



BOC Edwards offers a full range of ASA flanges and fittings. The ASA series includes a complete range of components compatible with other ASA manufactured flanges and fitting, which are also compatible with 150# ANSI flanges.

Sealing principle

Typical vacuum applications would require one flat face flange and one "O" ring grooved flange. The two would mate together creating a seal for pressures down to 1×10^{-7} Torr. Other means of sealing may be two "O" ring grooved flanges mated together with a ring of thin metal shim-stock used to separate the two flanges. If both flanges are flat face, the use for a flat rubber gasket or "O" rings molded into carriers are used between the two flanges to create a seal. All three methods are acceptable when used for vacuum, although the most common method is the use of one flat face and one "O" ring grooved flange mated together.

Dimensions

ASA flanges are available in rotatable and non-rotatable flange sizes of 1" to 10". The ASA size represents the OD of the tube size used on a particular flange. However, because of the requirement for a different size tube but with the same OD, all ASA flanges will have several options for different tube OD's. For instance, a 4" flange has an OD of 9" and can accept tube OD's of 4" and 6" and a 6" flange has an OD of 11" and can accept tube OD's of 6" and 8". It is important to gather all necessary information when determining which flange is required. Standard bore sizes of ASA flanges will accept tubing only, which has a larger OD than pipe. If pipe is being used with the ASA flange, it will be necessary to use a blank flange and have the required bore size machined to the pipe OD.

TECHNICAL DATA

Construction materials	
Flanges and fittings	304 stainless steel
Bolts, nuts and washers	Stainless steel
"O" rings	Fluoroelastomer and nitrile
Pressure rating	Down to 1×10^{-7} Torr
Flange sizes available	1", 1.5", 2", 3", 4", 6", 8", 10"
Product offering	Blank and bored flanges, full nipples, half nipples, bellows, "O" rings, etc.
Bolts nuts and washers	Supplied as kits specific to flange size.

ORDERING INFORMATION

Contact BOC Edwards or your local supplier for information about ordering ASA flange fittings

Lubrication All "O" rings, nitrile rubber extruded cord and sheet used in low vacuum applications should be lubricated with either vapor pump fluid, Fomblin® vacuum grease or Apiezon® grease M lubrication will prolong the life of the material and facilitate sealing.

Apply the oil or grease very sparingly and evenly, coating the seal to give it no more than a shining surface with no visible smears. Excessive lubrication may cause leaks.

In general, but with certain exceptions dictated by common sense, seals used in high vacuum applications should be lubricated, but even more sparingly, using vapor pump fluid.

Cleaning The only necessary and recommended method of cleaning "O" rings and nitrile rubber extruded cord or sheet is by wiping with a dry, lint free, soft cloth. Most solvent fluids are liable to be absorbed by fluoroelastomer and nitrile rubber, swelling these materials and subsequently outgassing into the system.

NITRILE RUBBER CORD

Nitrile cord should be cut perfectly square and to a length which is 5% above the mean circumference of the groove in which it is laid. Compression and sealing of the butt joint is thereby assured.

ORDERING INFORMATION

PRODUCT DESCRIPTION	ORDERING NUMBER
Nitrile rubber cord	
0.275 inch (7 mm) diameter	H02101008
0.312 inch (8 mm) diameter	H02101009
0.500 inch (12.7 mm) diameter	H02101015
State exact length required (per metre).	

VACUUM TUBING

This high quality neoprene rubber vacuum tubing is suitable for use down to approximately 10^{-4} mbar. We recommend that you use the shortest length possible.

ORDERING INFORMATION

PRODUCT DESCRIPTION	ORDERING NUMBER
Rubber vacuum tube, 1 m lengths	
5 mm bore, 19 mm external diameter	H02100002
7 mm bore, 17 mm external diameter	H02100003
9 mm bore, 25 mm external diameter	H02100004
12 mm bore, 28 mm external diameter	H02100005
20 mm bore, 34 mm external diameter	H02100006
Flexible hose connection*	C06600025
* Neoprene, steel reinforced, 12 inch (305 mm) long, to suit 1 1/8 inch external diameter tube	