QUESTIONS & ANSWERS

Groundwater Heat Pumps

Q: Several well-water heat pump manufacturers claim COP's of 3 to 6 and EER's of 13 to 17. But the Air Conditioning and Refrigeration Institute (ARI) list tested COP's of 2.6 to 3.4 and EER's of 9 to 14. Who's right? —*Harold W. Murray, Bowie, Md.*

A: You can't tell without additional data describing the testing conditions, according to Atlanta-based engineer Don Abrams, author of "Ground Coupled Heat Pumps" [September 1985]. The building's heating and cooling loads and incoming water temperature all affect efficiency measurement. Another factor is the energy required to pump the water. This could, by itself, account for efficiency differences on the order reported. ARI engineer David Feron says that for groundwater-source heat pump efficiencies to compare with ARI figures, testing has to be done in accordance with ARI standard 325-85.

A Doctor in the House

Q: Where can I get information on how to get started in house doctoring and find sources for house-doctoring equipment?—*Phil Kalvelage, Dubuque, Iowa*

A: First, learn all you can about what house doctoring is and how it works through magazine articles such

as ours ("House Doctors With Better Medicine," September 1984, and "Energy Help for Builders," September 1985). Attend house-doctoring workshops held around the country and at builders' conferences.

House-doctor franchises are available through Princeton Energy Partners [P.O. Box 1221, Princeton, NJ 08540] and Watt Count [7065 Moores Lane, Franklin, TN 37046]. Watt Count supplies certain equipment, marketing, training, and evaluation of testing and a guarantee to consumers. A Watt Count franchise costs between $20,000 and $50,000, depending on the territory.

Products and marketing support services for house doctoring are also offered by Retrotech USA, Inc., [6215 Morenci Trail, Indianapolis, IN 46268] and Enercorp [2 Donald St., Winnipeg, Manitoba, Canada R3L 0K5]. Many manufacturers sell specific products used in the house-doctoring approach. You can find them listed in *The Spec Guide* available from the publishers of *Progressive Builder*. Also keep an eye on the new product department and the ads in this magazine.

Low-e Retrofit Products

Q: Are any low-e coated products available for retrofitting existing windows?—*Ed Swiderski, Pawtuckett, R.I.*

A: Two low-e window films and one inside storm window. The films are applied to the inside of the window with a squeegee, using water as the adhesive. These "winter films" or "all-weather" films are tuned to retain winter heat and reject some outside heat gain. They probably make the most sense in houses north of the Mason-Dixon line. Scotchtint Plus All Season claims to reduce heat gain by 60 percent and wintertime heat loss by 40 percent. It also blocks 98 percent of UV light that fades furnishings [3M Co., P.O. Box 33600, St. Paul, Minn. 55133]. The second is Gila River Products' [6615 West Boston St., Chandler, AZ 85226] PWD-5 with roughly similar characteristics. With a winter U-value of .85, this film ups the R-value of a single-pane 1/8-inch window from around .90 to 1.18, a 31-percent increase. What's lost is some useful solar gain and light in the winter due to the film's low transmittance (.55).

To our knowledge, the only low-e retrofit storm window is the Windo-Tite unit. It's an aluminum-framed single window that attaches to the inside of the primary window via swivel clips or sash locks. It has a tested U-value of .408 (R-2.45 for storm plus primary window). Amesbury Industries [21 Water

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