

ADDENDUM TO INSTALLATION INSTRUCTIONS

>>> IMPORTANT: Problems caused by the improper installations are not covered by the manufacturer's warranty.

>>> IMPORTANT: Undersized and improperly installed duct pipe and/or other ventilation components will cause excessive static pressure (air resistance), that may result in rattling, vibration and air buffeting noises, as well as inadequate ventilation.

1. BUILDING CODES

Kitchen hood/liners should be installed by qualified technicians familiar with state and local building codes.

2. DUCT PIPE & FITTINGS (ELBOWS, TRANSITIONS, ROOF & WALL CAPS)

a.) Use round or rectangular rigid metal duct only. Where possible, use round duct as it creates the least amount of static pressure. **IT IS RECOMMENDED THAT YOU DO NOT USE FLEX DUCT**

b.) All duct sections and fittings, should overlap and be connected with at least 3 - 4 equally spaced screws and wrapped tightly with 2 - 3 layers of Aluminum Foil Metal Duct Tape. This type of duct tape is more durable than traditional cloth duct tape. **DO NOT USE BUTT JOINTS.**

c.) For best air flow, elbows and pipe size transition fittings should not be directly connected to one another. Where possible, always include at least 15 inches of straight pipe between fittings.

3. DUCT PIPE & FITTING SIZES (See Duct Sizing Chart and Area Calculations section on page 3 for more details)

>>> IMPORTANT: The required duct size is indicated by the size of the duct collar on the hood or liner.

>>> IMPORTANT: No portion of any length of duct pipe or fitting should be smaller than the duct collar of the hood/liner. This is very important because any type of restriction anywhere in the ventilation system will cause increased static pressure (air resistance), that may result in rattling, vibration and air buffeting noises, as well as inadequate ventilation.

DUCT RUNS - LENGTH

a.) Configure the ventilation duct run to be as short and as direct to the outside as possible. Minimize the number of elbows and transition fittings used. Complex or long runs should be reviewed by a qualified installer.

b.) No portion of the ducting should be run so that the exhaust air flows **downward**. Since exhaust heat rises, forcing the air to flow downward will cause increased static pressure. As previously mentioned, **improperly installed duct pipe will cause excessive static pressure (air resistance), that may result in rattling, vibration and air buffeting noises, as well as inadequate ventilation.**

c.) Duct runs for 390 CFM hood/liner models should not exceed 20 linear feet with two 90-degree elbows (or four 45-degree elbows), a damper and a roof or wall cap. Longer runs or additional elbows will result in decreased ventilation performance. Each 90-degree elbow is the equivalent of 8 linear feet of duct pipe; each 45-degree elbow is equivalent to 4 linear feet of duct pipe.

d.) Duct runs for 600 – 1200 CFM hood/liner models should not exceed 35 linear feet with two 90-degree elbows and two 45-degree elbows, a damper and a roof or wall cap. Longer runs or additional elbows will result in decreased ventilation performance. Each 90-degree elbow is the equivalent of 6 linear feet of duct pipe; each 45-degree elbow is equivalent to 3 linear feet of duct pipe.

e.) Always run hood/liner ducts to the outdoors. DO NOT terminate a duct into an attic, basement, garage, crawl space under a house, a chimney, other ducting or an enclosed room.

4. DAMPERS

➤➤ **IMPORTANT: DO NOT USE SCREWS TO ATTACH ANY TYPE OF DAMPER AS THE SCREWS MAY BLOCK THE DAMPER BLADES.**

➤➤ **IMPORTANT: DO NOT USE MORE THAN ONE DAMPER IN THE VENTILATION SYSTEM.**

NOTE: Many styles of roof caps and wall caps have built-in dampers. See Roof Caps and Wall Caps section for more detail. Always use carefully crafted, tightly wrapped Aluminum Foil Metal Duct Tape on all connections and physically view and test the damper blades to make certain they are opening and closing correctly. Make sure that the damper blades do not touch the duct walls and that there is no debris blocking the free movement of the damper mechanism. Common things to look for include screws protruding into the blade's path, overspray of paint, plaster and insulation. If using rectangular duct, be sure that all four sides of the duct are on the outside of the damper's duct collar or frame. On hood/liner installations designed to recirculate the exhaust air back into the kitchen, be sure to remove the aluminum damper blade before attaching the duct to the damper frame.

a.) 390 CFM Models

390 CFM models have either a 3.25" x 10" rectangular metal damper attached directly to the hood/liner or a 7" duct collar that requires a 7" damper (sold separately).

b.) 600 – 1200 CFM Models

600-1200 CFM models have either an 8" or 10" round duct collar that requires use of a damper with the corresponding dimension (sold separately).

Damper in Roof Cap or Wall Cap: In ventilation systems utilizing a roof cap or wall cap **with** a built-in damper, do not install an additional in-line damper. **Two dampers are unnecessary and will cause increased static pressure (air resistance), that may result in rattling, vibration and air buffeting noises, as well as inadequate ventilation.**

In-line Damper: In cold weather areas, installing an "in-line" damper may be the preferred type of installation. This is because in-line dampers installed just above the perimeter of the heated space (the ceiling) will reduce the amount of cold air traveling down the duct into the heated space and into the kitchen through the hood/liner. In-line dampers must be installed so that the exhaust air-flow will open the butterfly blades.

Horizontal duct runs: The in-line damper must be installed so that the hinge between the two butterfly blades is **vertical**—the hinge pin must point up and down. Otherwise, because of gravity, the damper's blades will not close and the damper will not prevent backdrafts.

Vertical duct runs: The in-line damper's hinge will be **horizontal** (sideways), which is correct for vertical duct runs. Gravity will help close the damper blades after each use.

Upward slanted duct runs: The in-line damper's hinge must point to the top and bottom sides of the duct. In his position, gravity will help close the damper blades after each use. Otherwise, because of gravity, the damper's blades will not close and the damper will not prevent backdrafts.

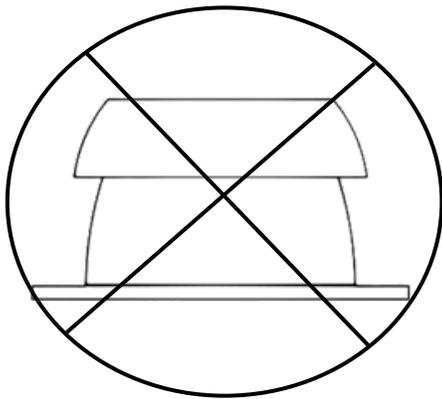
5. ROOF CAPS & WALL CAPS

The roof cap or wall cap is the termination point of the venting system that allows the exhaust air to exit to the outdoors. All sections of this fitting must have an equal or greater air path area than the hood/liner's duct collar. If any section of the roof cap or wall cap is smaller than the hood/liner's duct collar, the entire ventilation system will lose performance and the restriction will cause increased static pressure.

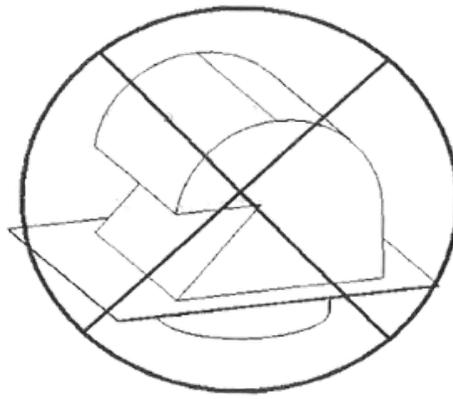
>>> IMPORTANT: Even though the intake side of the roof cap or wall cap may be properly sized, roof caps or wall caps with built-in dampers must be made so that when the damper is fully open, the actual open area of the exit point is equal to or greater than the duct collar of the hood/liner. Any undersized portion of a roof cap or wall cap will cause excessive static pressure that may result in rattling, vibration and air buffeting noises, as well as inadequate ventilation.

ROOF CAPS AND WALL CAPS MUST HAVE AN INTEGRAL BIRD SCREEN.

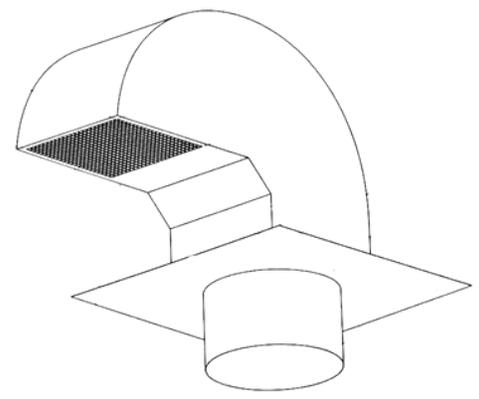
ROOF CAP DRAWING: RECOMMENDED & NOT RECOMMENDED



No Mushroom Cap Style



No "Goose-Neck" Style



Only use a shape that looks like the picture shown. Call TRADE-WIND® Customer Service for any questions.

6. ATTACHING DUCT TO HOUSE FRAMEWORK

The ventilation system should be attached to the framework in such a manner that the weight of the duct and fittings is supported with no stress on the duct joints, fittings or on the hood/liner. All ducting should be attached so as to avoid any possible duct vibration from being transferred to the house's framework.

7. DUCT SIZING CHART & AREA CALCULATION

DUCT COLLAR TYPES & SIZES	DUCT TYPE REQUIRED	DUCT SIZE (IN SQ. IN.)	MINIMUM ROOFCAP OR WALLCAP OPENING SIZE	AIR VELOCITY
6" DIAMETER, ROUND - 290 CFM	6" ROUND METAL DUCT	28.3"	28.3"	24.3 ft. / second
7" DIAMETER, ROUND - 390 CFM	7" ROUND METAL DUCT	38.5"	38.5"	24.3 ft. / second
8" DIAMETER, ROUND - 600 CFM	8" ROUND METAL DUCT	50.25"	50.25"	28.6 ft. / second
10" DIAMETER, ROUND - 1200 CFM	10" ROUND METAL DUCT	78.5"	78.5"	36.7 ft. / second
3.25" x 10" RECTANGULAR - 390 CFM	3.25" x 10" RECT. METAL DUCT	32.5"	32.5"	28.8 ft. / second

ROUND DUCT

$$\text{RADIUS} \times \text{RADIUS} \times \text{RADIUS} = \text{AREA (SQ. IN.)}$$

$$\underline{\quad} \times \underline{\quad} \times \underline{\quad} = \underline{\quad}$$

RECTANGULAR DUCT OR WALL/ROOF CAP

$$\text{WIDTH} \times \text{DEPTH} = \text{AREA (SQ. IN.)}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

The "radius" is one-half the diameter of a round duct, e. g. , 1/2 of a 10" round duct is 5". 3.1416 is "Pi", the "constant" used when calculating the area of a circle.