IV. Venting

WARNING

Failure to vent this boiler in accordance with these instructions could cause products of combustion to enter the building resulting in severe property damage, personal injury or death.

Do not interchange vent systems or materials unless otherwise specified.

The use of thermal insulation covering pipe and fittings is prohibited.

Do not use a barometric damper, draft hood or vent damper with this boiler.

When using the CPVC/PVC vent option, the use of CPVC is required when venting in vertical or horizontal chase ways.

The CPVC vent materials supplied with this boiler do not comply with B149.1.S1-07 and are not approved for use in Canadian jurisdictions that require vent systems be listed to ULC S636-2008. In these jurisdictions, vent this boiler using either stainless steel Special Gas vent or a listed ULC S636 Class IIB venting system.

Do not locate vent termination where exposed to prevailing winds. Moisture and ice may form on surface around vent termination. To prevent deterioration, surface must be in good repair (sealed, painted, etc.).

Do not locate air intake vent termination where chlorines, chlorofluorocarbons (CFC’s), petroleum distillates, detergents, volatile vapors or other chemicals are present. Severe boiler corrosion and failure will result.

The use of cellular core PVC (ASTM F891) is prohibited.

Do not locate vent termination under a deck.

Do not reduce specified diameters of vent and combustion air piping.

When installing vent pipe through chimney, as a chase, no other appliance can be vented into the chimney.

Do not allow low spots in the vent where condensate may pool.

A. General Guidelines

1. Vent system installation must be in accordance with National Fuel Gas Code, NFPA 54/ANSI Z221.3 or applicable provisions of local building codes. Contact local building or fire officials about restrictions and installation inspection in your area.

2. The Alpine™ is designed to be installed as a Direct Vent (sealed combustion) boiler. The air for combustion is supplied directly to the burner enclosure from outdoors and flue gases are vented directly outdoors (through wall or roof).

3. The following combustion air/vent system options are approved for use with the Alpine™ boilers (refer to Table 3):
   - **Two-Pipe CPVC/PVC Vent/Combustion Air System** - separate CPVC/PVC pipe serves to expel products of combustion and separate PVC pipe delivers fresh outdoor combustion air. Refer to Part B for specific details.
   - **Two-Pipe Stainless Steel Vent/Combustion Air System** - separate stainless steel pipe serves to expel products of combustion. Separate PVC or galvanized pipe delivers fresh outdoor air. Refer to Part C for specific details.
   - **Concentric Inner Polypropylene Vent and Outer Steel Combustion Air System** - the assembly consists of inner fire resistant polypropylene vent pipe and outer steel pipe casing. The inner pipe serves as conduit to expel products of combustion, while outdoor fresh combustion air is drawn through the space between the inner and outer pipes. Refer to Part D for specific details.

4. Horizontal vent pipe must maintain a 1/4" per foot slope down towards the boiler.

5. Horizontal combustion air pipe must maintain a minimum 1/4" per foot slope down towards terminal, when possible. If not, slope toward boiler.

6. Do not install venting system components on the exterior of the building except as specifically required by these instructions (refer to Figure 3):
   - Vent terminals must be at least 1 foot from any door, window, or gravity inlet into the building.
   - Maintain the correct clearance and orientation between the vent and air intake terminals. The vent and air intake terminals must be at the same height and their center lines must be spaced apart 12” minimum. Locate air intake termination on the same wall as the vent termination if possible.