3. VENTING & AIR INLET PIPING

A. GENERAL

1. Install the Infinite Energy boiler venting system in accordance with these instructions and with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, CAN/CGA B149, and/or applicable provisions of local building codes.

2. The Infinite Energy boiler is a direct vent appliance and is ETL Listed as a Category IV appliance with Intertek Testing Laboratories, Inc.

B. APPROVED MATERIALS

1. Table 3.1 lists approved materials for vent pipe (and adhesives where applicable). Use only these materials for exhaust vent piping.

2. PVC pipe and fittings are not to be used for venting in confined spaces such as closet installations. Use only CPVC vent pipe under these conditions.

3. Cellular core piping is approved for inlet air piping only.

C. EXHAUST VENT/AIR INTAKE PIPE LOCATION

1. Install vent piping before installing water, fuel, or condensate piping. Working from largest to smallest diameter reduces the complexity of piping interferences.

2. Vent and air intake piping is to be installed so that there is sufficient access for routine inspection as required in Section 11 of this manual.

3. The vent piping for this boiler is approved for zero clearance to combustible construction. However, a fire stop must be used where the vent pipe penetrates walls or ceilings.

4. The Infinite Energy boiler, like all high efficiency, gas-fired appliances, is likely to produce a vapor plume due to condensation. Surfaces near the vent termination will likely become coated with condensation.

5. The maximum combined vent and air inlet vent length for the Infinite Energy boiler is about 200 equivalent feet (60 m). Be sure that the boiler is located such that the maximum vent length is not exceeded.

6. Air Intake Pipe Location – Sidewall Venting:
   a. Provide 1 foot (30 cm) clearance from the bottom of the air intake pipe to the level of maximum snow accumulation. Snow removal may be necessary to maintain clearances.
   b. Do not locate air intake pipe in a parking area where machinery may damage the pipe.
   c. The maximum distance between the air intake and exhaust is 6 feet (1.8 m).

Table 3.1: Approved Materials for Exhaust Vent Pipe

<table>
<thead>
<tr>
<th>Description</th>
<th>Material</th>
<th>Conforming to Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vent Piping &amp;</td>
<td>PVC (Sch 40 or 80)*</td>
<td>ANSI/ASTM D1785</td>
</tr>
<tr>
<td>Fittings</td>
<td>CPVC (Sch 40 or 80)</td>
<td>ANSI/ASTM D1785</td>
</tr>
<tr>
<td></td>
<td>PVC-DWV*</td>
<td>ANSI/ASTM D2665</td>
</tr>
<tr>
<td></td>
<td>MUGRO™ PP(s)</td>
<td>ULC-S636</td>
</tr>
<tr>
<td></td>
<td>InnoFlue® PP</td>
<td>ULC-S636</td>
</tr>
<tr>
<td>Pipe Cement</td>
<td>PVC/CPVC Cement</td>
<td>ANSI/ASTM D2564</td>
</tr>
</tbody>
</table>

* PVC pipe fittings are not to be used for venting within confined spaces.