Air Lock Dryer Vents

What are Air Lock Dryer Vents?

Dryer vents, which expel hot moist air from the dryer to the exterior, are critical for the safe operation of a dryer and indoor air quality of a home but can also be a significant source of air leakage. An air lock or vent cap helps prevent outside air from entering the home when the dryer is not in operation.\(^1\) This will help reduce air leakage to the exterior and the overall heating load in the home.

How to implement Air Lock Dryer Vents

Improper venting can lead to condensation problems and mildew, lint buildup that can pose a serious fire risk, and toxic gasses inside the home. Consult local building codes before installing a dryer vent for any requirements or restrictions.

Dryer vents should terminate outdoors away from any other vents to avoid potential hazards including the accumulation of flammable fabric lint and the diffusion of humid air into the home that promotes mildew growth and wood rot. Dryer vents that terminate in garages or crawl spaces are equally susceptible to these hazards and likely do not conform to building codes. Installing the dryer vent on the roof with adequate flashing is a good way to expel the dryer’s exhaust away from any of the home’s windows, vents, or other openings. Select roof vent caps that are one piece, include a screen to keep out pests, and a damper that prevents outside air from entering.\(^2\) One concern of roof vent caps is that they may cause lint to build up on the roof. If possible, position the vent cap where it is least visible. Wall dryer vent caps cannot be used on a roof as they are not be able to adequately keep out rainwater in that location. Wall dryer vent caps with a screen and louvers are preferable.\(^3\)

Vents should be composed of smooth metal ducts that are non-flammable and easy to work with.\(^4\) Use clamps instead of screws when installing the dryer vent because the screws can catch

---

lint and cause problems over time. Seal any seams with foil faced duct tape that can be found at HVAC wholesale distributors. In colder climates insulate the outdoor segments of the vent with a minimum of 3 inches of fiberglass insulation.\(^4\)

Avoid running dryer vents through soffits (the underside of the ceiling\(^5\)), as humid air tends to leak into the attic. Under no circumstances should an interior vent be installed as they substantially reduce a home’s indoor air quality, pose a fire and health risk, and can cause wood rot.\(^6\)

In newer homes, clothes dryers tend to be located in laundry rooms and small closets away from exterior walls requiring more piping and bends to reach outside. Accessing the ducts in these homes becomes more difficult and creates more places for lint to collect and pests to hide. Annual dryer inspections can identify potential dangers including pest problems, mildew growth, and fire hazards.\(^7\)

**Benefits**

Air lock dryer vents improve the efficiency of dryer ducts, reduce air leakage, and prevent fires, indoor air contamination, and other health risks, and protect indoor air quality.

**Cost**

Depending on features, dryer vent caps can range from around $20 to over $100.

**Resources**

Chimney Safety Institute of America – Clothes Dryer Venting Safety

Carter, Tim. Ask the Builder – Clothes Dryer Vents
[http://www.askthebuilder.com/B228_Installing_a_Clothes_Dryer_Vent.shtml](http://www.askthebuilder.com/B228_Installing_a_Clothes_Dryer_Vent.shtml)

The Natural Handyman

---


