



TriScroll Purge Kit Instruction Manual

P/N 699904341

Rev A 12/12/01

Instructions for Use

General Information

This instruction manual accompanies the Purge Kit for TriScroll pumps (P/N PTSPURGEKIT).

The TriScroll Purge kit enables safe, proper purging of either the main bearings (through the Bearing Purge Port), or the pump exhaust region (through the Gas Ballast Port) on TriScroll 300 and 600 series pumps.

The kit includes a flowmeter with manual throttle valve, a 5 psig relief valve, necessary tubing and fittings, and instructions.

The flowmeter assembly mounts directly onto the TriScroll pump. A ¼" Swagelok fitting is provided which the user connects to and supplies regulated dry gas (typically Nitrogen) at = 5 psig.

The recommended flow rate into either the Bearing Purge Port or Gas Ballast is 5 lpm.

Use of a Bearing Purge is required for the following applications:

- Cryopump Regeneration
- Wet chamber cleanup
- High cycle rate Loadlock Applications
- Pumping organic solvents
- Pumping trace amounts of Bromine or Chlorine
- Pumping residual corrosives

Use of a Gas Ballast purge is indicated for the following applications:

- Leak detection where high ambient helium rejection is required

Important Note

Proper purge use will help prevent corrosion of pump bearings but does not guarantee long pump life in an aggressive application. Pump warranty specifically covers defects in materials and workmanship. It does not cover damage to the pump caused by exposure to corrosives, nor does it cover periodic maintenance such as tip seal replacement.

Installation

Tools required: 9/16 inch or 15 mm open ended wrench, or an adjustable wrench

1. Remove the Purge Assembly from its packaging.
2. Loosen the 2 Swagelok nuts to separate the Purge Assembly into 3 subassemblies as shown in Figure 1.

Note: Do not remove the green cap from the relief valve.

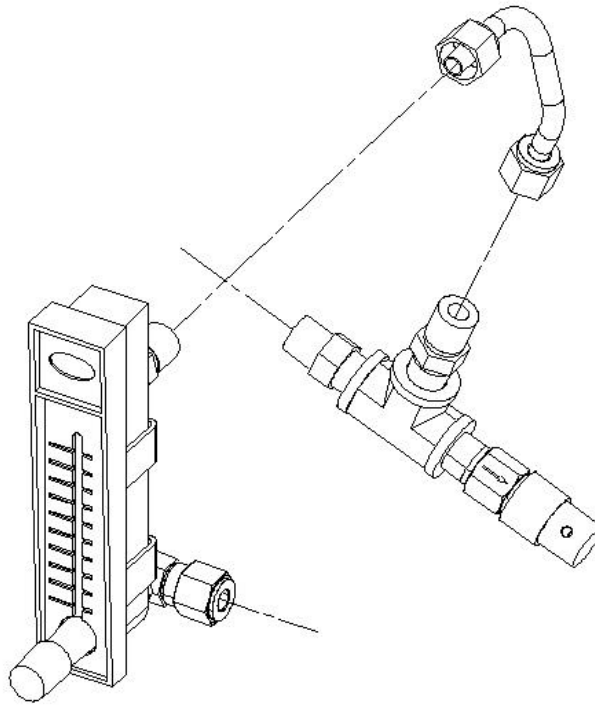


Figure 1. Flowmeter, Tube and Tee Subassemblies

Bearing Purge Installation

1. Remove the ¼" NPT plug from the Bearing Purge Port on the TriScroll pump.
2. Install the Tee Subassembly into the Bearing Purge Port. Tighten moderately until the Swagelok fitting is pointing up as shown in Figure 2.
3. Attach the Flowmeter and Tubing Subassemblies to the Tee Subassembly. Tighten the 2 Swagelok nuts.
4. Attach a purge gas line to the ¼" Swagelok fitting at the flowmeter inlet.

Warning: The purge gas pressure must be regulated to 5 psig or less.

Note: The flowmeter must be positioned vertically to read accurately.

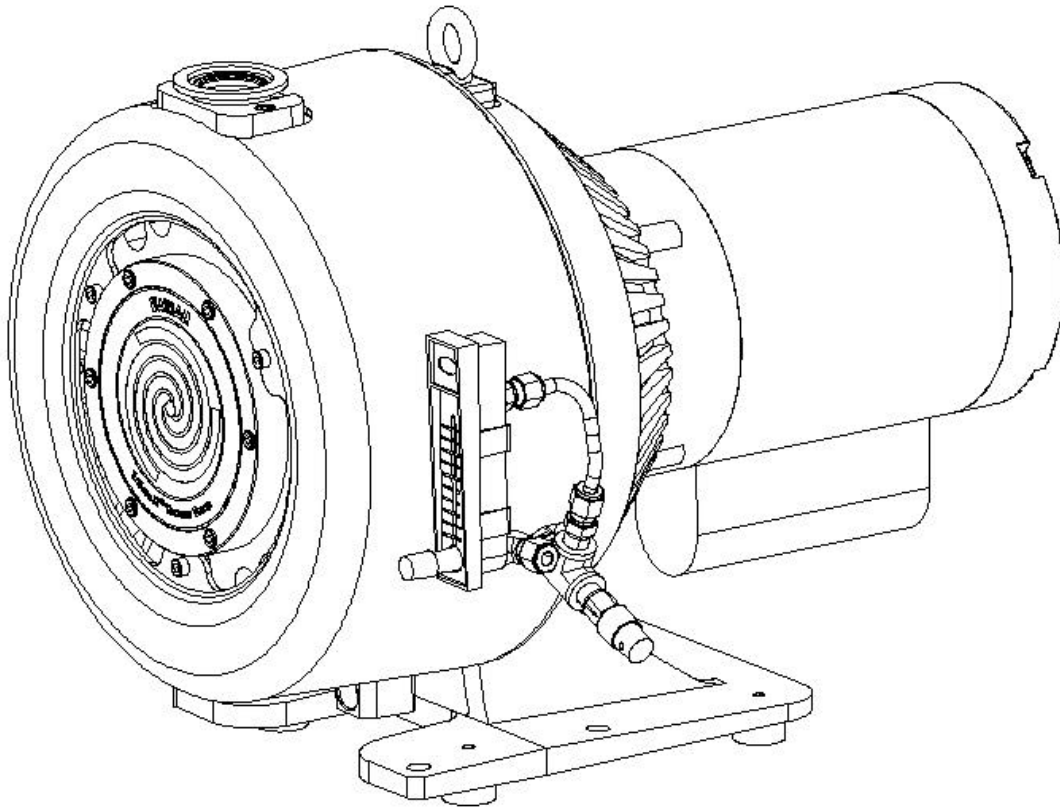


Figure 2. Bearing Purge Installation

Gas Ballast Installation

1. Remove the ¼" NPT fitting from the Gas Ballast Port on the TriScroll pump.
2. Install the Tee Subassembly into the Gas Ballast Port. Tighten moderately until the Swagelok fitting is pointing down as shown in Figure 3.
3. Attach the Flowmeter and Tubing Subassemblies to the Tee Subassembly. Tighten the 2 Swagelok nuts.
4. Attach a purge gas line to the ¼" Swagelok fitting at the flowmeter inlet.

Warning: The purge gas pressure must be regulated to 5 psig or less.

Note: The flowmeter must be positioned vertically to read accurately.

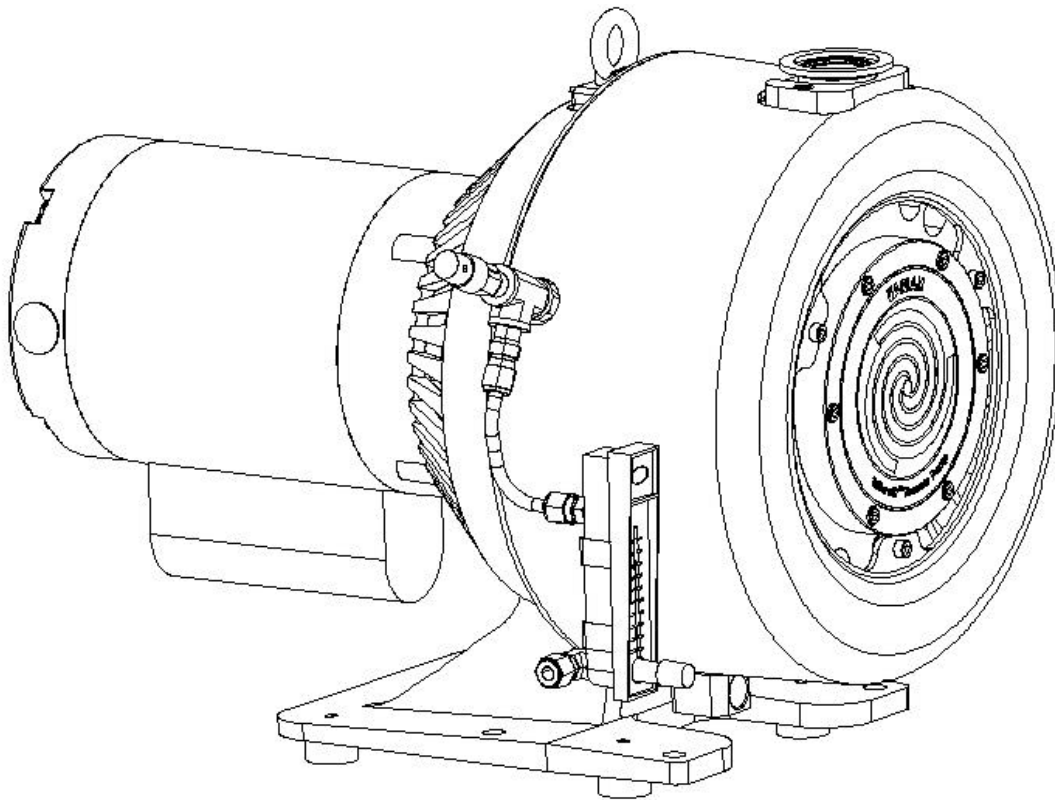


Figure 3. Gas Ballast Purge Installation

Operation

1. Start the TriScroll pump.
2. Adjust the valve at the base of the flowmeter so that the ball floats at the 5 lpm mark.