
FYI - DRYER DUCT SAFETY

- Clothes dryers evaporate the water from wet clothing by blowing hot air past them while they tumble inside a spinning drum. Heat is provided by an electrical heating element or gas burner. Some heavy garment loads can contain more than a gallon of water which, during the drying process, will become airborne water vapor and leave the dryer and home through an exhaust duct (more commonly known as a dryer vent).
- **A vent that exhausts moist air to the home's exterior has a number of requirements:**
- It should be connected. The connection is usually behind the dryer but may be beneath it. Look carefully to make sure it's actually connected.
- It should not be restricted. Dryer vents are often made from flexible plastic or metal duct, which may be easily kinked or crushed where they exit the dryer and enter the wall or floor. This is often a problem since dryers tend to be tucked away into small areas with little room to work. Vent hardware is available which is designed to turn 90° in a limited space without restricting the flow of exhaust air. Airflow restrictions are a potential fire hazard.
- One of the reasons that restrictions are a potential fire hazard is that, along with water vapor evaporated out of wet clothes, the exhaust stream carries lint – highly flammable particles of clothing made of cotton and polyester. Lint can accumulate in an exhaust duct, reducing the dryer's ability to expel heated water vapor, which then accumulates as heat energy within the machine. As the dryer overheats, mechanical failures can trigger sparks, which can cause lint trapped in the dryer vent to burst into flames. This condition can cause the whole house to burst into flames. Fires generally originate within the dryer but spread by escaping through the ventilation duct, incinerating trapped lint, and following its path into the building wall.
- The dryer duct should be installed with the direction of airflow from female to male ends to prevent lint catching on the duct ends and building up in the ductwork, obstructing the airflow and causing a potential fire hazard and increased drying time.
- The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet from the dryer location to the wall or roof termination. The maximum length of the duct shall be reduced 2.5 feet for each 45-degree bend, and 5 feet for each 90-degree bend. The maximum length of the exhaust duct does not include the transition duct.

The ideal dryer vent consists of:

- The transition duct. This is what connects the dryer to the wall connection. This should **not** be lightweight foil or white vinyl flex, which are both flammable materials. This should be 4" aluminum flex duct with solid metal connectors. There should be solid pipe in the wall or floor to connect to, using 4" hose clamps
- **Use solid metal pipe and elbows (BEST!)** Or flexible metal pipe (Acceptable, but does not allow the free airflow of a smooth walled pipe)
- **Never use flexible foil or white plastic ducting** (These do not hold their shape, break easily and catch lint in the accordion folds. They are also flammable)
- The tape used to secure the solid pipe joints should always be foil tape made for aluminum pipe. Do **not** use duct tape for any joints. Duct tape dries out quickly and literally falls off the ductwork, causing duct joints to fail
- The main ductwork should be solid aluminum with solid aluminum elbows (Best) or **flexible metal** ductwork (acceptable) NEVER use flexible thin foil or flexible white plastic duct, these are both flammable materials and not for underfloor use!
- Screws should never be used to hold the joints together as they tend to collect lint and gradually create blockages to the ductwork. Only use metallic foil tape made for this purpose.

- The ductwork should be supported along the entire length so there are no sagging areas which tend to collect lint and clog.
- Keep exhaust duct as straight and short as possible. Exhaust systems longer than the manufacturer's recommendations can extend drying times, affect appliance operation and may collect lint. These recommendations may vary somewhat for different brands and should be referenced when installing the dryer.
- The exhaust hood on the outside of the house should have a swing out damper to prevent backdrafts and entry of pests and wildlife. Never use an exhaust hood with a magnetic damper as this can get stuck closed and block the airflow.
- The hood should have at least 12 inches of clearance between the bottom of the hood and the ground or other obstruction. This will allow the air to flow freely out of the hood and not create back pressure in the duct, which dramatically reduces the effectiveness of your dryer.
- The hood should match the duct sizing. i.e. a 4" duct should have a 4" duct hood, (measured from the wall plate to the end of the duct hood) Many duct hoods are 2 ½", which only allows the flapper to open 2 ½" (this is not what you want on a 4" duct!)
- The hood opening should point down so the flapper works properly.
- Never install a screen over the exhaust outlet as this will quickly catch lint and block the airflow.
- **And most importantly...Clean your dryer duct regularly!**