

- |    | United States | Canada        |
|----|---------------|---------------|
| A. | 16" (410 mm)  | 18" (460 mm)  |
| B. | 8" (200 mm)   | 8" (200 mm)   |
| C. | 40" (1020 mm) | 40" (1020 mm) |
- NOTE: Measuring from the door opening of the insert to the fireplace opening adds 3-1/2" (90 mm) to the total depth of the hearth protector.

*Unless your fireplace and hearth are constructed over a dirt floor (or unpainted concrete over dirt) you must use a floor protector that satisfies the above requirements.*

Floor protectors must extend at least 8" (200 mm) from the side of the door opening, making the protector 40" (1020 mm) wide. In addition, the floor protector must extend from the front door opening a minimum of 16" (410 mm) in the United States and 18" (460 mm) in Canada.

The approved construction of a floor protector calls for 24 gauge galvanized sheet metal covered with a listed floor protector material that is at least 7/16" (11 mm) thick (such as Wonderboard® or Durock®). The floor protector may be covered with a non-combustible decorative material if desired.

Custom-made floor protectors may be used if they offer the same protection as the approved floor protector described in the preceding paragraph, which in testing was found to have a standard K value of 0.84. Custom-built floor protectors must have a K value equal to, or less than, 0.84, meaning that heat will transfer at the same rate or more slowly than the tested standard.

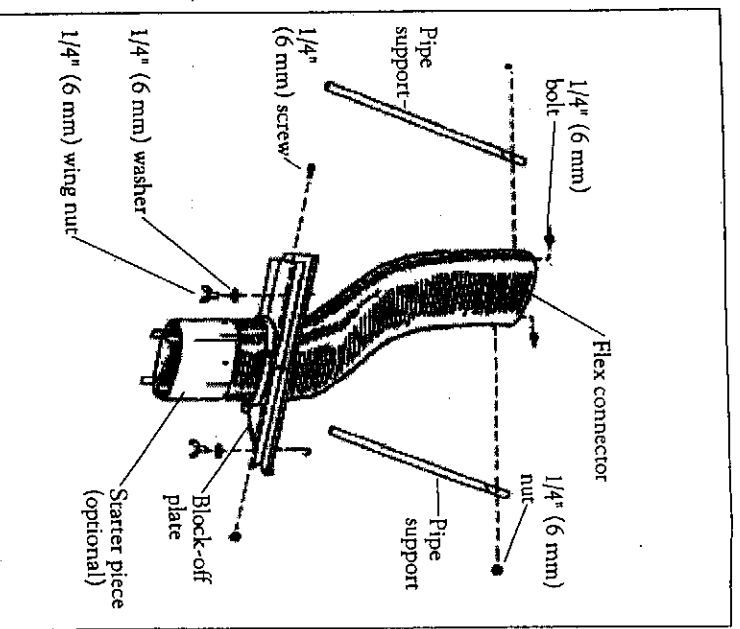
To calculate the thickness required for an alternate material to result in a K value of 0.84, first determine the alternate material's K factor. This information should be available from your local building supply yard. Then, calculate the following formula:

$$\frac{(K \text{ factor of alternate material})}{(0.84)} \times (7/16" [11 \text{ mm}]) = (\text{Required thickness of alternate material})$$

Let's use brick as an example, since it is a commonly used hearth material. Its K factor is 5.0.

$$\frac{(5.0)}{(0.84)} \times (7/16" [11 \text{ mm}]) = 2.6" (65 \text{ mm})$$

NOTE: Any floor protector thicker than 9/16" (14 mm) will require elevating the firechamber on a solid, approved floor protector to provide enough clearance for the door to open. This in turn will require a higher fireplace opening to permit installation of the fire chamber.



Components of the Flex Connector System.

### The Chimney Connector

Connect your WinterWarm Fireplace Insert to the chimney flue with a "positive flue connection." Such a connection provides a direct passageway for smoke and exhaust gases leading from the flue collar of the WinterWarm to the first chimney lining tile. Positive flue connections are required in many areas before an installation can be approved.

The chimney connector itself should have a minimum cross-sectional area of 50 square inches (320 square centimeters), equivalent to an 8" (200 mm) diameter opening, and must be 24 gauge or heavier.

### Sealing Requirements

It is important to seal off the flue completely from the room air for proper operation of your WinterWarm. There are three ways to do it:

1. Install a Vermont Castings' Flex Connector system;