



### ***Polylok 12" Riser Vacuum Test***

March 2007

On March 28, 2007 a vacuum test was performed on the Polylok 12" Riser and Cover.

#### **ASTM C 1227-07a Testing Guidelines**

"9.2.1 *Vacuum Testing* – Seal the empty tank and apply a vacuum to 4 in.(100mm) of mercury. The tank is approved if 90% of vacuum is held for 2 min."

#### **Materials**

The test was performed using a ¼" steel vacuum plate with a 3/8 foam gasket adhered to the plate. The test sample consisted of a Polylok 12" Riser (part number 3017-R) with the four riser to riser attachment holes plugged on the bottom flange. The riser was sealed with a Polylok 12" Cover (part number 3017-C) with a standard Polylok gasket and four #10 1-1/2" stainless steel screws.

#### **Testing**

A vacuum of 10.5" Hg was applied and locked in using a ¼" ball valve. Vacuum was held for 10 minutes.

#### **Results**

After a standard 10 minute test, the vacuum gauge dropped to 10" Hg. A deformation of ½" on the cover was noticed (pulled in). The 0.5" Hg drop was attributed to the deformation of the cover. ***Our Riser and Cover were able to maintain vacuum pressure of >95% at 10 Hg after 10 minutes. The specification calls for 90% at 4 Hg for 2 minutes.***

#### **Conclusion**

The Polylok test was performed at 2 ½ times the vacuum required by the new standards. The test shows that our Polylok 12" Riser and Cover exceed the requirements defined in the ASTM 1227 specifications. There were no detectable changes in vacuum pressure at 4.0" Hg. It was not until the gauge reached 10" Hg for a period of 10 minutes that there was a slight change in vacuum pressure; a decrease of less than 5%. The change was minimal, at 0.5" Hg and shows that the product can withstand vacuum pressure that far exceeds pressure present in a typical septic tank environment.