On-Board® IS 320FE Cryopump
Quick Installation Guide

Part Number 8040721, Revision A. 01/11/2013
ECO Number 63723

Cryopump Facility Requirements

<table>
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<tr>
<th>Electrical Power</th>
<th>Roughing Valve</th>
<th>Air Supply</th>
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<tbody>
<tr>
<td>208 VAC (Range: 180-253 VAC) 5 Amps 50/60 Hz Single-phase</td>
<td>NW-25 ISO KF flange Nitrogen connection is customer defined.</td>
<td>60 - 80 psig 1/4 inch tube connection</td>
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</table>

Startup the Cryopump


Product Information and Technical Support

Please visit the Brooks Automation website at www.brooks.com or email to tscallcenter@brooks.com.
Before You Start

1. Ensure On-Board IS 1000 Compressors are installed according to 8040645, On-Board IS 1000 Compressor Quick Installation Guide.
2. Read and follow all safety notices in this guide and in the appropriate compressor guides.

Cryopump Safety

Ensure the cryopump operates safely and dependably by adhering to all safety notices when you use or service the cryopump.

**WARNING**

**Toxic, Corrosive, Flammable or Explosive Materials**

1. To prevent personal injury, over pressurization, and equipment damage, always vent toxic, corrosive, or flammable materials to a safe location using an inert gas.
2. Clearly identify toxic, corrosive, or flammable materials on shipping containers when you ship equipment that contacted these materials.
3. To prevent flammable gas ignition, do not install a hot filament type vacuum gauge on the high-vacuum side of the isolation valve.
4. To prevent explosions, be aware of ozone as a by-product of an oxygen process, and take the appropriate precautions.

**WARNING**

**High Voltage Electric Shock Hazard**

1. To avoid electric shock, disconnect the cryopump from all power sources before making electrical connections between system components, and before performing troubleshooting or maintenance procedures.
2. When you connect the cryopump to a power source, ensure it is a 208 VAC, Single-Phase 5 Amp source.

**CAUTION**

**Heavy Object**

To avoid injury when moving the cryopump, use a lifting aid and proper lifting techniques.

**CAUTION**

**High Pressure Gas Hazard**

To avoid injury from unexpectedly propelled objects, always bleed the helium charge to atmospheric pressure before servicing or disassembling the self-sealing couplings.

**NOTE:** To avoid loss of helium, do not modify or remove the pressure relief valves. (See Figure 3.) Always connect and disconnect helium flex lines with the method illustrated in Figure 1 Inset.

Cryopump Connections

See the following numbered steps in Figure 1, Figure 2, and Figure 3 for cryopump installation connections.

**NOTE:** Before mounting the cryopump to the vacuum system, ensure that a high-vacuum isolation (hi-vac) valve is installed between the cryopump and the vacuum chamber. This isolates the cryopump from the chamber during rough pumping, cooldown, and regeneration.

**NOTE:** Install the cryopump in any orientation. This does not affect its performance.

The number of cryopumps connected to each compressor (your installation) varies based on the cryopump models you use. Consult Technical Support for information about specific cryopump and compressor applications.