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A Fresh Angle on Clothes Dryer Vents

Recognizing that there can be serious efficiency and safety problems with conventional clothes dryer vents, Rick Harpenau, president of In-O-Vate Technologies (Jupiter, FL), has brought a solution to market. Like most good ideas, the Dryerbox is admirably simple, consisting of an aluminized steel receptacle that installs between 2 x 6 studs (12- or 16-inches on center) directly behind the clothes dryer (see Figure 6). The installer can vent the dryer to a roof jack, sidewall, or down and out to a crawlspace or floor joist system. (Editor's note: we stress that the terminal exhaust point on clothes dryers should always be outdoors.)

"The recessed connection allows the clothes dryer to be installed right up against the wall, which makes installation easier, saves a square foot of living area (5 x 28 inches), and makes the laundry room appear larger," says Harpenau. "But more importantly, it eliminates bends in the flex exhaust hose that accelerate lint accumulation and can really hurt the efficiency of the dryer and-worse yet--create a fire hazard."

Harpenau tells EDU that zigzags in the exhaust hose and the accompanying lint built-up can substantially increase dryer run time. "Our in-house tests, comparing similar loads of clothes, which were weighed for moisture content after each test, showed that the drying time was 11% longer when the exhaust hose was bent and partially obstructed," he says. "We estimate that a typical household could save as much as $60 a year in electricity by installing a Dryerbox and eliminating those problems."

According to the Fire Analysis and Research Division of the National Fire Prevention Association, clothes dryers caused 14,100 home fires in the US in the latest statistical year, resulting in seven deaths and over $65 million in property damage. The leading cause of clothes dryer fires was lack of maintenance (lint build-up in the exhaust system). Harpenau says that lint accumulation and reduced exhaust airflow feed on each other to provide conditions that are ripe for a fire. "Lint is highly combustible and decreased airflow causes overheating of the exhaust environment, causing excessive cycling of the high temperature limit switch and eventual failure," he explains. "The unnatural compressed state of the flex hose reduces the aperture of the pipe by about 18%. When you include a couple 90-degree bends, you end up with a substantial reduction in airflow and efficiency loss in exhausting that lint-laden air."

The Dryerbox measures 21 x 12½ x 5 1/8 inches and weighs about four pounds. The top port measures 4 1/8 inches and has a very slight oval shape. The distance from the nailing flange to the rear of the box is 4 ¼ inches. In a 2x6 wall, this leaves room behind the box for a layer of 1¼ -inch thick insulating sheathing to act as thermal or acoustical insulation. Because of its depth, the Dryerbox will only work with 2 x 6 framing. But even in houses that have 2 x 4 framing, many designers and builders now spec a 2 x 6 wall behind the washer and dryer wall due to the amount of mechanicals that exist in this one wall.

In a few months, Harpenau expects to have 3 ½-inch version of the Dryerbox on the market for homes that have a 2 x 4 wall behind the dryer. The Dryerbox retails for $19.95.

-- By Don Best