



ISO Components

KF and LF Clamp Style Flanges and Fittings

Conical Reducer ISO Flanges

Blank ISO Flanges

Nipples, Elbows,
and Couplings

Centering Ring Assemblies
and Mounting Hardware

ISO KF
Clamp Style

ISO LF
Clamp Style

Features

- 304 Stainless Steel
- HV Compatible to 1×10^{-8} Torr
- Bakeable to 200°C, 250°C intermittently

Specifications

Material

Flange	304 Stainless Steel
Centering Ring	304 Stainless Steel
O-Ring	Viton® elastomer
Clamps	Aluminum

Vacuum Range

HV, Ultrahigh vacuum	1×10^{-8} Torr
----------------------	-------------------------

Temperature Range¹

304 Stainless Steel	450°C
Elastomer Gasket	200°C
Intermittently up to	250°C

Notes

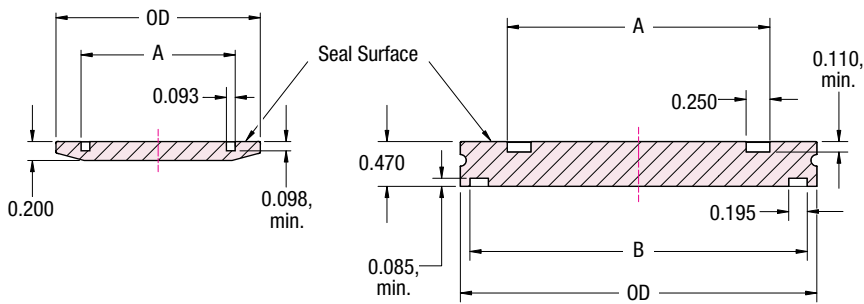
1. Overall assembly ratings must be adjusted to that of its lowest rated component.
2. Anti-seizing thread lubricants or compounds are recommended when fastening stainless steel components. Silver-plated bolts are an ideal solution for in-vacuum use, while various paint-on thread lubricating solutions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

ISO Components

Accu-Glass Products' line of ISO KF and LF style blank flanges, fittings and hardware are designed to incorporate the industry standard "hinged or claw" clamp with centering ring sealing principle. This is the standard high vacuum sealing method used throughout the industrial and scientific vacuum communities.

Our range of products include numerous KF and LF flanged parts from conical reducers, nipples, elbows and couplings to all supporting mounting hardware including hinged clamps, claw clamps and centering rings.

**KF — Hinged Clamp Style****LF — Claw Clamp Style****202000** / ISO KF Flange**ISO Flanges¹ — Blank / 150°C / HV to 1x10⁻⁸ Torr**

Flange Size	Flange OD	A	B	Clamping Method	Model Number	Part Number	Unit Price \$
-------------	-----------	---	---	-----------------	--------------	-------------	---------------

KF Type — Blank Flange / Hinge Style Clamping

NW16 KF	1.18	0.68	—	Hinged	K16-000	202000	11
NW25 KF	1.57	1.03	—	Hinged	K25-000	202020	12
NW40 KF	2.16	1.62	—	Hinged	K40-000	202030	19
NW50 KF	2.95	2.06	—	Hinged	K50-000	202040	24

LF Type — Blank Flange / Claw Style Clamping

NW63 LF	3.74	2.76	3.54	Claw	L63-000-C	202050	69
NW80 LF	4.33	3.27	4.13	Claw	L80-000-C	202060	102
NW100 LF	5.12	4.02	4.92	Claw	L100-000-C	202070	115
NW160 LF	7.09	6.02	6.89	Claw	L160-000-C	202080	155
NW200 LF	9.45	8.39	9.25	Claw	L200-000-C	202090	250

1. Centering ring assemblies and mounting hardware located on pages 236 and 237.

**202040** / ISO KF Flange**202050** / ISO LF Flange**202070** / ISO LF Flange



210500 / Conical Reducer



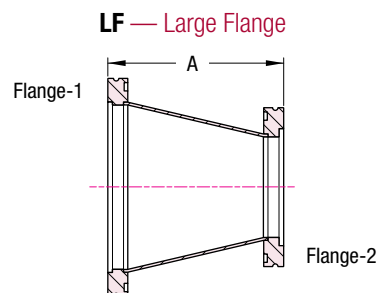
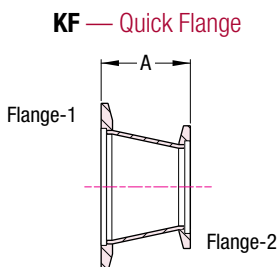
210502 / Conical Reducer



210600 / Half Nipple



210602 / Half Nipple



Conical Reducers¹ — ISO KF and LF Flanges / 150°C / HV to 1x10⁻⁸ Torr

ISO Flange		Tube OD		Length A	Model Number	Part Number	Unit Price \$
Flange-1	Flange-2	Flange-1	Flange-2				

KF to KF — Conical Reducers

NW40 KF	NW16	1.50 (1.37)	0.75 (0.68)	1.57	CR-K40-K16	210500	90
NW50 KF	NW40	2.00 (1.87)	1.50 (1.37)	1.57	CR-K50-K40	210501	105

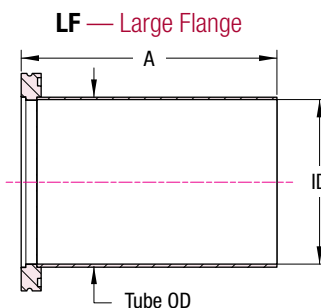
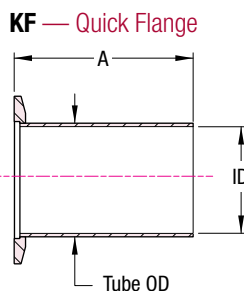
LF to KF — Conical Reducers

NW63 LF	NW40	2.50 (2.37)	1.50 (1.37)	2.83	CR-L63-K40	210502	225
NW63 LF	NW50	2.50 (2.37)	2.00 (1.87)	2.85	CR-L63-K50	210503	235

LF to LF — Conical Reducers

NW100 LF	NW63	4.00 (3.87)	2.50 (2.37)	4.14	CR-L100-L63	210504	355
----------	------	-------------	-------------	------	-------------	---------------	-----

1. Centering ring assemblies and mounting hardware located on pages 236 and 237. Please call factory for larger flange sizes.



Half Nipple¹ — ISO KF and LF Flanges / 150°C / HV to 1x10⁻⁸ Torr

ISO Flange		Tube OD	ID	Length A	Model Number	Part Number	Unit Price \$
Size	Dia.						

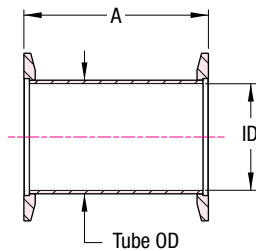
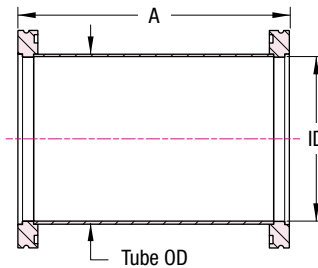
KF — Half Nipples

NW40 KF	2.16	1.50	1.37	2.40	HN-150-K40	210600	28
NW50 KF	2.95	2.00	1.87	3.15	HN-200-K50	210601	42

LF — Half Nipples

NW63 LF	3.74	2.50	2.37	3.25	HN-250-L63	210602	135
NW100 LF	5.12	4.00	3.87	3.94	HN-400-L100	210603	180
NW160 LF	7.09	6.00	5.76	3.94	HN-600-L160	210604	219

1. Centering ring assemblies and mounting hardware located on pages 236 and 237.

**KF — Quick Flange****LF — Large Flange**

Full Nipples¹ — ISO KF and LF Flanges / 150°C / HV to 1x10⁻⁸ Torr

Flange Size		Tube OD	ID	A Length	Model Number	Part Number	Unit Price \$
Size	Dia.						

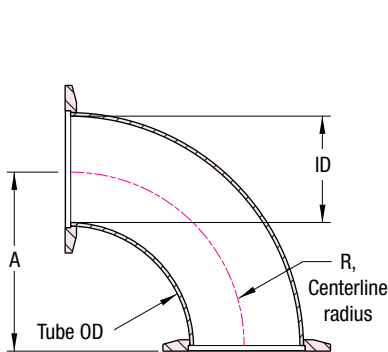
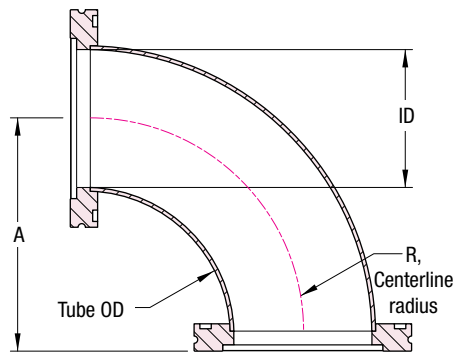
KF — Full Nipples

NW40 KF	2.16	1.50	1.37	4.80	FN-150-K40	210605	82
NW50 KF	2.95	2.00	1.87	6.30	FN-200-K50	210606	105

LF — Full Nipples

NW63 LF	3.74	2.50	2.37	6.50	FN-250-L63	210607	255
NW100 LF	5.12	4.00	3.87	8.26	FN-400-L100	210608	325

1. Centering ring assemblies and mounting hardware located on pages 236 and 237.

**210605** / Full Nipple**210607** / Full Nipple**KF — Quick Flange****LF — Large Flange**

90° Radius Elbows¹ — ISO KF and LF Flanges / 150°C / HV to 1x10⁻⁸ Torr

Flange Size		Tube OD	ID	A	R	Model Number	Part Number	Unit Price \$
Size	Dia.							

KF — 90° Radius Elbows

NW40 KF	2.16	1.50	1.37	2.40	2.25	RL90-K40	210609	95
NW50 KF	2.95	2.00	1.87	3.15	3.00	RL90-K50	210610	125

LF — 90° Radius Elbows

NW63 LF	3.74	2.50	2.37	4.00	3.75	RL90-L63	210611	290
NW100 LF	5.12	4.00	3.87	6.25	6.00	RL90-L100	210612	390

1. Centering ring assemblies and mounting hardware located on pages 236 and 237.

**210609** / 90° Elbow**210611** / 90° Elbow

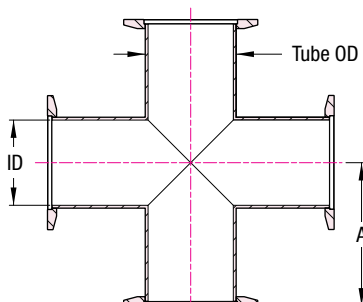


210613 / 4-Way Cross

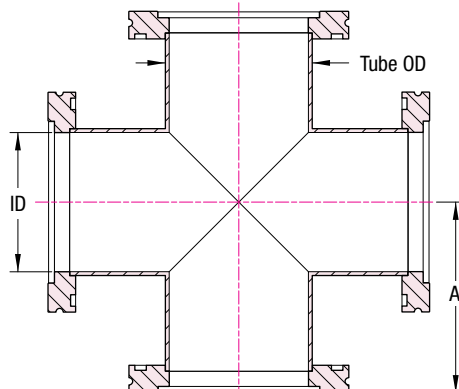


210615 / 4-Way Cross

KF — Quick Flange



LF — Large Flange



4-Way Crosses¹ — ISO KF and LF Flanges / 150°C / HV to 1x10⁻⁸ Torr

Flange Size				A Length	Model Number	Part Number	Unit Price \$
Size	Dia.	Tube OD	ID				

KF — 4-Way Crosses

NW40 KF	2.16	1.50	1.37	2.40	X4-150-K40	210613	225
NW50 KF	2.95	2.00	1.87	3.15	X4-200-K50	210614	295

LF — 4-Way Crosses

NW63 LF	3.74	2.50	2.37	3.25	X4-250-L63	210615	535
NW100 LF	5.12	4.00	3.87	4.13	X4-400-L100	210616	955

1. Centering ring assemblies and mounting hardware located on pages 236 and 237.

KF / LF — Centering Rings



Centering Rings — ISO KF and LF Flanges / 150°C / HV to 1x10⁻⁸ Torr

Flange Model	Pkg Qty	Ring Material	O-Ring Material	ID	A	Model Number	Part Number	Unit Price \$
-----------------	------------	------------------	--------------------	----	---	-----------------	----------------	---------------------

KF — Centering Rings

NW16 KF	1	SS	Viton	0.63	0.315	CRV-SS-K16	202200	8
NW25 KF	1	SS	Viton	0.97	0.315	CRV-SS-K25	202210	10
NW40 KF	1	SS	Viton	1.55	0.315	CRV-SS-K40	202220	12
NW50 KF	1	SS	Viton	1.97	0.315	CRV-SS-K50	202230	15

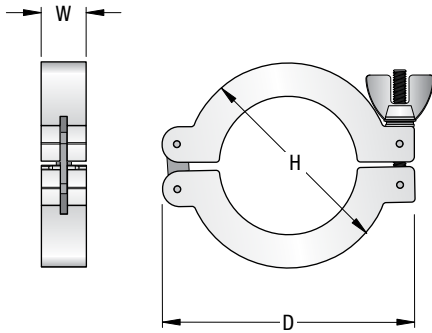
LF — Centering Rings

NW63 LF	1	SS	Viton	2.61	0.327	CRV-SS-L63	202240	55
NW80 LF	1	SS	Viton	3.14	0.327	CRV-SS-L80	202251	65
NW100 LF	1	SS	Viton	3.86	0.327	CRV-SS-L100	202262	70
NW160 LF	1	SS	Viton	5.87	0.327	CRV-SS-L160	202273	85
NW200 LF	1	SS	Viton	8.23	0.327	CRV-SS-L200	202284	115

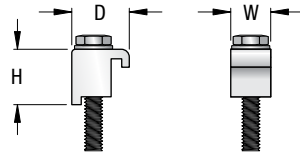
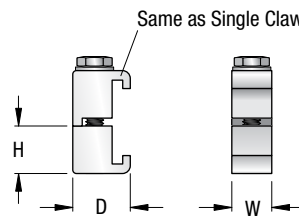
202200 / ISO KF Centering Ring Assembly



202240 / ISO LF Centering Ring Assembly

**ISO KF — Hinged Clamp**

Stainless steel bolts and washers, all styles

ISO LF — Clamp, Single Claw**ISO LF — Clamp, Double Claw****202225** / ISO KF Hinged Clamp**ISO Clamps — Mounting Hardware / 150°C / HV to 1x10⁻⁸ Torr**

ISO Flange	Bolt Size	Pkg Qty	W x D x H ¹	Model Number	Part Number	Unit Price \$
------------	-----------	---------	------------------------	--------------	-------------	---------------

Hinged — Clamp / Aluminum / for use with ISO KF 'Quick Flange'

NW16 KF	Captive	1	0.75 x 2.47 x 1.63	HC-AL-K16	202205	6
NW25 KF	Captive	1	0.75 x 2.85 x 2.06	HC-AL-K25	202215	8
NW40 KF	Captive	1	0.75 x 3.53 x 2.70	HC-AL-K40	202225	9
NW50 KF	Captive	1	0.80 x 4.45 x 3.60	HC-AL-K50	202235	15

Single Claw — Clamp / Aluminum / for use with ISO LF 'Large Flange'

NW63 LF						
NW80 LF	M8 x 35	1	0.65 x 0.95 x 0.94	LF-SCC-1	210553	6
NW100 LF						
NW160 LF						
NW200 LF	M10 x 35	1	0.75 x 1.10 x 0.94	LF-SCC-2	210554	6
NW250 LF						
NW320 LF						
NW400LF	M12 x 50	1	0.90 x 1.33 x 1.18	LF-SCC-3	210555	8
NW500 LF						

Double Claw — Clamp / Aluminum / for use with ISO LF 'Large Flange'

NW63 LF						
NW80 LF	M8 x 45	1	0.65 x 0.95 x 0.80	LF-DCC-1	210550	8
NW100 LF						
NW160 LF						
NW200 LF	M10 x 45	1	0.75 x 1.10 x 0.80	LF-DCC-2	210551	8
NW250 LF						
NW320 LF						
NW400LF	M12 x 55	1	0.90 x 1.33 x 1.00	LF-DCC-3	210552	16
NW500 LF						

¹. Dimensions are for reference only, actual dimensions may vary slightly.**210553** / ISO LF Single Claw Clamp**210550** / ISO LF Double Claw Clamp