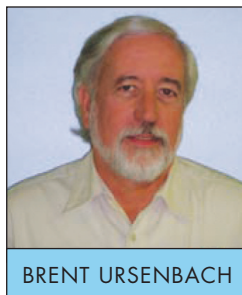


MECHANICAL CODE DISCUSSION

Vent Piping Part 2: Other Approved Products



BRENT URSEBACH

BRENT URSEBACH

HVAC EDUCATOR/
EXPERT WITNESS
bursenbach@gmail.com
801-381-1449

LAST ISSUE WE DISCUSSED glues and primers, for PVC pipe installation as a Category IV vent system. Since I wrote that discussion, I have become aware of a couple of new products that may be used for these for furnace, water heater, and boiler vent systems. Obviously, standard PVC pipe and fittings is the most common, due to it being the cheapest; however, some of the alternate products will perform better in higher temperature applications. The key is you **MUST** use a product approved by the code, and as the code specifically directs, approved by the appliance manufacturer. Referring again to the code: IFGC 503.4.1.1 and IRC G2427.4.1.1 state: **Plastic vent joints.** *Plastic pipe and fittings used to vent appliances shall be installed in accordance with the appliance manufacturer's instructions. Plastic pipe venting materials listed and labeled in accordance with UL 1738 shall be installed in accordance with the vent manufacturer's instructions. Where a primer is required, it shall be of a contrasting color.*

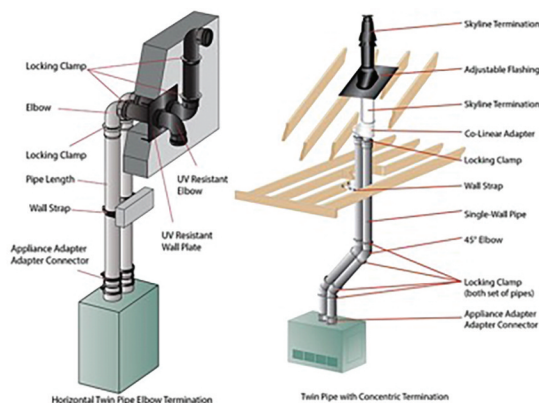
As there are new products on the market, let us review all the products we might consider, allowed by most if not all appliance manufacturers.:

1. Schedule 40 PVC, CPVC, and ABS pipe and fitting — *the pipe manufacturers generally do not approve the use, but the*

code does per the *appliance manufacturer*.

2. High Temperature polypropylene venting products. These systems are rated at 230°F compared to 140°F for PVC, 160°F for ABS and 194°F for CPVC products. One of the big advantages of these systems is they use O-ring or gaskets at joints, with a retainer system. Joints may be turned/twisted after installation and in most cases, taken apart without cutting. These are strongly recommended for recirculating boiler systems with high return water temperatures. Available products/manufacturers include:
 - a. PolyPro/DuraVent
 - b. Inni/Flue/Centrotherm
 - c. Polyflue
 - d. EasyFlex/HTP – flexible system used inside chimneys or shafts
 - e. Z-Dens/NovaFlex

Below are two typical *DuraVent* Polypropylene installation details:



3. NEW: IPEX System 1738 PVC – this is a new PVC pipe which the pipe manufacturer approves for direct vent Category IV appliances. It is rated for 149°F flue temperatures. Requires the use of their glues and primers.
4. NEW: IPEX System 636 CPVC – also approved by the pipe manufacturer for Category IV appliances. It is rated for 194°F. Requires use of their glues and primers.
5. Stainless Steel vent systems often manufactured or supplied by the appliance manufacturer, but also available from *DuraVent* and other vent manufacturers. Quite common in larger commercial boiler applications, these systems are typically acceptable for use with Category II, III, or IV appliances.

PLEASE remember, special vent systems not specifically identified in the code must be listed per UL 1738 for rigid vents, or UL 1777 for chimney liners. This was discussed previously in the March/April 2018 *Pipeline* for the *FasNSeal* vent liner system approved for use inside an existing operational B-vent. Each must be installed per the manufacturer's installation instructions – READ them. Also, you cannot mix products from different manufacturers. *Thanks again for your comments, questions, and suggestions. Be safe and stay healthy. —Brent* ■