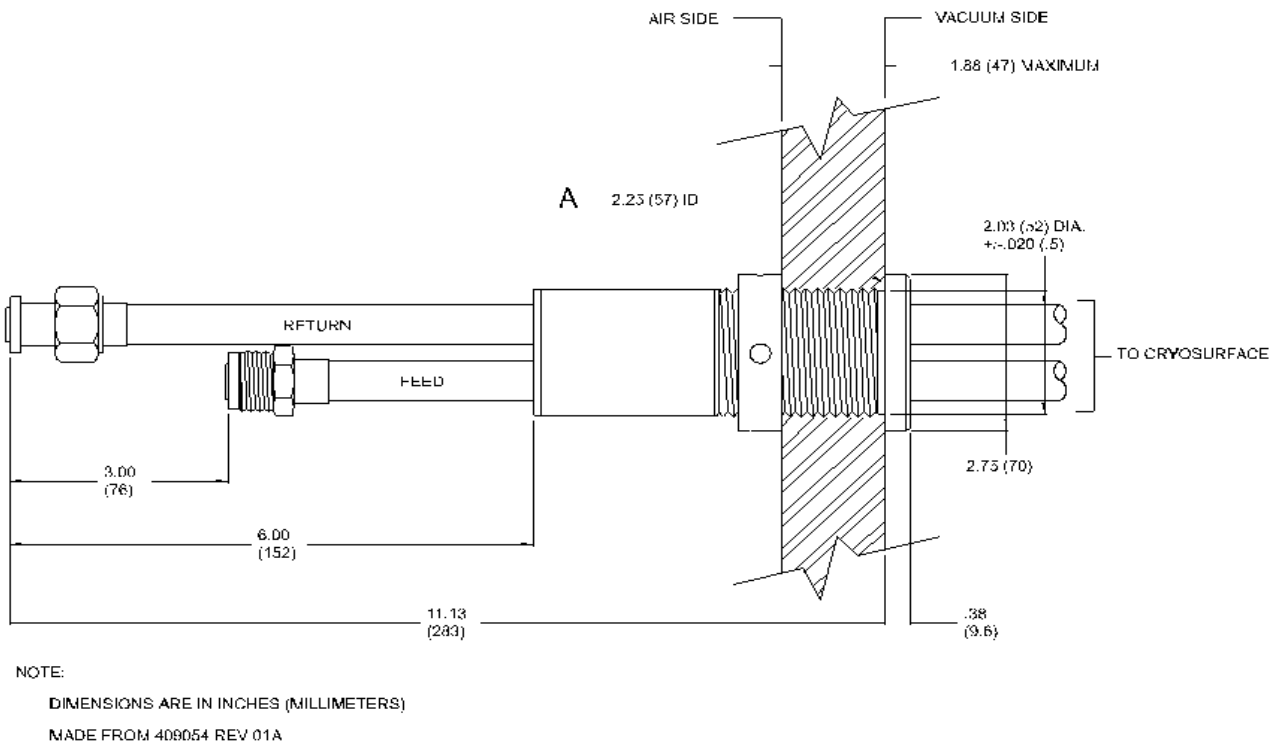

Figure 3-1: Polycold's 2-inch (50 mm) Feed-through with Port Requirements

O-ring number 228: 2.25 inches (57 mm) ID x 0.125 inches (3 mm) section
O-ring material: Buna-nitrile
O-ring surface: 2.60 inches (66 mm) surface roughness not to exceed 32 micro-inch (32 / 1000000 inch or 0.81 micron) — must be flat, clean, and free of scratches or deposits.

3.1.1.2 Put the Cryocoil into the Vacuum Chamber

1. Insert the feed-through into the feed-through port. Tighten the feed-through nut finger-tight and position the cryocoil. If the cryocoil has fasteners, secure them at this time.

2. Verify that no moving parts will hit the cryocoil. Make sure the cryocoil does not touch the vacuum chamber wall or anything else in the vacuum chamber. The cryocoil should be at least 5 / 8 inch (16 mm) away from the vacuum chamber wall.

3. Hold the feed-through in place and tighten the nut with a wrench. Make certain the nut is tight. If the nut is loose, the O-ring will tend to lift from the vacuum chamber wall when under vacuum.

4. Install a radiation shield if the cryocoil is in direct view of a source of heat greater than 50°C. Position the shield between the cryocoil and the heat source. The shield should be as close as possible to the heat source, and as far away as possible from the cryocoil. The cryocoil traps molecules best when it has maximum view of the vacuum chamber.

3.1.1.3 Check Vacuum Chamber for Leaks

Check the feed-through port and seals used to install the cryocoil to ensure that the vacuum chamber is free of leaks.

3.1.2 If the Cryosurface Is a Baffle

Tools and materials needed:

high vacuum lubricant—must have an appropriate low vapor pressure (for optional use on an O-ring seal)

NOTE: ***Note:*** *This section assumes the purchase of a cryobaffle from Brooks Polycold Systems Inc. If not, see section 3.5 Cryosurface & Cryogenic Feed-through Specification. Then continue with the installation.*

⚠ CAUTION

GENERAL HAZARD
Do not connect the unit to an existing cryosurface without first verifying that the cryosurface meets specification. The cryopump's working pressure may exceed your cryosurface's working pressure, which may damage your vacuum system components and may result in minor or moderate injury. (Reservoir type cryosurfaces are not suitable.)
Verify all components meet specifications before connection.

3.1.2.1 Inspect All Vacuum Sealing Surfaces

Surfaces must be clean and free from scratches or other imperfections that might result in vacuum leaks. Protect these surfaces at all times. Remove any contaminants by wiping it with a clean cloth moistened with alcohol.

3.1.2.2 Mount the Cryobaffle

If the cryobaffle is a Polycold “CB” type, carefully center it between the flange bolt holes to assure a good O-ring seal.

3.1.2.3 Confirm Cryobaffle is Thermally Isolated

1. Shield the cryobaffle from any radiation source greater than 50°C.

2. Ensure that there isn’t any part of the cryobaffle in direct contact with the vacuum chamber.

3.1.2.4 Check the Vacuum Chamber for Leaks