



**US Army Corps
of Engineers®**

ENGINEERING AND CONSTRUCTION BULLETIN

No. 2008-9

Issuing Office: CECW-CE

Issued: 14 Mar 2008

Subject: Proper Installation of Type 1 Clothes Dryer Vent System Will Extend Dryer Life, Reduce Energy Costs and Prevent Fires.

Applicability: Information



1. A Type 1 Clothes Dryer is primarily used in a family living environment. Listed Type 1 clothes dryers shall be installed with a minimum clearance of 6 in. (150 mm) from adjacent combustible material. Clothes dryers listed for installation at reduced clearances shall be installed in accordance with the manufacturer's installation instructions. Type 1 clothes dryers installed in closets shall be specifically listed for such installation. Always follow the manufacturer's specific instructions for the installation of the dryer vent system for your

ECB: 2008-9

Subject: **Proper installation of Type 1 Clothes Dryer vent system will extend dryer life, reduce energy costs and prevent fires.**

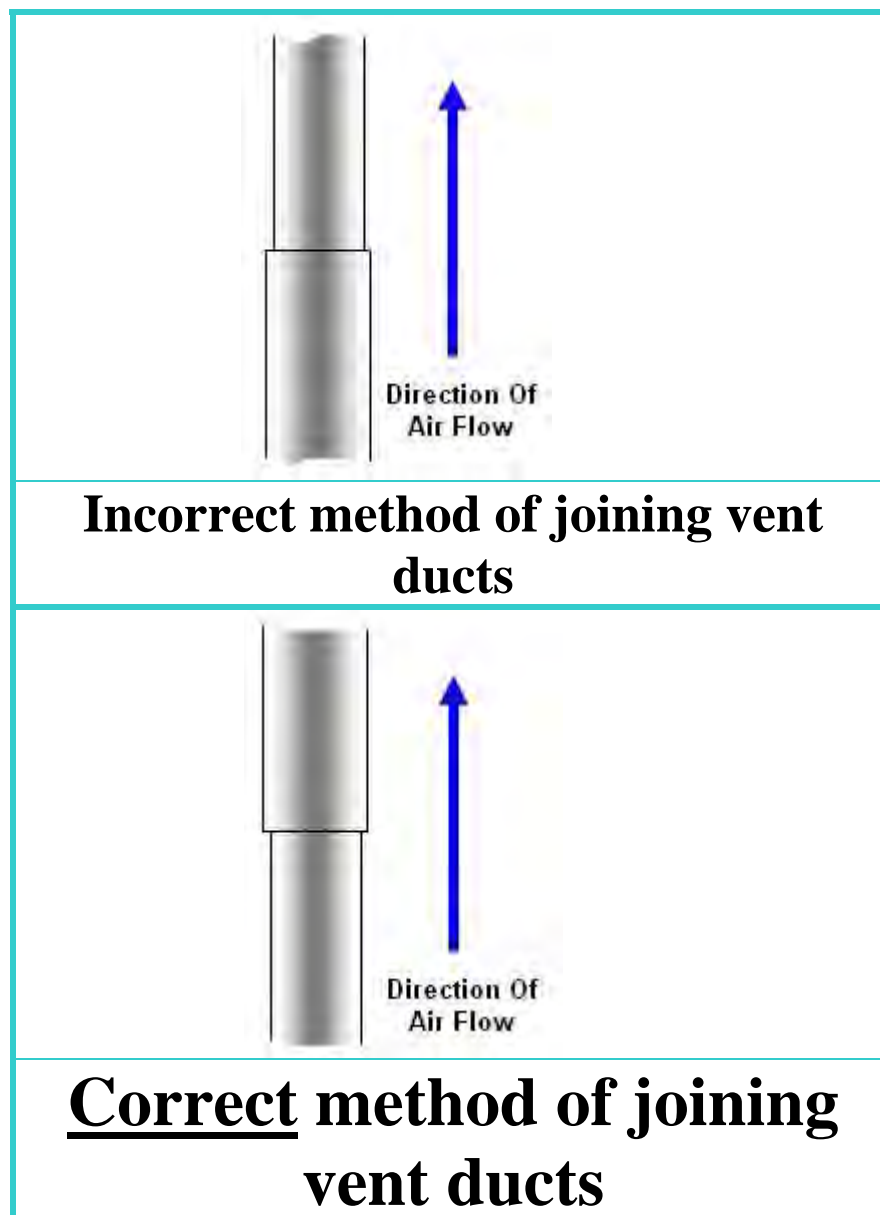
clothes dryer. If you are replacing an old dryer with a new one, do not assume that the previous dryer vent system is adequate for the new dryer that you have just purchased.

2. Since it is not usually known during design the make of Type 1 Clothes Dryer that will be installed the following vent duct installation parameters are recommended:
 - a. The vent duct shall be 4 inch diameter continuous with the most direct route from the dryer to the outside with as few bends in the dryer vent duct. Per the Intentional Mechanical Code the vent duct shall terminate on the outside of the building and shall be equipped with a back draft damper. Screens shall not be installed at the vent termination.
 - b. Make-up air shall be provided for Type 1 clothes dryers in accordance with the manufacturers' installation instructions.
 - c. A clothes dryer vent duct shall not be connected into any vent connector, gas vent, chimney, crawl space, attic, or other similar concealed space.
 - d. The maximum distance from the dryer to the outside wall should not exceed 25 feet. If you need to run in excess of 25 feet you should install an auxiliary dryer vent fan.
 - e. A 90 degree elbow is equivalent to 5 feet of duct.
 - f. A 45 degree elbow is equivalent to 2½ feet of duct. Note, a dryer vent system that has two 90 degree elbows and two 45 degree elbows and travels 6 feet up a wall to exhaust outside of the home is the equivalent of 21 feet of straight dryer vent duct.
 - g. Vent ducts shall be constructed of rigid metallic material. Transition ducts used to connect the dryer to the vent duct shall be listed for that application or installed in accordance with the clothes dryer manufacturer's installation instructions, see I below. Always support hanging vents at each joint with strapping. Secure vent piping.
 - h. Any vent duct which is buried in walls or ceiling cavities shall be metal.



Subject: Proper installation of Type 1 Clothes Dryer vent system will extend dryer life, reduce energy costs and prevent fires.

- i. Seal joints using a metal film tape - do not use "duct" tape or sheet metal screws, rivets or any fastener that protrudes or extends into the vent duct to catch lint or reduce the efficiency of the exhaust system.
- j. For designers it is recommended to specify any part of the dryer vent that passes through an unheated area to be insulated. Otherwise, condensation will form inside the duct, snare the lint and greatly increase lint buildup.
- k. When joining duct sections ensure that the end farthest from the dryer goes inside the next portion of duct. This will help to prevent lint build-up at joints and allows the air to move through the duct as freely as possible.



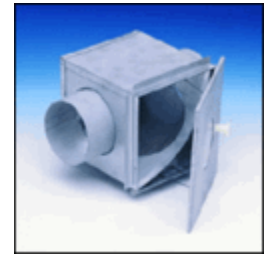
ECB: 2008-9

Subject: **Proper installation of Type 1 Clothes Dryer vent system will extend dryer life, reduce energy costs and prevent fires.**

1. Ensure that the duct running directly out of the back of the dryer is not crushed when the dryer is moved back into its permanent position. A good alternative to using elbows and flexible piping when connecting to the vent on the back of the dryer is to use a "tight fit" dryer vent.



- m. If there is excessive lint, consider installing a secondary lint trap.



3. HQUSACE point of contact for this ECB is Gary Bauer, 202-761-0505. Special thanks to Jim Snyder, SWT, for his review and technical support.

//S//

James C. Dalton, P.E.
Chief, Engineering and Construction
Directorate of Civil Works