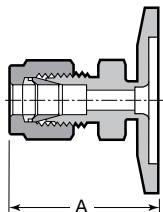
Pipe Size in.	Flange Connection	Ordering Number	A in. (mm)
1/8	KF 10	JNWFPT1018	0.92 (23.4)
	KF 16	JNWFPT1618	
	KF 25	JNWFPT2518	
	KF 40	JNWFPT4018	
	KF 50	JNWFPT5018	
1/4	KF 10	JNWFPT1014	1.07 (27.2)
	KF 16	JNWFPT1614	
	KF 25	JNWFPT2514	
	KF 40	JNWFPT4014	
	KF 50	JNWFPT5014	
1/2	KF 10	JNWFPT1050	1.44 (36.6)
	KF 16	JNWFPT1650	1.39 (35.3)
	KF 25	JNWFPT2550	
	KF 40	JNWFPT4050	
	KF 50	JNWFPT5050	
3/4	KF 25	JNWFPT2575	1.45 (36.8)
	KF 40	JNWFPT4075	
	KF 50	JNWFPT5075	
1	KF 25	JNWFPT2510	1.57 (39.9)
	KF 40	JNWFPT4010	
	KF 50	JNWFPT5010	
1 1/4	KF 40	JNWFPT40125	1.68 (42.7)
	KF 50	JNWFPT50125	
1 1/2	KF 40	JNWFPT4015	1.78 (45.2)
	KF 50	JNWFPT5015	
2	KF 50	JNWFPT5020	1.82 (46.2)

Pipe Size in.	Flange Connection	Ordering Number	A in. (mm)
1/8	KF 10	JNWMPT1018	0.89 (22.6)
	KF 16	JNWMPT1618	
	KF 25	JNWMPT2518	
	KF 40	JNWMPT4018	
	KF 50	JNWMPT5018	
1/4	KF 10	JNWMPT1014	1.10 (27.9)
	KF 16	JNWMPT1614	
	KF 25	JNWMPT2514	
	KF 40	JNWMPT4014	
	KF 50	JNWMPT5014	
1/2	KF 10	JNWMPT1050	1.35 (34.3)
	KF 16	JNWMPT1650	
	KF 25	JNWMPT2550	
	KF 40	JNWMPT4050	
	KF 50	JNWMPT5050	
3/4	KF 25	JNWMPT2575	1.35 (34.3)
	KF 40	JNWMPT4075	
	KF 50	JNWMPT5075	
1	KF 25	JNWMPT2510	1.64 (41.7)
	KF 40	JNWMPT4010	
	KF 50	JNWMPT5010	
1 1/4	KF 40	JNWMPT40125	1.78 (45.2)
	KF 50	JNWMPT50125	
1 1/2	KF 40	JNWMPT4015	2.00 (50.8)
	KF 50	JNWMPT5015	
2	KF 50	JNWMPT5020	2.29 (58.2)

## Ordering Information and Dimensions

### KF Adapter Fittings

#### KF to Swagelok Tube Fitting



To order bored-through fittings, add **BT** to the ordering number.

Examples: JNWSWAG1018**BT**  
JNWSWAG103M0**BT**

#### Fractional

Tube OD in.	Flange Connection	Ordering Number	A in. (mm)
1/8	KF 10	JNWSWAG1018	1.28 (32.5)
	KF 16	JNWSWAG1618	
	KF 25	JNWSWAG2518	
	KF 40	JNWSWAG4018	
	KF 50	JNWSWAG5018	
1/4	KF 10	JNWSWAG1014	1.47 (37.3)
	KF 16	JNWSWAG1614	
	KF 25	JNWSWAG2514	
	KF 40	JNWSWAG4014	
	KF 50	JNWSWAG5014	
3/8	KF 10	JNWSWAG1038	1.63 (41.4)
	KF 16	JNWSWAG1638	
	KF 25	JNWSWAG2538	
	KF 40	JNWSWAG4038	
	KF 50	JNWSWAG5038	
1/2	KF 25	JNWSWAG2550	1.77 (45.0)
	KF 40	JNWSWAG4050	
	KF 50	JNWSWAG5050	
3/4	KF 25	JNWSWAG2575	1.46 (37.1)
	KF 40	JNWSWAG4075	
	KF 50	JNWSWAG5075	
1	KF 40	JNWSWAG4010	1.74 (44.2)
	KF 50	JNWSWAG5010	

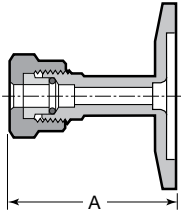
#### Metric

Tube OD mm	Flange Connection	Ordering Number	A mm (in.)
3	KF 10	JNWSWAG103M0	34.3 (1.35)
	KF 16	JNWSWAG163M0	
	KF 25	JNWSWAG253M0	
	KF 40	JNWSWAG403M0	
	KF 50	JNWSWAG503M0	
4	KF 10	JNWSWAG104M0	35.1 (1.38)
	KF 16	JNWSWAG164M0	
	KF 25	JNWSWAG254M0	
	KF 40	JNWSWAG404M0	
	KF 50	JNWSWAG504M0	
6	KF 10	JNWSWAG106M0	41.7 (1.64)
	KF 16	JNWSWAG166M0	
	KF 25	JNWSWAG256M0	
	KF 40	JNWSWAG406M0	
	KF 50	JNWSWAG506M0	
8	KF 10	JNWSWAG108M0	42.4 (1.67)
	KF 16	JNWSWAG168M0	
	KF 25	JNWSWAG258M0	
	KF 40	JNWSWAG408M0	
	KF 50	JNWSWAG508M0	
10	KF 10	JNWSWAG1010M0	44.7 (1.76)
	KF 16	JNWSWAG1610M0	
	KF 25	JNWSWAG2510M0	
	KF 40	JNWSWAG4010M0	
	KF 50	JNWSWAG5010M0	
12	KF 10	JNWSWAG1012M0	44.7 (1.76)
	KF 16	JNWSWAG1612M0	
	KF 25	JNWSWAG2512M0	
	KF 40	JNWSWAG4012M0	
	KF 50	JNWSWAG5012M0	

## Ordering Information and Dimensions

### KF Adapter Fittings

#### KF to Ultra-Torr Vacuum Fitting

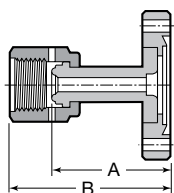


Tube OD in.	Flange Connection	Ordering Number	A in. (mm)
1/4	KF 10	JNWUT1014	1.48 (37.6)
	KF 16	JNWUT1614	
	KF 25	JNWUT2514	
	KF 40	JNWUT4014	
	KF 50	JNWUT5014	
3/8	KF 10	JNWUT1038	1.62 (41.1)
	KF 16	JNWUT1638	
	KF 25	JNWUT2538	
	KF 40	JNWUT4038	
	KF 50	JNWUT5038	
1/2	KF 16	JNWUT1650	1.79 (45.5)
	KF 25	JNWUT2550	
	KF 40	JNWUT4050	
	KF 50	JNWUT5050	
3/4	KF 25	JNWUT2575	1.93 (49.0)
	KF 40	JNWUT4075	
	KF 50	JNWUT5075	
1	KF 40	JNWUT4010	1.95 (49.5)
	KF 50	JNWUT5010	

## Ordering Information and Dimensions

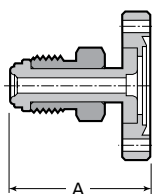
### CF Adapter Fittings

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



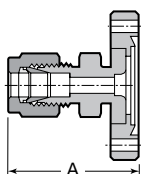
VCR Size in.	Flange Connection	Nominal Flange OD in.	Ordering Number	Dimensions, in. (mm)	
				A	B
1/4	CF 133	1.33	JCFFVCR13314	1.48 (37.7)	1.98 (50.4)
1/2			JCFFVCR13350	1.68 (42.6)	2.34 (56.8)
1/4	CF 275	2.75	JCFFVCR27514	1.52 (38.6)	2.02 (51.3)
1/2			JCFFVCR27550	1.71 (43.4)	2.27 (57.6)

#### CF to Male VCR Metal Gasket Face Seal Fitting



VCR Size in.	Flange Connection	Nominal Flange OD in.	Ordering Number	A in. (mm)
1/4	CF 133	1.33	JCFMVCR13314	1.48 (37.7)
1/2			JCFMVCR13350	1.68 (42.6)
1/4	CF 275	2.75	JCFMVCR27514	1.52 (38.6)
1/2			JCFMVCR27550	1.71 (43.4)

#### CF to Swagelok Tube Fitting



Tube OD in.	Flange Connection	Nominal Flange OD in.	Ordering Number	A in. (mm)
1/4	CF 133	1.33	JCFSWAG13314	1.50 (38.0)
3/8			JCFSWAG13338	1.66 (42.0)
1/2			JCFSWAG13350	1.80 (45.6)
1/4	CF 275	2.75	JCFSWAG27514	1.53 (38.9)
3/8			JCFSWAG27538	1.69 (42.9)
1/2			JCFSWAG27550	1.83 (46.5)

### Tubing Products

Swagelok offers a wide variety of tubing products.

Contact your authorized Swagelok representative or see the *Stainless Steel Seamless Tubing, Fractional, Metric, and Imperial Sizes* catalog, MS-01-181.



### Swagelok Orbital Welding System

See the *Swagelok Welding System M200 Power Supply* catalog, MS-02-342, for more information.



**Safe Product Selection**

**When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.**

**Warranty Information**

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit [swagelok.com](http://swagelok.com) or contact your authorized Swagelok representative.