

# 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

- **Vacuum Range:**
  - Copper Seal:  $\geq 10^{-12}$  Torr
  - Elastomeric Seal:  $\geq 10^{-8}$  Torr
- **Operational Temperature Range:**
  - Copper Seal: -325 to 842°F (-200 to 450°C)
  - Elastomeric Seal: -4 to 302°F (-20 to 150°C)

## Applications

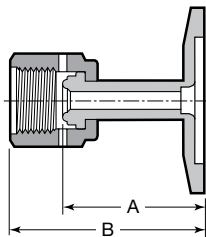
Adapter vacuum products are generally used on vacuum chamber ports to connect vacuum flanges to various fittings.

## Ordering Information and Dimensions

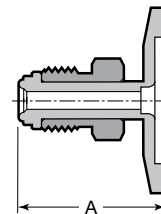
Dimensions, in inches (millimeters), are for reference only and are subject to change.

### KF Adapter Fittings

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



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

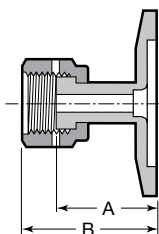


VCR Size in.	Flange Connection	Ordering Number	Dimensions, in. (mm)	
			A	B
1/4	KF 10	JNWFVCR1014	1.46 (37.1)	1.96 (49.8)
	KF 16	JNWFVCR1614		
	KF 25	JNWFVCR2514		
	KF 40	JNWFVCR4014		
	KF 50	JNWFVCR5014		
1/2	KF 16	JNWFVCR1650	1.65 (41.9)	2.21 (56.1)
	KF 25	JNWFVCR2550		
	KF 40	JNWFVCR4050		
	KF 50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

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	
	KF 50	JNWMVCR5014	
1/2	KF 16	JNWMVCR1650	1.65 (41.9)
	KF 25	JNWMVCR2550	
	KF 40	JNWMVCR4050	
	KF 50	JNWMVCR5050	
3/4	KF 25	JNWMVCR2575	2.15 (54.6)
	KF 40	JNWMVCR4075	
	KF 50	JNWMVCR5075	
1	KF 25	JNWMVCR2510	2.47 (62.7)
	KF 40	JNWMVCR4010	
	KF 50	JNWMVCR5010	

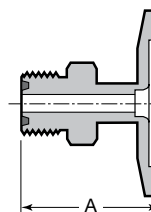
### KF Adapter Fittings

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



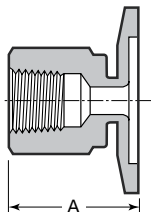
VCO Size in.	Flange Connection	Ordering Number	Dimensions, in. (mm)	
			A	B
1/4	KF 10	JNWFVCO1014	0.92 (23.4)	1.26 (32.0)
	KF 16	JNWFVCO1614		
	KF 25	JNWFVCO2514		
	KF 40	JNWFVCO4014		
	KF 50	JNWFVCO5014		
1/2	KF 16	JNWFVCO1650	0.96 (24.4)	1.33 (33.8)
	KF 25	JNWFVCO2550		
	KF 40	JNWFVCO4050		
	KF 50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

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



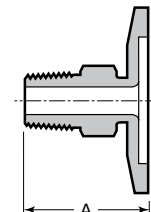
VCO Size in.	Flange Connection	Ordering Number	A in. (mm)
1/4	KF 10	JNWMVCO1014	1.24 (31.5)
	KF 16	JNWMVCO1614	
	KF 25	JNWMVCO2514	
	KF 40	JNWMVCO4014	
	KF 50	JNWMVCO5014	
1/2	KF 16	JNWMVCO1650	1.49 (37.8)
	KF 25	JNWMVCO2550	
	KF 40	JNWMVCO4050	
	KF 50	JNWMVCO5050	

**KF to Female 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	
	KF 25	JNWFPT2550	1.39 (35.3)
	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)

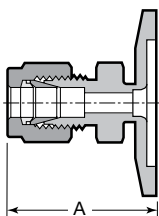
**KF to Male NPT**



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	1.35 (34.3)
	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)

### 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

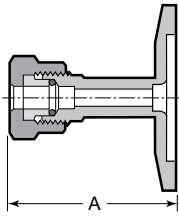
Tube OD in.	Flange Connection	Ordering Number	A in. (mm)
1/8	KF 10	JNWSWAG1018	1.28 (32.5)
	KF 16	JNWSWAG1618	
	KF 25	JNWSWAG2518	
	KF 40	JNWSWAG4018	
	KF 50	JNWSWAG5018	
1/4	KF 10	JNWSWAG1014	1.47 (37.3)
	KF 16	JNWSWAG1614	
	KF 25	JNWSWAG2514	
	KF 40	JNWSWAG4014	
	KF 50	JNWSWAG5014	
3/8	KF 10	JNWSWAG1038	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	

### KF Adapter Fittings

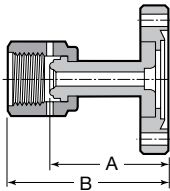
#### KF to Ultra-Torr Vacuum Fitting



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	

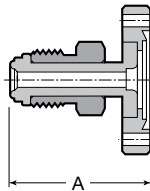
### CF Adapter Fittings

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



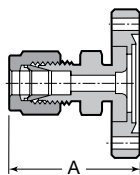
VCR Size in.	Flange Connection	Ordering Number	Dimensions, in. (mm)	
			A	B
1/4	CF 133	JCFFVCR13314	1.48 (37.7)	1.98 (50.4)
1/2		JCFFVCR13350	1.68 (42.6)	2.34 (56.8)
1/4	CF 275	JCFFVCR27514	1.52 (38.6)	2.02 (51.3)
1/2		JCFFVCR27550	1.71 (43.4)	2.27 (57.6)

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



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

#### CF to Swagelok Tube Fitting



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

## KF Flanges and Fittings

For more information, contact your authorized Swagelok representative or see the *Swagelok Vacuum Fittings, KF Flanges and Fittings* catalog, MS-03-15.



## CF Flanges and Fittings

For more information, contact your authorized Swagelok representative or see the *Swagelok Vacuum Fittings, CF Flanges and Fittings* catalog, MS-03-17.



## ISO Flanges and Fittings

For more information, contact your authorized Swagelok representative or see the *Swagelok Vacuum Fittings, ISO Flanges and Fittings* catalog, MS-03-16.



## Swagelok Orbital Welding System

For information on the Swagelok welding system, see the *Swagelok Orbital Welding System Quick Reference Guide*, MS-02-143.



## Weld Fittings for Vacuum Service

For more information, contact your authorized Swagelok representative or see the *Swagelok Weld Fittings for Vacuum Service* catalog, MS-03-14.



## Tubing Products

Swagelok offers a wide variety of tubing products.

Contact your authorized Swagelok representative or see these Swagelok catalogs for more information:

- *Stainless Steel Seamless Tubing, Fractional Sizes*, MS-01-153-SCS
- *Stainless Steel Welded Tubing*, MS-01-161-SCS
- *Stainless Steel Tubing, Imperial Sizes*, MS-01-159-SCS



### 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.