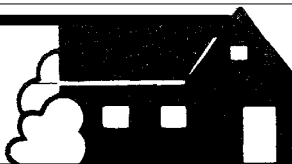


On the House

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Flue Insulation

Q. What is the safe and effective way to insulate or weatherstrip around a prefabricated insulated flue at the point that it enters the attic?

A. If the flue is rated for zero clearance, anything can be used. If the flue is rated at 1" clearance to combustible materials, it means exactly that — there must be a 1" air space around it.

The air flow is necessary to prevent a hot spot in the flue at the ceding or at some other point. The flue usually is supported by a factory-made flange that holds it in the center of the framed opening. If this flange is perforated, the perforations must not be blocked.

Fiberglass insulation is considered a combustible material because of the resin binders used. Many manufacturers have an insulated thimble rated by Underwriters Laboratories that can be used.

The insulation should not be placed against the flue above the thimble. If the flue is not rated for zero clearance or does not have an approved insulated thimble, I do not think it should be used north of the Mason-Dixon line (which is the only place it is an issue).

Fireplace Safety

Q. What safety and fire codes apply to fireplace inserts? What kind of clearances apply? Can we believe the manufacturers' literature?

A. Underwriters Laboratories lists fireplace inserts for use with masonry fireplaces and with some specific models of prefabricated fireplaces. If the fireplace meets the codes before the installation of an insert, it should meet them afterward as well.

One exception might be when the insert projects into the room from the original opening, meaning that the hearth may not be large enough. The normal requirement is for a non-combustible hearth that extends at least 16" in front of the fireplace and at least 8" past each side of the opening. The hearth should extend the full 16" in front of the insert as well. Of course, local codes, if any, take precedence.

If the insert is not UL listed, you buy it at your risk — and your fire insurance carrier may not cover any damage resulting from its use.

Product-liability suits have made certain that, at a minimum, the specifications section (clearances, ratings, etc) of the manufacturers' literature is accurate.

Basement Drainage

Q. Is there any danger in connecting a cellar floor drain into a perimeter drain? When is a subfloor drain called for? Should it be separately daylighted?

A. Some codes define the cellar floor drain as a sanitary outlet and require it to be connected to the sanitary sewer. Other codes prohibit connecting floor drains to the sanitary system. Your local code will govern.

The greatest danger in connecting the floor drain to the perimeter drain is that if the outlet to the perimeter tile is ever blocked, it will flood the cellar. The downspouts should never be connected to the perimeter drain for the same reason.

A subfloor drain is used where the ground-water table is high enough to allow water to percolate upward into the fill under the floor, possibly creating hydraulic pressure under the slab as a result. If the water table is not that

high and the perimeter tile is at or below the bottom of the footing, the subfloor drain should not be necessary.

However, some people believe in wearing

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both a belt and suspenders. If the water table is high enough to really require a subfloor drain, a cellar should not have been built there at all.

Instantaneous Water Heaters

Q. Do the instantaneous (on-demand) water heaters actually save any money?

A. As usual in this business, it depends. If hot water is used fairly frequently and in moderate quantities during the day, the savings in operating costs may not offset the higher cost of installation. However, if the demand is irregular and there is only an occasional need for large quantities of hot water, the answer is definitely yes.

Similarly, a half-bath located some distance from the utility area would not require two water pipes or waste a quantity of water to empty the pipes before getting hot water. A unit large enough to supply a shower would be considerably more expensive to install and might not be economical, depending on the source of hot water for the rest of the house.

Another advantage is that the instantaneous heaters are either electric or direct-vent. No house air is used for combustion, thereby decreasing the overall infiltration of the house.

A major factor to consider is the fuel used by the demand heater as compared to that used by a storage heater. If large quantities of hot water are used, the cost per Btu may override the savings in storage losses.

In some cases, the instantaneous heaters are being used to supply hydronic heating as well as domestic hot water. The jury is still out on

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that, depending considerably on the water quality.

Again, in a vacation cabin used only occasionally, there could be a considerable savings in initial cost over a conventional water heater plus a heating boiler. Continued use for hydronic heating may significantly shorten the life of the demand heater, however. •