

## Addendum to Stabil-Ion® Vacuum Measurement System User Manuals 360119 & 370119 For Stabil-Ion Gauge Catalog Numbers (20)360194, (20)370194, (20)360215, 360227, 360234, 370160

### Introduction

This addendum is for use with all Granville-Phillips Stabil-Ion Gauges with NW40KF flanges. The safety and performance of a Stabil-Ion Gauge with an NW40KF flange can be compromised by the selection of an inappropriate gasket material or clamp for the connection to the vacuum system.

### Safety Notice

Serious electrical shock hazard and inaccurate pressure readings can occur if the gauge is not properly grounded to the vacuum system. Grounding can be accomplished through a conductive vacuum connection if the following precautions are adhered to:

1. Do NOT use a plastic, composite, or anodized aluminum clamp, with a polymer o-ring gasket. Even though this type of o-ring is usually carried in a metal-centering ring, electrical conductivity through this type of ring cannot be assured.
2. Use a steel or stainless steel clamp with appropriate o-ring seals or an aluminum gasket to assure conductivity between the gauge and the grounded vacuum system.
3. For the safest possible connection, it is recommended that an aluminum gasket and a stainless steel chain clamp is used.

### Installation

1. Using a polymer gasket to seal a Stabil-Ion Gauge to the vacuum system is NOT recommended. Polymers contain volatile compounds and are susceptible to gas permeation and absorption of water and other contamination. The elevated temperatures intrinsic to normal operation of the Stabil-Ion Gauge can cause outgassing these materials possibly causing an artificially high reading and contamination of the gauge electrodes and the vacuum system.
2. It is recommended that a stainless steel chain clamp (along with an aluminum gasket) be used to connect the gauge to the vacuum system. This combination provides the most robust vacuum connection. It is recommended that the clamp be retorqued periodically to assure that the gasket is properly sealed.  
An aluminum clamp can be used at a lower cost, but the manufacturer's torque specifications must be carefully applied to avoid compromising the less robust clamp.
3. If an o-ring type seal must be used, use an unfilled fluorocarbon material, such as DuPont V884 brown Viton or similar. The o-ring should be cleaned in an aqueous based cleaner and vacuum baked for one hour at 150 °C. Do NOT use vacuum grease on the o-ring; it is volatile at higher temperatures and is a source of contamination to the Stabil-Ion Gauge and the vacuum system.



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