

# PLUG-IT PRODUCTS, CORP.

## MANHOLE BLADDER VACUUM TEST PROCEDURE

1. Plug all incoming lines. Because the plugs will be subject to a vacuum (negative air pressure), inflate the plug to 5psi below the plugs recommended inflation pressure to prevent the pressure relief valve from opening during the test. NEVER REMOVE OR DISABLE PRESSURE RELIEF VALVES!
2. CAUTION! Always block plugs! Use engineered approved blocking to prevent plugs from being sucked into the manhole when vacuum is applied. Damage to the manhole bladder could result, as well as serious injury or death to the operator and others!
3. Install the vacuum test bladder into manhole. Set cross brace across manhole opening; adjust elevation of bladder to desired sealing point as close to the top of the manhole as possible.
4. Inflate bladder to 40psi, do not over inflate!
5. Attach pump assembly to test bladder with hose assembly.
6. Begin pumping, open suction valve, pull vacuum to 10" Hg (equivalent to negative 5psi air pressure).
7. At 10"Hg, close valve and stop pump.
8. Refer to test specifications for length of test.
9. If test fails, or 10"Hg Vacuum cannot be obtained:
  - Stop vacuum pump
  - Deflate vacuum test plug and remove from manhole.
  - Using a 2-gallon hand pump (like a garden spray pump), spray the interior surface of manhole with a soap and water mixture and retest.
  - After 30 seconds, stop test, remove bladder as above
  - Check inside surface of manhole for soapy bubbles, indicating the areas that leak

## Vacuum Time Table

<b>DEPTH - FEET</b>	<b>DIAMETER - INCHES</b>		
	<b>48"</b>	<b>60"</b>	<b>72"</b>
<b>4'</b>	<b>10 sec.</b>	<b>13 sec.</b>	<b>16 sec.</b>
<b>8'</b>	<b>20 sec.</b>	<b>26 sec.</b>	<b>32 sec.</b>
<b>12'</b>	<b>30 sec.</b>	<b>39 sec.</b>	<b>48 sec.</b>
<b>16'</b>	<b>40 sec.</b>	<b>52 sec.</b>	<b>64 sec.</b>
<b>20'</b>	<b>50 sec.</b>	<b>65 sec.</b>	<b>80 sec.</b>
<b>24'</b>	<b>60 sec.</b>	<b>78 sec.</b>	<b>96 sec.</b>
<b>*</b>	<b>5.0 sec.</b>	<b>6.5 sec.</b>	<b>8.0 sec.</b>

**\* Add "T" times for each additional 2' depth.**

**(The values listed above have been extrapolated from ASTM designation C924-85.)**