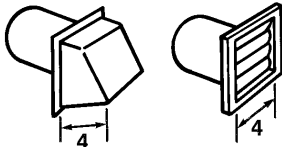


# Venting Specifications for Commercial Laundry— General Information for Dryer Installation

Minimizing the length of ductwork and the number of turns in an exhaust system minimizes the potential for lint to settle and accumulate in the exhaust duct and in the interior cabinet of the dryer. Refer to your specific dryer installation instructions for recommended duct length.

## 1. Wall Caps and Other Terminations

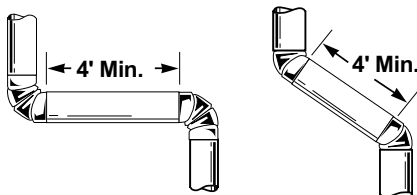
All exhaust systems must be terminated in a manner that will prevent backdrafts from outside as well as prevent birds or other wildlife from building nests or taking refuge in the ductwork. The wall cap should present minimal resistance to the flow of exhaust air and should require little maintenance to prevent clogging. **The preferred termination is either a dampered wall cap with a 4"-wide opening or a movable louvered wall cap.** A 2-1/2" wall cap restricts airflow and increases drying time. Wall caps must be installed with the opening down, and installed at a minimum of 12" above ground level or any other obstruction. Special consideration should be given in areas where heavy snow drifts are likely to occur to ensure the wall cap does not become obstructed. Other types of terminations, such as roof vents or louvered plenum chambers, are acceptable providing **they are equivalent to the 4" dampered wall cap.** They must contain at least 14 square inches of ventilation area and afford adequate protection against backdrafts.



**Exhaust ducts must not contain screens or other filtering devices which may become clogged with lint.** The dryer exhaust must not terminate in an ordinary chimney, under an enclosed house floor or crawl space, or into an attic, since any accumulated lint could create a fire hazard and the moisture could cause damage. **Never terminate the exhaust into a common duct or plenum with a kitchen hood exhaust since the combination of grease and lint could create a fire hazard.**

## 2. Separation of Turns in the Ductwork

All turns in the exhaust system, external to the dryer itself, including the distance from the last turn to the dampered wall cap, should be separated by at least 4' of straight metal duct. This will reduce the added resistance which results from rapid changes in airflow direction inside the ducting. If two turns must be closer than 4', deduct 10' from the maximum lengths.



## 3. Treatment of Turns Other Than 90°

One turn of 45° or less may be ignored. Two such turns should be treated as one 90°. Each turn over 45° should be treated as one 90°. Refer to specific dryer installation for maximum duct lengths and for allowable number of 90° bends. In determining the number of turns for an exhaust system, one 90° turn must be added for the bend made inside the cabinet whenever the dryer is exhausted through the right, left or bottom. NOTE: Some dryers are limited to only rear exhausting. Consult the installation instruction for the type of dryer being used.

## 4. Use of Flexible Metal Ducting

**We recommend the use of 4" diameter rigid metal ducting for permanent and transition venting. Permanent venting is from the wall, floor or ceiling to the outside. Transition venting is from the dryer to the wall, floor or ceiling.** If all-rigid metal ducting cannot be used then flexible all-metal ducting may be used, if the following precautions are adhered to:

- Use only 4" diameter all-metal ducting.
- It must not be allowed to collapse, kink or sag when the dryer is in its final installed position. Required turns in the exhaust system should be made with rigid elbows.
- Use the shortest duct length possible. Don't exceed the maximum allowable duct length specified in the installation instructions.
- Stretch the duct to its maximum length.
- To reduce the risk of fire, **NEVER USE PLASTIC OR OTHER COMBUSTIBLE DUCTWORK.**

NOTE: In special installations where it is impossible to use all-rigid metal or flexible all-metal duct for transition venting, UL Listed clothes dryer transition duct may be used. The following additional precautions should be followed if this type of ducting is used.

- Never use transition duct beyond the wall, ceiling or floor inside the dryer.
- Avoid resting the duct on sharp objects.

Please refer to the installation instructions for additional exhaust information.

## 5. Sealing of Joints

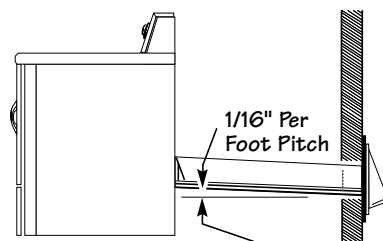
All duct joints should avoid leaks. Duct joints should be made air and moisture tight by wrapping the overlapped joints with duct tape. The male ends of each section of duct should point away from the dryer.

**Do not assemble the ductwork with screws or other fasteners that extend into the duct. They will serve as a collection point for lint.**

## 6. Water Condensation

Condensation in a dryer exhaust system is caused by the moisture in the exhausted air contacting the cold inner surfaces of the ductwork. Condensation, which forms at the beginning of the drying cycle, will dissipate quickly after the ductwork becomes heated. If the ductwork passes through an area which keeps it cool throughout the drying cycle, considerable condensation within the duct can be expected. This can result in rapid accumulation of lint in the ductwork.

Ductwork which runs through an unheated area or is situated adjacent to an air conditioning duct should be insulated to avoid such condensation problems. Joints should be tight to avoid leaks and, where feasible, the duct should be dropped 1/16" per foot toward the termination.



## 7. Accessibility for Cleaning

Since it may be necessary from time to time to remove lint from the inside of the ductwork, it is important that the exhaust system be installed with a provision for periodic inspection and cleaning. Some provision should be made for access to turns and straight runs of duct installed in an enclosed area, such as above plastered ceilings. Special consideration should be given to the amount of maintenance required for roof caps on vertical installations, since the user cannot be expected to make frequent inspections or cleanings.

### Single Family-Type Dwellings

For more detailed information, refer to the installation instructions for the specific dryer model selected.

### Mobile or Manufactured Home Installation

Gas Dryer installation must conform with local Gas Codes and with CGA B149.1 or B149.2 (Installation code for Gas Burning Appliances and Equipment).

All Dryer Installations must conform to Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 32-80. The dryer **MUST** be exhausted to the outdoors with the termination securely fastened to the mobile home structure. The exhaust **MUST NOT** be directed underneath the mobile home.

# Multi-Unit Dryer Installation

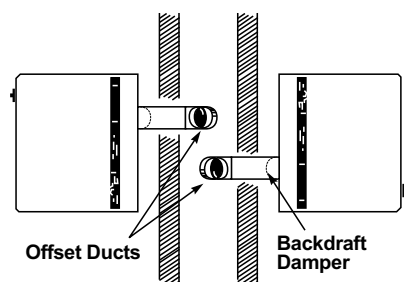
## Multi-Unit Systems

Accurate installation of a good dryer exhaust system in multi-family construction is especially important. The restrictions applied by this type of construction should cause the planner to be more concerned than in single-family construction.

When the length of the exhaust duct or the number of turns in the system exceed the maximum limitations recommended by the dryer manufacturer, the planner must seek an alternate solution. One option is to install a common ducting system that is capable of handling the discharge of several dryers at various points along the system.

The scope of the subject is far too broad to be extensively described within this publication. Sufficient information is presented, however, to make the planner aware of the importance of special attention to the subject. Two types of common ducts are generally used: (1) the common dryer exhaust stack with an auxiliary roof fan and (2) the chimney exhaust.

**Stack and chimney designs and exhaust fans must meet all local code requirements.** It is suggested that professional engineering counsel should be sought in these matters. Dryers should be installed as close to the common duct as possible. Dryer discharges must be offset to prevent one unit from exhausting directly into another. **See Illustration No. 1.**



Plan View

Illustration 1

# Venting Specifications for Commercial Laundry

## Common Fan Assisted Dryer Exhaust Stack (Auxiliary Roof Fan Systems)

The stack outlet (See Illustration No. 2) must be fitted to a continuous duty exhaust fan rated to handle the stack air volume for the total number of dryers on the system. Periodic cleaning of the exhaust fan is necessary to maintain efficient operation.

The bottom of the stack should contain a barometric damper to prevent drawing air through the dryers not in use, and a lint clean-out access door. The damper should be adjusted to just open with all dryers on and the continuous duty exhaust fan operating.

The weighted damper in the individual dryer ducts should be adjusted so that it will just close with all dryers off and the continuous duty exhaust fan operating. The fan should be running at all times. The duct system from each individual dryer must meet the turn and length requirements as noted on next page.

The required stack diameter for air volumes of 200 CFM to 3,000 CFM can be determined from Illustration No. 4 and calculations on the chart to the bottom right.

## Chimney Exhaust System

The chimney must be fire resistant and large enough to accommodate the volume of air exhausting from the dryers. Consideration must be made for lint buildup, excessive chimney pressures, backdrafts and other technical factors which will influence the performance and the safety of the system. A lint clean-out access door should be included at the bottom of the chimney. Each dryer duct must have a 4" diameter backdraft damper, adjusted so that it will just close with the dryer inoperative. This will prevent the exhaust and lint of one dryer from going into another dryer and its room. The duct system for each individual dryer must meet the turn and length requirements as noted on next page.

### Use the specs for a 2-1/2" exhaust hood for proper dryer performance.

Include the 90° elbow and all ducting in the chimney in your calculations.

The 22" (minimum) of vertical ducting in the chimney reduces back pressure and is required for proper dryer performance. See Illustration No. 3.

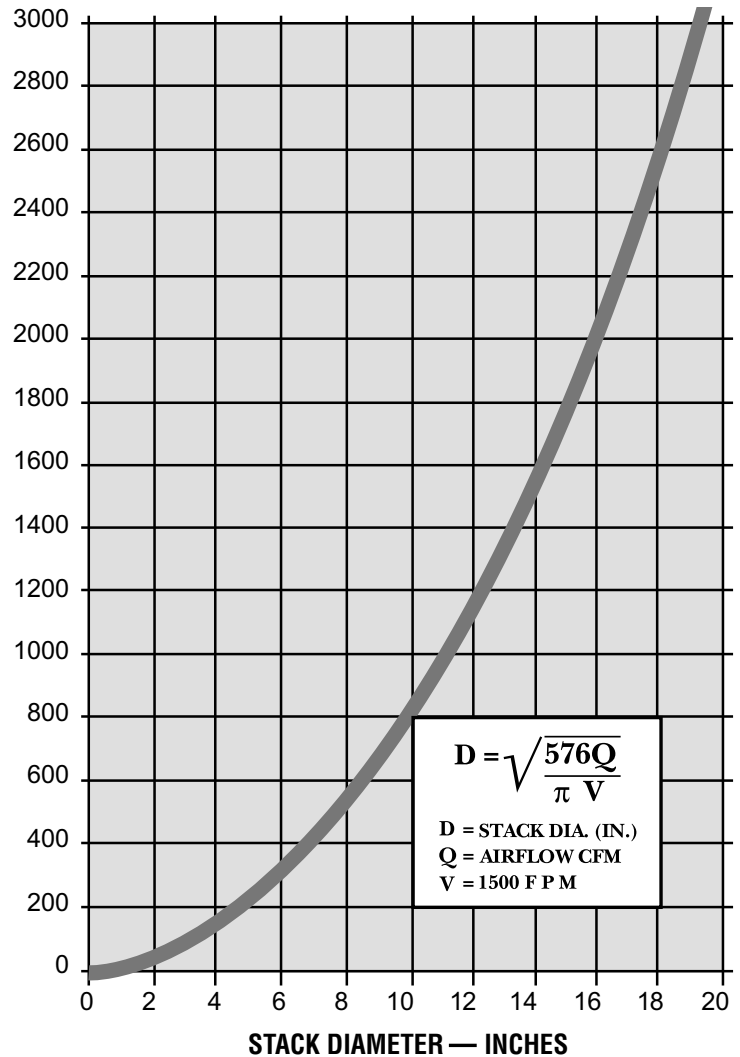


Illustration 4

### How To Use Illustration No. 4

Airflow value: 150 CFM.

Assume installation contains eight (8) dryers operating at the same time. Stack air volume (Q) = 150 x 8 = 1200 CFM (Q) is air volume that stack must be capable of handling in the event all dryers are running at one time. Therefore, the stack diameter must be:

$$D = \sqrt{\frac{576Q}{\pi V}} = \sqrt{\frac{576 \times 1200}{\pi \times 1500}} = \sqrt{147} \approx 12 \text{ inches}$$

or read directly from Illustration No. 4 by placing 1200 on the vertical scale and reading 12 on the horizontal scale. The stack diameter should be 12 inches to handle the required volume of air and the continuous duty exhaust blower should be rated to handle this volume while maintaining an air velocity of 1500 Ft./Minute.

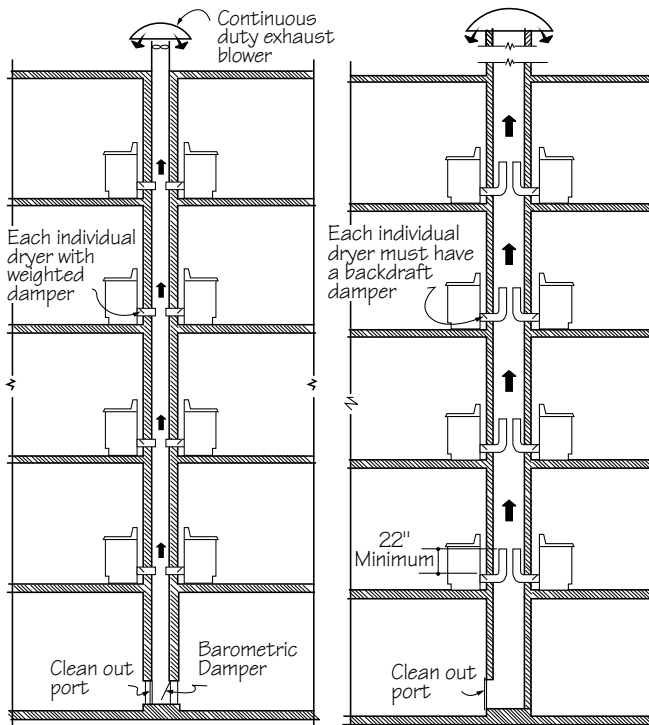


Illustration 2

Illustration 3

# Venting Specifications for Commercial Laundry

## Dryer Exhausting Information

For complete information see installation instructions packed with dryer.

**Important Note:** GE Kit Number 14-A018 needed when converting rear exhaust to bottom or side (on 5.7 extra-large capacity models only).

### Ducting Materials

For best performance, this dryer should be vented with 4" diameter all-rigid metal exhaust duct. If "all-rigid metal" duct cannot be used, then "flexible all-metal" venting can be used, but it will reduce the maximum recommended duct length.

The following kit or parts are available from your local service organization.

Kit WX8X75—7' aluminum duct and 4' hood, short tail.

(OR individual parts):

WX8X65 7' aluminum flex duct only

WX8X58 4' clamps (2)

WX8X67 4' exhaust hood

See installation instructions for complete information.

### Exhaust length calculation:

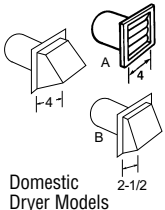
1. Determine the number of 90° turns needed for your installation. If you exhaust to the side or bottom of dryer, add one turn.
2. The maximum length of 4" rigid (aluminum or galvanized) duct which can be tolerated is shown in the table. The maximum lengths for flexible ducts are less than for rigid duct. See table in installation instructions. A turn of 45° or less may be ignored. Two 45° turns within the duct length should be treated as a 90° elbow. A turn over 45° should be treated as a 90° elbow.

**Exhausting the dryer to the outside is strongly recommended** to prevent large amounts of moisture and lint from being blown into the room. Gas dryers or any dryer located in a closet **must** be exhausted to the outside.

**Caution:** For personal safety do not terminate exhaust into a chimney, under any enclosed house floor (crawl space), or into an attic, since the accumulated lint could create a fire hazard or moisture could cause damage. Never terminate the exhaust into a common duct or plenum with a kitchen exhaust, since the combination of lint and grease could create a fire hazard.

Exhaust ducts should be terminated in a dampered wall cap to prevent back drafts, bird nesting, etc. The wall cap must also be located at least 12" above the ground or any other obstruction with the opening pointed down. Other terminations, such as louvered wall boxes, are acceptable provided they are equivalent to a 4" opening dampered wall cap.

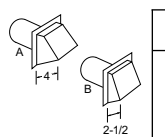
### Dryer Exhausting Information—Use Metal Duct Only Vertical and Horizontal Ducting



Domestic Dryer Models	Number of 90° Turns	Best Performance			
		Maximum Length of 4" Dia. Rigid Metal Duct		Maximum Length of 4" Dia. Flexible Metal Duct	
		Exhaust Hood Type		Exhaust Hood Type	
		A 4" Opening	B 2-1/2" Opening	A 4" Opening	B 2-1/2" Opening
7.0 and 6.0 Capacity Models all Electric Dryers	0	90 ft.	60 ft.	55 ft.	45 ft.
	1	60 ft.	45 ft.	40 ft.	30 ft.
	2	45 ft.	35 ft.	30 ft.	20 ft.
	3	35 ft.	25 ft.	20 ft.	15 ft.
7.0 and 6.0 Capacity Models all Gas Dryers	0	90 ft.	60 ft.	55 ft.	45 ft.
	1	60 ft.	45 ft.	40 ft.	30 ft.
	2	45 ft.	35 ft.	30 ft.	20 ft.
	3	35 ft.	25 ft.	20 ft.	15 ft.
5.7 Capacity Electric and Gas Dryers	0	60 ft.	48 ft.	30 ft.	18 ft.
	1	52 ft.	40 ft.	22 ft.	14 ft.
	2	44 ft.	32 ft.	14 ft.	10 ft.
	3	32 ft.	24 ft.	—	—
	4	28 ft.	16 ft.	—	—

### Dryer Exhausting Information for Front-Loading Dryer Only

#### Use Metal Duct Only



Front Loading Dryers	Number of 90° Turns	Best Performance	
		Maximum Length of 4" Dia. Rigid Metal Duct	
		Exhaust Hood Type	
		A 4" Opening	B 2-1/2" Opening
Front Loading Dryers	0	60 ft.	48 ft.
	1	52 ft.	40 ft.
	2	44 ft.	32 ft.
	3	32 ft.	24 ft.
	4	28 ft.	16 ft.
Front Loading Dryers	Number of 90° Turns	Best Performance	
		Maximum Length of 4" Dia. Flexible Metal Duct	
		Exhaust Hood Type	
		A 4" Opening	B 2-1/2" Opening
Front Loading Dryers	0	30 ft.	18 ft.
	1	22 ft.	14 ft.
	2	14 ft.	10 ft.

#### Dryer Specifications

##### Exhaust Options:

**Electric:** 4-way via rear, right, left and bottom.

**Gas:** For 5.7 cu. ft. dryers, when viewed from the front of the unit, exhaust 3-way via rear, right and bottom. Dryer is shipped exhausted to the rear.

Exhaust Conversion Kit:  
Order Pub. No. 14-A018.

##### Electrical Requirements:

240V, 3 Wire, 5600W, 24A, 60 Hz  
208V, 3 Wire, 4400W, 22A, 60 Hz

**Gas Requirements:** 120V, 60 Hz, 6 A

**See Pub. No. 49-9963-2 for installation information.**