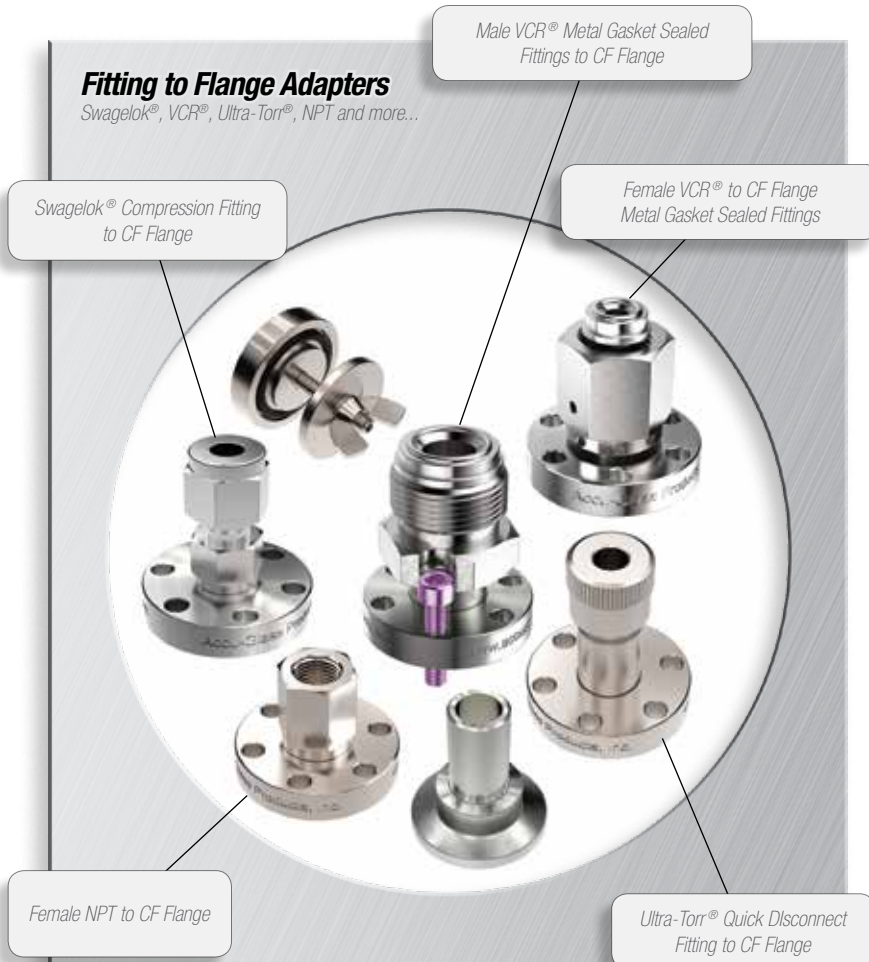




### Fitting to Flange Adapters

Swagelok®, VCR®, Ultra-Torr®, NPT and more...



### Features

- Swagelok® Fittings
- VCR® Fittings
- Ultra-Torr® Fittings
- NPT Pipe Thread Fittings
- Hose Fittings
- Baseplate Fittings
- 304 / 316 Stainless Steel
- UHV Compatible to  $1 \times 10^{-13}$  Torr
- Bakeable to 450°C

### Specifications

#### Vacuum Range

UHV, Ultrahigh Vacuum	$1 \times 10^{-13}$ Torr
HV, High Vacuum	$1 \times 10^{-8}$ Torr

#### Temperature Range<sup>1,2</sup>

304, 316 Stainless Steel	450°C
Metal Seals	450°C
Elastomer Seals	200°C

### Notes

1. Overall assembly ratings must be adjusted to that of its lowest rated component.
2. Anti-seizing thread lubricants or compounds are recommended when fastening stainless steel components. Silver-plated bolts are an ideal solution for in-vacuum use, while various paint-on thread lubricating solutions for air-service applications are commercially available. Contact factory for more information on thread lubricating solutions.

§ Unless specified otherwise, dimensional units in all sections of this catalog are expressed in inches.

### Fitting to Flange Adapters

Accu-Glass Products' line of Fitting-to-Flange Adapters provide a simple and economical means of mating between dissimilar flange/fitting interfaces.

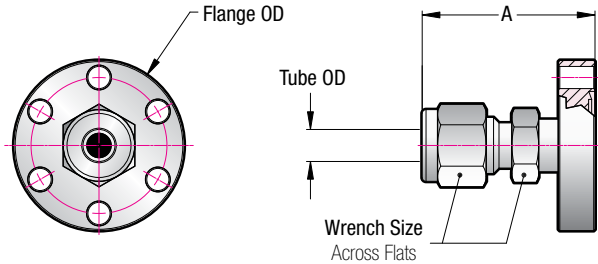
For UHV and high vacuum applications, we offer both Conflat® compatible CF and ISO NW KF/LF flanges that are fitted with industry standard fittings including Swagelok® and VCR® metal-to-metal tube fittings (both male and female for VCR® fittings).

For high vacuum applications, Ultra-Torr® quick disconnect tube fittings, male and female NPT pipe threads, and various rubber hose fittings are also available. Custom solution inquires are always welcome, just contact one of our sales engineers with your detailed requirements.



## Swagelok® — Swaged Metal Seal Compression Fitting

Type 304 Flange, and 316 Swagelok® compression fitting stainless steel materials.



## CF Flange Adapter — 450°C / UHV to 1x10<sup>-10</sup> Torr

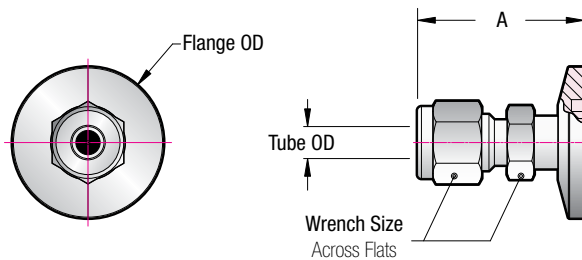
Fitting Size	Tube OD	Flange Type	Flange OD	A Nominal Length	Wrench Size	Model Number	Part Number	Unit Price \$
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### Swagelok® — Compression Fitting

1/4	0.250	1.33 CF	1.33	1.38	.56 / .50	SWG1/4-133	<b>210800</b>	65
1/4	0.250	2.75 CF	2.73	1.51	.56 / .50	SWG1/4-275	<b>210801</b>	103
1/2	0.500	1.33 CF	1.33	1.68	.87 / .62	SWG1/2-133	<b>210802</b>	105
1/2	0.500	2.75 CF	2.73	1.68	.87 / .87	SWG1/2-275	<b>210803</b>	109
3/4	0.750	2.75 CF	2.73	1.77	1.12 / 1.06	SWG3/4-275	<b>210804</b>	124
1	1.000	2.75 CF	2.73	2.13	1.50 / 1.37	SWG1-275	<b>210805</b>	227



**210800** / 1/4 Inch Tube Swagelok® Fitting to 1.33 CF Flange



## ISO KF Flange Adapter — 150°C / HV to 1x10<sup>-8</sup> Torr

Fitting Size	Tube OD	Flange Type	Flange OD	A Nominal Length	Wrench Size	Model Number	Part Number	Unit Price \$
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### Swagelok® — Compression Fitting

1/4	0.250	NW16 KF	1.18	1.43	.56 / .50	SWG1/4-K16	<b>210806</b>	75
1/4	0.250	NW40 KF	2.16	1.33	.56 / .50	SWG1/4-K40	<b>210807</b>	79
1/4	0.250	NW50 KF	2.95	1.33	.56 / .50	SWG1/4-K50	<b>210808</b>	80
1/2	0.500	NW40 KF	2.16	1.63	.87 / .87	SWG1/2-K40	<b>210809</b>	83
1/2	0.500	NW50 KF	2.95	1.63	.87 / .87	SWG1/2-K50	<b>210810</b>	93
3/4	0.750	NW40 KF	2.16	1.72	1.12 / 1.06	SWG3/4-K40	<b>210811</b>	114
3/4	0.750	NW50 KF	2.95	1.72	1.12 / 1.06	SWG3/4-K50	<b>210812</b>	124
1	1.000	NW40 KF	2.16	2.08	1.50 / 1.37	SWG1-K40	<b>210813</b>	191
1	1.000	NW50 KF	2.95	2.08	1.50 / 1.37	SWG1-K50	<b>210814</b>	201



**210806** / 1/4 Inch Tube Swagelok® Fitting to ISO NW16 KF Flange



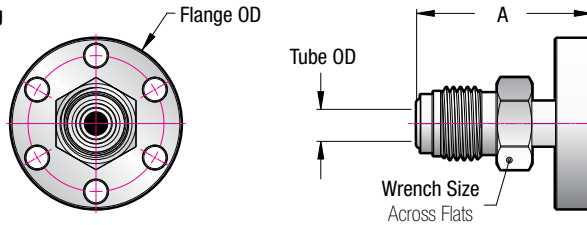
### VCR® — Metal Gasket Seal Fitting

Type 304 Flange, and 316 VCR® metal gasket seal fitting stainless steel materials.

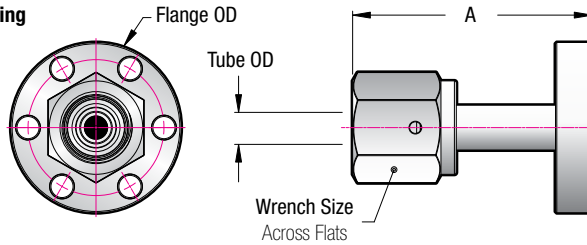


**210815** / 1/4 Inch Tube  
Male VCR® Fitting to 1.33 CF Flange

#### Male Fitting



#### Female Fitting



### CF Flange Adapter — 450°C / UHV to 1x10<sup>-10</sup> Torr



**210817** / 1/2 Inch Tube  
Male VCR® Fitting to 1.33 CF Flange

Fitting Size	Tube OD	Flange Type	Flange OD	A Nominal Length	Wrench Size	Model Number	Part Number	Unit Price \$
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#### VCR® — Male Fitting

1/4	0.250	1.33 CF	1.33	1.37	.62	VCRM1/4-133	<b>210815</b>	79
1/4	0.250	2.75 CF	2.73	1.50	.62	VCRM1/4-275	<b>210816</b>	81
1/2	0.500	1.33 CF	1.33	1.56	1.08	VCRM1/2-133	<b>210817</b>	83
1/2	0.500	2.75 CF	2.73	1.56	1.08	VCRM1/2-275	<b>210818</b>	89
3/4	0.750	2.75 CF	2.73	2.06	1.31	VCRM3/4-275	<b>210819</b>	134
1	1.000	2.75 CF	2.73	2.28	1.62	VCRM1-275	<b>210820</b>	170

#### VCR® — Female Fitting

1/4	0.250	1.33 CF	1.33	1.87	.75	VCRF1/4-133	<b>211091</b>	80
1/4	0.250	2.75 CF	2.73	2.00	.75	VCRF1/4-275	<b>211092</b>	85
1/2	0.500	1.33 CF	1.33	2.13	1.06	VCRF1/2-133	<b>211093</b>	90
1/2	0.500	2.75 CF	2.73	2.13	1.06	VCRF1/2-275	<b>211094</b>	95
3/4	0.750	2.75 CF	2.73	2.81	1.50	VCRF3/4-275	<b>211095</b>	134
1	1.000	2.75 CF	2.73	3.20	1.75	VCRF1-275	<b>211096</b>	170

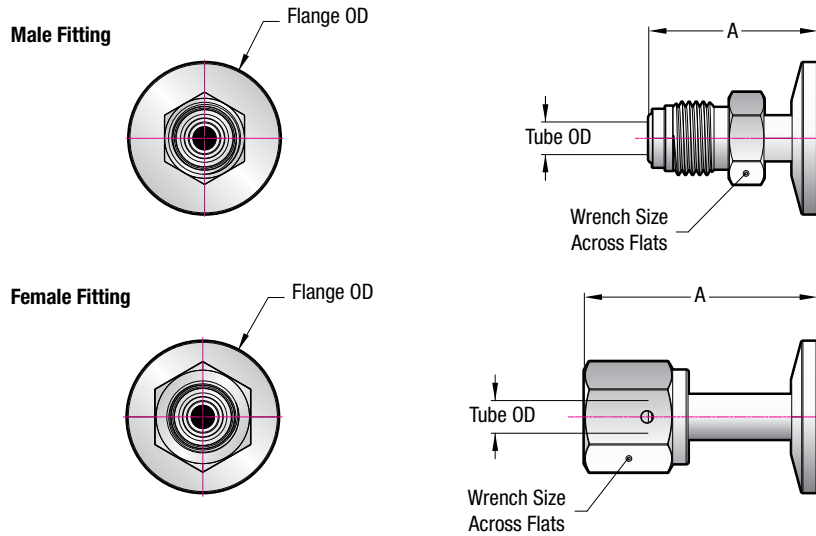


**211091** / 1/4 Inch Tube  
Female VCR® Fitting to 1.33 CF Flange



## VCR® — Metal Gasket Seal Fitting

Type 304 Flange, and 316 VCR® metal gasket seal fitting stainless steel materials.



**210821** / 1/4 Inch Tube  
Male VCR® Fitting to ISO NW16 KF Flange

## ISO KF Flange Adapter — 150°C / HV to 1x10<sup>-8</sup> Torr

Fitting Size	Tube OD	Flange Type	Flange OD	A Nominal Length	Wrench Size	Model Number	Part Number	Unit Price \$
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### VCR® — Male Fitting

1/4	0.250	NW16 KF	1.18	1.32	.62	VCRM1/4-K16	<b>210821</b>	60
1/4	0.250	NW40 KF	2.16	1.32	.62	VCRM1/4-K40	<b>210822</b>	75
1/4	0.250	NW50 KF	2.95	1.32	.62	VCRM1/4-K50	<b>210823</b>	85
1/2	0.500	NW40 KF	2.16	1.51	.94	VCRM1/2-K40	<b>210824</b>	80
1/2	0.500	NW50 KF	2.95	1.51	.94	VCRM1/2-K50	<b>210825</b>	95
3/4	0.750	NW40 KF	2.16	2.01	1.31	VCRM3/4-K40	<b>210826</b>	106
3/4	0.750	NW50 KF	2.95	2.01	1.31	VCRM3/4-K50	<b>210827</b>	113
1	1.000	NW40 KF	2.16	2.23	1.62	VCRM1-K40	<b>210828</b>	135
1	1.000	NW50 KF	2.95	2.23	1.62	VCRM1-K50	<b>210829</b>	145

### VCR® — Female Fitting

1/4	0.250	NW16 KF	1.18	1.82	.75	VCRF1/4-K16	<b>210855</b>	60
1/4	0.250	NW40 KF	2.16	1.82	.75	VCRF1/4-K40	<b>210857</b>	75
1/4	0.250	NW50 KF	2.95	1.82	.75	VCRF1/4-K50	<b>210858</b>	85
1/2	0.500	NW40 KF	2.16	2.08	1.06	VCRF1/2-K40	<b>210861</b>	90
1/2	0.500	NW50 KF	2.95	2.08	1.06	VCRF1/2-K50	<b>210862</b>	95
3/4	0.750	NW40 KF	2.16	2.76	1.50	VCRF3/4-K40	<b>210864</b>	106
3/4	0.750	NW50 KF	2.95	2.76	1.50	VCRF3/4-K50	<b>210865</b>	113
1	1.000	NW40 KF	2.16	3.15	1.75	VCRF1-K40	<b>210867</b>	135
1	1.000	NW50 KF	2.95	3.15	1.75	VCRF1-K50	<b>210868</b>	145



**210855** / 1/4 Inch Tube  
Shown With Nut Resting on Flange

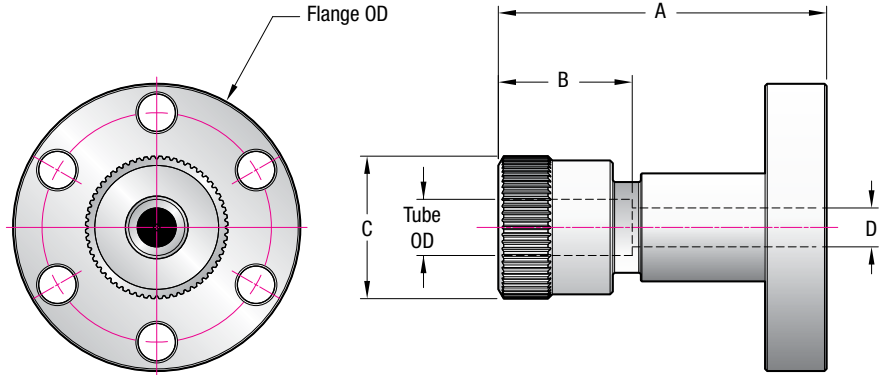


**210855** / 1/4 Inch Tube  
Female VCR® Fitting to ISO NW16 KF Flange



### Ultra-Torr® — Quick Disconnect Fitting

Type 304 Flange, and 316 Ultra-Torr® fitting stainless steel materials.



**210833** / 1/4 Inch Tube  
Ultra Torr® Fitting to 1.33 CF Flange

### CF Flange Adapter — 150°C / HV to 1x10<sup>-8</sup> Torr

Tube Size	Flange Type	Flange OD	A Nominal Length	B	C	D	Model Number	Part Number	Unit Price \$
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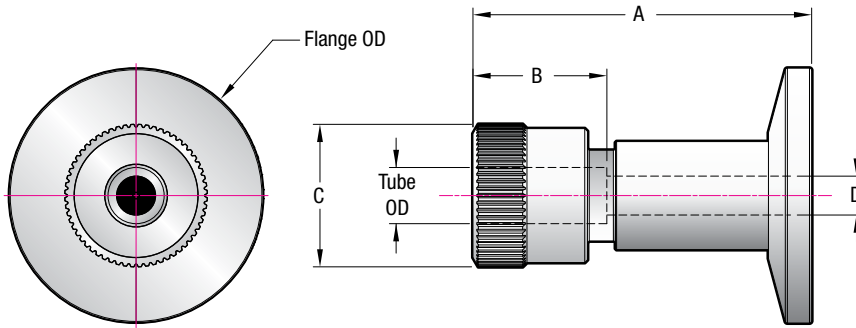
### Ultra-Torr® — Quick Disconnect Fitting

1/4	1.33 CF	1.33	1.53	.62	.69	.18	QD1/4-133	<b>210833</b>	89
1/4	2.75 CF	2.73	1.66	.62	.69	.18	QD1/4-275	<b>210841</b>	150
3/8	1.33 CF	1.33	1.64	.66	.81	.28	QD3/8-133	<b>210835</b>	89
3/8	2.75 CF	2.73	1.77	.66	.81	.28	QD3/8-275	<b>210843</b>	150
1/2	1.33 CF	1.33	1.80	.80	.94	.40	QD1/2-133	<b>210836</b>	93
1/2	2.75 CF	2.73	1.75	.80	.94	.40	QD1/2-275	<b>210844</b>	155
3/4	2.75 CF	2.73	1.84	.94	1.25	.62	QD3/4-275	<b>210846</b>	165
1	2.75 CF	2.73	1.86	.94	1.56	.87	QD1-275	<b>210848</b>	175



**Ultra-Torr® — Quick Disconnect Fitting**

Type 304 Flange, and 316 Ultra-Torr® fitting stainless steel materials.



**ISO KF Flange Adapter — 150°C / UHV to 1x10<sup>-8</sup> Torr**

Tube Size	Flange Type	Flange OD	A Nominal Length	B	C	D	Model Number	Part Number	Unit Price \$
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**Ultra-Torr® — Quick Disconnect Fitting**

1/4	NW16 KF	1.18	1.58	.62	.69	.18	QD1/4-K16	<b>210903</b>	65
1/4	NW40 KF	2.16	1.48	.62	.69	.18	QD1/4-K40	<b>210911</b>	86
1/4	NW50 KF	2.95	1.48	.62	.69	.18	QD1/4-K50	<b>210926</b>	96
3/8	NW16 KF	1.18	1.69	.66	.81	.28	QD3/8-K16	<b>210905</b>	162
3/8	NW40 KF	2.16	1.59	.66	.81	.28	QD3/8-K40	<b>210913</b>	165
3/8	NW50 KF	2.95	1.59	.66	.81	.28	QD3/8-K50	<b>210928</b>	170
1/2	NW16 KF	1.18	1.80	.80	.94	.40	QD1/2-K16	<b>210906</b>	162
1/2	NW40 KF	2.16	1.70	.80	.94	.40	QD1/2-K40	<b>210914</b>	165
1/2	NW50 KF	2.95	1.70	.80	.94	.40	QD1/2-K50	<b>210929</b>	170
3/4	NW40 KF	2.16	1.79	.94	1.25	.62	QD3/4-K40	<b>210916</b>	162
3/4	NW50 KF	2.95	1.79	.94	1.25	.62	QD3/4-K50	<b>210931</b>	170
1	NW40 KF	2.16	1.81	.94	1.56	.87	QD1-K40	<b>210918</b>	170
1	NW50 KF	2.95	1.81	.94	1.56	.87	QD1-K50	<b>210933</b>	175



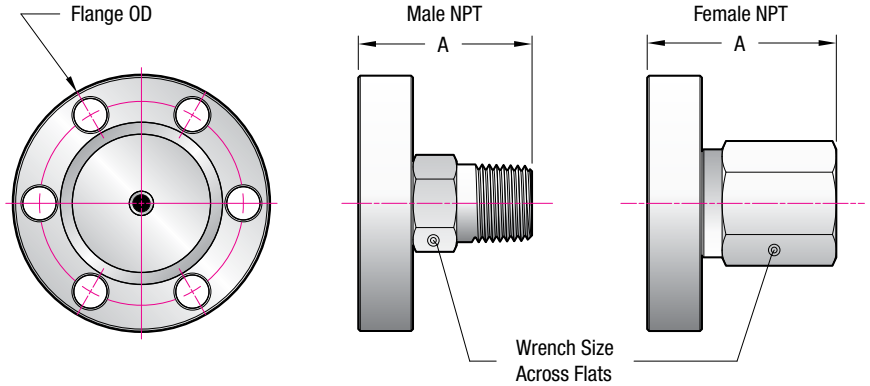
**210903** / 1/4 Inch Tube  
Ultra Torr® Fitting to ISO NW16 KF Flange

Vacuum Hardware



### NPT — Tapered Pipe Thread Fitting

Type 304 Flange, and 316 NPT fitting stainless steel materials.



**210942** / 1/4 inch  
Male NPT Fitting to 1.33 CF Flange



**210962** / 1/4 inch  
Female NPT Fitting to 1.33 CF Flange

### CF Flange Adapter — 150°C / HV to 1x10<sup>-8</sup> Torr

Fitting Size	Flange Type	Flange OD	A Nominal Length	Wrench Size	Model Number	Part Number	Unit Price \$
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#### NPT — Male Pipe Thread Fitting

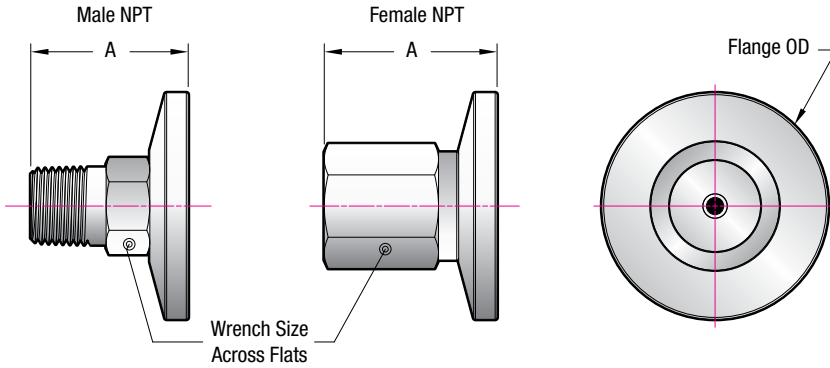
1/4	1.33 CF	1.33	1.11	.56	NPTM1/4-133	<b>210942</b>	120
1/4	2.75 CF	2.73	1.32	.56	NPTM1/4-275	<b>210943</b>	125
1/2	2.75 CF	2.73	1.54	.87	NPTM1/2-275	<b>210944</b>	130
3/4	2.75 CF	2.73	1.54	1.06	NPTM3/4-275	<b>210945</b>	140
1	2.75 CF	2.73	1.80	1.37	NPTM1-275	<b>210946</b>	150

#### NPT — Female Pipe Thread Fitting

1/4	1.33 CF	1.33	1.11	.75	NPTF1/4-133	<b>210962</b>	120
1/4	2.75 CF	2.73	1.32	.75	NPTF1/4-275	<b>210963</b>	125
1/2	2.75 CF	2.73	1.59	1.06	NPTF1/2-275	<b>210964</b>	130
3/4	2.75 CF	2.73	1.64	1.31	NPTF3/4-275	<b>210965</b>	140
1	2.75 CF	2.73	1.73	1.62	NPTF1-275	<b>210966</b>	150

**NPT — Tapered Pipe Thread Fitting**

Type 304 Flange, and 316 NPT fitting stainless steel materials.



**ISO KF Flange Adapter — 150°C / HV to 1x10<sup>-8</sup> Torr**

Fitting Size	Flange Type	Flange OD	A Nominal Length	Wrench Size	Model Number	Part Number	Unit Price \$
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**NPT — Male Pipe Thread Fitting**

1/4	NW16 KF	1.18	1.02	.56	NPTM1/4-K16	<b>210950</b>	120
1/4	NW40 KF	2.16	1.02	.56	NPTM1/4-K40	<b>210951</b>	125
1/4	NW50 KF	2.95	1.02	.56	NPTM1/4-K50	<b>210952</b>	130
1/2	NW40 KF	2.16	1.24	.87	NPTM1/2-K40	<b>210953</b>	130
1/2	NW50 KF	2.95	1.24	.87	NPTM1/2-K50	<b>210954</b>	135
3/4	NW40 KF	2.16	1.24	1.06	NPTM3/4-K40	<b>210955</b>	135
3/4	NW50 KF	2.95	1.24	1.06	NPTM3/4-K50	<b>210956</b>	140
1	NW40 KF	2.16	1.50	1.37	NPTM1-K40	<b>210957</b>	145
1	NW50 KF	2.95	1.50	1.37	NPTM1-K50	<b>210958</b>	150

**NPT — Female Pipe Thread Fitting**

1/4	NW16 KF	1.18	1.02	.75	NPTF1/4-K16	<b>210973</b>	120
1/4	NW40 KF	2.16	1.02	.75	NPTF1/4-K40	<b>210974</b>	125
1/4	NW50 KF	2.95	1.02	.75	NPTF1/4-K50	<b>210975</b>	130
1/2	NW40 KF	2.16	1.22	1.06	NPTF1/2-K40	<b>210976</b>	130
1/2	NW50 KF	2.95	1.22	1.06	NPTF1/2-K50	<b>210977</b>	135
3/4	NW40 KF	2.16	1.34	1.31	NPTF3/4-K40	<b>210978</b>	135
3/4	NW50 KF	2.95	1.34	1.31	NPTF3/4-K50	<b>210979</b>	140
1	NW40 KF	2.16	1.43	1.62	NPTF1-K40	<b>210980</b>	145
1	NW50 KF	2.95	1.43	1.62	NPTF1-K50	<b>210981</b>	150

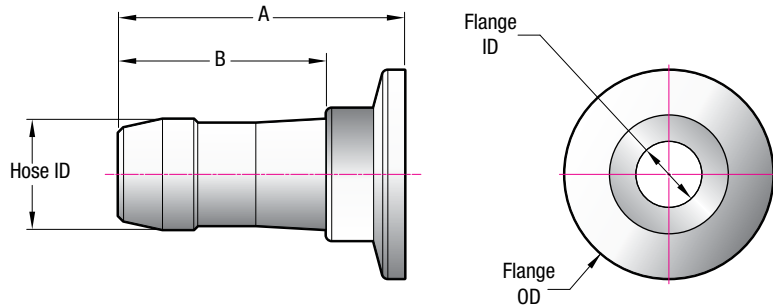


**210950** / 1/4 Inch  
Male NPT Fitting to NW16 KF Flange



**210973** / 1/4 Inch  
Female NPT Fitting to NW16 KF Flange





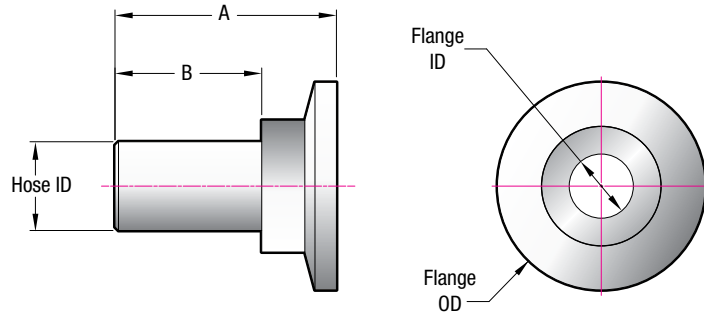
**211100** / 1/2 or 5/8 Inch Rubber Hose to NW16 KF Flange

### ISO KF Flange Adapter — 150°C / UHV to 1x10<sup>-8</sup> Torr

Hose ID		Flange Type	Flange OD	Flange ID	A Nominal Length	B	Model Number	Part Number	Unit Price \$
Min.	Max.								

#### Rubber Hose — Requires Hose Clamp

.50 - .63	NW16 KF	1.18	.38	1.65	1.18	RH63-K16	<b>211100</b>	20
.63 - .75	NW16 KF	1.18	.60	1.65	1.18	RH75-K16	<b>211101</b>	20
1.50 - 1.63	NW40 KF	2.16	1.36	2.17	1.72	RH1.63-K40	<b>211103</b>	30
1.50 - 1.63	NW50 KF	2.95	1.36	2.17	1.63	RH1.63-K50	<b>211104</b>	40



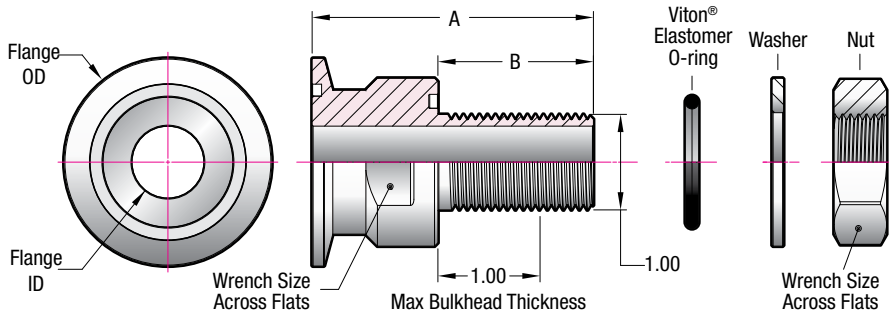
**211110** / 1/2 inch PVC Hose to NW16KF Flange

### ISO KF Flange Adapter — 150°C / UHV to 1x10<sup>-8</sup> Torr

Hose Size	Flange Type	Flange OD	Flange ID	Hose ID	A Nominal Length	B	Model Number	Part Number	Unit Price \$
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#### PVC Hose — Requires Hose Clamp

1/2	NW16 KF	1.18	.37	0.50	1.26	.84	PVC1/2-K16	<b>211110</b>	20
3/4	NW16 KF	1.18	.62	0.75	1.26	.84	PVC3/4-K16	<b>211111</b>	20
1-1/2	NW40 KF	2.16	1.37	1.50	2.00	1.58	PVC1-1/2-K40	<b>211113</b>	30
2	NW50 KF	2.95	1.87	2.00	2.00	1.58	PVC2-K50	<b>211114</b>	40

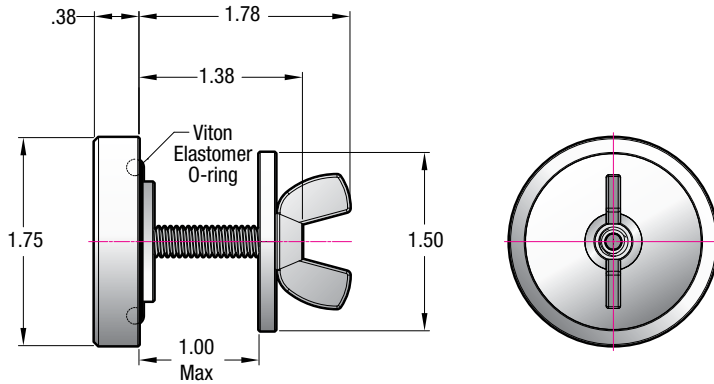


**ISO KF Flange Adapter** — 150°C / UHV to 1x10<sup>-8</sup> Torr

Flange Type	Flange OD	Flange ID	A	B	Wrench Size	Model Number	Part Number	Unit Price \$
NW40 KF	2.16	0.75	2.93	1.62	1.50	BPF-K40	<b>211120</b>	215



**211120** / Baseplate to NW40 KF Flange



**Baseplate Plug** — 150°C / HV to 1x10<sup>-8</sup> Torr

Description	Model Number	Part Number	Unit Price \$
<b>Blank Plug</b> — for 1 Inch Hole			
Stainless Steel Blank Plug	BPP	<b>211125</b>	70



**211125** / Baseplate Plug

Vacuum Hardware