

ISO-KF Fittings

Sizes NW 10 to NW 100 (1/2" to 4")



The Series 31 ISO-KF standard vacuum components are part of a modular, building block method to quickly and easily create a piping system. The ISO-KF system is a family of small vacuum components up to 2" that include flanges, elbows, tees and crosses. The International Standards Organization (ISO) defines the interface dimensions, allowing the interchanging of components that conform to the standard's dimensions. Since component dimensions are standardized, elbows, tees, crosses or valves for a given size may be interchanged making piping easy.

The flanges are "sexless", and the seal is symmetrical, making the components rotatable. By using ISO components, system assembly is quick and cost effective. See Figure 1

for the ISO dimensions of flange sizes 10, 16, 25, 40 and 50. These dimensions apply to ISO-KF flanges of these nominal diameters throughout this catalog. The catalog contains dimension specifics.

The Series 31 component line also includes a few components in NW 80 (3") and NW 100 (4") sizes. There is no international standard for these sizes in the KF style. MKS has designed the flanging using series consistencies and customer requirements.

Product Features

- Made with quality stainless steel materials
- Available in sizes NW ISO 10 to NW ISO 50
- Meets ISO vacuum standards
- Custom manifolds and flanges available
- High temperature O-rings available



Key Benefits

- ISO standard fittings make system assembly quick and easy
- Full line of fittings are available to design your vacuum system

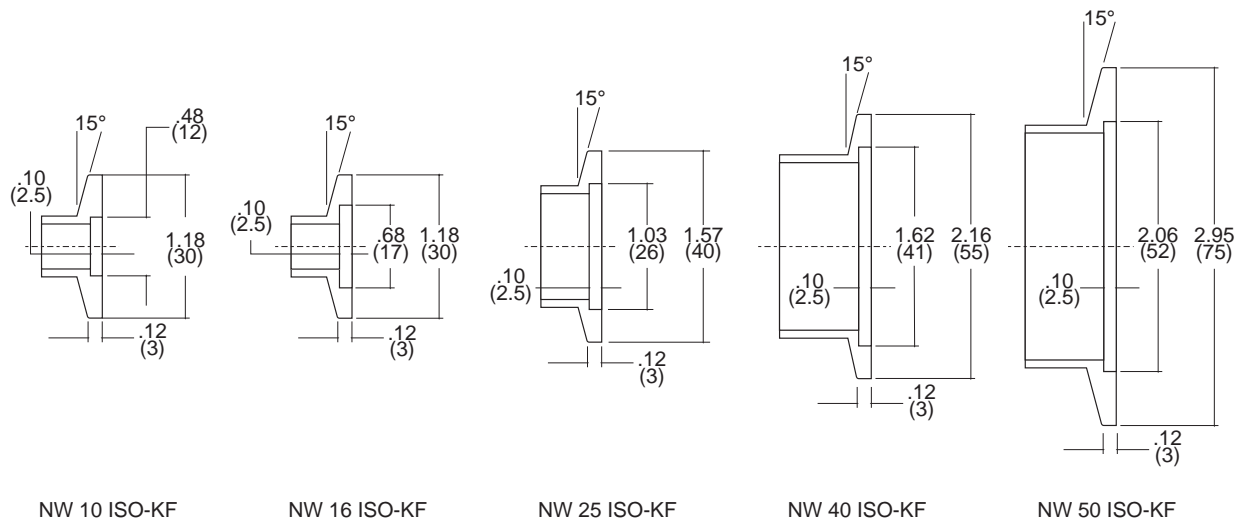


Figure 1 — ISO-KF Flange Dimensions

Applications

ISO-KF fittings can be used in a wide variety of applications including:

- Roughing and foreline plumbing
- Small systems
- Systems requiring frequent cleaning or modification
- Research and teaching laboratories

ISO-KF components are primarily designed for use at subatmospheric pressure. Because of the large number of elastomer seals used, typical limiting pressure without baking is about 10^{-7} Torr. Baked systems using Viton® seals can be used to two decades lower.

Standard components can be used to slight overpressure. If the ISO-KF system contains significant overpressure, i.e., 5-100 psig, then use the MKS overpressure rings.

Installation

The ISO-KF components are assembled by inserting a centering ring between the two flange faces, then securing the assembly with a flange encompassing clamp (see Figure 2).

There are a variety of clamp choices in the Series 31 line. The wing-nut clamp, shown in Figure 2, is hand tightened

until metal contact is felt. A version of the wing-nut clamp with a washer is available; contact MKS for more information.

The MKS toggle clamp is convenient and easy to use. The clamp provides enough sealing force to fully compress the O-Ring, so that the flanges and the centering ring are metal to metal. The heavy-duty spring supports the full range of production tolerance variables.

The self-adjusting clamp locks in a positive method. A pin can be inserted to prevent accidental release of the toggle lever (see Figure 3). The toggle clamps are ideal for situations where the clamp must be removed frequently, like leak testing or gauge calibration.

An additional option to the toggle clamp is a model with a fastening pin on a lanyard. The pin is fastened so that it cannot be accidentally removed and the lanyard prevents the pin's loss.

The Series 31 ISO-KF line also includes bulkhead clamps. They are used to attach an ISO-KF flange directly to a chamber or base plate. The two-part, bolted clamp fits over the flange. A centering ring assembly is needed between the flange and the opening. The bulkhead clamp kit includes the two-piece clamp, bolts and washers (see Figure 4).

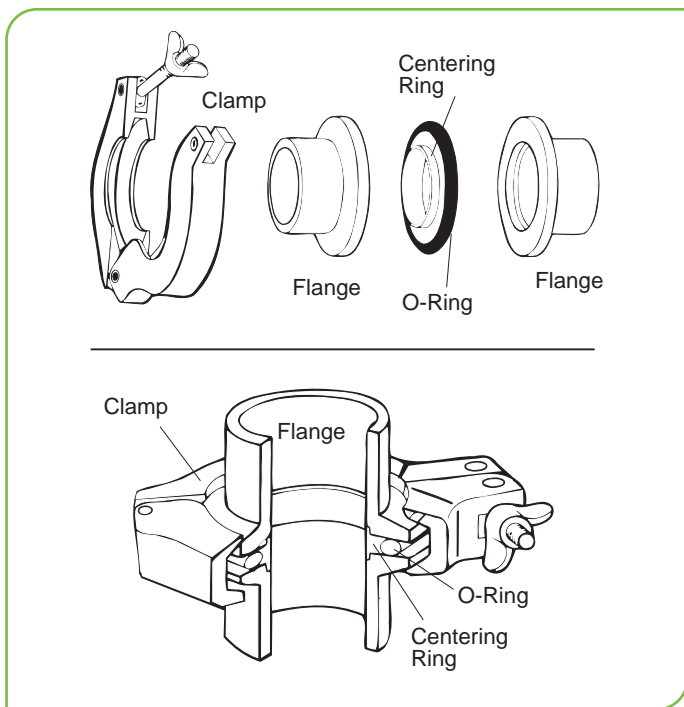


Figure 2 – Component Assembly

The NW 10 flange uses the same basic flange and clamp as the NW 16 flange, and the two flanges can join via an adaptive centering ring (see Figure 5). Adaptive centering rings are also available for obsolete sizes (NW 20, NW 32) in the ISO-KF series.

Weld assembly of stainless or aluminum parts should be performed by an experienced TIG welder. Using a rotating fixture simplifies creation of high quality joints. MKS aluminum weld stubs are chamfered for using filler metal. Improper welding can lead to warping of flanges.

Brass flanges, stub or socket types, are toleranced for silver brazing where clearances of a few thousandths of an inch are optimal for alloy flow. Brass components may be soft soldered. However, it is much more difficult to make leak free assemblies by soft soldering than by silver brazing. Soft soldering has little strength, and the assemblies cannot be cleaned by immersion in a chemical bright dip.

If system pressures are in the positive pressure range, it is recommended that over pressure rings are used. The ISO-KF over pressure rings are installed differently by

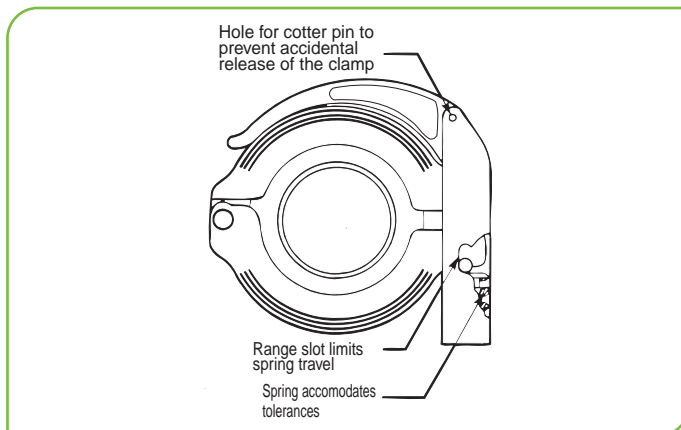


Figure 3 – Toggle Clamp

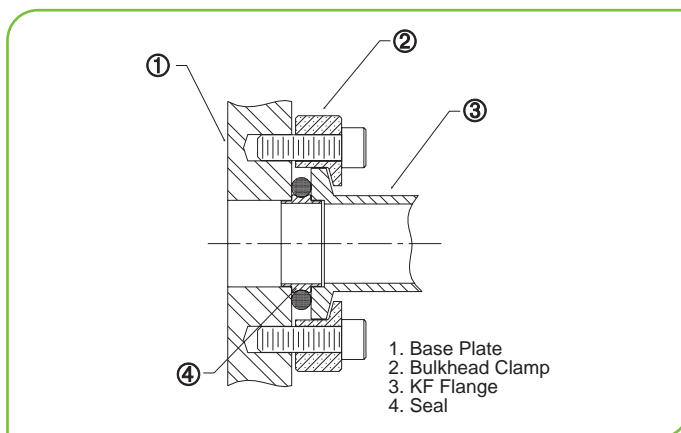


Figure 4 – Bulkhead Clamp

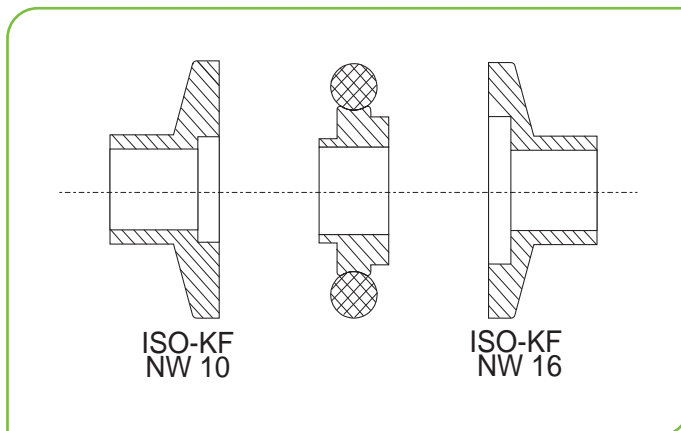


Figure 5 – Adaptive Centering Rings

size. The NW 16, 25, and 40 ISO-KF rings are installed over the two ISO-KF flanges. The NW 10 and 50 ISO-KF rings are installed between the two flange faces. The clamp is installed around all items to secure the assembly (see Figures 6 and 6a).

For more information, contact Customer Service at 1-800-345-1967 or 303-449-9861.

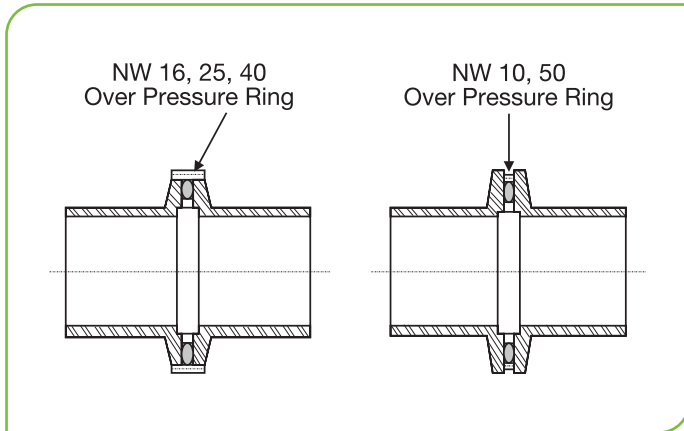


Figure 6 — Overpressure Rings

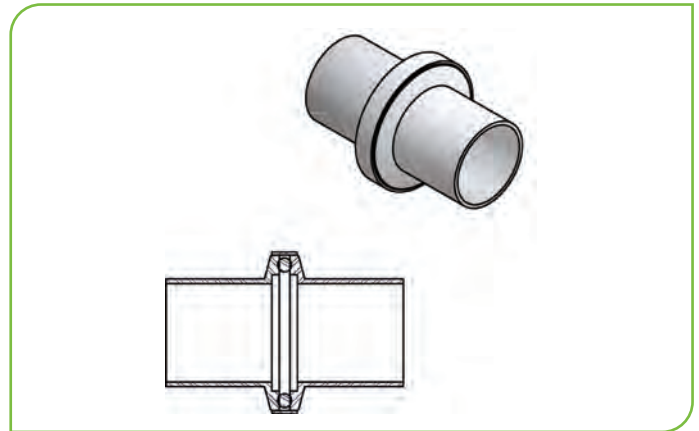


Figure 6a — Captured O-Ring Overpressure Assembly

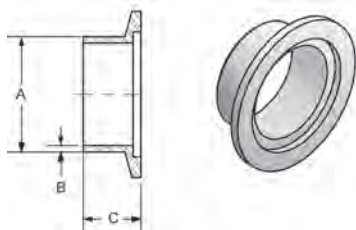
Elastomer Comparison

	Buna-N	Viton®	Silicone
Compound	N674-70	V747-75	S604-70
Color	Black	Black	Rust
Bakeout	80°C	150°C	185°C
Benefits	Seals easier, lower cost	Chemical resistance, lasts longer	High Temperature

Specifications

Maximum Pressure (with overpressure ring)		<ul style="list-style-type: none"> • 100 psig • 75 psig • 50 psig
	NW 10-25	
	NW 40	
	NW50	
Minimum Pressure		10 ⁻⁹ Torr
Leak Check		<10 ⁻⁹ std-cc/s
Materials		
	Fittings	<ul style="list-style-type: none"> • 304 Stainless Steel • 6061T6 Aluminum (316 Stainless is available on request)
	Clamps	<ul style="list-style-type: none"> • Aluminum • Stainless Steel
	Over Pressure Rings	<ul style="list-style-type: none"> • Choice of aluminum or stainless steel centering ring; Choice of Viton®, Silicone, or Buna-N elastomer seal
	Seal Assembly	

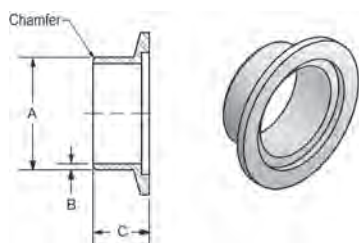
Flange, Short Weld Stub, Stainless Steel



Flange Size (ISO)	For Tubing OD	A	B	C	Part Number
NW 10	1/2"	0.50 (13)	0.065 (1.7)	0.50 (13)	100310300
NW 16	1/2"	0.50 (13)	0.065 (1.7)	0.50 (13)	100310301
NW 16	3/4"	0.75 (19)	0.065 (1.7)	0.50 (13)	100310311
NW25	1"	1.00 (25)	0.065 (1.7)	0.50 (13)	100310303
NW40	1 1/2"	1.50 (38)	0.065 (1.7)	0.75 (19)	100310305
NW50	2"	2.00 (51)	0.065 (1.7)	0.75 (19)	100310306

- Stainless Steel Type 304
- Buttweld
- Standard Inch Stub Diameters

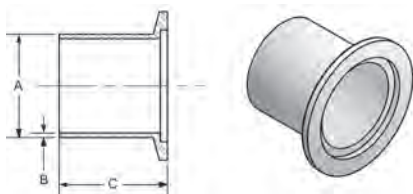
Flange, Short Weld Stub, Aluminum



Flange Size (ISO)	For Tubing OD	A	B	C	Part Number
NW 16	1/2"	0.50 (13)	0.065 (1.7)	0.50 (13)	100310101
NW 16	3/4"	0.75 (19)	0.065 (1.7)	0.50 (13)	100310111
NW 25	1"	1.00 (25)	0.065 (1.7)	0.50 (13)	100310103
NW 40	1 1/2"	1.50 (38)	0.083 (2.1)	0.75 (19)	100310105
NW 50	2"	2.00 (51)	0.083 (2.1)	0.75 (19)	100310106

- Aluminum Type 6061T6
- Buttweld
- Standard Inch Stub Diameters

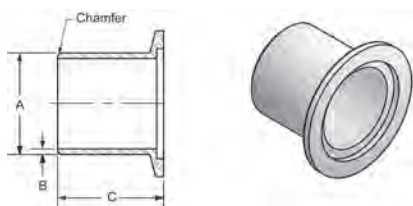
Flange, Long Weld Stub, Stainless Steel



Flange Size (ISO)	For Tubing OD	A	B	C	Part Number
NW 10	1/2"	0.50 (13)	0.065 (1.7)	1.58 (40)	100315700
NW 16	1/2"	0.50 (13)	0.065 (1.7)	1.58 (40)	100315701
NW 16	3/4"	0.75 (19)	0.065 (1.7)	1.58 (40)	100315711
NW 25	1"	1.00 (25)	0.065 (1.7)	1.58 (40)	100315703
NW 40	1 1/2"	1.50 (38)	0.065 (1.7)	1.58 (40)	100315705
NW 50	2"	2.00 (51)	0.065 (1.7)	1.58 (40)	100315706

- Stainless Steel Type 304
- Buttweld
- Standard Inch Stub Diameters

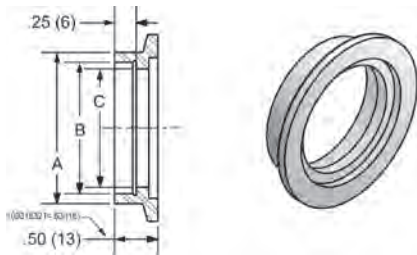
Flange, Long Weld Stub, Aluminum



Flange Size (ISO)	For Tubing OD	A	B	C	Part Number
NW 16	1/2"	0.50 (13)	0.065 (1.7)	1.58 (40)	100310201
NW 16	3/4"	0.75 (19)	0.065 (1.7)	1.58 (40)	100310211
NW 25	1"	1.00 (25)	0.065 (1.7)	1.58 (40)	100310203
NW 40	1 1/2"	1.50 (38)	0.083 (2.1)	1.58 (40)	100310205
NW 50	2"	2.00 (51)	0.083 (2.1)	1.58 (40)	100310206

- Aluminum Type 6061T6
- Standard Inch Stub Diameters

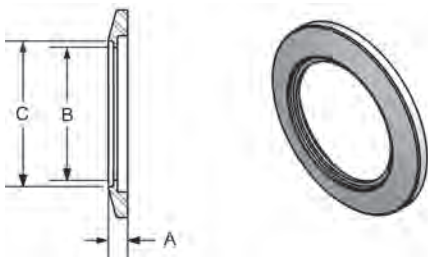
Flange, Weld Socket, Stainless Steel



- Stainless Steel Type 304
- Self Aligning
- Standard Tube Weld Prep.
- Also Suitable for Buttweld

Flange Size (ISO)	For Tubing OD	A	B	C	Part Number
NW 16	1/2"	0.61 (15)	0.51 (13)	0.45 (11)	100318301
NW 16	5/8"	0.77 (20)	0.64 (16)	0.58 (15)	100318311
NW 16	3/4"	0.87 (22)	0.76 (19)	0.68 (17)	100318321
NW 25	1"	1.13 (29)	1.02 (26)	0.87 (22)	100318303
NW 40	1 1/2"	1.75 (44)	1.50 (38)	1.37 (35)	100318305
NW 50	2"	2.25 (57)	2.02 (51)	1.87 (47)	100318306

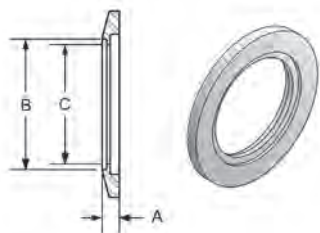
Flange, Blank with Bore, Stainless Steel



- Stainless Steel Type 304
- Standard Inch Tube OD's

Flange Size (ISO)	For Tubing OD	A	B	C	Part Number
NW 10	1/4"	0.20 (5)	0.26 (7)	N/A	100319710
NW 10	3/8"	0.20 (5)	0.39 (10)	N/A	100319720
NW 10	1/2"	0.20 (5)	0.44 (11)	0.51 (13)	100319700
NW 16	1/4"	0.20 (5)	0.26 (7)	N/A	100319711
NW 16	3/8"	0.20 (5)	0.39 (10)	N/A	100319721
NW 16	1/2"	0.20 (5)	0.51 (13)	N/A	100319731
NW 16	3/4"	0.20 (5)	0.68 (17)	0.76 (19)	100319701
NW 25	1/4"	0.20 (5)	0.26 (7)	N/A	100319713
NW 25	3/8"	0.20 (5)	0.39 (10)	N/A	100319723
NW 25	1/2"	0.20 (5)	0.51 (13)	N/A	100319733
NW 25	3/4"	0.20 (5)	0.63 (16)	0.76 (19)	100319743
NW 25	1"	0.20 (5)	0.89 (23)	1.02 (26)	100319703
NW 40	1/4"	0.20 (5)	0.26 (7)	N/A	100319715
NW 40	3/8"	0.20 (5)	0.39 (10)	N/A	100319725
NW 40	1/2"	0.20 (5)	0.51 (13)	N/A	100319735
NW 40	3/4"	0.20 (5)	0.63 (16)	0.76 (19)	100319745
NW 40	1"	0.20 (5)	0.89 (23)	1.02 (26)	100319755
NW 40	1 1/2"	0.20 (5)	1.39 (35)	1.52 (39)	100319705
NW 50	1/4"	0.20 (5)	0.26 (7)	N/A	100319716
NW 50	3/8"	0.20 (5)	0.39 (10)	N/A	100319726
NW 50	1/2"	0.20 (5)	0.51 (13)	N/A	100319736
NW 50	3/4"	0.20 (5)	0.63 (16)	0.76 (19)	100319746
NW 50	1"	0.20 (5)	0.89 (23)	1.02 (26)	100319756
NW 50	1 1/2"	0.20 (5)	1.39 (35)	1.52 (39)	100319766
NW 50	2"	0.20 (5)	1.89 (48)	2.02 (51)	100319706

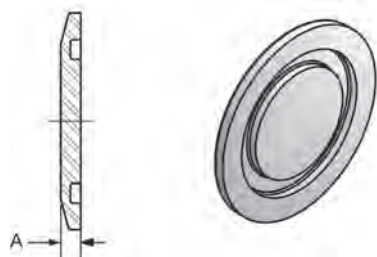
Flange, Blank with Bore, KF 80 / KF 100, Stainless Steel



- Stainless Steel Type 304

Flange Size (ISO)	For Tubing OD	A	B	C	Part Number
NW 80	3"	0.47 (12)	3.02 (76)	2.90 (74)	100319801
NW 100	4"	0.47 (12)	4.02 (102)	3.87 (98)	100319803

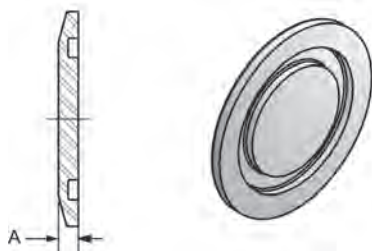
Flange, Blank-Off, Stainless Steel



- Stainless Steel Type 304
- To Close off Unused Ports

Flange Size (ISO)	A	Part Number
NW 10	0.20 (5)	100311700
NW 16	0.20 (5)	100311701
NW 25	0.20 (5)	100311703
NW 40	0.20 (5)	100311705
NW 50	0.20 (5)	100311706
NW 80	0.43 (11)	100319802
NW 100	0.43 (11)	100319804

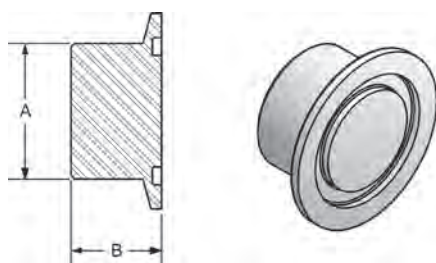
Flange, Blank-Off, Aluminum



- Aluminum Alloy
- To Close Off Unused Ports

Flange Size (ISO)	A	Part Number
NW 10	0.20 (5)	100311600
NW 16	0.20 (5)	100311601
NW 25	0.20 (5)	100311603
NW 40	0.20 (5)	100311605
NW 50	0.20 (5)	100311606

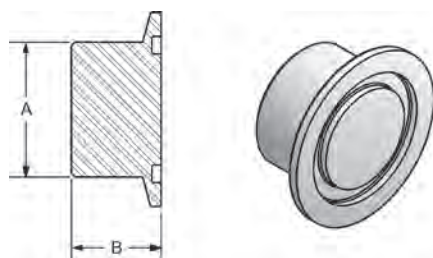
Flange, Unbored Stub, Stainless Steel



- Stainless Steel Type 304
- Stub may be turned, bored or tapped to fit

Flange Size (ISO)	A	B	Part Number
NW 10	0.75 (19)	0.75 (19)	100311300
NW 16	0.75 (19)	0.75 (19)	100311301
NW 25	1.00 (25)	0.75 (19)	100311303
NW 40	1.50 (38)	1.00 (25)	100311305
NW 50	2.00 (51)	1.00 (25)	100311306

Flange, Unbored Stub, Aluminum



- Aluminum Type 6061T6
- Stub may be turned, bored or tapped to fit

Flange Size (ISO)	A	B	Part Number
NW 16	0.75 (19)	0.75 (19)	100311100
NW 16	0.75 (19)	0.75 (19)	100311101
NW 25	1.00 (25)	0.75 (19)	100311103
NW 40	1.50 (38)	1.00 (25)	100311105
NW 50	2.00 (51)	1.00 (25)	100311106

Seal, Centering Ring Assembly, Stainless Steel/Viton®



- 180°C Max
- Replaceable O-Ring
- NW 80/100 includes aluminum spacer ring

Flange Size (ISO)	Part Number
NW 10	100312700
NW 16	100312701
NW 25	100312703
NW 40	100312705
NW 50	100312706
NW 80	100760508
NW 100	100760510

Seal, Centering Ring Assembly, Aluminum/Viton®



- 180°C Max
- Replaceable O-Ring
- NW 80/100 includes aluminum spacer ring

Flange Size (ISO)	Part Number
NW 10	100312600
NW 16	100312601
NW 25	100312603
NW 40	100312605
NW 50	100312606
NW 80	100760608
NW 100	100760610

Seal, Centering Ring Assembly, Stainless Steel/Buna-N



- 80°C Max
- Replaceable O-Ring

Flange Size (ISO)	Part Number
NW 10	100312800
NW 16	100312801
NW 25	100312803
NW 40	100312805
NW 50	100312806

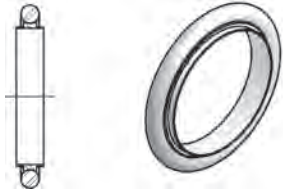
Seal, Centering Ring Assembly, Aluminum/Buna-N



- 80°C Max
- Replaceable O-Ring
- NW 80/100 includes aluminum spacer ring

Flange Size (ISO)	Part Number
NW 10	100312500
NW 16	100312501
NW 25	100312503
NW 40	100312505
NW 50	100312506
NW 80	100760708
NW 100	100760710

Seal, Centering Ring Assembly, Stainless Steel/Silicone



- 200°C Max
- Replaceable O-Ring

Flange Size (ISO)	Part Number
NW 10	100317300
NW 16	100317301
NW 25	100317303
NW 40	100317305
NW 50	100317306

Seal, Centering Ring Assembly Overpressure, Stainless Steel/Viton®



- Stainless Steel Centering Ring
- Replaceable Viton O-Ring
- Includes Aluminum Overpressure Ring

Flange Size (ISO)	Part Number
NW 25	100936525
NW 40	100936524
NW 50	100936523

Seal, Centering Ring Assembly, w/Screen, Stainless Steel/Viton®



- Stainless Steel Centering Ring
- Replaceable Viton O-Ring
- 72 Mesh Screen Stainless Steel

Flange Size (ISO)	Part Number
NW 16	100318601
NW 25	100318603
NW 40	100318605
NW 50	100318606

Seal, Adaptive Centering Ring Assembly, Stainless Steel/Viton®



- Stainless Steel Centering Ring
- Replaceable Viton O-Ring
- For Obsolete Bore Sizes

Flange Size (ISO)	Flange Size (ISO)	Part Number
NW 16	NW 10	100315821
NW 25	NW 20	100315823
NW 40	NW 32	100315825

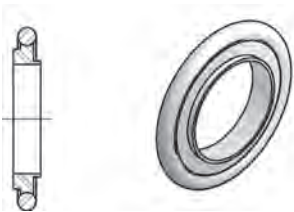
Seal, Adaptive Centering Ring Assembly, Aluminum/Viton®



- Replaceable Viton O-Ring
- For Obsolete Bore Sizes

Flange Size (ISO)	Flange Size (ISO)	Part Number
NW 16 NW 25 NW 40	NW 10 NW 20 NW 32	100315811 100315813 100315815

Seal, Adaptive Centering Ring Assembly, Aluminum/Buna-N



- Replaceable O-Ring
- For Obsolete Bore Sizes

Flange Size (ISO)	Flange Size (ISO)	Part Number
NW 16 NW 25 NW 40	NW 10 NW 20 NW 32	100315801 100315803 100315805

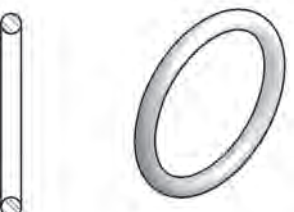
Seal, Replacement O-Ring, Viton®



- Standard Inch O-Ring Sizes

Flange Size (ISO)	Standard O-Ring Size	Part Number
NW 10 NW 16 NW 25 NW 40 NW 50 NW 80 NW 100	2-312 2-314 2-320 2-326 2-330 2-340 2-346	100314000 100314001 100314003 100314005 100314006 100762008 100762010

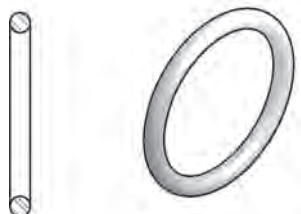
Seal, Replacement O-Ring, Buna-N



- Standard Inch O-Ring Sizes

Flange Size (ISO)	Standard O-Ring Size	Part Number
NW 10 NW 16 NW 25 NW 40 NW 50 NW 80 NW 100	2-312 2-314 2-320 2-326 2-330 2-340 2-346	100313900 100313901 100313903 100313905 100313906 100761908 100761910

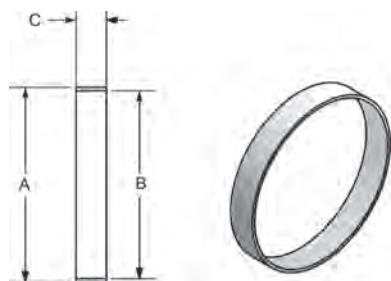
Seal, Replacement O-Ring, Silicone



- Standard Inch O-Ring Sizes

Flange Size (ISO)	Standard O-Ring Size	Part Number
NW 10	2-312	100317310
NW 16	2-314	100317311
NW 25	2-320	100317313
NW 40	2-326	100317315
NW 50	2-330	100317316

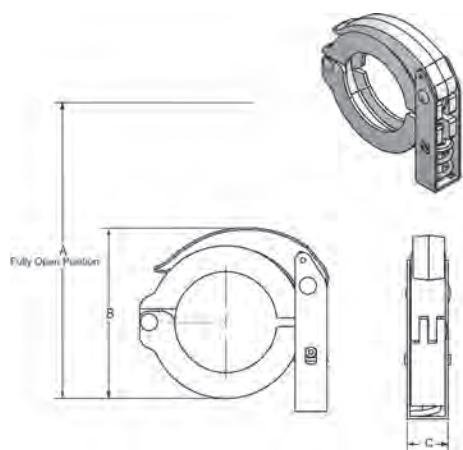
Ring, Overpressure



- Stainless Steel
- Fits over OD of O-ring
- Use to retain O-ring when system is used at internal pressures over atmospheric

Flange Size (ISO)	Max Pressure	A	B	C	Part Number
NW 16	100 psig	1.25 (31)	1.19 (30)	0.35 (9)	100316301
NW 25	100 psig	1.66 (42)	1.58 (40)	0.35 (9)	100316303
NW 40	75 psig	2.25 (57)	2.17 (55)	0.35 (9)	100316305
NW 50	50 psig	2.75 (70)	2.66 (68)	0.14 (4)	100316306

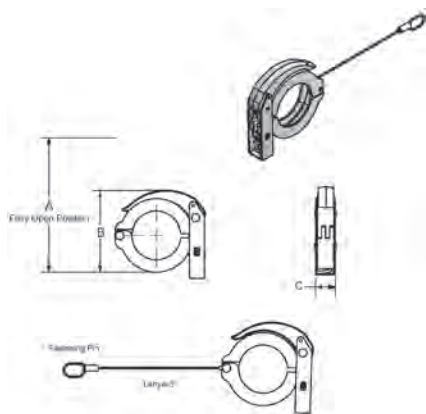
Clamp, Toggle



- Aluminum
- Quick Operating
- Positive Locking Method
- Self Adjusting
- Cannot Be Over-tightened

Flange Size (ISO)	Fits Sizes	A	B	C	Part Number
NW 16	16/10	4.05 (103)	2.50 (64)	0.75 (19)	100318801
NW 25	25/20	4.31 (109)	2.96 (75)	0.75 (19)	100318803
NW 40	40/32	4.87 (124)	3.29 (84)	0.75 (19)	100318805
NW 50	50	6.34 (161)	4.73 (120)	0.89 (23)	100318806

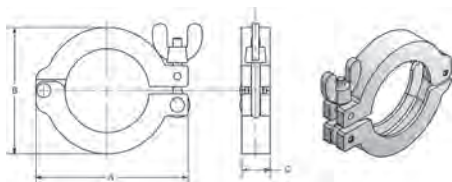
Clamp, Toggle w/Lanyard



- Aluminum
- Fastening pin on lanyard prevents accidental opening and pin loss
- Positive locking method
- Self-adjusting
- Heavy duty spring supports the full range of production tolerance variables

Flange Size (ISO)	Fits Sizes	A	B	C	Part Number
NW 16	16/10	4.05 (103)	2.50 (64)	0.75 (19)	100318801-L
NW 25	25/20	4.31 (109)	2.96 (75)	0.75 (19)	100318803-L
NW 40	40/32	4.87 (124)	3.29 (84)	0.75 (19)	100318805-L
NW 50	50	6.34 (161)	4.73 (120)	0.89 (23)	100318806-L

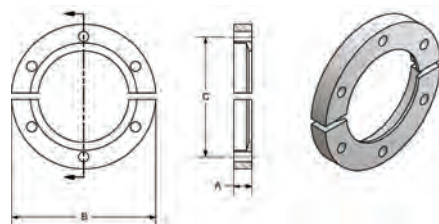
Clamp, Wing Nut



- Aluminum
- 70 inch-pounds max torque

Flange Size (ISO)	Fits Sizes	A	B	C	Part Number
NW 16	16/10	2.24 (57)	1.69 (43)	0.63 (16)	100312901
NW 25	25/20	2.76 (70)	2.17 (55)	0.63 (16)	100312903
NW 40	40/32	3.39 (86)	2.76 (70)	0.63 (16)	100312905
NW 50	50	4.33 (110)	3.70 (94)	0.79 (20)	100312906

Clamp, Bulkhead



- Aluminum
- Adapts to a baseplate or fixed flange
- Standard KF seal assembly
- Stainless steel bolts and washers included, 10-32 x 5/8"

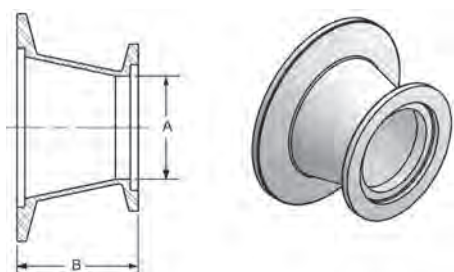
Flange Size (ISO)	Number of Bolts	A	B	C	Part Number
NW 16	6	0.36 (9)	2.00 (51)	1.50 (38)	100318901
NW 25	6	0.39 (10)	2.38 (60)	1.89 (48)	100318903
NW 40	6	0.37 (9)	2.94 (75)	2.44 (62)	100318905
NW 50	8	0.40 (10)	3.75 (95)	3.25 (83)	100318906

Clamp, Chain

- For use with KF 80 and 100 flanges
- Aluminum

Flange Size (ISO)	Part Number
NW 80	100993460
NW 100	100994717

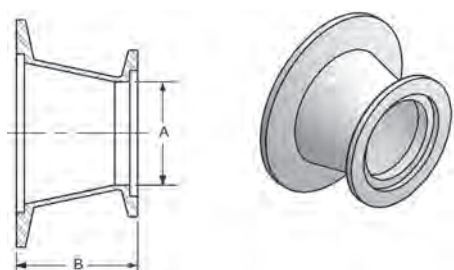
Conical Reducer, Stainless Steel



Flange Size (ISO)	Flange Size (ISO)	A	B	Part Number
NW 16	NW 25	0.62 (16)	1.57 (40)	100313711
NW 16	NW 40	0.62 (16)	1.57 (40)	100313712
NW 16	NW 50	0.62 (16)	1.57 (40)	100313713
NW 25	NW 40	0.87 (22)	1.57 (40)	100313714
NW 25	NW 50	0.87 (22)	1.57 (40)	100313715
NW 40	NW 50	1.34 (34)	1.57 (40)	100313716

- Mates differing ISO-KF flange sizes

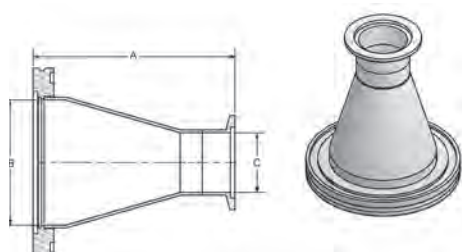
Conical Reducer, Aluminum



Flange Size (ISO)	Flange Size (ISO)	A	B	Part Number
NW 16	NW 25	0.62 (16)	1.57 (40)	100313511
NW 16	NW 40	0.62 (16)	1.57 (40)	100313512
NW 16	NW 50	0.62 (16)	1.57 (40)	100313513
NW 25	NW 40	0.87 (22)	1.57 (40)	100313514
NW 25	NW 50	0.87 (22)	1.57 (40)	100313515
NW 40	NW 50	1.34 (34)	1.57 (40)	100313516

- Mates differing ISO-KF flange sizes

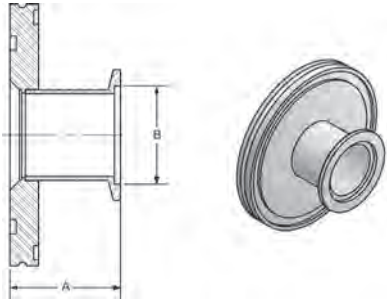
Conical Adapter, ISO-MF to ISO-KF



Flange Size (ISO)	A	B	C	Part Number
NW 63 to NW 40	3.39 (86)	2.37 (60)	1.37 (35)	100765006
NW 63 to NW 50	3.39 (86)	2.37 (60)	1.87 (47)	100765017
NW 80 to NW 40	4.64 (118)	2.87 (73)	1.37 (35)	100765016
NW 80 to NW 50	4.64 (118)	2.87 (73)	1.87 (47)	100765008
NW 100 to NW 50	4.64 (118)	3.83 (97)	1.87 (47)	100765018

- Stainless Steel Type 304
- High conductance adapter
- Special adapters available upon request

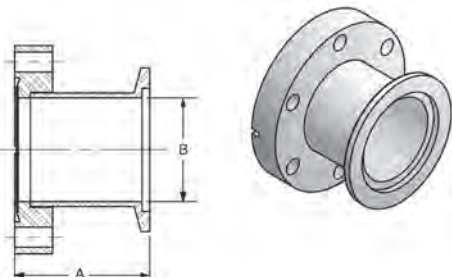
Step Adapter, ISO-MF to ISO-KF



- Stainless Steel Type 304

Flange Size (ISO)	A	B	Part Number
NW 63 to NW 40	1.77 (45)	1.37 (35)	100762606
NW 63 to NW 50	1.77 (45)	1.87 (47)	100762617
NW 80 to NW 40	1.77 (45)	1.87 (47)	100762616
NW 80 to NW 50	1.77 (45)	1.87 (47)	100762608
NW 100 to NW 40	1.77 (45)	1.37 (35)	100762620
NW 100 to NW 50	1.77 (45)	1.87 (47)	100762618

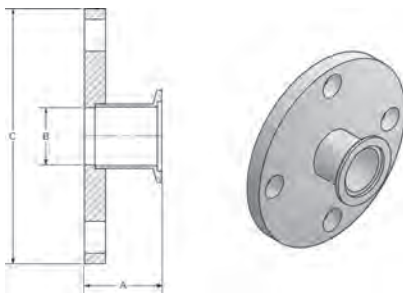
Adapter, ISO-KF to CF



- Stainless Steel Type 304

Flange Size (KF)	Flange Size (CF)	A	B	Part Number
NW 16	Mini 1 1/3"	2.08 (53)	0.62 (16)	100315601
NW 16	2 3/4"	1.78 (45)	0.62 (16)	100315611
NW 25	2 1/8"	1.89 (48)	0.87 (22)	100319812
NW 25	2 3/4"	1.78 (45)	0.87 (22)	100315603
NW 40	2 3/4"	1.78 (45)	1.33 (34)	100315605
NW 50	2 3/4"	2.11 (54)	1.37 (35)	100319813
NW 50	4 1/2"	1.95 (50)	1.83 (46)	100315606

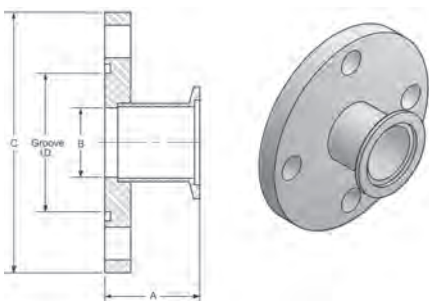
Adapter, ISO-KF to ASA, without O-Ring Groove



- Stainless Steel Type 304
- Without O-Ring Groove

Flange Size (KF)	Flange Size (ASA)	A	B	C	Part Number
NW 40	1 1/2"	1.81 (46)	1.33 (34)	5.00 (127)	100316755
NW 40	2"	1.81 (46)	1.33 (34)	6.00 (152)	100316705
NW 40	3"	1.81 (46)	1.33 (34)	7.50 (191)	100316715
NW 50	1 1/2"	1.81 (46)	1.83 (46)	5.00 (127)	100316756
NW 50	2"	1.81 (46)	1.83 (46)	6.00 (152)	100316706
NW 50	3"	1.81 (46)	1.83 (46)	7.50 (191)	100316716

Adapter, ISO-KF to ASA, with O-Ring Groove



- Stainless Steel Type 304
- With O-Ring Groove

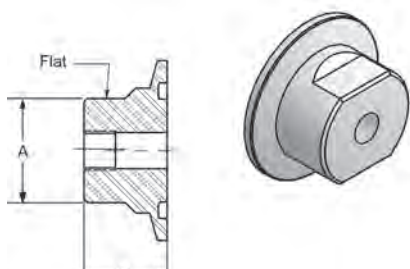
Flange Size (KF)	Flange Size (ASA)	Groove ID (O-Ring)	A	B	C	Part Number
NW 40	1 1/2"	2.66" (2-231)	1.81 (46)	1.33 (34)	5.00 (127)	100316775
NW 40	2"	3.42" (2-237)	1.81 (46)	1.33 (34)	6.00 (152)	100316725
NW 40	3"	4.69" (2-247)	1.81 (46)	1.33 (34)	7.50 (191)	100316735
NW 50	1 1/2"	2.66" (2-231)	1.81 (46)	1.83 (46)	5.00 (127)	100316776
NW 50	2"	3.42" (2-237)	1.81 (46)	1.83 (46)	6.00 (152)	100316726
NW 50	3"	4.69" (2-247)	1.81 (46)	1.83 (46)	7.50 (191)	100316736

ASA O-Ring, Viton®



Flange Size (ASA)	O-Ring	Part Number
1 1/2"	2-231	100001380
2"	2-237	100006098
3"	2-247	100006099

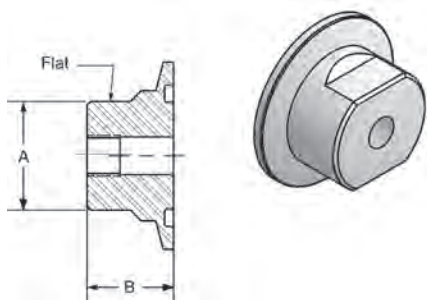
Adapter, ISO-KF to NPT-F Pipe, Stainless Steel



- Teflon Tape recommended to seal
- Compatible with most TC and Pirani tubes

Flange Size (KF)	Flange Size (NPT)	A	B	Part Number
NW 10	1/8"	0.62 (16)	0.75 (19)	100312100
NW 10	1/4"	0.62 (16)	0.75 (19)	100312300
NW 16	1/8"	0.62 (16)	0.75 (19)	100312101
NW 16	1/4"	0.62 (16)	0.75 (19)	100312301
NW 25	1/8"	0.88 (22)	0.75 (19)	100312103
NW 25	1/4"	0.88 (22)	0.75 (19)	100312303
NW 40	1/8"	1.25 (32)	1.00 (25)	100312105
NW 40	1/4"	1.25 (32)	1.00 (25)	100312305
NW 50	1/8"	1.75 (44)	1.00 (25)	100312106
NW 50	1/4"	1.75 (44)	1.00 (25)	100312306

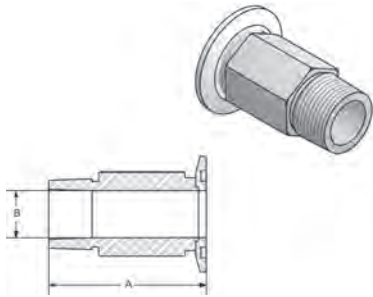
Adapter, ISO-KF to NPT-F Pipe, Aluminum



- Teflon Tape recommended to seal
- Compatible with most TC and Pirani tubes

Flange Size (KF)	Flange Size (NPT)	A	B	Part Number
NW 10	1/8"	0.62 (16)	0.75 (19)	100312000
NW 10	1/4"	0.62 (16)	0.75 (19)	100312200
NW 16	1/8"	0.62 (16)	0.75 (19)	100312001
NW 16	1/4"	0.62 (16)	0.75 (19)	100312201
NW 25	1/8"	0.88 (22)	0.75 (19)	100312003
NW 25	1/4"	0.88 (22)	0.75 (19)	100312203
NW 40	1/8"	1.25 (32)	1.00 (25)	100312005
NW 40	1/4"	1.25 (32)	1.00 (25)	100312205
NW 50	1/8"	1.75 (44)	1.00 (25)	100312006
NW 50	1/4"	1.75 (44)	1.00 (25)	100312206

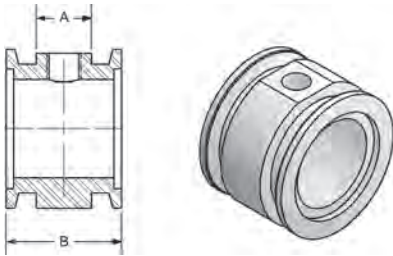
Adapter, ISO-KF to NPT-M Pipe, Stainless Steel



- Stainless Steel
- Hex Shank
- Tapered Thread
- Teflon Tape recommended to seal

Flange Size (KF)	Flange Size (NPT)	A	B	Part Number
NW 16	1/8"	1.57 (40)	0.19 (5)	100316801
NW 16	1/4"	1.97 (50)	0.26 (7)	100316811
NW 25	1/8"	1.57 (40)	0.19 (5)	100316803
NW 25	1/4"	1.97 (50)	0.26 (7)	100316813
NW 25	1/2"	2.95 (75)	0.45 (11)	100316823
NW 25	3/4"	2.95 (75)	0.78 (20)	100316833
NW 40	1/4"	1.97 (50)	0.26 (7)	100316805
NW 40	1/2"	2.95 (75)	0.45 (11)	100316815
NW 40	3/4"	2.95 (75)	0.78 (20)	100316825
NW 40	1"	2.95 (75)	0.88 (22)	100316835
NW 40	1 1/4"	2.00 (51)	1.12 (28)	100316844
NW 40	1 1/2"	2.00 (51)	1.34 (34)	100316845
NW 50	1/4"	1.97 (50)	0.26 (7)	100316806
NW 50	1/2"	2.95 (75)	0.45 (11)	100316816
NW 50	3/4"	2.95 (75)	0.78 (20)	100316826
NW 50	1"	2.95 (75)	0.88 (22)	100316836
NW 50	2"	2.00 (51)	1.87 (47)	100316846

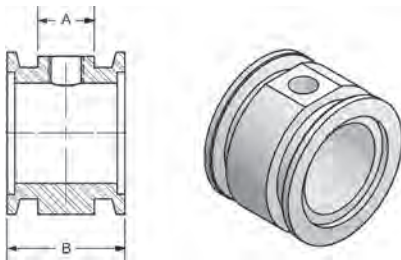
Adapter Tee, ISO-KF to NPT-F Pipe, Stainless Steel



- Available with additional NPT holes
- Teflon Tape recommended to seal

Flange Size (KF)	Flange Size (NPT)	A	B	Part Number
NW 16	1/8" Tapped	0.76 (19)	1.57 (40)	100319401
NW 16	1/4" Tapped	0.76 (19)	1.57 (40)	100319601
NW 25	1/8" Tapped	0.76 (19)	1.57 (40)	100319403
NW 25	1/4" Tapped	0.76 (19)	1.57 (40)	100319603
NW 40	1/8" Tapped	0.76 (19)	1.57 (40)	100319405
NW 40	1/4" Tapped	0.76 (19)	1.57 (40)	100319605
NW 50	1/8" Tapped	0.76 (19)	1.57 (40)	100319406
NW 50	1/4" Tapped	0.76 (19)	1.57 (40)	100319606

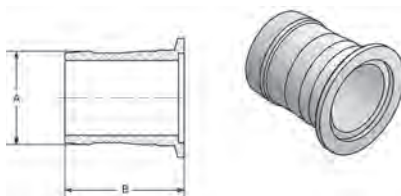
Adapter Tee, ISO-KF to NPT-F Pipe, Aluminum



- Available with additional NPT holes
- Teflon Tape recommended to seal

Flange Size (KF)	Flange Size (NPT)	A	B	Part Number
NW 16	1/8" Tapped	0.76 (19)	1.57 (40)	100319301
NW 16	1/4" Tapped	0.76 (19)	1.57 (40)	100319501
NW 25	1/8" Tapped	0.76 (19)	1.57 (40)	100319303
NW 25	1/4" Tapped	0.76 (19)	1.57 (40)	100319503
NW 40	1/8" Tapped	0.76 (19)	1.57 (40)	100319305
NW 40	1/4" Tapped	0.76 (19)	1.57 (40)	100319505
NW 50	1/8" Tapped	0.76 (19)	1.57 (40)	100319306
NW 50	1/4" Tapped	0.76 (19)	1.57 (40)	100319506

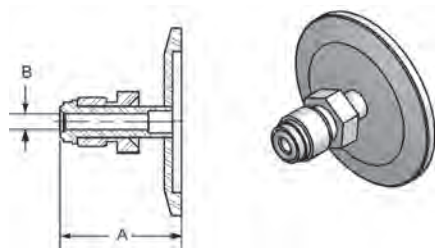
Adapter, ISO-KF to Rubber Hose



- Aluminum
- Compatible with standard vacuum hose bores

Flange Size (ISO)	Hose Size	A	B	Part Number
NW 16	1/2" or 5/8"	0.63 (16)	1.65 (42)	100311811
NW 16	5/8" or 3/4"	0.75 (19)	1.65 (42)	100311801
NW 25	3/4" or 7/8"	0.88 (22)	1.73 (44)	100311803
NW 40	1 1/2" or 1 5/8"	1.63 (41)	2.17 (55)	100311805
NW 50	1 1/2" or 1 5/8"	1.63 (41)	2.17 (55)	100311806

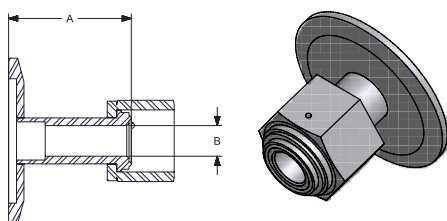
Adapter, ISO-KF to VCR®-M



- Stainless Steel

Flange Size (ISO)	Flange Size (VCR)	A	B	VCR Size	Part Number
NW 16	4 VCR	1.40 (36)	0.19 (5)	1/4"	100319111
NW 16	8 VCR	1.63 (41)	0.41 (10)	1/2"	100319121
NW 25	4 VCR	1.40 (36)	0.19 (5)	1/4"	100319113
NW 25	8 VCR	1.60 (41)	0.41 (10)	1/2"	100319123
NW 25	12 VCR	2.14 (54)	0.62 (16)	3/4"	100319133
NW 40	4 VCR	1.40 (36)	0.19 (5)	1/4"	100319115
NW 40	8 VCR	1.60 (41)	0.41 (10)	1/2"	100319125
NW 40	12 VCR	2.10 (53)	0.62 (16)	3/4"	100319135
NW 50	4 VCR	1.40 (36)	0.19 (5)	1/4"	100319116
NW 50	8 VCR	1.60 (41)	0.41 (10)	1/2"	100319126
NW 50	12 VCR	2.10 (53)	0.62 (16)	3/4"	100319136

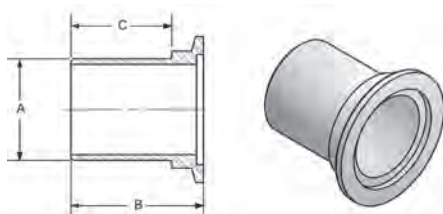
Adapter, ISO-KF to VCR®-F



- Stainless Steel

Flange Size (ISO)	Flange Size (VCR)	A	B	VCR Size	Part Number
NW 16	4 VCR	1.40 (36)	0.19 (5)	1/4"	100319211
NW 16	8 VCR	1.63 (41)	0.41 (10)	1/2"	100319221
NW 25	4 VCR	1.40 (36)	0.19 (5)	1/4"	100319213
NW 25	8 VCR	1.60 (41)	0.41 (10)	1/2"	100319223
NW 25	12 VCR	2.14 (54)	0.62 (16)	3/4"	100319233
NW 40	4 VCR	1.40 (36)	0.19 (5)	1/4"	100319215
NW 40	8 VCR	1.60 (41)	0.41 (10)	1/2"	100319225
NW 40	12 VCR	2.10 (53)	0.62 (16)	3/4"	100319235
NW 50	4 VCR	1.40 (36)	0.19 (5)	1/4"	100319216
NW 50	8 VCR	1.60 (41)	0.41 (10)	1/2"	100319226
NW 50	12 VCR	2.10 (53)	0.62 (16)	3/4"	100319236

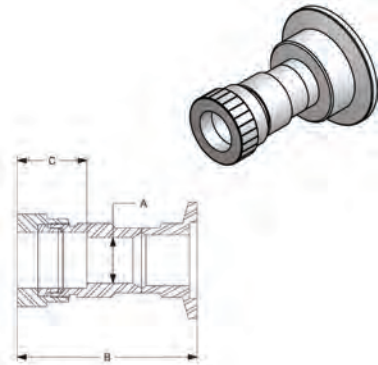
Adapter, ISO-KF to PVC Hose



- Stainless Steel Type 304
- Recommend the use of hose clamps

Flange Size (ISO)	Hose Size	A	B	C	Part Number
NW 10	1/2"	0.50 (13)	1.26 (32)	0.79 (20)	100316400
NW 16	1/2"	0.50 (13)	1.26 (32)	0.79 (20)	100316411
NW 16	3/4"	0.75 (19)	1.26 (32)	0.79 (20)	100316401
NW 25	1"	1.00 (25)	1.50 (38)	1.02 (26)	100316403
NW 40	1 1/2"	1.50 (38)	1.97 (50)	1.50 (38)	100316405
NW 50	2"	2.00 (51)	2.17 (55)	1.61 (41)	100316406

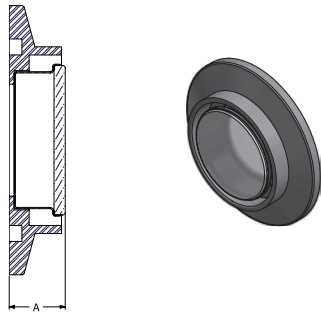
Adapter, ISO-KF to Compression Fitting



- Stainless Steel
- Viton O-Ring
- Compression fitting tightened by hand
- Compression connect for tube insertion

Flange Size (ISO)	For Tubing OD	A	B	C	Part Number
NW 10	1/2"	0.41 (10)	2.1 (53)	.80 (20)	100316910
NW 16	1/4"	0.19 (5)	1.4 (36)	.62 (16)	100316911
NW 16	1/2"	0.41 (10)	2.4 (61)	.80 (20)	100316921
NW 16	3/4"	0.62 (16)	2.4 (61)	.94 (24)	100316931
NW 25	1/2"	0.41 (10)	2.4 (61)	.80 (20)	100316903
NW 25	3/4"	0.62 (16)	2.5 (64)	.94 (24)	100316913
NW 25	1"	0.88 (22)	2.4 (61)	.94 (24)	100316923
NW 40	1/2"	0.41 (10)	2.6 (66)	.80 (20)	100316905
NW 40	3/4"	0.62 (16)	2.8 (71)	.94 (24)	100316915
NW 40	1"	0.88 (22)	2.8 (71)	.94 (24)	100316925
NW 40	1 1/8"	1.14 (29)	2.9 (74)	.94 (24)	100316945
NW 40	1 1/2"	1.25 (32)	2.9 (74)	.94 (24)	100316935
NW 50	3/4"	0.62 (16)	2.8 (71)	.94 (24)	100316926
NW 50	1"	0.88 (22)	2.8 (71)	.94 (24)	100316936
NW 50	1 1/8"	1.14 (29)	2.9 (74)	.94 (24)	100316946
NW 50	1 1/2"	1.25 (32)	3.0 (76)	.94 (24)	100316906
NW 50	2"	2.01 (51)	3.4 (87)	2.5 (63)	100316916

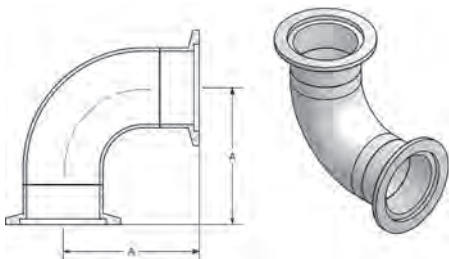
ISO-KF Viewing Port



- Stainless Steel Flange
- Max. Temperature 150°C
- Optical quality borosilicate glass

Flange Size (ISO)	A	Part Number
NW 40	0.45 (12)	20057025-001
NW 50	0.50 (13)	20057026-001

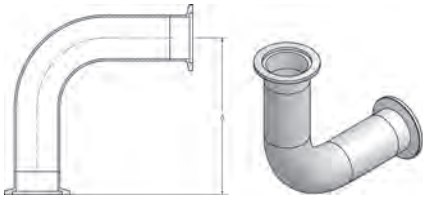
ISO-KF Elbow 90° Smooth Radius



- Stainless Steel Type 304
- Same Size Flanges Both Ports
- Standard Modulus

Flange Size (ISO)	A	Part Number
NW 16	1.57 (40)	100314401
NW 25	1.97 (50)	100314403
NW 40	2.56 (65)	100314505
NW 50	2.76 (70)	100314506

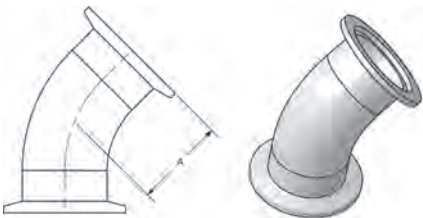
ISO-KF Elbow 90° Smooth, Long Radius



- Stainless Steel Type 304
- Same Size Flanges both Ports
- Twice Standard Modulus

Flange Size (ISO)	A	Part Number
NW 40	5.12 (130)	100314415
NW 50	5.51 (140)	100314416

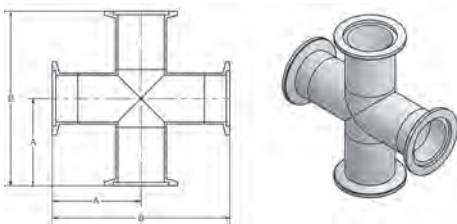
ISO-KF Elbow 45° Smooth Radius



- Stainless Steel Type 304
- Same Size Flanges Both Ports

Flange Size (ISO)	Flange Size (ISO)	Part Number
NW 16	0.91 (23)	100318701
NW 25	1.12 (28)	100318703
NW 40	1.68 (43)	100318705
NW 50	1.99 (51)	100318706

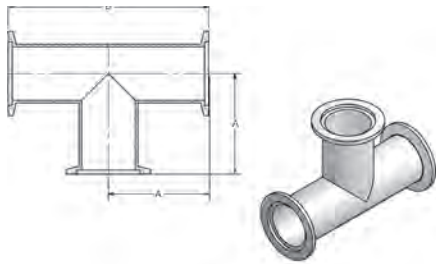
ISO-KF Cross



- Stainless Steel Type 304
- Same Size Flanges all Ports
- Standard Modulus

Flange Size (ISO)	A	B	Part Number
NW 16	1.57 (40)	3.15 (80)	100314801
NW 25	1.97 (50)	3.94 (100)	100314803
NW 40	2.56 (65)	5.12 (130)	100314805
NW 50	2.76 (70)	5.51 (140)	100314806

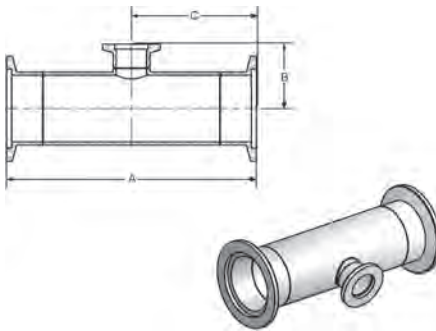
ISO-KF Tee



- Stainless Steel Type 304
- Same Size Flanges all Ports
- Standard Modulus

Flange Size (ISO)	A	B	Part Number
NW 16	1.57 (40)	3.15 (80)	100314601
NW 25	1.97 (50)	3.94 (100)	100314603
NW 40	2.56 (65)	5.12 (130)	100314605
NW 50	2.76 (70)	5.51 (140)	100314606

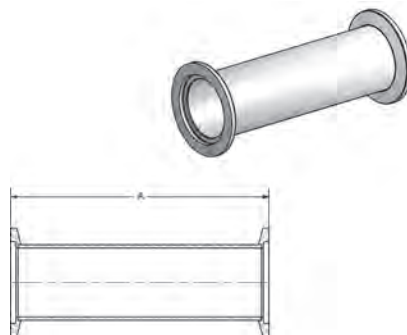
ISO-KF Tee, Reducing



- Stainless Steel Type 304
- Same Size Flanges Thru Ports

Flange Size (ISO)	Flange Size (ISO) Tee	A	B	C	Part Number
NW 25	NW 16	3.94 (100)	1.08 (27)	1.97 (50)	100318403
NW 40	NW 16	5.12 (130)	1.32 (34)	2.56 (65)	100318405
NW 50	NW 16	5.51 (140)	1.58 (40)	2.76 (70)	100318406
NW 40	NW 25	4.80 (122)	2.40 (61)	2.40 (61)	100319816
NW 50	NW 25	6.29 (160)	2.65 (67)	3.15 (80)	100319815
NW 50	NW 40	6.29 (160)	2.65 (67)	3.15 (80)	100319814

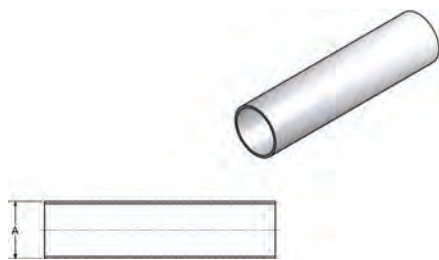
ISO-KF Straight Section



- Stainless Steel Type 304
- Special lengths to order

Flange Size (ISO)	A	Part Number
NW 16	3.15 (80)	100315101
NW 16	12.60 (320)	100315111
NW 25	3.94 (100)	100315103
NW 25	12.60 (320)	100315113
NW 40	5.12 (130)	100315105
NW 40	12.60 (320)	100315115
NW 50	5.51 (140)	100315106
NW 50	12.60 (320)	100315116

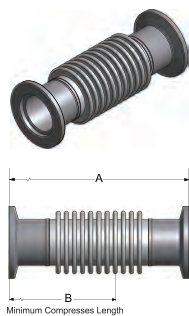
Tubing



- Tube ends deburred
- Stainless Steel
- Price per 10 foot length of tube

Flange Size (ISO)	A	Tube Wall	Part Number
NW 10	0.50 (13)	0.065 (1.7)	100314300
NW 16	0.75 (19)	0.065 (1.7)	100314301
NW 25	1.00 (25)	0.065 (1.7)	100314303
NW 40	1.50 (38)	0.065 (1.7)	100314305
NW 50	2.00 (51)	0.065 (1.7)	100314306
NW 80	3.00 (76)	0.065 (1.7)	100764508
NW 100	4.00 (102)	0.065 (1.7)	100764510
NW 100	4.00 (102)	0.083 (2.1)	100764511

ISO-KF Bellows Section



- Stainless Steel

Flange Size (ISO)	Static Bend Radius	Hose Wall	A	B	Spring Rate	Part Number
NW 16	1 1/8"	.006 (0.15)	3.94 (100)	3.07 (78)	56 lb/in	100314911G
NW 25	1 3/8"	.006 (0.15)	3.94 (100)	3.07 (78)	44 lb/in	100314913G
NW 40	2 1/2"	.006 (0.15)	3.94 (100)	2.93 (74)	32 lb/in	100314915G
NW 50	3 1/4"	.006 (0.15)	3.94 (100)	3.11 (79)	32 lb/in	100314916G

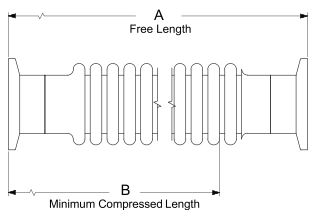
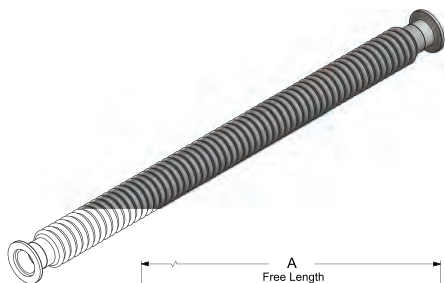
ISO-KF Thick Wall Metal Hose



- Stainless Steel
- Unsheathed
- Buttwelded
- Special Lengths to Order
- Thick wall hose static bend radius is to point of permanent deformation

Flange Size (ISO)	Static Bend Radius	Hose Wall	A	Spring Rate	Part Number
NW 16	2 1/8"	.012 (0.30)	9.84 (250)	256 lb/in	100315901
NW 16	2 1/8"	.012 (0.30)	19.69 (500)	128 lb/in	100316001
NW 16	2 1/8"	.012 (0.30)	39.40 (1000)	64 lb/in	100316111
NW 25	2 7/8"	.012 (0.30)	9.84 (250)	224 lb/in	100315903
NW 25	2 7/8"	.012 (0.30)	19.69 (500)	112 lb/in	100316003
NW 25	2 7/8"	.012 (0.30)	39.40 (1000)	56 lb/in	100316113
NW 40	3 1/2"	.012 (0.30)	9.84 (250)	220 lb/in	100315905
NW 40	3 1/2"	.012 (0.30)	19.69 (500)	110 lb/in	100316005
NW 40	3 1/2"	.012 (0.30)	39.40 (1000)	55 lb/in	100316115
NW 50	5 1/4"	.012 (0.30)	9.84 (250)	220 lb/in	100315906
NW 50	5 1/4"	.012 (0.30)	19.69 (500)	110 lb/in	100316006
NW 50	5 1/4"	.012 (0.30)	39.40 (1000)	55 lb/in	100316116

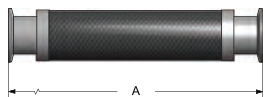
ISO-KF Thin Wall Metal Hose



- Stainless Steel
- Unsheathed
- Buttwelded
- Special Lengths to Order

Flange Size (ISO)	Static Bend Radius	Hose Wall	A	B	Spring Rate	Part Number
NW 16	1 5/8"	.006 (0.15)	9.84 (250)	6.41 (163)	27 lb/in	100317411
NW 16	1 5/8"	.006 (0.15)	12.02 (305)	7.82 (199)	21 lb/in	100319805
NW 16	1 5/8"	.006 (0.15)	19.69 (500)	12.30 (313)	12 lb/in	100317421
NW 16	1 5/8"	.006 (0.15)	24.09 (612)	18.12 (460)	9 lb/in	100319808
NW 16	1 5/8"	.006 (0.15)	39.40 (1000)	24.10 (613)	5.8 lb/in	100317441
NW 25	1 3/8"	.006 (0.15)	9.84 (250)	6.41 (163)	16 lb/in	100317413
NW 25	1 3/8"	.006 (0.15)	11.99 (305)	7.82 (199)	14 lb/in	100319806
NW 25	1 3/8"	.006 (0.15)	19.69 (500)	12.30 (313)	7.3 lb/in	100317423
NW 25	1 3/8"	.006 (0.15)	24.00 (610)	18.12 (460)	6.5 lb/in	100319809
NW 25	1 3/8"	.006 (0.15)	39.40 (1000)	24.10 (613)	3.4 lb/in	100317443
NW 40	2 1/2"	.006 (0.15)	9.84 (250)	6.23 (158)	8.6 lb/in	100317415
NW 40	2 1/2"	.006 (0.15)	12.12 (308)	7.88 (200)	7 lb/in	100319807
NW 40	2 1/2"	.006 (0.15)	19.69 (500)	11.70 (297)	3.9 lb/in	100317425
NW 40	2 1/2"	.006 (0.15)	24.05 (611)	18.12 (460)	3 lb/in	100319810
NW 40	2 1/2"	.006 (0.15)	39.40 (1000)	22.50 (571)	1.9 lb/in	100317445
NW 50	3 1/4"	.006 (0.15)	9.84 (250)	7.05 (179)	13 lb/in	100317416
NW 50	3 1/4"	.006 (0.15)	11.93 (303)	8.64 (219)	12 lb/in	100319817
NW 50	3 1/4"	.006 (0.15)	19.69 (500)	13.50 (342)	5.9 lb/in	100317426
NW 50	3 1/4"	.006 (0.15)	24.08 (612)	18.12 (460)	5 lb/in	100319811
NW 50	3 1/4"	.006 (0.15)	39.40 (1000)	26.30 (667)	2.9 lb/in	100317446

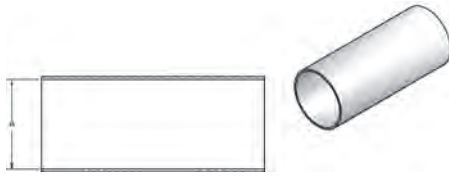
ISO-KF Braided Metal Hose



- Ideal for rough pumping lines
- Stainless Steel
- Flexible, yet resistant to contraction

Flange Size (ISO)	Static Bend Radius	A	Part Number
NW 16	2 1/2"	10.23 (259)	100313201
NW 16	2 1/2"	20.23 (514)	100313301
NW 16	2 1/2"	40.23 (1022)	100313401
NW 25	3"	10.27 (261)	100313203
NW 25	3"	20.27 (515)	100313303
NW 25	3"	40.27 (1023)	100313403
NW 40	5"	10.28 (261)	100313205
NW 40	5"	20.28 (515)	100313305
NW 40	5"	40.28 (1023)	100313405
NW 50	6"	10.53 (268)	100313206
NW 50	6"	20.53 (522)	100313306
NW 50	6"	40.53 (1030)	100313406

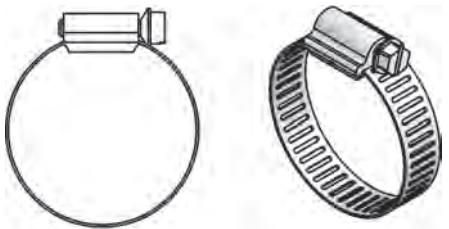
PVC Hose



- Good for exhaust lines
- Wire molded in tube wall for reinforcement
- Larger OD PVC has limited flexibility in short lengths

Flange Size (ISO)	A	Part Number
NW 10	0.50 (13)	100317500-100
NW 16	0.75 (19)	100317501-100
NW 25	1.00 (25)	100317503-100
NW 40	1.50 (38)	100317505-50
NW 50	2.00 (51)	100317506-50

PVC Hose Clamps



Flange Size (ISO)	Flange Size (ISO)	Part Number
NW 10	1/2"	100000797
NW 16	3/4"	100000935
NW 25	1"	100000936
NW 40	1 1/2"	100000937
NW 50	2"	100000938

Flange Protector Caps

- Protects Flange Faces
- Plastic

Flange Size (ISO)	Part Number
NW 16	100310001
NW 25	100310003
NW 40	100310005
NW 50	100310006

Type	Part Number	Type	Part Number
45° Elbow, Smooth Radius, NW 16, 304 SS	100318701	Adapter Pipe, NW 10 to 1/8" NPT, female, Aluminum	100312000
45° Elbow, Smooth Radius, NW 25, 304 SS	100318703	Adapter Pipe, NW 16 to 1/8" NPT, female, Aluminum	100312001
45° Elbow, Smooth Radius, NW 40, 304 SS	100318705	Adapter Pipe, NW 25 to 1/8" NPT, female, Aluminum	100312003
45° Elbow, Smooth Radius, NW 50, 304 SS	100318706	Adapter Pipe, NW 40 to 1/8" NPT, female, Aluminum	100312005
		Adapter Pipe, NW 50 to 1/8" NPT, female, Aluminum	100312006
90° Elbow, Smooth Radius, NW 16, 304 SS	100314401	Adapter Pipe, NW 10 to 1/8" NPT, female, SS	100312100
90° Elbow, Smooth Radius, NW 25, 304 SS	100314403	Adapter Pipe, NW 16 to 1/8" NPT, female, SS	100312101
90° Elbow, Long Radius, NW 40, 304 SS	100314415	Adapter Pipe, NW 25 to 1/8" NPT, female, SS	100312103
90° Elbow, Long Radius, NW 50, 304 SS	100314416	Adapter Pipe, NW 40 to 1/8" NPT, female, SS	100312105
90° Elbow, Smooth Radius, NW 40, 304 SS	100314505	Adapter Pipe, NW 50 to 1/8" NPT, female, SS	100312106
90° Elbow, Smooth Radius, NW 50, 304 SS	100314506		
Adapter, ISO-KF to CF, NW 16 to 1-1/3" CF, SS	100315601	Adapter Pipe, NW 10 to 1/4" NPT-F, Aluminum	100312200
Adapter, ISO-KF to CF, NW 25 to 2-3/4" CF, SS	100315603	Adapter Pipe, NW 16 to 1/4" NPT-F, Aluminum	100312201
Adapter, ISO-KF to CF, NW 40 to 2-3/4" CF, SS	100315605	Adapter Pipe, NW 25 to 1/4" NPT-F, Aluminum	100312203
Adapter, ISO-KF to CF, NW 50 to 4-1/2" CF, SS	100315606	Adapter Pipe, NW 40 to 1/4" NPT-F, Aluminum	100312205
Adapter, ISO-KF to CF, NW 16 to 2-3/4" CF, SS	100315611	Adapter Pipe, NW 50 to 1/4" NPT-F, Aluminum	100312206
Adapter, NW 10 to 1/2" PVC Tubing, 304 SS	100316400	Adapter Pipe, NW 10 to 1/4" NPT-F, SS	100312300
Adapter, NW 16 to 3/4" PVC Tubing, 304 SS	100316401	Adapter Pipe, NW 16 to 1/4" NPT-F, SS	100312301
Adapter, NW 25 to 1" PVC Tubing, 304 SS	100316403	Adapter Pipe, NW 25 to 1/4" NPT-F, SS	100312303
Adapter, NW 40 to 1 1/2" PVC Tubing, 304 SS	100316405	Adapter Pipe, NW 40 to 1/4" NPT-F, SS	100312305
Adapter, NW 50 to 2" PVC Tubing, 304 SS	100316406	Adapter Pipe, NW 50 to 1/4" NPT-F, SS	100312306
Adapter, NW 16 to 1/2" PVC Tubing, 304 SS	100316411		
Adapter, NW 40 to 2" ASA, w/out groove, 304 SS	100316705	Adapter Tee, NW 16 to 1/8" NPT-F, Aluminum	100319301
Adapter, NW 50 to 2" ASA, w/out groove, 304 SS	100316706	Adapter Tee, NW 25 to 1/8" NPT-F, Aluminum	100319303
Adapter, NW 40 to 3" ASA, w/out groove, 304 SS	100316715	Adapter Tee, NW 40 to 1/8" NPT-F, Aluminum	100319305
Adapter, NW 50 to 3" ASA, w/out groove, 304 SS	100316716	Adapter Tee, NW 50 to 1/8" NPT-F, Aluminum	100319306
Adapter, NW 40 to 2" ASA with groove, 304 SS	100316725	Adapter Tee, NW 16 to 1/8" NPT-F, 304 SS	100319401
Adapter, NW 50 to 2" ASA with groove, 304 SS	100316726	Adapter Tee, NW 25 to 1/8" NPT-F, 304 SS	100319403
Adapter, NW 40 to 3" ASA with groove, 304 SS	100316735	Adapter Tee, NW 40 to 1/8" NPT-F, 304 SS	100319405
Adapter, NW 50 to 3" ASA with groove, 304 SS	100316736	Adapter Tee, NW 50 to 1/8" NPT-F, 304 SS	100319406
Adapter, NW 40 to 1.5" ASA, w/out groove, 304 SS	100316755	Adapter Tee, NW 16 to 1/4" NPT-F, Aluminum	100319501
Adapter, NW 50 to 1.5" ASA, w/out groove, 304 SS	100316756	Adapter Tee, NW 25 to 1/4" NPT-F, Aluminum	100319503
Adapter, NW 40 to 1.5" ASA with groove, 304 SS	100316775	Adapter Tee, NW 40 to 1/4" NPT-F, Aluminum	100319505
Adapter, NW 50 to 1.5" ASA with groove, 304 SS	100316776	Adapter Tee, NW 50 to 1/4" NPT-F, Aluminum	100319506
Adapter, NW 25 to 2 1/8" CF, 304 SS	100319812	Adapter Tee, NW 16 to 1/4" NPT-F, 304 SS	100319601
Adapter, NW 50 to 2 3/4" CF, 304 SS	100319813	Adapter Tee, NW 25 to 1/4" NPT-F, 304 SS	100319603
Adapter, NW 40 to 1/8" NPT-M, 304 SS	100316801	Adapter Tee, NW 40 to 1/4" NPT-F, 304 SS	100319605
Adapter, NW 25 to 1/8" NPT-M, 304 SS	100316803	Adapter Tee, NW 50 to 1/4" NPT-F, 304 SS	100319606
Adapter, NW 40 to 1/4" NPT-M, 304 SS	100316805	Adapter Tubing, NW 25 to 1/2", SS, Viton O-Ring	100316903
Adapter, NW 50 to 1/4" NPT-M, 304 SS	100316806	Adapter Tubing, NW 40 to 1/2", SS, Viton O-Ring	100316905
Adapter, NW 16 to 1/4" NPT-M, 304 SS	100316811	Adapter Tubing, NW 50 to 1 1/2", SS, Viton O-Ring	100316906
Adapter, NW 25 to 1/4" NPT-M, 304 SS	100316813	Adapter Tubing, NW 10 to 1/2", SS, Viton O-Ring	100316910
Adapter, NW 40 to 1/2" NPT-M, 304 SS	100316815	Adapter Tubing, NW 16 to 1/4", SS, Viton O-Ring	100316911
Adapter, NW 50 to 1/2" NPT-M, 304 SS	100316816	Adapter Tubing, NW 25 to 3/4", SS, Viton O-Ring	100316913
Adapter, NW 25 to 1/2" NPT-M, 304 SS	100316823	Adapter Tubing, NW 40 to 3/4", SS, Viton O-Ring	100316915
Adapter, NW 40 to 3/4" NPT-M, 304 SS	100316825	Adapter Tubing, NW 50 to 2", SS, Viton O-Ring	100316916
Adapter, NW 50 to 3/4" NPT-M, 304 SS	100316826	Adapter Tubing, NW 16 to 1/2", SS, Viton O-Ring	100316921
Adapter, NW 25 to 3/4" NPT-M, 304 SS	100316833	Adapter Tubing, NW 25 to 1", SS, Viton O-Ring	100316923
Adapter, NW 40 to 1" NPT-M, 304 SS	100316835	Adapter Tubing, NW 40 to 1", SS, Viton O-Ring	100316925
Adapter, NW 50 to 1" NPT-M, 304 SS	100316836	Adapter Tubing, NW 50 to 3/4", SS, Viton O-Ring	100316926
Adapter, NW 40 to 1.25" NPT-M, 304 SS	100316844	Adapter Tubing, NW 16 to 3/4", SS, Viton O-Ring	100316931
Adapter, NW 40 to 1.5" NPT-M, 304 SS	100316845	Adapter Tubing, NW 40 to 1 1/2", SS, Viton O-Ring	100316935
Adapter, NW 50 to 2" NPT-M, 304 SS	100316846	Adapter Tubing, NW 50 to 1", SS, Viton O-Ring	100316936
Adapter, NW 40 to 1 1/2" or 1 5/8", Aluminum	100311805	Adapter Tubing, NW 40 to 1 1/8", SS, Viton O-Ring	100316945
Adapter, Hose , NW 16 to 5/8" or 3/4", Aluminum	100311801	Adapter Tubing, NW 50 to 1 1/8", SS, Viton O-Ring	100316946
Adapter, Hose , NW 25 to 3/4" or 7/8", Aluminum	100311803		
Adapter, Hose , NW 40 to 1 1/2" or 1 5/8", Aluminum	100311805		
Adapter, Hose , NW 50 to 1 1/2" or 1 5/8", Aluminum	100311806		
Adapter, Hose , NW 16 to 1/2" or 5/8", Aluminum	100311811		

Type	Part Number	Type	Part Number
Adapter, VCR-F, NW 16 to 4 VCR, SS	100319211	Centering Ring Assy, NW 10, SS/Viton O-ring	100312700
Adapter, VCR-F, NW 25 to 4 VCR, SS	100319213	Centering Ring Assy, NW 16, SS/Viton O-ring	100312701
Adapter, VCR-F, NW 40 to 4 VCR, SS	100319215	Centering Ring Assy, NW 25, SS/Viton O-ring	100312703
Adapter, VCR-F, NW 50 to 4 VCR, SS	100319216	Centering Ring Assy, NW 40, SS/Viton O-ring	100312705
Adapter, VCR-F, NW 16 to 8 VCR, SS	100319221	Centering Ring Assy, NW 50, SS/Viton O-ring	100312706
Adapter, VCR-F, NW 25 to 8 VCR, SS	100319223		
Adapter, VCR-F, NW 40 to 8 VCR, SS	100319225	Centering Ring Assy, NW 10, SS/Buna-N O-ring	100312800
Adapter, VCR-F, NW 50 to 8 VCR, SS	100319226	Centering Ring Assy, NW 16, SS/Buna-N O-ring	100312801
Adapter, VCR-F, NW 25 to 12 VCR, SS	100319233	Centering Ring Assy, NW 25, SS/Buna-N O-ring	100312803
Adapter, VCR-F, NW 40 to 12 VCR, SS	100319235	Centering Ring Assy, NW 40, SS/Buna-N O-ring	100312805
Adapter, VCR-F, NW 50 to 12 VCR, SS	100319236	Centering Ring Assy, NW 50, SS/Buna-N O-ring	100312806
Adapter, VCR-M, NW 16 to 4 VCR, SS	100319111	Centering Ring Assy, NW 10, SS/Silicone O-ring	100317300
Adapter, VCR-M, NW 25 to 4 VCR, SS	100319113	Centering Ring Assy, NW 16, SS/Silicone O-ring	100317301
Adapter, VCR-M, NW 40 to 4 VCR, SS	100319115	Centering Ring Assy, NW 25, SS/Silicone O-ring	100317303
Adapter, VCR-M, NW 50 to 4 VCR, SS	100319116	Centering Ring Assy, NW 40, SS/Silicone O-ring	100317305
Adapter, VCR-M, NW 16 to 8 VCR, SS	100319121	Centering Ring Assy, NW 50, SS/Silicone O-ring	100317306
Adapter, VCR-M, NW 25 to 8 VCR, SS	100319123		
Adapter, VCR-M, NW 40 to 8 VCR, SS	100319125		
Adapter, VCR-M, NW 50 to 8 VCR, SS	100319126	Chain Clamp, NW 80, Aluminum	100993460
Adapter, VCR-M, NW 25 to 12 VCR, SS	100319133	Chain Clamp, NW 100, Aluminum	100994717
Adapter, VCR-M, NW 40 to 12 VCR, SS	100319135		
Adapter, VCR-M, NW 50 to 12 VCR, SS	100319136		
Bellows, NW 16, Stainless Steel	100314911G	Conical Adapter, NW 63 to NW 40, SS	100765006
Bellows, NW 25, Stainless Steel	100314913G	Conical Adapter, NW 80 to NW 50, SS	100765008
Bellows, NW 40, Stainless Steel	100314915G	Conical Adapter, NW 80 to NW 40, SS	100765016
Bellows, NW 50, Stainless Steel	100314916G	Conical Adapter, NW 63 to NW 50, SS	100765017
		Conical Adapter, NW 100 to NW 50, SS	100765018
Bonded Viewport, NW 40, SS, Borosilicate Glass	20057025-001	Conical Reducer, NW 16 to NW 25, Aluminum	100313511
Bonded Viewport, NW 50, SS, Borosilicate Glass	20057026-001	Conical Reducer, NW 16 to NW 40, Aluminum	100313512
		Conical Reducer, NW 16 to NW 50, Aluminum	100313513
		Conical Reducer, NW 25 to NW 40, Aluminum	100313514
		Conical Reducer, NW 25 to NW 50, Aluminum	100313515
		Conical Reducer, NW 40 to NW 50, Aluminum	100313516
Braided Metal Hose, 10", NW 16, Stainless Steel	100313201	Conical Reducer, NW 16 to NW 25, 304 SS	100313711
Braided Metal Hose, 10", NW 25, Stainless Steel	100313203	Conical Reducer, NW 16 to NW 40, 304 SS	100313712
Braided Metal Hose, 10", NW 40, Stainless Steel	100313205	Conical Reducer, NW 16 to NW 50, 304 SS	100313713
Braided Metal Hose, 10", NW 50, Stainless Steel	100313206	Conical Reducer, NW 25 to NW 40, 304 SS	100313714
Braided Metal Hose, 20", NW 16, Stainless Steel	100313301	Conical Reducer, NW 25 to NW 50, 304 SS	100313715
Braided Metal Hose, 20", NW 25, Stainless Steel	100313303	Conical Reducer, NW 40 to NW 50, 304 SS	100313716
Braided Metal Hose, 20", NW 40, Stainless Steel	100313305		
Braided Metal Hose, 20", NW 50, Stainless Steel	100313306	Cross, NW 16, 304 Stainless Steel	100314801
Braided Metal Hose, 40", NW 16, Stainless Steel	100313401	Cross, NW 25, 304 Stainless Steel	100314803
Braided Metal Hose, 40", NW 25, Stainless Steel	100313403	Cross, NW 40, 304 Stainless Steel	100314805
Braided Metal Hose, 40", NW 40, Stainless Steel	100313405	Cross, NW 50, 304 Stainless Steel	100314806
Braided Metal Hose, 40", NW 50, Stainless Steel	100313406		
Bulkhead Clamp, 6 Bolts, NW 16, Aluminum	100318901	Flange, Blank-Off, NW 10, Aluminum	100311600
Bulkhead Clamp, 6 Bolts, NW 25, Aluminum	100318903	Flange, Blank-Off, NW 16, Aluminum	100311601
Bulkhead Clamp, 6 Bolts, NW 40, Aluminum	100318905	Flange, Blank-Off, NW 25, Aluminum	100311603
Bulkhead Clamp, 8 Bolts, NW 50, Aluminum	100318906	Flange, Blank-Off, NW 40, Aluminum	100311605
		Flange, Blank-Off, NW 50, Aluminum	100311606
Centering Ring Assy, NW 10, Alum./Buna-N O-ring	100312500	Flange, Blank-Off, NW 10, 304 Stainless Steel	100311700
Centering Ring Assy, NW 16, Alum./Buna-N O-ring	100312501	Flange, Blank-Off, NW 16, 304 Stainless Steel	100311701
Centering Ring Assy, NW 25, Alum./Buna-N O-ring	100312503	Flange, Blank-Off, NW 25, 304 Stainless Steel	100311703
Centering Ring Assy, NW 40, Alum./Buna-N O-ring	100312505	Flange, Blank-Off, NW 40, 304 Stainless Steel	100311705
Centering Ring Assy, NW 50, Alum./Buna-N O-ring	100312506	Flange, Blank-Off, NW 50, 304 Stainless Steel	100311706
Centering Ring Assy, NW 10, Alum./Viton O-ring	100312600	Flange, Blank-Off, NW 80, 304 Stainless Steel	100319802
Centering Ring Assy, NW 16, Alum./Viton O-ring	100312601	Flange, Blank-Off, NW 100, 304 Stainless Steel	100319804
Centering Ring Assy, NW 25, Alum./Viton O-ring	100312603		
Centering Ring Assy, NW 40, Alum./Viton O-ring	100312605		
Centering Ring Assy, NW 50, Alum./Viton O-ring	100312606		

Type	Part Number	Type	Part Number
Flange, Blank with Bore, NW 10, 304 SS	100319700	Flange, Unbored, NW 10, 304 Stainless Steel	100311300
Flange, Blank with Bore, NW 16, 304 SS	100319701	Flange, Unbored, NW 16, 304 Stainless Steel	100311301
Flange, Blank with Bore, NW 25, 304 SS	100319703	Flange, Unbored, NW 25, 304 Stainless Steel	100311303
Flange, Blank with Bore, NW 40, 304 SS	100319705	Flange, Unbored, NW 40, 304 Stainless Steel	100311305
Flange, Blank with Bore, NW 50, 304 SS	100319706	Flange, Unbored, NW 50, 304 Stainless Steel	100311306
Flange, Blank with Bore, NW 10, 304 SS	100319710		
Flange, Blank with Bore, NW 16, 304 SS	100319711		
Flange, Blank with Bore, NW 25, 304 SS	100319713	Metal Hose, Thick Wall, 10", NW 16, SS	100315901
Flange, Blank with Bore, NW 40, 304 SS	100319715	Metal Hose, Thick Wall, 10", NW 25, SS	100315903
Flange, Blank with Bore, NW 50, 304 SS	100319716	Metal Hose, Thick Wall, 10", NW 40, SS	100315905
Flange, Blank with Bore, NW 10, 304 SS	100319720	Metal Hose, Thick Wall, 10", NW 50, SS	100315906
Flange, Blank with Bore, NW 16, 304 SS	100319721	Metal Hose, Thick Wall, 20", NW 16, SS	100316001
Flange, Blank with Bore, NW 25, 304 SS	100319723	Metal Hose, Thick Wall, 20", NW 25, SS	100316003
Flange, Blank with Bore, NW 40, 304 SS	100319725	Metal Hose, Thick Wall, 20", NW 40, SS	100316005
Flange, Blank with Bore, NW 50, 304 SS	100319726	Metal Hose, Thick Wall, 20", NW 50, SS	100316006
Flange, Blank with Bore, NW 16, 304 SS	100319731	Metal Hose, Thick Wall, 40", NW 16, SS	100316111
Flange, Blank with Bore, NW 25, 304 SS	100319733	Metal Hose, Thick Wall, 40", NW 25, SS	100316113
Flange, Blank with Bore, NW 40, 304 SS	100319735	Metal Hose, Thick Wall, 40", NW 40, SS	100316115
Flange, Blank with Bore, NW 50, 304 SS	100319736	Metal Hose, Thick Wall, 40", NW 50, SS	100316116
Flange, Blank with Bore, NW 25, 304 SS	100319743		
Flange, Blank with Bore, NW 40, 304 SS	100319745		
Flange, Blank with Bore, NW 50, 304 SS	100319746	Metal Hose, Thin Wall, 10", NW 16, SS	100317411
Flange, Blank with Bore, NW 40, 304 SS	100319755	Metal Hose, Thin Wall, 10", NW 25, SS	100317413
Flange, Blank with Bore, NW 50, 304 SS	100319756	Metal Hose, Thin Wall, 10", NW 40, SS	100317415
Flange, Blank with Bore, NW 50, 304 SS	100319766	Metal Hose, Thin Wall, 10", NW 50, SS	100317416
Flange, Blank with Bore, NW 80, 304 SS	100319801	Metal Hose, Thin Wall, 20", NW 16, SS	100317421
Flange, Blank with Bore, NW 100, 304 SS	100319803	Metal Hose, Thin Wall, 20", NW 25, SS	100317423
		Metal Hose, Thin Wall, 20", NW 40, SS	100317425
		Metal Hose, Thin Wall, 20", NW 50, SS	100317426
Flange, Long Weld Stub, NW 16, Aluminum	00310201	Metal Hose, Thin Wall, 40", NW 16, SS	100317441
Flange, Long Weld Stub, NW 25, Aluminum	100310203	Metal Hose, Thin Wall, 40", NW 25, SS	100317443
Flange, Long Weld Stub, NW 40, Aluminum	100310205	Metal Hose, Thin Wall, 40", NW 40, SS	100317445
Flange, Long Weld Stub, NW 50, Aluminum	100310206	Metal Hose, Thin Wall, 40", NW 50, SS	100317446
Flange, Long Weld Stub, NW 16, Aluminum	100310211		
		Metal Hose, Thin Wall, 12", NW 16, SS	100319805
Flange, Long Weld Stub, NW 10, 304 SS	100315700	Metal Hose, Thin Wall, 12", NW 25, SS	100319806
Flange, Long Weld Stub, NW 16, 304 SS	100315701	Metal Hose, Thin Wall, 12", NW 40, SS	100319807
Flange, Long Weld Stub, NW 25, 304 SS	100315703	Metal Hose, Thin Wall, 24", NW 16, SS	100319808
Flange, Long Weld Stub, NW 40, 304 SS	100315705	Metal Hose, Thin Wall, 24", NW 25, SS	100319809
Flange, Long Weld Stub, NW 50, 304 SS	100315706	Metal Hose, Thin Wall, 24", NW 40, SS	100319810
Flange, Long Weld Stub, NW 16, 304 SS	100315711	Metal Hose, Thin Wall, 24", NW 50, SS	100319811
		Metal Hose, Thin Wall, 12", NW 50, SS	100319817
Flange Protector Caps, NW 16, Plastic	100310001	O-Ring, standard size 2-312, NW 10, Buna-N	100313900
Flange Protector Caps, NW 25, Plastic	100310003	O-Ring, standard size 2-314, NW 16, Buna-N	100313901
Flange Protector Caps, NW 40, Plastic	100310005	O-Ring, standard size 2-320, NW 25, Buna-N	100313903
Flange Protector Caps, NW 50, Plastic	100310006	O-Ring, standard size 2-326, NW 40, Buna-N	100313905
		O-Ring, standard size 2-330, NW 50, Buna-N	100313906
Flange, Short Weld Stub, NW 16, Aluminum	100310101		
Flange, Short Weld Stub, NW 25, Aluminum	100310103	O-Ring, standard size 2-312, NW 10, Viton	100314000
Flange, Short Weld Stub, NW 40, Aluminum	100310105	O-Ring, standard size 2-314, NW 16, Viton	100314001
Flange, Short Weld Stub, NW 50, Aluminum	100310106	O-Ring, standard size 2-320, NW 25, Viton	100314003
Flange, Short Weld Stub, NW 16, Aluminum	100310111	O-Ring, standard size 2-326, NW 40, Viton	100314005
		O-Ring, standard size 2-330, NW 50, Viton	100314006
Flange, Short Weld Stub, NW 10, 304 SS	100310300		
Flange, Short Weld Stub, NW 16, 304 SS	100310301	O-Ring, standard size 2-312, NW 10, Silicone 604	100317310
Flange, Short Weld Stub, NW 25, 304 SS	100310303	O-Ring, standard size 2-314, NW 16, Silicone 604	100317311
Flange, Short Weld Stub, NW 40, 304 SS	100310305	O-Ring, standard size 2-320, NW 25, Silicone 604	100317313
Flange, Short Weld Stub, NW 50, 304 SS	100310306	O-Ring, standard size 2-326, NW 40, Silicone 604	100317315
Flange, Short Weld Stub, NW 16, 304 SS	100310311	O-Ring, standard size 2-330, NW 50, Silicone 604	100317316
Flange, Unbored, NW 10, Aluminum	100311100	O-Ring, standard size 2-340, NW 80, Buna-N	100761908
Flange, Unbored, NW 16, Aluminum	100311101	O-Ring, standard size 2-346, NW 100, Buna-N	100761910
Flange, Unbored, NW 25, Aluminum	100311103	O-Ring, standard size 2-340, NW 80, Viton	100762008
Flange, Unbored, NW 40, Aluminum	100311105	O-Ring, standard size 2-346, NW 100, Viton	100762010
Flange, Unbored, NW 50, Aluminum	100311106		

Type	Part Number	Type	Part Number
Overpressure Ring, NW 16, 304 SS/Silicone	100316301	Straight Section, NW 16, 304 Stainless Steel	100315101
Overpressure Ring, NW 25, 304 SS/Silicone	100316303	Straight Section, NW 25, 304 Stainless Steel	100315103
Overpressure Ring, NW 40, 304 SS/Silicone	100316305	Straight Section, NW 40, 304 Stainless Steel	100315105
Overpressure Ring, NW 50, 304 SS/Silicone	100316306	Straight Section, NW 50, 304 Stainless Steel	100315106
Overpressure Seal Assy, NW 50, SS/Viton	100936523	Straight Section, NW 16, 304 Stainless Steel	100315111
Overpressure Seal Assy, NW 40, SS/Viton	100936524	Straight Section, NW 25, 304 Stainless Steel	100315113
Overpressure Seal Assy, NW 25, SS/Viton	100936525	Straight Section, NW 40, 304 Stainless Steel	100315115
PVC Hose Clamp, NW 10, 1/2"	100000797	Straight Section, NW 50, 304 Stainless Steel	100315116
PVC Hose Clamp, NW 16, 3/4"	100000935	Tee, NW 16, 304 Stainless Steel	100314601
PVC Hose Clamp, NW 25 1"	100000936	Tee, NW 25, 304 Stainless Steel	100314603
PVC Hose Clamp, NW 40 1 1/2"	100000937	Tee, NW 40, 304 Stainless Steel	100314605
PVC Hose Clamp, NW 50 2"	100000938	Tee, NW 50, 304 Stainless Steel	100314606
PVC Hose (price per 100 foot), NW 10, PVC	100317500-100	Toggle Clamp, NW 16, fits 16/10, Aluminum	100318801
PVC Hose (price per 100 foot), NW 16, PVC	100317501-100	Toggle Clamp, NW 25, fits 25/20, Aluminum	100318803
PVC Hose (price per 100 foot), NW 25, PVC	100317503-100	Toggle Clamp, NW 40, fits 40/32, Aluminum	100318805
PVC Hose (price per 50 foot), NW 40, PVC	100317505-50	Toggle Clamp, NW 50, fits 50, Aluminum	100318806
PVC Hose (price per 50 foot), NW 50, PVC	100317506-50	Toggle Clamp w/ Lanyard, NW 16, 16/10, Aluminum	100318801-L
Reducing Tee, NW 25 to NW 16, 304 SS	100318403	Toggle Clamp w/ Lanyard, NW 25, 25/20, Aluminum	100318803-L
Reducing Tee, NW 40 to NW 16, 304 SS	100318405	Toggle Clamp w/ Lanyard, NW 40, 40/32, Aluminum	100318805-L
Reducing Tee, NW 50 to NW 16, 304 SS	100318406	Toggle Clamp w/ Lanyard, NW 50, 50, Aluminum	100318806-L
Reducing Tee, NW 50 to NW 40, 304 SS	100319814	Tube (price per 10 foot), NW 10, 0.50" O.D., SS	100314300
Reducing Tee, NW 50 to NW 25, 304 SS	100319815	Tube (price per 10 foot), NW 16, 0.75" O.D., SS	100314301
Reducing Tee, NW 40 to NW 25, 304 SS	100319816	Tube (price per 10 foot), NW 25, 1.00" O.D., SS	100314303
Seal, ASA O-ring, 2-231, 1 1/2", Viton	100001380	Tube (price per 10 foot), NW 40, 1.50" O.D., SS	100314305
Seal, ASA O-ring, 2-237, 2", Viton	100006098	Tube (price per 10 foot), NW 50, 2.00" O.D., SS	100314306
Seal, ASA O-ring, 2-247, 3", Viton	100006099	Tube (price per 10 foot), NW 80, 3.00" O.D., SS	100764508
Seal Assembly, NW 16 to NW 10, Aluminum/Buna	100315801	Tube (price per 10 foot), NW 100, 4.00" O.D., SS	100764510
Seal Assembly, NW 25 to NW 20, Aluminum/Buna	100315803	Tube (price per 10 foot), NW 100, 4.00" O.D., SS	100764511
Seal Assembly, NW 40 to NW 32, Aluminum/Buna	100315805	Weld Socket Flange, NW 16, 304 SS	100318301
Seal Assembly, NW 16 to NW 10, Aluminum/Viton O-ring	100315811	Weld Socket Flange, NW 25, 304 SS	100318303
Seal Assembly, NW 25 to NW 20, Aluminum/Viton	100315813	Weld Socket Flange, NW 40, 304 SS	100318305
Seal Assembly, NW 40 to NW 32, Aluminum/Viton	100315815	Weld Socket Flange, NW 50, 304 SS	100318306
Seal Assembly, NW 16 to NW 10, SS/Viton	100315821	Weld Socket Flange, NW 16, 304 SS	100318311
Seal Assembly, NW 25 to NW 20, SS/Viton	100315823	Weld Socket Flange, NW 16, 304 SS	100318321
Seal Assembly, NW 40 to NW 32, SS/Viton	100315825	Wing Nut Clamp, NW 16, fits 16/10, Aluminum	100312901
Seal Assembly w/Screen, NW 16, SS/Viton O-ring	100318601	Wing Nut Clamp, NW 25, fits 25/20, Aluminum	100312903
Seal Assembly w/Screen, NW 25, SS/Viton O-ring	100318603	Wing Nut Clamp, NW 40, fits 40/32, Aluminum	100312905
Seal Assembly w/Screen, NW 40, SS/Viton O-ring	100318605	Wing Nut Clamp, NW 50, fits 50, Aluminum	100312906
Seal Assembly w/Screen, NW 50, SS/Viton O-ring	100318606		
Seal Assembly, NW 80, SS/Viton O-ring	100760508		
Seal Assembly, NW 100, SS/Viton O-ring	100760510		
Seal Assembly, NW 80, Aluminum/Viton O-ring	100760608		
Seal Assembly, NW 100, Aluminum/Viton O-ring	100760610		
Seal Assembly, NW 80, Aluminum/Buna-N O-ring	100760708		
Seal Assembly, NW 100, Aluminum/Buna-N O-ring	100760710		
Step Adapter, NW 63 to NW 40, SS	100762606		
Step Adapter, NW 80 to NW 50, SS	100762608		
Step Adapter, NW 80 to NW 40, SS	100762616		
Step Adapter, NW 63 to NW 50, SS	100762617		
Step Adapter, NW 100 to NW 50, SS	100762618		
Step Adapter, NW 100 to NW 40, SS	100762620		

