

## ASA/ANSI Flanges & Fittings

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ASA/ANSI Flanges &amp; Fittings

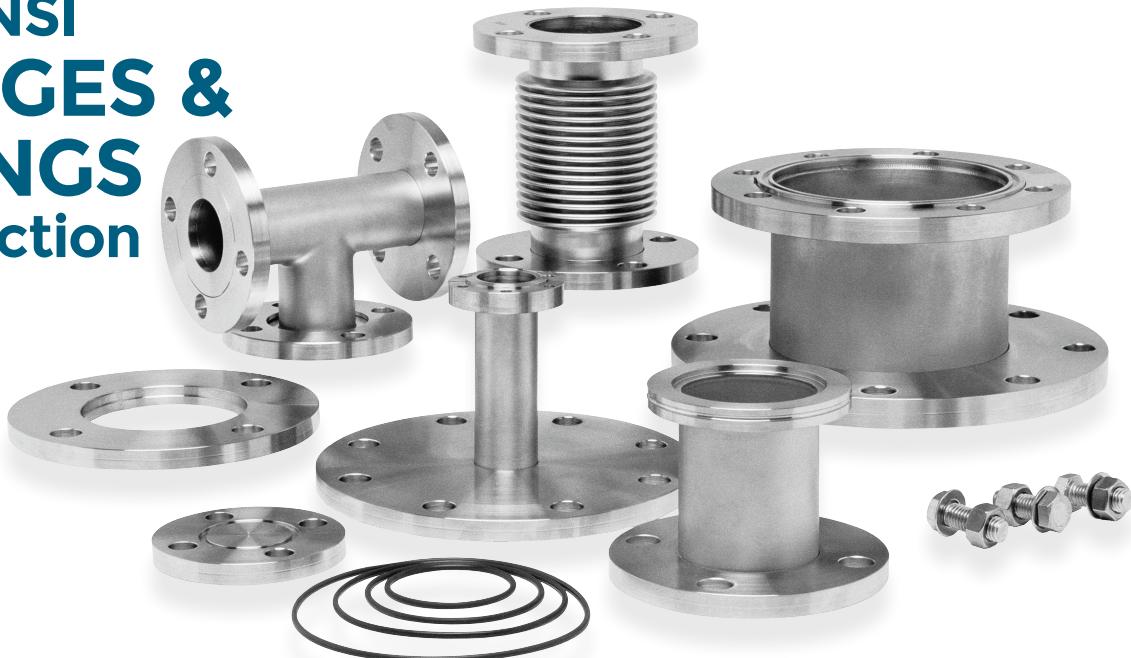


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# ASA/ANSI FLANGES & FITTINGS Introduction

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## ASA/ANSI Flanges & Fittings



### Overview:

ASA/ANSI flanges provide a complete range of fittings to mount with tubing sized from 1 inch up to 12 inches in diameter. The flange system consists of two flanges, a sealing ring and bolt fasteners to compress the seal between the two flanges. A pair of ASA/ANSI flanges must have one grooved flange to accept the sealing ring and one smooth face flange onto which the seal will be made. To ease system assembly rotatable flanges are available for bolt hole alignment.

### Background:

**ANCORP's** ASA/ANSI flanges and fittings are manufactured for compatibility with 150 lbs. ASA flanges and 150 ANSI flanges. The ASA/ANSI flange specification was originally created for use with steam pipes. Now adapted for vacuum use the system utilizes an elastomer seal and is capable of achieving high vacuum pressure levels.

All flanges offered by **ANCORP** are manufactured on state-of-the-art CNC (computer controlled) lathes to ensure consistency with dimensional tolerances, and extremely fine surface finishes. Water soluble, non-sulfur based coolants are used during the manufacturing process. The flanges are cleaned in an ultrasonic de-ionized water based cleaning system and vacuum packaged free from visible particulates and oils, ready for immediate use in any vacuum application.

### Specifications:

- Vacuum rated to  $1 \times 10^{-8}$  Torr.
- Leak rating  $< 1 \times 10^{-9}$  std. cc/s helium
- Temperature range: -26°C to 200°C; Sustainable high: 150°C
- Standard sizes: 5 inches to 16 inches O.D. (for tubing diameter 1 inch up to 12 inches)
- Materials:
  - Flanges and fittings: 304 stainless steel
  - Elastomer seals: Viton®
- Custom works available upon request.

### Features:

- Reusable flanges and seals
- Rotatable flanges for easier bolt hole alignment
- Adapters to other flange systems available
- Interchangeable with all other flanges and assemblies made to 150 lbs.

## ASA/ANSI Standard Sealing Assemblies

The ASA/ANSI flange system provides a complete range of flanges to mount with tubing sized 1 inch up to 12 inches diameter. The ASA/ANSI seal assembly consists of three types of sub-components, two flanges, a sealing O-ring and a bolt fastener kit to compress the seal between the two flanges.

ASA/ANSI flanges are available in two general styles: fixed and rotatable. Fixed flanges have a set bolt hole orientation while rotatable flanges have a two piece design allowing for bolt hole rotation to ease bolt alignment when mating the two flanges. The two pieces of the rotatable ASA/ANSI flange are called the insert and the housing (in which the bolt holes are machined). When installing these components the housing is placed behind the insert on the tubing prior to welding the insert to the tubing.

Both fixed and rotatable flanges are available with an O-ring groove. All ASA/ANSI sealing assemblies must include one smooth face ASA/ANSI flange and one grooved face flange. The sealing O-ring is placed into the groove prior to compressing the flanges together with a bolt kit. Flanges in this system are sized according to the nominal internal diameter for the tubing onto which they will be welded. When adding new flanges to an existing vacuum line, valve or chamber carefully compare all dimensions to be sure you are ordering a compatible flange. The most important dimensions to consider are the bolt circle diameter and the internal diameter of the flanges.

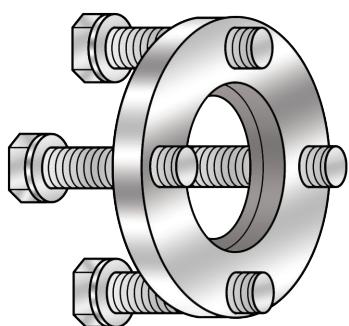
## ASA/ANSI Conversion Chart

ANCORP PART #	ASA	ANSI
ASA100	4.25	1.0
ASA150	5.00	1.5
ASA200	6.00	2.0
ASA300	7.50	3.0
ASA400	9.00	4.0
ASA600	11.00	6.0
ASA800	13.50	8.0
ASA1000	16.00	10.0

ASA/ANSI fluoroelastomer O-ring seals are capable of high vacuum pressures and temperatures as high as 205°C. The sealing ring is placed into the grooved flange and compressed against the smooth sealing face of the mating flange. Viton® gaskets are re-usable and can be used many times to make new vacuum tight seals.

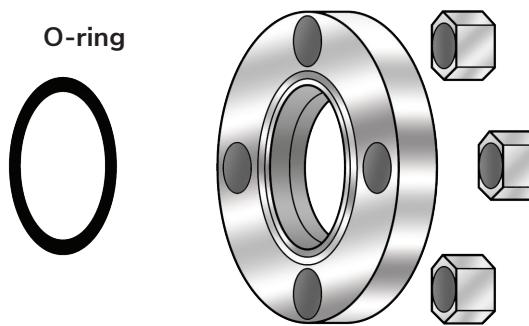
ASA/ANSI fasteners are bolts, nuts and washers made of high tensile strength stainless steel. Bolts and nuts are offered with standard hex-head design.

**Rotatable ASA Flange**

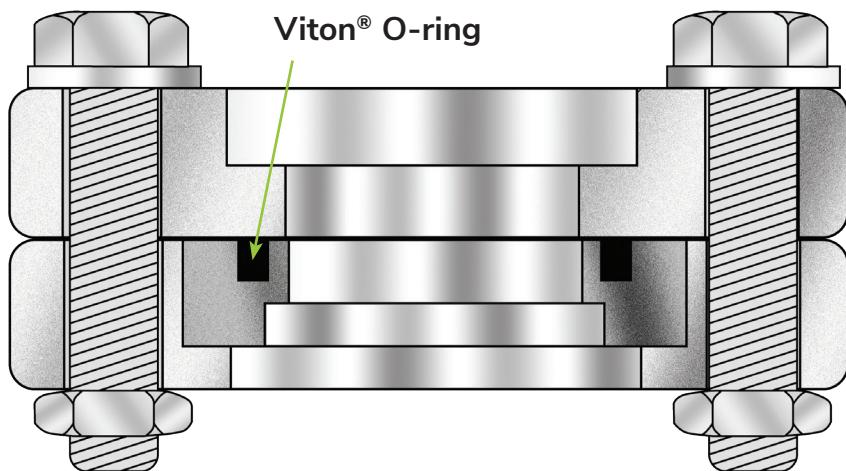


Insert

**Fixed ASA Flange with O-ring Groove**



## ASA/ANSI Standard Sealing Assemblies



A sealing pair of ASA/ANSI flanges contains one flange with a smooth face and one flange with an O-ring groove machined into the surface. A Viton® sealing O-ring is placed into the groove of one of the flanges. The flanges compress the O-ring as the fastening bolts are tightened. The O-ring cold flows under this pressure and fills microscopic surface imperfections on the sealing flange face creating a vacuum tight seal capable of withstanding temperature extremes from -26°C up to 200°C and pressures as low as  $1 \times 10^{-8}$  Torr.

## ASA/ANSI Hardware

This elastomer sealed flange system uses bolt kits to fasten together your flanges and Viton® elastomer O-rings to create a seal.

The bolt kits fasten two flanges together that both have clearance bolt holes. The bolts slide easily through smooth bored bolt holes and are fastened with a nut and washer on the far side of the flange assembly. These bolt kits are offered in hex-head bolt, nut and washer kits.

The Viton® seals are a vacuum grade fluorocarbon elastomer O-rings that are compressed between the two ASA/ANSI flanges to create a seal capable of achieving high vacuum pressure. Viton® seals have a



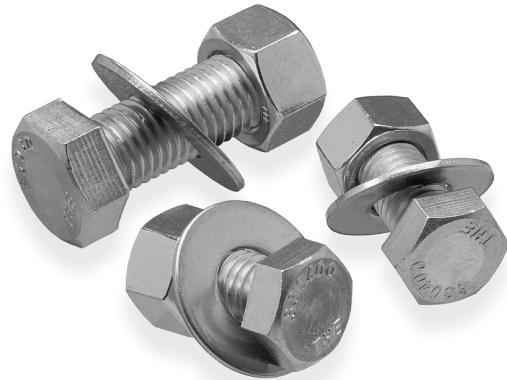
temperature range of -26°C up to 150°C (200°C intermittent use) and may be re-used many times for re-installation of ASA/ANSI sealing assemblies.

## Bolt Kits Fasteners

### Materials:

- Hex-head bolt: stainless steel
- Hardware (nut and washer): stainless steel

PART #	REFERENCE ID	# of Bolts	BOLT SIZE (in)
0606500	ASA100-HBK	4	9/16-12x1 1/2 in.
0606501	ASA150-HBK	4	9/16-12x1 1/2 in.
0606502	ASA200-HBK	4	5/8-11x1 1/2 in.
0606503	ASA300-HBK	4	5/8-11x1 1/2 in.
0606504	ASA400-HBK	8	5/8-11x1 1/2 in.
0606505	ASA600-HBK	8	3/4-10x2 1/4 in.
0606506	ASA800-HBK	8	3/4-10x2 1/4 in.
0606507	ASA1000-HBK	12	3/4-10x2 1/4 in.



### Product Notes:

- For use with clearance bolt hole ASA/ANSI flanges

## Viton® O-ring for ASA Flanges

PART #	REFERENCE ID	USE WITH	STD #	A (in)	B (in)
0600225	2-225-OV	ASA100	2-225	0.120	1.875
0600230	2-230-OV	ASA150	2-230	0.120	2.500
0600238	2-238-OV	ASA200	2-238	0.120	3.500
0600247	2-247-OV	ASA300	2-247	0.120	4.625
0600258	2-258-OV	ASA400	2-258	0.120	6.000
0600266	2-266-OV	ASA600	2-266	0.120	8.000
0600274	2-274-OV	ASA800	2-274	0.120	10.000
0600278	2-278-OV	ASA1000	2-278	0.120	12.000

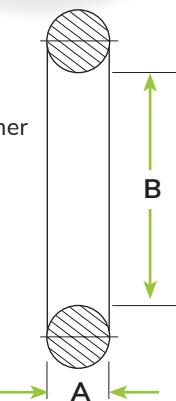


### Materials:

- Fluorocarbon elastomer

### Product Notes:

- Multi-use seal
- Temperature range: -26°C up to 150°C (intermittent use to 20°C)
- Pressure range: HV (approx.  $1 \times 10^{-8}$  Torr)



## ASA/ANSI Flanges

### Specifications:

- Vacuum rated to  $1 \times 10^{-8}$  Torr.
- Leak rating  $< 1 \times 10^{-9}$  std. cc/s helium
- Temperature range: -26°C to 200°C
- Standard sizes: 5 inches to 16 inches O.D. (for tubing diameter 1 inch up to 12 inches)
- Materials:
  - Elastomer seals: Viton®
  - Flanges and fittings: 304 stainless steel

### Features:

- Reusable flanges and seals
- Rotatable flanges for easier bolt hole alignment
- Adapters to other flange systems available
- Interchangeable with other ASA/ANSI style flanges made to industry standards

**ANCORP** manufactures flanges for our own use as we manufacture modular fittings (tee's, elbows and nipples) valves, feedthroughs, chambers and other components. We offer these same flanges for those customers that have in-house welding capabilities and desire to customize their system or components themselves.

All **ANCORP** ASA/ANSI flanges are manufactured to industry specifications to ensure compatibility with other manufacturer's flanges.



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### ASA Flange System

All ASA/ANSI sealing assemblies must include 1 smooth face ASA/ANSI flange and 1 grooved face flange. Fixed and rotatable flanges have clearance bolt holes. Clearance bolt holes allow for unrestricted passage of a bolt through the flanges. The bolt is then tightened with a nut on the back side of the flange assembly.

Standard ASA/ANSI weld flanges are manufactured of 304 stainless steel. Other materials are available on request.

## ASA/ANSI Fixed Weld Flanges

These flanges are manufactured with a weld prep and tubing bore for immediate installation on your system with no additional alteration.

Fixed flanges have a set bolt hole orientation. Both fixed and rotatable flanges are available with an O-ring groove.



## ASA/ANSI Rotatable Weld Flanges

These flanges are manufactured with a weld prep and tubing bore for immediate installation on your system with no additional alteration.

Rotatable flanges have a two piece design allowing for bolt hole rotation to ease bolt alignment when mating the two flanges.

Both fixed and rotatable flanges are available with an O-ring groove.



## ASA/ANSI Fixed Blank Flanges

These flanges are manufactured with no weld prep and no tubing bore. Blank flanges are commonly used to close unused ports or they are altered by customers with their own custom machining capability for a special use.

Fixed flanges have a set bolt hole orientation.

Both fixed and rotatable flanges are available with an O-ring groove.



## ASA/ANSI Rotatable Blank Flanges

These flanges are manufactured with no weld prep and no tubing bore. Blank flanges are commonly used to close unused ports or they are altered by customers with their own custom machining capability for a special use.

Rotatable flanges have a two piece design allowing for bolt hole rotation to ease bolt alignment when mating the two flanges.

Both fixed and rotatable flanges are available with an O-ring groove.



## 100 ASA - 4.25 inch O.D.



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## 100 ASA Flanges

**Product Features:**

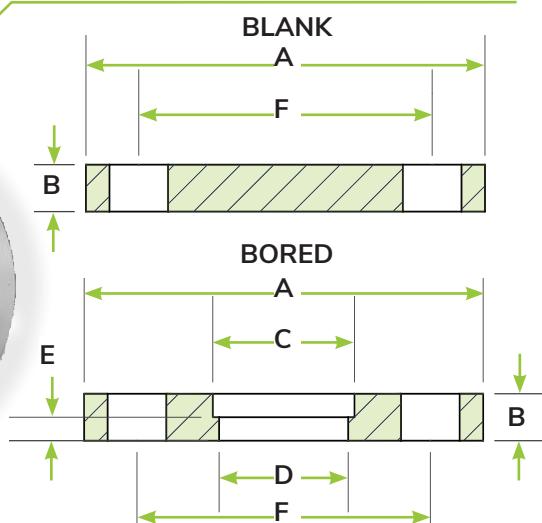
- Designed to fit standard inch tubing O.D.'s
- Self-aligning
- Internal weld
- Rotatable flanges for easier bolt hole alignment
- Blank flanges to close unused ports or custom modify
- Interchangeable with other ASA/ANSI style flanges

**Product Specifications:**

- Pressure range: HV (approx.  $1 \times 10^{-8}$  Torr)
- Temperature range: -26°C up to 200°C
- Standard materials: 304 grade stainless steel

**Options: Call for price and availability**

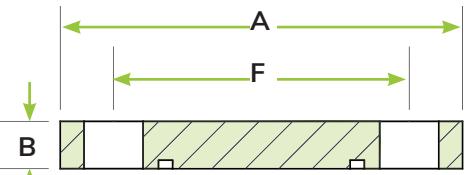
## 100 ASA - Fixed Flanges



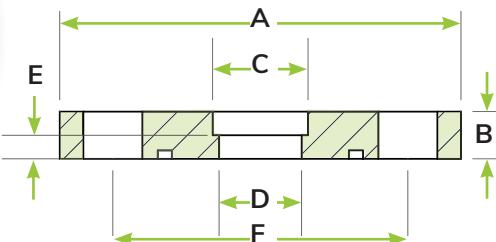
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000000	ASA100-000	4.25	0.500	Blank	-	-	3.125	4	0.625
6000001	ASA100-100	4.25	0.500	1.010	0.875	0.250	3.125	4	0.625
6000002	ASA100-150	4.25	0.500	1.510	1.375	0.250	3.125	4	0.625



BLANK WITH O-RING GROOVE



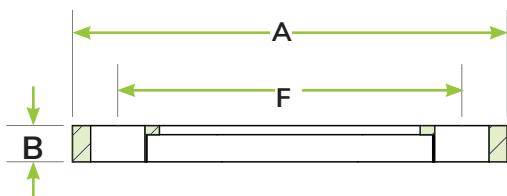
BORED WITH O-RING GROOVE



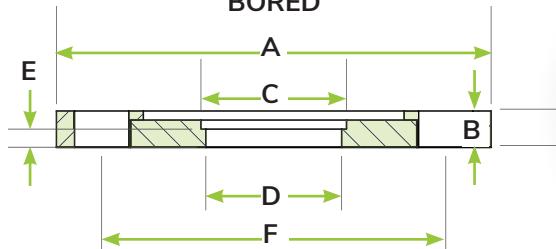
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000028	ASA100G-000	4.25	0.500	Blank	-	-	3.125	4	0.625
6000029	ASA100G-100	4.25	0.500	1.010	0.875	0.250	3.125	4	0.625
6000030	ASA100G-150	4.25	0.500	1.510	1.375	0.250	3.125	4	0.625

## 100 ASA - Rotatable Flanges

BLANK

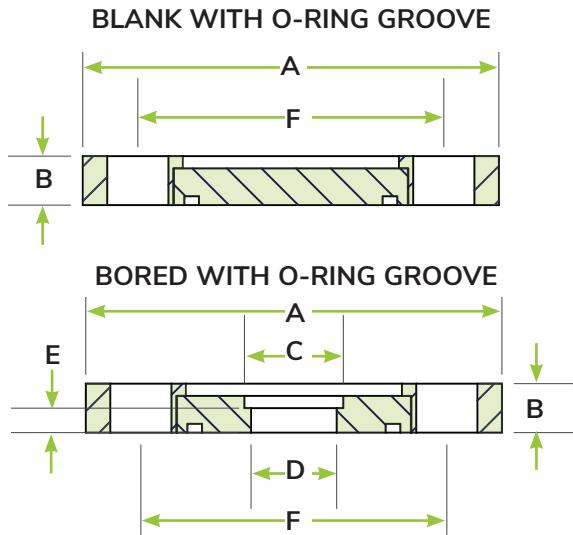


BORED



PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000056	ASA100R-000	4.25	0.500	Blank	-	-	3.125	4	0.625
6000057	ASA100R-100	4.25	0.500	1.010	0.875	0.250	3.125	4	0.625
6000058	ASA100R-150	4.25	0.500	1.510	1.375	0.250	3.125	4	0.625

## 100 ASA - Rotatable, Grooved Flanges



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100 ASA Flanges

PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000084	ASA100RG-000	4.25	0.500	Blank	-	-	3.125	4	0.625
6000085	ASA100RG-100	4.25	0.500	1.010	0.875	0.250	3.125	4	0.625
6000086	ASA100RG-150	4.25	0.500	1.510	1.375	0.250	3.125	4	0.625

## 100 ASA Hardware

PART #	REFERENCE ID	DESCRIPTION
0600225	2-225-OV	ASA100 (1) Viton® O-ring
0606500	ASA100-HBK	ASA100 (4) Bolt, Nut & Washer Kit; 9/16-12x1 1/2 in.

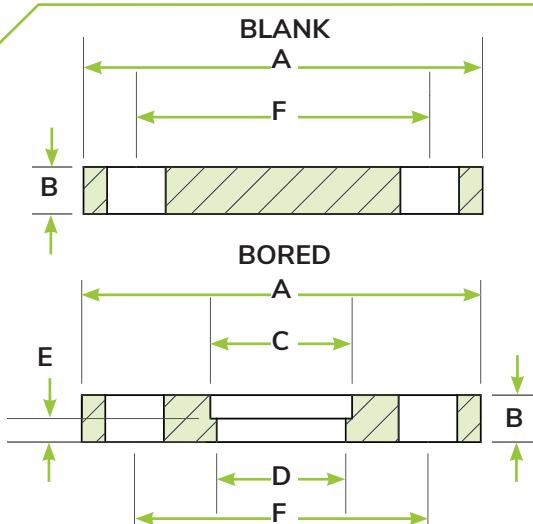


**150 ASA - 5.00 inch O.D.****Product Features:**

- Designed to fit standard inch tubing O.D.'s
- Self-aligning
- Internal weld
- Rotatable flanges for easier bolt hole alignment
- Blank flanges to close unused ports or custom modify
- Interchangeable with other ASA/ANSI style flanges

**Product Specifications:**

- Pressure range: HV (approx.  $1 \times 10^{-8}$  Torr)
- Temperature range: -26°C up to 200°C
- Standard materials: 304 grade stainless steel

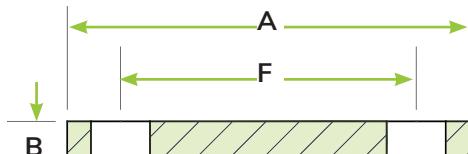
**Options: Call for price and availability****150 ASA - Fixed Flanges**

PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000003	ASA150-000	5.00	0.500	Blank	-	-	3.880	4	0.625
6000004	ASA150-150	5.00	0.500	1.510	1.375	0.250	3.880	4	0.625
6000005	ASA150-200	5.00	0.500	2.010	1.875	0.250	3.880	4	0.625
6000006	ASA150-250	5.00	0.500	2.510	2.375	0.250	3.880	4	0.625

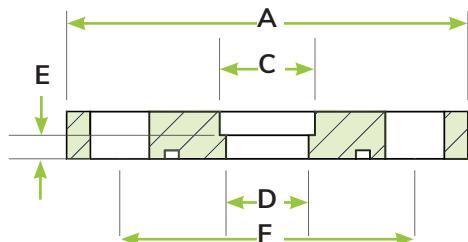
## 150 ASA - Fixed, Grooved Flanges



BLANK WITH O-RING GROOVE



BORED WITH O-RING GROOVE

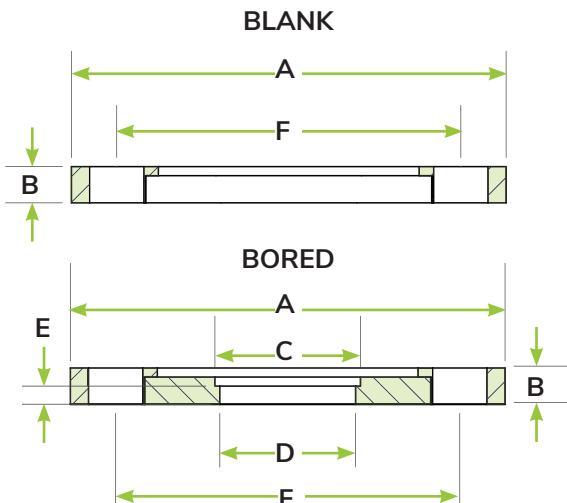


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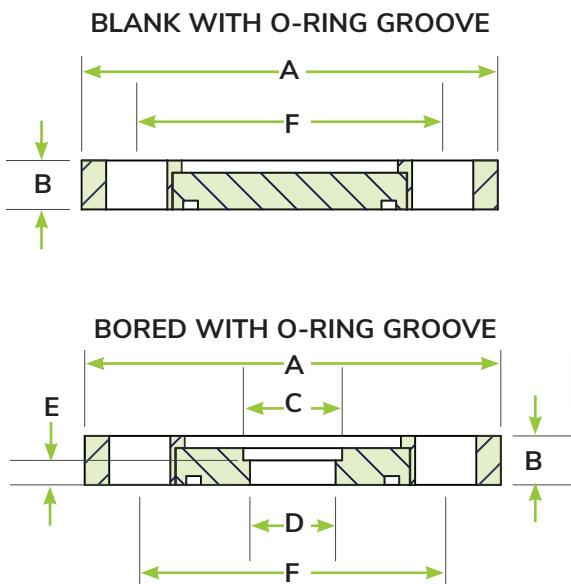
## 150 ASA Flanges

PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000031	ASA150G-000	5.00	0.500	Blank	-	-	3.880	4	0.625
6000032	ASA150G-150	5.00	0.500	1.510	1.375	0.250	3.880	4	0.625
6000033	ASA150G-200	5.00	0.500	2.010	1.875	0.250	3.880	4	0.625
6000034	ASA150G-250	5.00	0.500	2.510	2.375	0.250	3.880	4	0.625

## 150 ASA - Rotatable Flanges



PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000059	ASA150R-000	5.00	0.500	Blank	-	-	3.880	4	0.625
6000060	ASA150R-150	5.00	0.500	1.510	1.375	0.250	3.880	4	0.625
6000061	ASA150R-200	5.00	0.500	2.010	1.875	0.250	3.880	4	0.625
6000062	ASA150R-250	5.00	0.500	2.510	2.375	0.250	3.880	4	0.625



PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000087	ASA150RG-000	5.00	0.500	Blank	-	-	3.880	4	0.625
6000088	ASA150RG-150	5.00	0.500	1.510	1.375	0.250	3.880	4	0.625
6000089	ASA150RG-200	5.00	0.500	2.010	1.875	0.250	3.880	4	0.625
6000090	ASA150RG-250	5.00	0.500	2.510	2.375	0.250	3.880	4	0.625

## 150 ASA Hardware

PART #	REFERENCE ID	DESCRIPTION
0600230	2-230-OV	ASA150 (1) Viton® O-ring
0606501	ASA150-HBK	ASA150 (4) Bolt, Nut & Washer Kit; 9/16-12x1 1/2 in.



## 200 ASA - 6.00 inch O.D.



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## 200 ASA Flanges

**Product Features:**

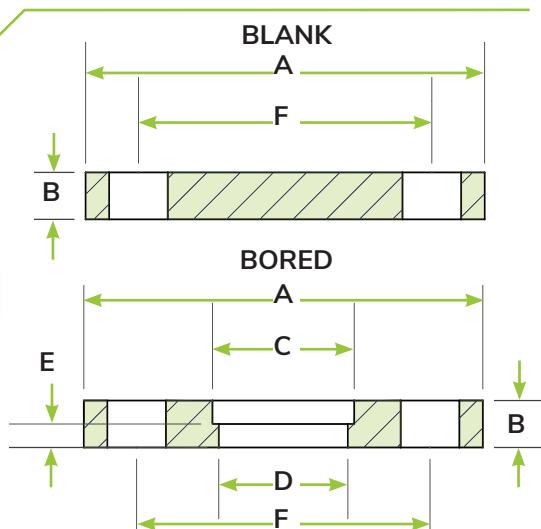
- Designed to fit standard inch tubing O.D.'s
- Self-aligning
- Internal weld
- Rotatable flanges for easier bolt hole alignment
- Blank flanges to close unused ports or custom modify
- Interchangeable with other ASA/ANSI style flanges

**Product Specifications:**

- Pressure range: HV (approx.  $1 \times 10^{-8}$  Torr)
- Temperature range: -20°C up to 200°C
- Standard materials: 304 grade stainless steel

**Options: Call for price and availability**

## 200 ASA - Fixed Flanges



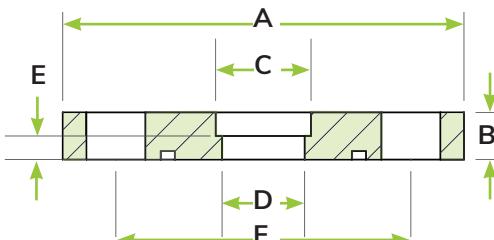
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000007	ASA200-000	6.00	0.500	Blank	-	-	4.750	4	0.750
6000008	ASA200-200	6.00	0.500	2.010	1.875	0.250	4.750	4	0.750
6000009	ASA200-250	6.00	0.500	2.510	2.375	0.250	4.750	4	0.750
6000010	ASA200-300	6.00	0.500	3.010	2.938	0.250	4.750	4	0.750
6000011	ASA200-350	6.00	0.500	3.510	3.438	0.250	4.750	4	0.750



BLANK WITH O-RING GROOVE



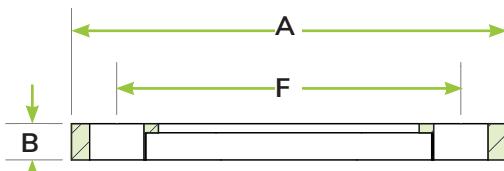
BORED WITH O-RING GROOVE



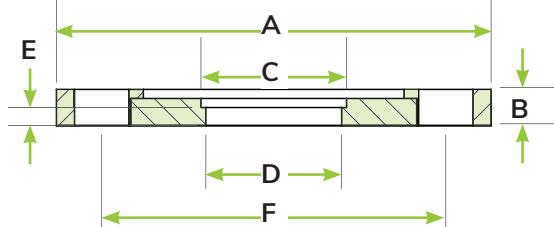
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000035	ASA200G-000	6.00	0.500	Blank	-	-	4.750	4	0.750
6000036	ASA200G-200	6.00	0.500	2.010	1.875	0.250	4.750	4	0.750
6000037	ASA200G-250	6.00	0.500	2.510	2.375	0.250	4.750	4	0.750
6000038	ASA200G-300	6.00	0.500	3.010	2.938	0.250	4.750	4	0.750
6000039	ASA200G-350	6.00	0.500	3.510	3.438	0.250	4.750	4	0.750

## 200 ASA - Rotatable Flanges

BLANK



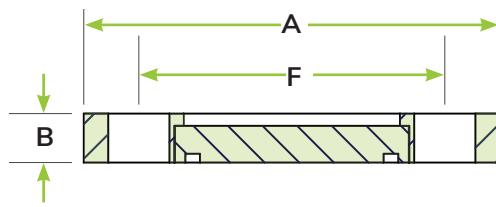
BORED



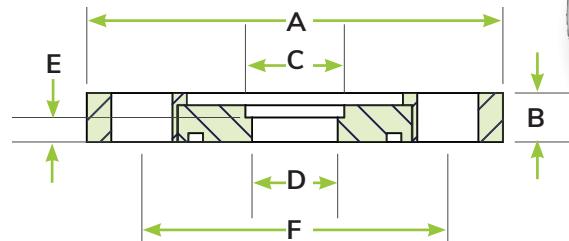
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000063	ASA200R-000	6.00	0.500	Blank	-	-	4.750	4	0.750
6000064	ASA200R-200	6.00	0.500	2.010	1.875	0.250	4.750	4	0.750
6000065	ASA200R-250	6.00	0.500	2.510	2.375	0.250	4.750	4	0.750
6000066	ASA200R-300	6.00	0.500	3.010	2.938	0.250	4.750	4	0.750
6000067	ASA200R-350	6.00	0.500	3.510	3.438	0.250	4.750	4	0.750

## 200 ASA - Rotatable, Grooved Flanges

BLANK WITH O-RING GROOVE



BORED WITH O-RING GROOVE



3

200 ASA Flanges

PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000091	ASA200RG-000	6.00	0.500	Blank	-	-	4.750	4	0.750
6000092	ASA200RG-200	6.00	0.500	2.010	1.875	0.250	4.750	4	0.750
6000093	ASA200RG-250	6.00	0.500	2.510	2.375	0.250	4.750	4	0.750
6000094	ASA200RG-300	6.00	0.500	3.010	2.938	0.250	4.750	4	0.750
6000095	ASA200RG-350	6.00	0.500	3.510	3.438	0.250	4.750	4	0.750

## 200 ASA Hardware

PART #	REFERENCE ID	DESCRIPTION
0600238	2-238-OV	ASA200 (1) Viton® O-ring
0606502	ASA200-HBK	ASA200 (4) Bolt, Nut & Washer Kit; 9/16-12x1 1/2 in.



## 300 ASA - 7.50 inch O.D.

**Product Features:**

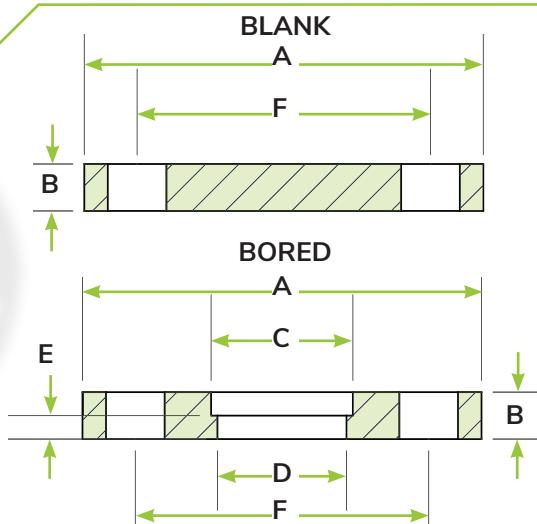
- Designed to fit standard inch tubing O.D.'s
- Self-aligning
- Internal weld
- Rotatable flanges for easier bolt hole alignment
- Blank flanges to close unused ports or custom modify
- Interchangeable with other ASA/ANSI style flanges

**Product Specifications:**

- Pressure range: HV (approx.  $1 \times 10^{-8}$  Torr)
- Temperature range: -20°C up to 200°C
- Standard materials: 304 grade stainless steel

**Options: Call for price and availability**

## 300 ASA - Fixed Flanges

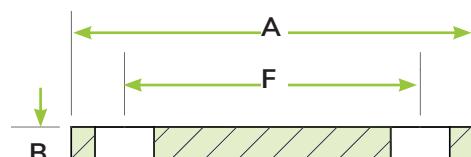


PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000012	ASA300-000	7.50	0.500	Blank	-	-	6.000	4	0.750
6000013	ASA300-300	7.50	0.500	3.010	2.938	0.250	6.000	4	0.750
6000014	ASA300-350	7.50	0.500	3.510	3.438	0.250	6.000	4	0.750
6000015	ASA300-400	7.50	0.500	4.010	3.910	0.250	6.000	4	0.750

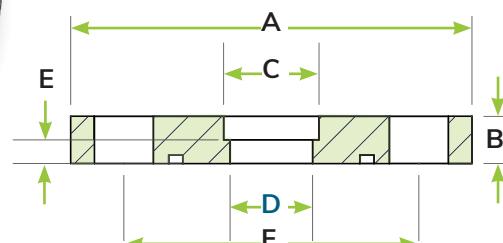
## 300 ASA - Fixed, Grooved Flanges



BLANK WITH O-RING GROOVE



BORED WITH O-RING GROOVE

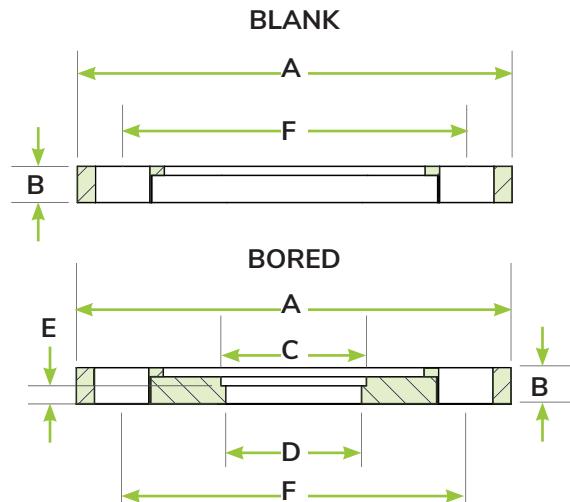


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## 300 ASA Flanges

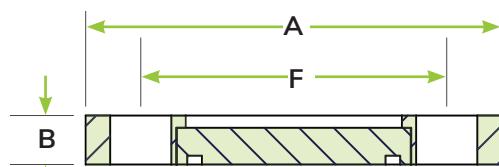
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000040	ASA300G-000	7.50	0.500	Blank	-	-	6.000	4	0.750
6000041	ASA300G-300	7.50	0.500	3.010	2.938	0.250	6.000	4	0.750
6000042	ASA300G-350	7.50	0.500	3.510	3.438	0.250	6.000	4	0.750
6000043	ASA300G-400	7.50	0.500	4.010	3.910	0.250	6.000	4	0.750

## 300 ASA - Rotatable Flanges

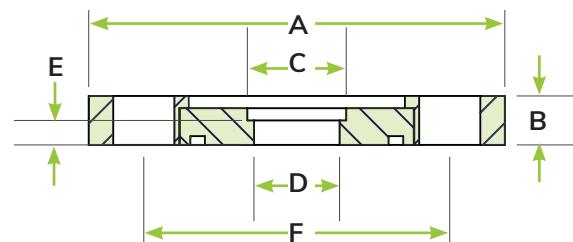


PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000068	ASA300R-000	7.50	0.500	Blank	-	-	6.000	4	0.750
6000069	ASA300R-300	7.50	0.500	3.010	2.938	0.250	6.000	4	0.750
6000070	ASA300R-350	7.50	0.500	3.510	3.438	0.250	6.000	4	0.750
6000071	ASA300R-400	7.50	0.500	4.010	3.910	0.250	6.000	4	0.750

## BLANK WITH O-RING GROOVE



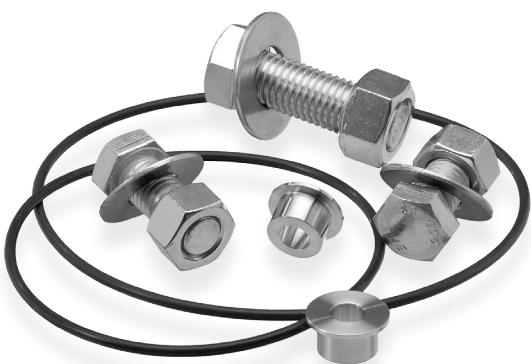
## BORED WITH O-RING GROOVE



PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000096	ASA300RG-000	7.50	0.500	Blank	-	-	6.000	4	0.750
6000097	ASA300RG-300	7.50	0.500	3.010	2.938	0.250	6.000	4	0.750
6000098	ASA300RG-350	7.50	0.500	3.510	3.438	0.250	6.000	4	0.750
6000099	ASA300RG-400	7.50	0.500	4.010	3.910	0.250	6.000	4	0.750

## 300 ASA Hardware

PART #	REFERENCE ID	DESCRIPTION
0600247	2-247-OV	ASA300 (1) Viton® O-ring
0606503	ASA300-HBK	ASA300 (4) Bolt, Nut & Washer Kit; 5/8-11x1 1/2 in.



## 400 ASA - 9.00 inch O.D.



3

## 400 ASA Flanges

**Product Features:**

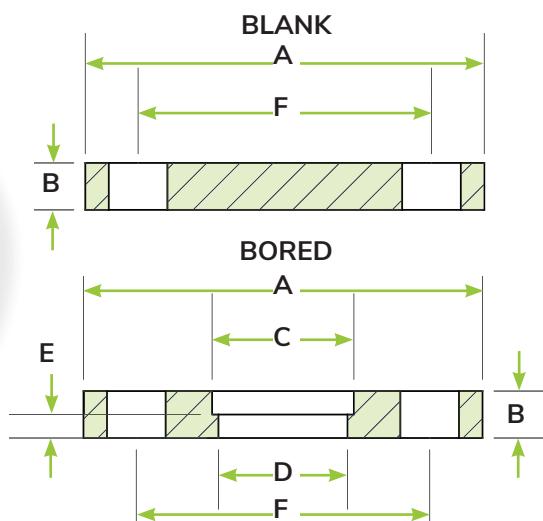
- Designed to fit standard inch tubing O.D.'s
- Self-aligning
- Internal weld
- Rotatable flanges for easier bolt hole alignment
- Blank flanges to close unused ports or custom modify
- Interchangeable with other ASA/ANSI style flanges

**Product Specifications:**

- Pressure range: HV (approx.  $1 \times 10^{-8}$  Torr)
- Temperature range: -20°C up to 200°C
- Standard materials: 304 grade stainless steel

**Options: Call for price and availability**

## 400 ASA - Fixed Flanges



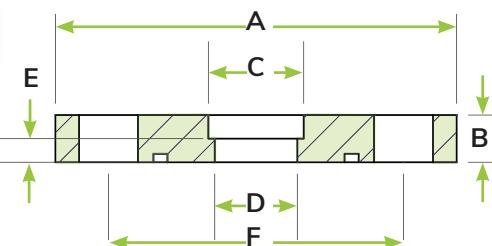
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000016	ASA400-000	9.00	0.500	Blank	-	-	7.500	8	0.750
6000017	ASA400-400	9.00	0.500	4.010	3.910	0.250	7.500	8	0.750
6000018	ASA400-600	9.00	0.500	6.020	5.875	0.250	7.500	8	0.750



BLANK WITH O-RING GROOVE

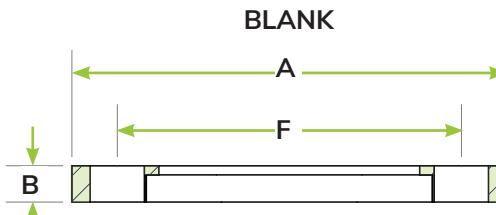


BORED WITH O-RING GROOVE

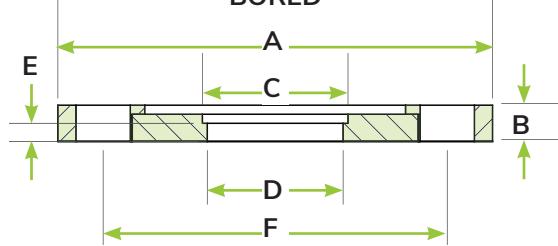


PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000044	ASA400G-000	9.00	0.500	Blank	-	-	7.500	8	0.750
6000045	ASA400G-400	9.00	0.500	4.010	3.910	0.250	7.500	8	0.750
6000046	ASA400G-600	9.00	0.500	6.020	5.875	0.250	7.500	8	0.750

## 400 ASA - Rotatable Flanges

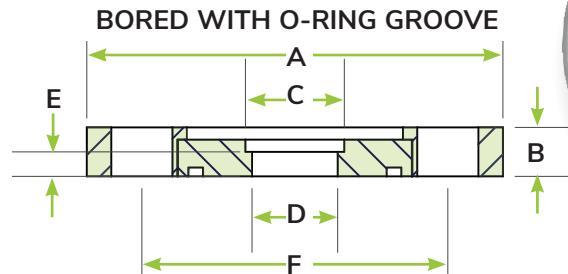
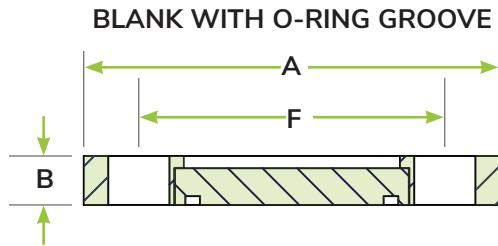


BORED



PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000072	ASA400R-000	9.00	0.500	Blank	-	-	7.500	8	0.750
6000073	ASA400R-400	9.00	0.500	4.010	3.910	0.250	7.500	8	0.750
6000074	ASA400R-600	9.00	0.500	6.020	5.875	0.250	7.500	8	0.750

## 400 ASA - Rotatable, Grooved Flanges



3

400 ASA Flanges

PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000100	ASA400RG-000	9.00	0.500	Blank	-	-	7.500	8	0.750
6000101	ASA400RG-400	9.00	0.500	4.020	3.910	0.250	7.500	8	0.750
6000102	ASA400RG-600	9.00	0.500	6.020	5.875	0.250	7.500	8	0.750

## 400 ASA Hardware

PART #	REFERENCE ID	DESCRIPTION
0600258	2-258-OV	ASA400 (1) Viton® O-ring
0606504	ASA400-HBK	ASA400 (8) Bolt, Nut & Washer Kit; 5/8-11x1 1/2 in.



## 600 ASA - 11.00 inch O.D.

**Product Features:**

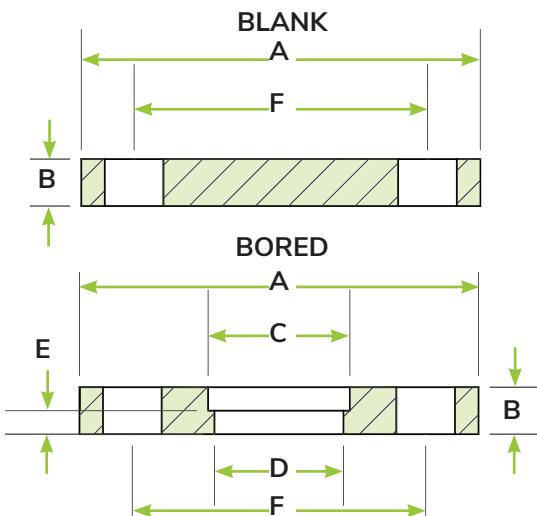
- Designed to fit standard inch tubing O.D.'s
- Self-aligning
- Internal weld
- Rotatable flanges for easier bolt hole alignment
- Blank flanges to close unused ports or custom modify
- Interchangeable with other ASA/ANSI style flanges

**Product Specifications:**

- Pressure range: HV (approx.  $1 \times 10^{-8}$  Torr)
- Temperature range: -26°C up to 200°C
- Standard materials: 304 grade stainless steel

**Options: Call for price and availability**

## 600 ASA - Fixed Flanges

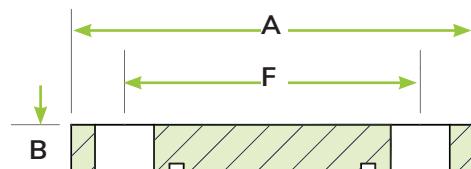


PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000019	ASA600-000	11.00	0.750	Blank	-	-	9.500	8	0.813
6000020	ASA600-600	11.00	0.750	6.020	5.875	0.375	9.500	8	0.813
6000021	ASA600-800	11.00	0.750	8.020	7.875	0.375	9.500	8	0.813

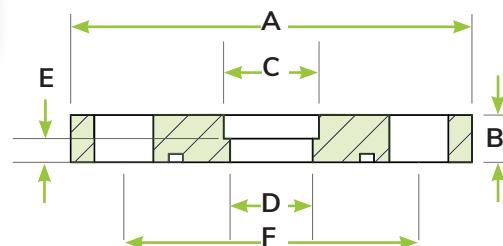
## 600 ASA - Fixed, Grooved Flanges



BLANK WITH O-RING GROOVE



BORED WITH O-RING GROOVE

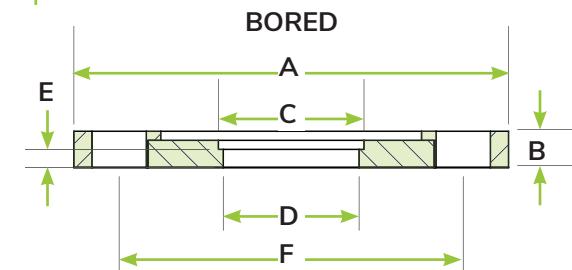
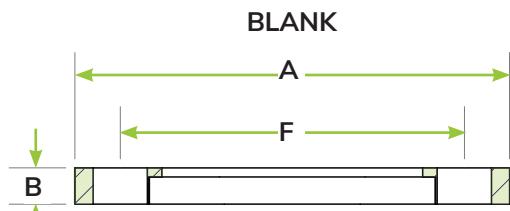


3

## 600 ASA Flanges

PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000047	ASA600G-000	11.00	0.750	Blank	-	-	9.500	8	0.813
6000048	ASA600G-600	11.00	0.750	6.020	5.875	0.375	9.500	8	0.813
6000049	ASA600G-800	11.00	0.750	8.020	7.875	0.375	9.500	8	0.813

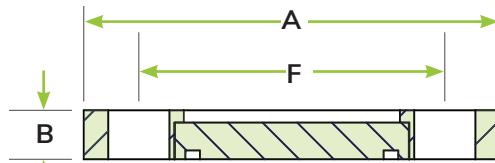
## 600 ASA - Rotatable Flanges



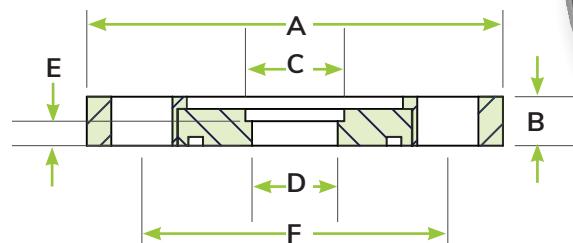
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000075	ASA600R-000	11.00	0.750	Blank	-	-	9.500	8	0.813
6000076	ASA600R-600	11.00	0.750	6.020	5.875	0.375	9.500	8	0.813
6000077	ASA600R-800	11.00	0.750	8.020	7.875	0.375	9.500	8	0.813

## 600 ASA - Rotatable, Grooved Flanges

BLANK WITH O-RING GROOVE



BORED WITH O-RING GROOVE



PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000103	ASA600RG-000	11.00	0.750	Blank	-	-	9.5	8	0.813
6000104	ASA600RG-600	11.00	0.750	6.020	5.875	0.375	9.5	8	0.813
6000105	ASA600RG-800	11.00	0.750	8.020	7.875	0.375	9.5	8	0.813

## 600 ASA Hardware

PART #	REFERENCE ID	DESCRIPTION
0600266	2-266-OV	ASA600 (1) Viton® O-ring
0606505	ASA600-HBK	ASA600 (8) Bolt, Nut & Washer Kit; 3/4-10x2 1/4 in.



## 800 ASA - 13.50 inch O.D.



3

## 800 ASA Flanges

**Product Features:**

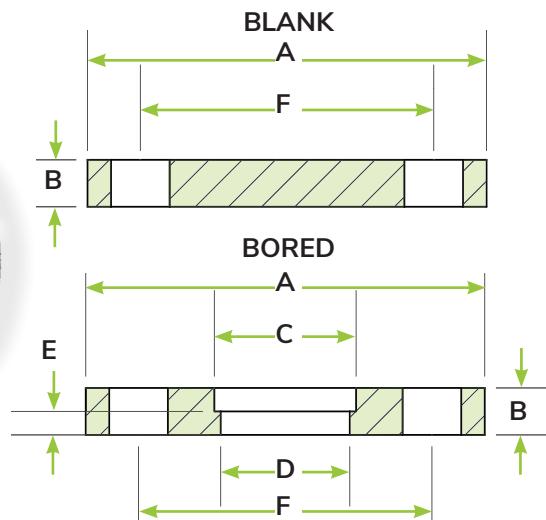
- Designed to fit standard inch tubing O.D.'s
- Self-aligning
- Internal weld
- Rotatable flanges for easier bolt hole alignment
- Blank flanges to close unused ports or custom modify
- Interchangeable with other ASA/ANSI style flanges

**Product Specifications:**

- Pressure range: HV (approx.  $1 \times 10^{-8}$  Torr)
- Temperature range: -26°C up to 200°C
- Standard materials: 304 grade stainless steel

**Options: Call for price and availability**

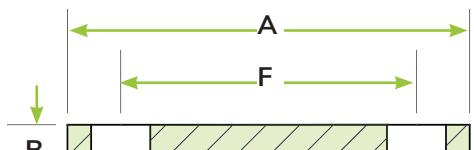
## 800 ASA - Fixed Flanges



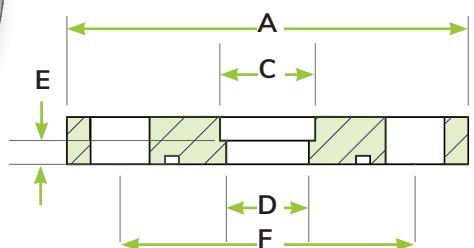
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000022	ASA800-000	13.50	0.750	Blank	-	-	11.750	8	0.813
6000023	ASA800-800	13.50	0.750	8.020	7.875	0.375	11.750	8	0.813
6000024	ASA800-1000	13.50	0.750	10.020	9.875	0.375	11.750	8	0.813



BLANK WITH O-RING GROOVE



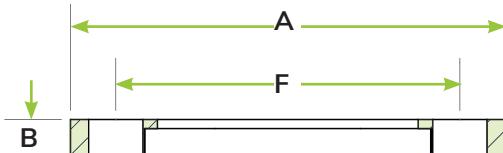
BORED WITH O-RING GROOVE



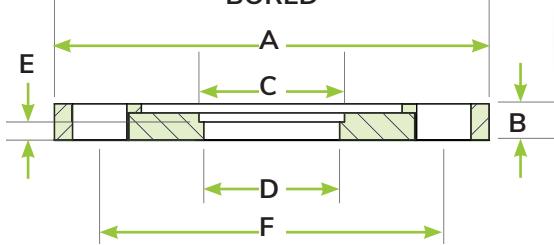
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000050	ASA800G-000	13.50	0.750	Blank	-	-	11.750	8	0.813
6000051	ASA800G-800	13.50	0.750	8.020	7.875	0.375	11.750	8	0.813
6000052	ASA800G-1000	13.50	0.750	10.030	9.875	0.375	11.750	8	0.813

## 800 ASA - Rotatable Flanges

BLANK



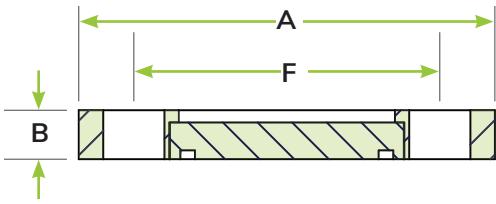
BORED



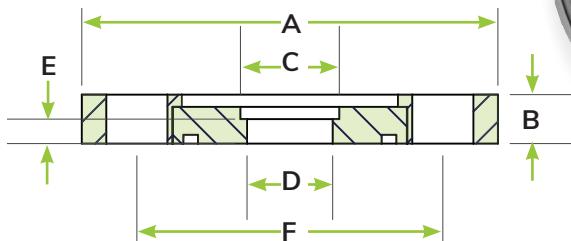
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000078	ASA800R-000	13.50	0.750	Blank	-	-	11.750	8	0.813
6000079	ASA800R-800	13.50	0.750	8.020	7.875	0.375	11.750	8	0.813
6000080	ASA800R-1000	13.50	0.750	10.030	9.875	0.375	11.750	8	0.813

## 800 ASA - Rotatable, Grooved Flanges

BLANK WITH O-RING GROOVE



BORED WITH O-RING GROOVE



PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000106	ASA800RG-000	13.50	0.750	Blank	-	-	11.750	8	0.813
6000107	ASA800RG-800	13.50	0.750	8.020	7.875	0.375	11.750	8	0.813
6000108	ASA800RG-1000	13.50	0.750	10.030	9.875	0.375	11.750	8	0.813

## 800 ASA Hardware

PART #	REFERENCE ID	DESCRIPTION
0600274	2-274-OV	ASA800 (1) Viton® O-ring
0606506	ASA800-HBK	ASA800 (8) Bolt, Nut & Washer Kit; 3/4-10x2 1/4 in.



## 1000 ASA - 16.00 inch O.D.



### Product Features:

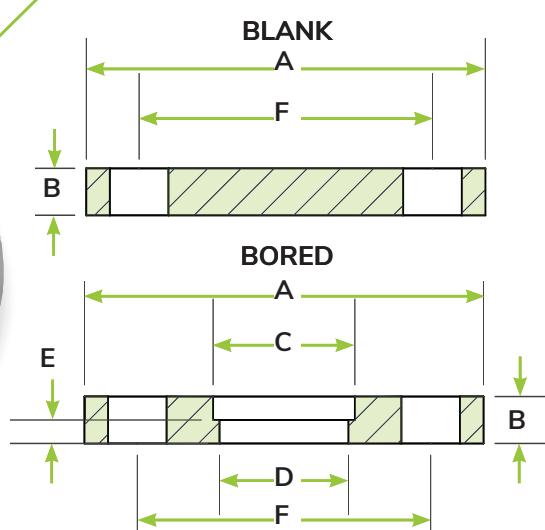
- Designed to fit standard inch tubing O.D.'s
- Self-aligning
- Internal weld
- Rotatable flanges for easier bolt hole alignment
- Blank flanges to close unused ports or custom modify
- Interchangeable with other ASA/ANSI style flanges

### Product Specifications:

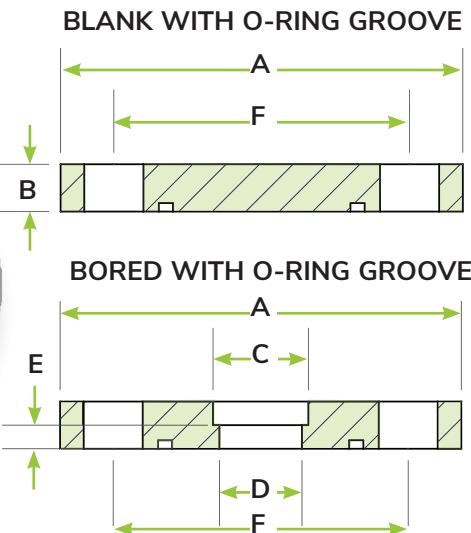
- Pressure range: HV (approx.  $1 \times 10^{-8}$  Torr)
- Temperature range: -26°C up to 200°C
- Standard materials: 304 grade stainless steel

**Options:** Call for price and availability

## 1000 ASA - Fixed Flanges



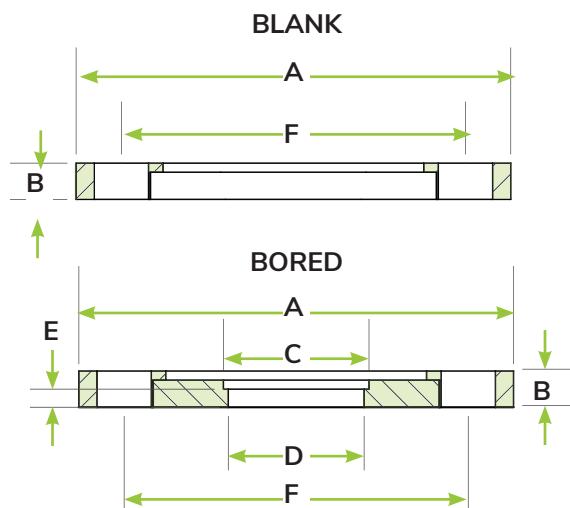
PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000025	ASA1000-000	16.00	0.750	Blank	-	-	14.250	12	0.813
6000026	ASA1000-1000	16.00	0.750	10.030	9.875	0.375	14.250	12	0.813
6000027	ASA1000-1200	16.00	0.750	12.030	11.875	0.375	14.250	12	0.813

**1000 ASA - Fixed, Grooved Flanges**

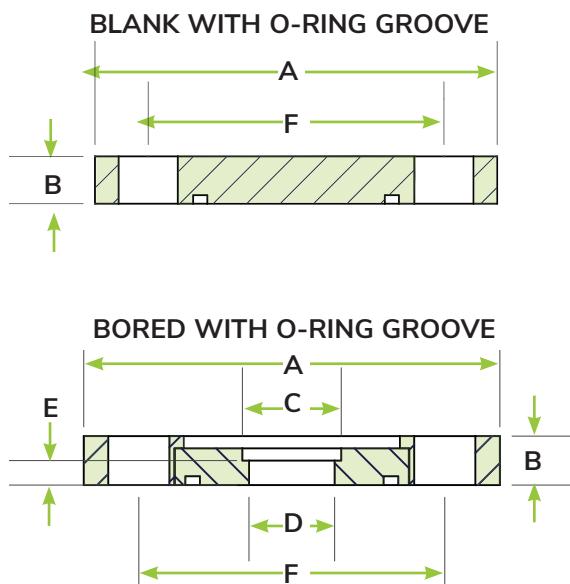
3

**1000 ASA Flanges**

PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
<b>6000053</b>	ASA1000G-000	16.00	0.750	Blank	-	-	14.250	12	0.813
<b>6000054</b>	ASA1000G-1000	16.00	0.750	10.030	9.875	0.375	14.250	12	0.813
<b>6000055</b>	ASA1000G-1200	16.00	0.750	12.030	11.875	0.375	14.250	12	0.813

**1000 ASA - Rotatable Flanges**

PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
<b>6000081</b>	ASA1000R-000	16.00	0.750	Blank	-	-	14.250	12	0.813
<b>6000082</b>	ASA1000R-1000	16.00	0.750	10.030	9.875	0.375	14.250	12	0.813
<b>6000083</b>	ASA1000R-1200	16.00	0.750	12.030	11.875	0.375	14.250	12	0.813



PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6000109	ASA1000RG-000	16.00	0.750	Blank	-	-	14.250	12	0.813
6000110	ASA1000RG-1000	16.00	0.750	10.020	9.875	0.375	14.250	12	0.813
6000111	ASA1000RG-1200	16.00	0.750	12.020	11.875	0.375	14.250	12	0.813

## 1000 ASA Hardware

PART #	REFERENCE ID	DESCRIPTION
0600278	2-278-OV	ASA1000 (1) Viton® O-ring
0606507	ASA1000-HBK	ASA1000 (12) Bolt, Nut & Washer Kit; 3/4-10x2 1/4 in.



## 1200 ASA - 19 inch O.D.



3

## 1200 ASA Flanges

**Product Features:**

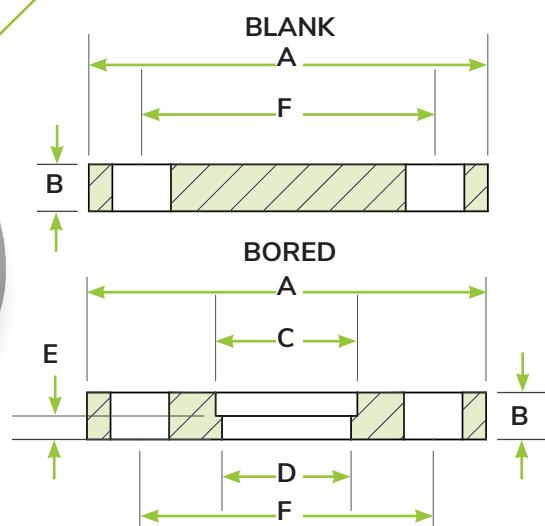
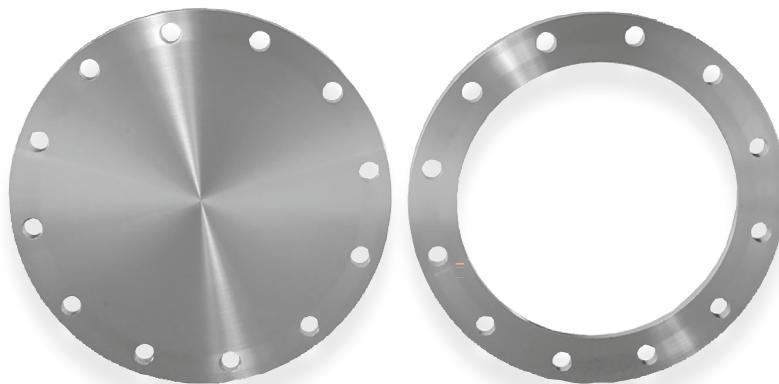
- Designed to fit standard inch tubing O.D.'s
- Self-aligning
- Internal weld
- Rotatable flanges for easier bolt hole alignment
- Blank flanges to close unused ports or custom modify
- Interchangeable with other ASA/ANSI style flanges

**Product Specifications:**

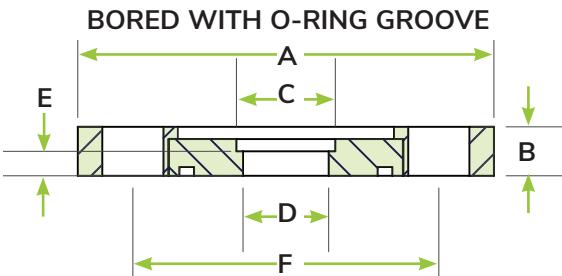
- Pressure range: HV (approx.  $1 \times 10^{-8}$  Torr)
- Temperature range: -26°C up to 200°C
- Standard materials: 304 grade stainless steel

**Options: Call for price and availability**

## 1200 ASA - Fixed Flanges

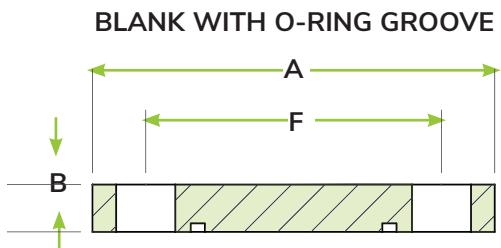


PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6001054	1200ASA-1400	19.00	1.250	14.030	13.620	0.625	17.000	12	1.000



PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6001055	1200ASA-1400-G	19.00	1.250	14.30	13.620	0.620	17.000	12	1.000

## 1200 ASA - Rotatable Flanges



PART #	REFERENCE ID	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	# of Bolts	HOLE SIZE (in)
6001081	1200ASA-000-R	19.00	1.250	Blank	-	-	17.000	12	1.000

## ASA/ANSI Fittings

### Specifications:

- Vacuum rated to  $1 \times 10^{-8}$  Torr.
- Leak rating  $< 1 \times 10^{-9}$  std. cc/s helium
- Temperature range: -26°C to 200°C
- Standard sizes: 5 inches to 16 inches O.D. (for tubing diameter 1 inch up to 12 inches)
- Materials:
  - Flanges and fittings: 304 stainless steel
  - Elastomer seals: Viton®

### Features:

- Reusable flanges and seals
- Rotatable flanges for easier bolt hole alignment
- Adapters to other flange systems available
- Interchangeable with other ASA/ANSI style flanges made to industry standards

**ANCORP's** ASA/ANSI fittings make up a complete set of modular components that allow our customers to create a custom vacuum system without the trouble and expense of having in-house machining and welding capabilities.



3

## ASA/ANSI Fittings

All **ANCORP** ASA/ANSI fittings are made with flanges manufactured to industry specifications to ensure compatibility with other manufacturer's flanges.

### Half Nipples



These fittings are manufactured with a flange on one end and raw tubing on the other.

Half nipples are often welded onto a custom vacuum system or instrument by a customer with in-house welding capabilities. However, these fittings can also be used with quick connect compression fittings to make a vacuum tight connection without welding (see section 7 for our selection of quick disconnect compression fittings). **ANCORP** manufactures standard half nipples in 304 stainless steel, other materials are available on request.

### Nipples



Nipples are manufactured with a flange on each end of a straight section of tubing.

They are used to create a weld free straight connection within a vacuum system. Nipples are also used as straight adapters between different tubing sizes or flange types.

These fittings are available in all ASA/ANSI sizes and flange types. **ANCORP** manufactures standard nipples in 304 stainless steel, other materials are available on request.

## Elbows



These fittings are manufactured with a flange on each end of a curved section of tubing. Elbows accommodate turns or alignment considerations for vacuum system design.

Elbows are offered in 3 designs: 45° radius elbow, 90° radius elbow and 90° mitered elbow to accommodate a wide variety of system configurations. **ANCORP** manufactures standard elbows in 304 stainless steel, other materials are available on request.

## Tees



These fittings are manufactured with a flange on each end of a "T" shaped section of tubing. Tees accommodate junctions or alignment considerations for vacuum system design.

Tees are also used as junction adapters between different tubing sizes or flange types. **ANCORP** manufactures standard tees in 304 stainless steel, other materials are available on request.

## Crosses



These fittings are manufactured with a flange on each end of an "X" shaped section of tubing. Crosses accommodate junctions or alignment considerations for vacuum system design.

Crosses are also used as junction adapters between different tubing sizes or flange types. **ANCORP** manufactures standard crosses in 304 stainless steel, other materials are available on request.

## 5 & 6 Way Crosses and Cubes



These fittings are manufactured with a flange on each end of a 5 or 6 sided tubing junction. These crosses accommodate complex junctions or alignment considerations for vacuum system design.

Larger sizes are sometimes used as the starting point of a simple vacuum chamber design. **ANCORP** manufactures standard 5 and 6-way crosses and cubes in 304 stainless steel, other materials are available on request.

















## 45° Elbow - ASA Fixed Flanges

### Materials:

- Flanges: 304 stainless steel

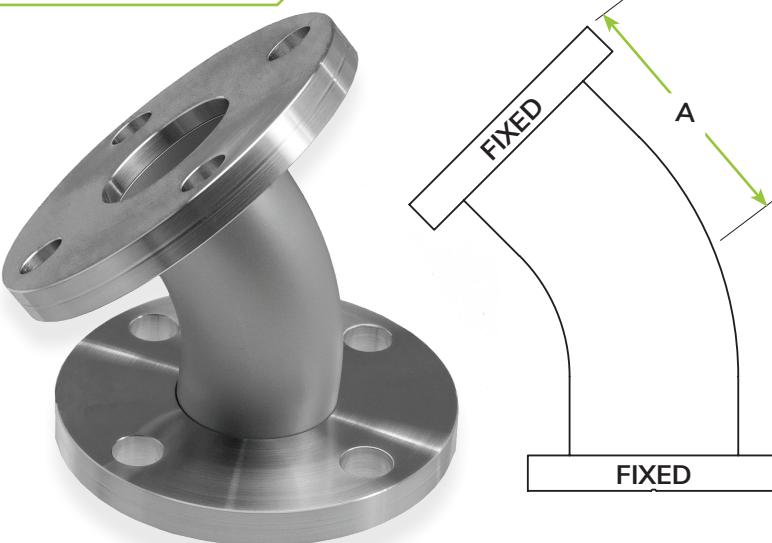
### Product Notes:

- Radius elbow design
- Both flanges have a fixed bolt hole orientation
- O-ring groove available (see chart below)

### Options:

#### Call for price and delivery

- Larger sizes
- Custom lengths
- Custom flange combinations



PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000487	ASA100XASA100-150-E45-1.78	4.25	1.50	1.78
6000488	ASA150XASA150-200-E45-2.09	5.00	2.00	2.09
6000489	ASA200XASA200-300-E45-3.93	6.00	3.00	3.93
6000490	ASA300XASA300-400-E45-5.02	7.50	4.00	5.03
6000491	ASA400XASA400-400-E45-5.02	9.00	4.00	5.03

## O-Ring Groove Option

ANCORP ASA/ANSI flanged fittings come standard with a smooth flange face. The addition of an O-ring groove is a standard option. If you require a grooved flange the additional charge for this is detailed in this chart.

**Please Note:** Adding a groove is customizing this product and is no longer returnable.

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

**Call For Pricing**

## 45° Elbows - ASA Rotatable Flange

**Materials:**

- Flanges: 304 stainless steel

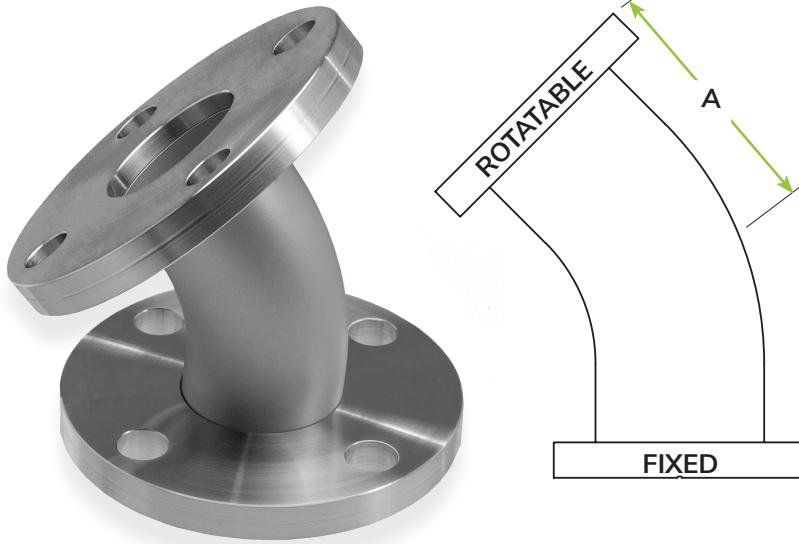
**Product Notes:**

- Radius elbow design
- One fixed and one rotatable flange per fitting
- O-ring groove available (see chart below)

**Options:**

**Call for price and delivery**

- Larger sizes
- Custom lengths
- Custom flange combinations



PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000493	ASA100-150-E45-1.78	4.25	1.50	1.78
6000494	ASA150-200-E45-2.09	5.00	2.00	2.09
6000495	ASA200-300-E45-3.93	6.00	3.00	3.93
6000496	ASA300-400-E45-5.02	7.50	4.00	5.03
6000497	ASA400-400-E45-5.02	9.00	4.00	5.03

## O-Ring Groove Option

ANCORP ASA/ANSI flanged fittings come standard with a smooth flange face. The addition of an O-ring groove is a standard option. If you require a grooved flange the additional charge for this is detailed in this chart.

**Please Note:** Adding a groove is customizing this product and is no longer returnable.

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

**Call For Pricing**

## 90° Elbows - ASA Fixed Flanges

### Materials:

- Flanges: 304 stainless steel

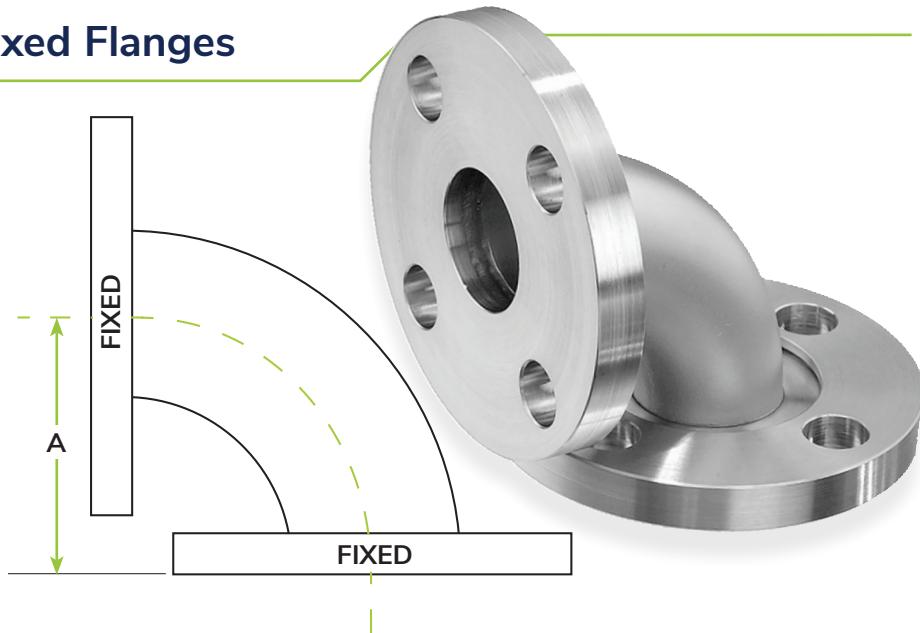
### Product Notes:

- Radius elbow design
- Both flanges have a fixed bolt hole orientation
- O-ring groove available (see chart below)

### Options:

#### Call for price and delivery

- Custom lengths
- Custom flange combinations



PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000499	ASA100XASA100-150-E90-2.66	4.25	1.50	2.66
6000500	ASA150XASA150-200-E90-3.25	5.00	2.00	3.25
6000501	ASA200XASA200-300-E90-4.75	6.00	3.00	4.75
6000502	ASA300XASA300-400-E90-6.25	7.50	4.00	6.25
6000503	ASA400XASA400-400-E90-6.25	9.00	4.00	6.25
6000504	ASA400XASA400-600-E90-9.25	9.00	6.00	9.25
6000505	ASA600XASA600-600-E90-9.38	11.00	6.00	9.38
6000506	ASA600XASA600-800-E90-12.38	11.00	8.00	12.38
6000507	ASA800XASA800-800-E90-12.38	13.50	8.00	12.38
6000508	ASA800XASA800-1000-E90-15.38	13.50	10.00	15.38
6000509	ASA1000XASA1000-1000-E90-15.38	16.00	10.00	15.38

## O-Ring Groove Option

ANCORP ASA/ANSI flanged fittings come standard with a smooth flange face. The addition of an O-ring groove is a standard option. If you require a grooved flange the additional charge for this is detailed in this chart.

**Please Note:** Adding a groove is customizing this product and is no longer returnable.

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

**Call For Pricing**

## 90° Elbows - ASA Rotatable Flange

### Materials:

- Flanges: 304 stainless steel

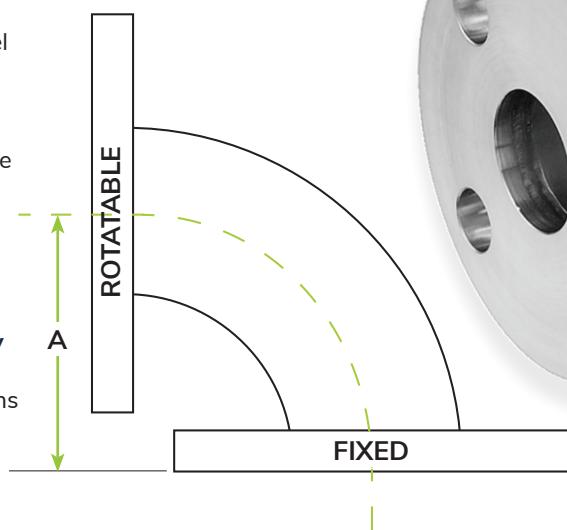
### Product Notes:

- Radius elbow design
- One fixed and one rotatable flange per fitting
- O-ring groove available (see chart below)

### Options:

**Call for price and delivery**

- Custom lengths
- Custom flange combinations



PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000511	ASA100-150-E90-2.66	4.25	1.50	2.66
6000512	ASA150-200-E90-3.25	5.00	2.00	3.25
6000513	ASA200-300-E90-4.75	6.00	3.00	4.75
6000514	ASA300-400-E90-6.25	7.50	4.00	6.25
6000515	ASA400-400-E90-6.25	9.00	4.00	6.25
6000516	ASA400-600-E90-9.25	9.00	6.00	9.25
6000517	ASA600-600-E90-9.38	11.00	6.00	9.38
6000518	ASA600-800-E90-12.38	11.00	8.00	12.38
6000519	ASA800-800-E90-12.38	13.50	8.00	12.38
6000520	ASA800-1000-E90-15.38	13.50	10.00	15.38
6000521	ASA1000-1000-E90-15.38	16.00	10.00	15.38

### O-Ring Groove Option

ANCORP ASA/ANSI flanged fittings come standard with a smooth flange face. The addition of an O-ring groove is a standard option. If you require a grooved flange the additional charge for this is detailed in this chart.

**Please Note:** Adding a groove is customizing this product and is no longer returnable.

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

**Call For Pricing**

## 90° Mitered Elbow - ASA Fixed Flanges

### Materials:

- Flanges: 304 stainless steel

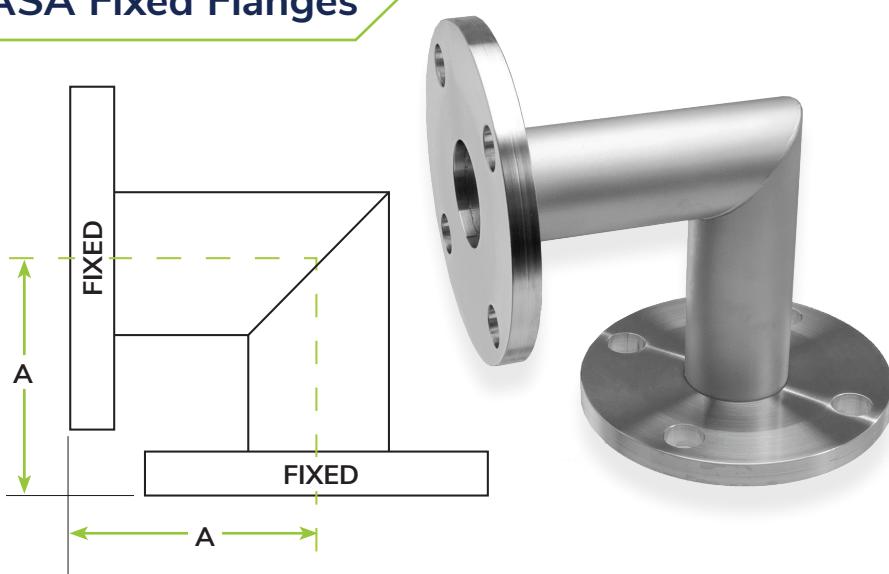
### Product Notes:

- Mitered elbow design
- Both flanges have a fixed bolt hole orientation
- O-ring groove available (see chart below)

### Options:

#### Call for price and delivery

- Custom lengths
- Custom flange combinations



PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000523	ASA100XASA100-150-E90M-3.25	4.25	1.50	3.25
6000525	ASA150XASA150-200-E90M-3.25	5.00	2.00	3.25
6000526	ASA150XASA150-250-E90M-3.25	5.00	2.50	3.25
6000529	ASA200XASA200-300-E90M-5.12	6.00	3.00	5.12
6000530	ASA300XASA300-300-E90M-5.12	7.50	3.00	5.12
6000531	ASA300XASA300-400-E90M-5.12	7.50	4.00	5.12
6000532	ASA400XASA400-400-E90M-5.12	9.00	4.00	5.12
6000533	ASA400XASA400-600-E90M-5.25	9.00	6.00	5.25
6000534	ASA600XASA600-600-E90M-6.44	11.00	6.00	6.44
6000535	ASA600XASA600-800-E90M-7.38	11.00	8.00	7.38
6000536	ASA800XASA800-800-E90M-7.38	13.50	8.00	7.38
6000537	ASA800XASA800-1000-E90M-9.88	13.50	10.00	9.88
6000538	ASA1000XASA1000-1000-E90M-9.88	16.00	10.00	9.88

## O-Ring Groove Option

ANCORP ASA/ANSI flanged fittings come standard with a smooth flange face. The addition of an O-ring groove is a standard option. If you require a grooved flange the additional charge for this is detailed in this chart.

**Please Note:** Adding a groove is customizing this product and is no longer returnable.

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

**Call For Pricing**

## 90° Mitered Elbows - ASA Rotatable Flange

### Materials:

- 304 stainless steel

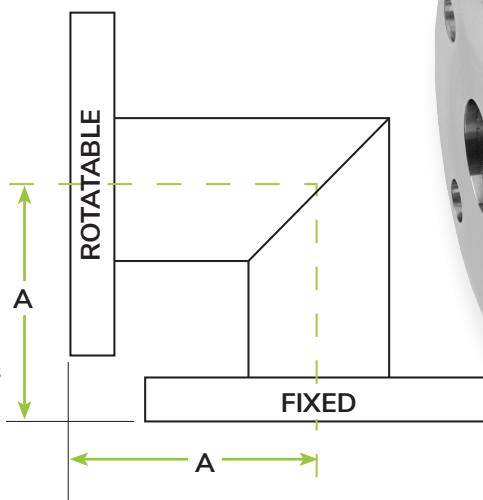
### Product Notes:

- One fixed and one rotatable flange per fitting
- O-ring groove available (see chart below)

### Options:

#### Call for price and delivery

- Custom lengths
- Custom flange combinations



PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000540	ASA100-150-E90M-3.25	4.25	1.50	3.25
6000542	ASA150-200-E90M-3.25	5.00	2.00	3.25
6000543	ASA150-250-E90M-3.25	5.00	2.50	3.25
6000546	ASA200-300-E90M-5.12	6.00	3.00	5.12
6000547	ASA300-300-E90M-5.12	7.50	3.00	5.12
6000548	ASA300-400-E90M-5.12	7.50	4.00	5.12
6000549	ASA400-400-E90M-5.12	9.00	4.00	5.12
6000550	ASA400-600-E90M-5.25	9.00	6.00	5.25
6000551	ASA600-600-E90M-6.44	11.00	6.00	6.44
6000552	ASA600-800-E90M-7.38	11.00	8.00	7.38
6000553	ASA800-800-E90M-7.38	13.50	8.00	7.38
6000554	ASA800-1000-E90M-9.88	13.50	10.00	9.88
6000555	ASA1000-1000-E90M-9.88	16.00	10.00	9.88

## O-Ring Groove Option

ANCORP ASA/ANSI flanged fittings come standard with a smooth flange face. The addition of an O-ring groove is a standard option. If you require a grooved flange the additional charge for this is detailed in this chart.

**Please Note:** Adding a groove is customizing this product and is no longer returnable.

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

**Call For Pricing**

## Tees - ASA Fixed Flanges

### Materials:

- Flanges: 304 stainless steel

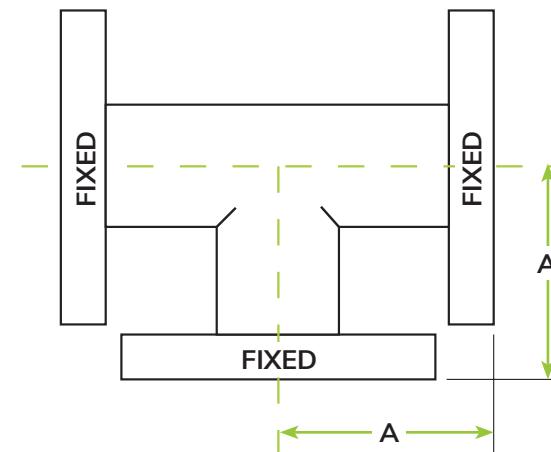
### Product Notes:

- Pulled ports for optimum vacuum performance
- Flanges have a fixed bolt hole orientation
- O-ring groove available (see chart below)

### Options:

#### Call for price and delivery

- Custom lengths
- Custom flange combinations
- Reducing tee fittings



3

## ASA Tees

PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000556	ASA100XASA100XASA100-150-TEE-2.64	4.25	1.50	2.64
6000559	ASA150XASA150XASA150-200-TEE-3.25	5.00	2.00	3.25
6000560	ASA150XASA150XASA150-250-TEE-3.25	5.00	2.50	3.25
6000563	ASA200XASA200XASA200-300-TEE-3.50	6.00	3.00	3.50
6000565	ASA300XASA300XASA300-400-TEE-5.12	7.50	4.00	5.12
6000566	ASA400XASA400XASA400-400-TEE-5.12	9.00	4.00	5.12
6000567	ASA400XASA400XASA400-600-TEE-5.25	9.00	6.00	5.25
6000568	ASA600XASA600XASA600-600-TEE-6.44	11.00	6.00	6.44
6000569	ASA600XASA600XASA600-800-TEE-7.38	11.00	8.00	7.38
6000570	ASA800XASA800XASA800-800-TEE-7.75	13.50	8.00	7.75
6000571	ASA800XASA800XASA800-1000-TEE-9.88	13.50	10.00	9.88
6000572	ASA1000XASA1000XASA1000-1000-TEE-9.88	16.00	10.00	9.88

## O-Ring Groove Option

ANCORP ASA/ANSI flanged fittings come standard with a smooth flange face. The addition of an O-ring groove is a standard option. If you require a grooved flange the additional charge for this is detailed in this chart.

**Please Note:** Adding a groove is customizing this product and is no longer returnable.

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

**Call For Pricing**

## Tee - ASA Rotatable Flanges

**Materials:**

- Flanges: 304 stainless steel

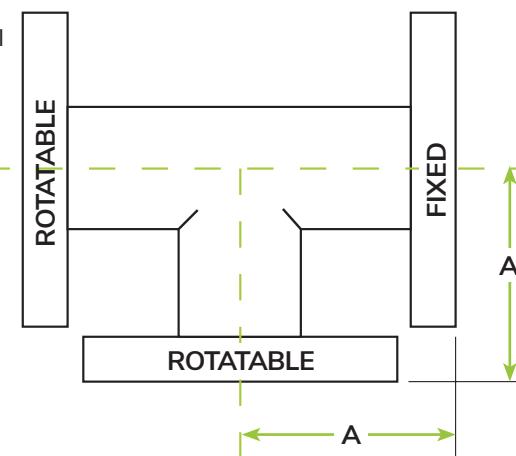
**Product Notes:**

- Pulled ports for optimum vacuum performance
- One Fixed and one Rotatable flange per axis
- O-ring groove available (see chart below)

**Options:**

**Call for price and delivery**

- Custom lengths
- Custom flange combinations
- Reducing tee fittings



PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000573	ASA100-150-TEE-2.64	4.25	1.50	2.50
6000576	ASA150-200-TEE-3.25	5.00	2.00	3.25
6000577	ASA150-250-TEE-3.25	5.00	2.50	3.25
6000580	ASA200-300-TEE-3.50	6.00	3.00	3.50
6000582	ASA300-400-TEE-5.12	7.50	4.00	5.12
6000583	ASA400-400-TEE-5.12	9.00	4.00	5.12
6000584	ASA400-600-TEE-5.12	9.00	6.00	5.25
6000585	ASA600-600-TEE-6.44	11.00	6.00	6.44
6000586	ASA600-800-TEE-7.38	11.00	8.00	7.38
6000587	ASA800-800-TEE-7.75	13.50	8.00	7.75
6000588	ASA800-1000-TEE-9.88	13.50	10.00	9.88
6000589	ASA1000-1000-TEE-9.88	16.00	10.00	9.88

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

## O-Ring Groove Option

**ANCORP** ASA/ANSI flanged fittings come standard with a smooth flange face. Adding a groove to this product is customization and will no longer be returnable. If you require a grooved flange the additional charge for this is detailed in this chart.

**Call For Pricing**

## Crosses - ASA Rotatable Flanges

**Materials:**

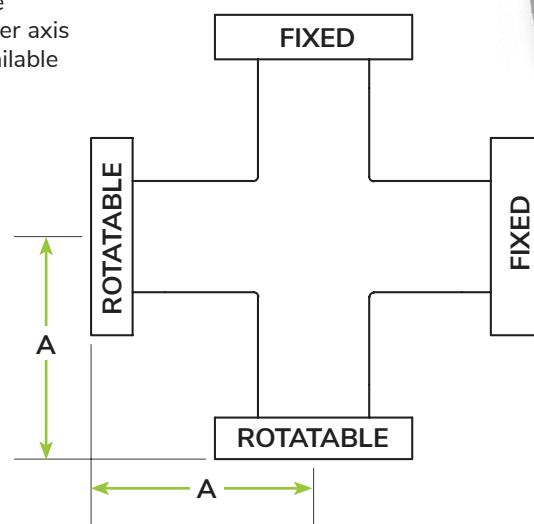
- Flanges: 304 stainless steel

**Product Notes:**

- Pulled ports for optimum vacuum performance
- One fixed and one rotatable flange per axis
- O-ring groove available (see chart below)

**Options:**
**Call for price and delivery**

- Custom lengths
- Custom flange combinations
- Reducing cross fittings



PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000608	ASA100-150-4X-2.50	4.25	1.50	2.50
6000610	ASA150-200-4X-3.25	5.00	2.00	3.25
6000611	ASA150-250-4X-3.25	5.00	2.50	3.25
6000614	ASA200-300-4X-3.50	6.00	3.00	3.50
6000616	ASA300-400-4X-5.12	7.50	4.00	5.12
6000617	ASA400-400-4X-5.12	9.00	4.00	5.12
6000618	ASA400-600-4X-5.25	9.00	6.00	5.25
6000619	ASA600-600-4X-6.44	11.00	6.00	6.44
6000620	ASA800-600-4X-7.38	11.00	8.00	7.38
6000621	ASA800-800-4X-7.75	13.50	8.00	7.75
6000622	ASA800-1000-4X-9.88	13.50	10.00	9.88
6000623	ASA1000-1000-4X-9.88	16.00	10.00	9.88

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

## O-Ring Groove Option

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**Call For Pricing**

## 5-Way Crosses - ASA Rotatable Flanges

3

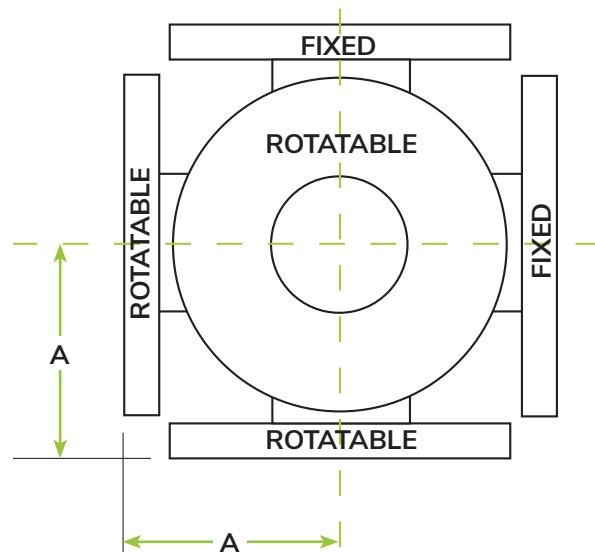
ASA 5-Way Crosses

**Materials:**

- Flanges: 304 stainless steel

**Product Notes:**

- Pulled ports for optimum vacuum performance
- One fixed and one rotatable flange per axis
- O-ring groove available (see chart below)

**Options:****Call for price and delivery**

- Custom lengths
- Custom flange combinations

PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000640	ASA100-150-5X-2.50	4.25	1.50	2.50
6000641	ASA150-200-5X-3.25	5.00	2.00	3.25
6000642	ASA150-250-5X-3.25	5.00	2.50	3.25
6000644	ASA200-300-5X-3.50	6.00	3.00	3.50
6000646	ASA300-400-5X-5.12	7.50	4.00	5.12
6000647	ASA400-400-5X-5.12	9.00	4.00	5.12
6000648	ASA400-600-5X-5.25	9.00	6.00	5.25
6000649	ASA600-600-5X-6.44	11.00	6.00	6.44
6000650	ASA600-800-5X-7.38	11.00	8.00	7.38
6000651	ASA800-800-5X-7.75	13.50	8.00	7.75
6000652	ASA800-1000-5X-9.88	13.50	10.00	9.88
6000653	ASA1000-1000-5X-9.88	16.00	10.00	9.88

**O-Ring Groove Option**

ANCORP ASA/ANSI flanged fittings come standard with a smooth flange face. Adding a groove to this product is customization and will no longer be returnable. If you require a grooved flange the additional charge for this is detailed in this chart.

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

**Call For Pricing**

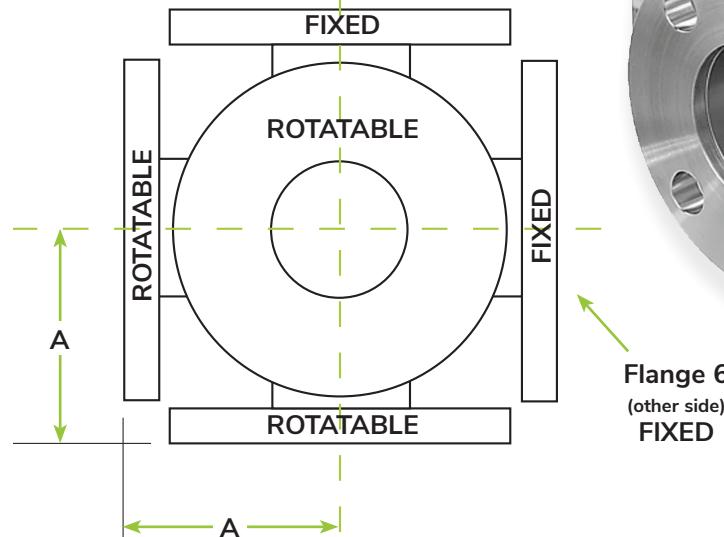
## 6-Way Crosses - ASA Rotatable Flanges

**Materials:**

- 304 stainless steel

**Product Notes:**

- Pulled ports for optimum vacuum performance
- One fixed and one rotatable flange per axis
- O-ring groove available (see chart below)



3

**ASA 6-Way Crosses**
**Options:**
**Call for price and delivery**

- Custom lengths
- Custom flange combinations

PART #	REFERENCE ID	FLANGE O.D. (in)	TUBE O.D. (in)	A (in)
6000671	ASA100-150-6X-2.50	4.25	1.50	2.50
6000672	ASA150-200-6X-2.50	5.00	2.00	2.50
6000673	ASA150-250-6X-3.25	5.00	2.50	3.25
6000675	ASA200-300-6X-3.50	6.00	3.00	3.50
6000677	ASA300-400-6X-5.12	7.50	4.00	5.12
6000678	ASA400-400-6X-5.12	9.00	4.00	5.12
6000679	ASA400-600-6X-5.25	9.00	6.00	5.25
6000680	ASA600-600-6X-6.44	11.00	6.00	6.44
6000681	ASA600-800-6X-7.38	11.00	8.00	7.38
6000682	ASA800-800-6X-7.75	13.50	8.00	7.75
6000683	ASA800-1000-6X-9.88	13.50	10.00	9.88
6000684	ASA1000-1000-6X-9.88	16.00	10.00	9.88

REFERENCE ID
ASA100
ASA150
ASA200
ASA300
ASA400
ASA600
ASA800
ASA1000

## O-Ring Groove Option

**ANCORP** ASA/ANSI flanged fittings come standard with a smooth flange face. Adding a groove to this product is customization and will no longer be returnable. If you require a grooved flange the additional charge for this is detailed in this chart.

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