

Chimney Cap Design - Wind Directional Cap

<http://www.chimneycapdesign.com/>

- Most coastal and mountain areas are exposed to weather conditions where heavy rain is mixed with strong wind (some refer as horizontal rain). Regular side screen caps will not help here because rain is pushed by wind through the screen and then water, taking all fumes on its way down the flue, coming down on the carpet next to the fireplace. This is typical of the one on most of the units we are dealing with.
- People refer to this chimney cap by many different names - Wind Directional Cap, Roman Helmet, Rooster Tail and other names but we call it SkyRider. The top helmet of the cap can freely rotate around its shaft. When wind blows, the fin aligns the hood against wind and front skirt will divert all air streams over and sides of the cap along with rain and snow solving wind related downdraft problems. Also, when wind flows over the cap this way, it creates low air pressure over the flue due to the speed difference of air inside and outside of the flue. This effect helps the flue to draw air better. The streamlined shape of the cap slices through air with very little resistance and it can withstand very strong winds. This type has a 98% rain protection

LUSYRY METALS - Wind Directional Caps

<http://www.luxurymetals.com/index.html>

- Excellent High Quality Chimney Cap used to provide maximum draft while preventing downdraft in high wind environments. This high quality, proven chimney cap pivots with the wind to keep rain and wind from entering your chimney and complicating your stove's draft.
- The most effective draft inducing chimney caps are able to: Separate the wind stream as it flows over the cap & rotate to align with the direction of the wind



Chimney Caps to Prevent Downdraft – from “ehow”

Mounting Styles

Crown-mounted chimney caps mount directly to your chimney's crown, or the brick portion of the chimney, with masonry screws. Crown-mounted chimney caps can sometimes cover multiple flues with a single cap. This mounting style is also appropriate when no flue tile extends from the crown of the chimney.

Single flue mounted chimney caps are appropriate when there is clay tile protruding from the crown of the chimney. In a single flue mount, the chimney cap is fastened to the flue tile with friction screws.

Cap Openings

All chimney caps have openings to let the smoke from your fireplace out. However, depending on where you live, you will have to pay special attention to this opening because there are codes dictating how large the opening should be. In places like California, where wildfires are possible, code requires the opening to be 5/8 inch, but 3/4-inch openings are code in many other parts of the country. Sometimes these openings are simply holes in the chimney caps, but other times the openings are covered with mesh, which is helpful for keeping animals out of your chimney.

Types of Chimney Caps

Chimney caps come in a wide variety of shapes and sizes, but most are made out of steel (either galvanized or stainless) or copper.

Wind-directional chimney caps swivel to the direction of the wind, which is *especially helpful in preventing downdraft*. With this type of chimney cap, the wind moves past the hood on the cap to create a vacuum inside the flue.

Vacuum chimney caps come with a round cap on the top. This is a simple type of chimney cap *that isn't made to prevent downdraft but can help simply because it covers the flue*. Vacuum caps are available for round pipes and square flue tiles. [NOTE: ?? see below]

Universal chimney caps are designed to replace already existing chimney caps. They are designed to install onto almost any type of chimney and *do not necessarily prevent downdraft*.

Cone top chimney caps have a cone-shaped top, which *can help prevent downdraft* but is especially effective at keeping rain out of your chimney.

ChimneySupply.com

Weathershield Chimney Caps - - Helps maintain a chimney's optimum performance by keeping out rain, snow, leaves, debris, squirrels, birds and other animals.



Chimney Top Draft Inducer - Provides negative pressure to overcome the effects of wind, cold chimneys, insufficient chimney height and downdraft. It can operate with a standard, manual on-off switch or can be installed with the Field Controls variable speed motor control. [NOTE: is electrically powered]



Cone Chimney Caps - An attractive way to protect chimneys equipped with chimney pots from rain and bird/animal intrusion.



Vacu-Stack - The Vacu-Stack Chimney Cap is the best solution for wind induced downdrafts on both masonry and prefabricated chimneys. It is designed to stop wind from blowing into the chimney regardless of the wind direction. Accelerated air flow around the Vacu-Stack causes flue gasses to flow up and out of the chimney.



HVAC Solutions Direct

Wind Directional Vent Cap - Wind Directional Cap provides maximum drafting. Rotating hood helps to prevent Downdrafts. Separates the wind stream as it flows over the cap. Pivoted hood rotates to align with the direction of the wind. Provides maximum drafting - creates a partial vacuum in the flue. Enhances efficiency and helps to prevent downdraft. Provides maximum draft while preventing wind related downdrafts. Increases efficiency of Wood Stove or Fireplace.

FAMCO: The FAMCO research team has proven that the most effective draft inducing chimney caps are those that separate the wind stream as it flows over the cap and those that rotate to align with the wind direction. The Wind Directional Cap does both to provide maximum drafting. In usage, the rotating hood is kept in proper position (relative to the wind) by the wind vane. Air movement past the hood creates a partial vacuum in the flue, enhancing draft efficiency and helping to prevent downdrafts. The WDC is engineered to slip over the O/D (outside diameter) of a single wall pipe and with the help of an adapter (WCA) fit inside an insulated, double or tripple wall pipe.

NOTE: FAMCO makes Wind Directional, Vacuum, Universal, and Cone caps. The Universal and Cone caps bascially list only that they keep animals, rain, and snow out of the outlet pipe.



Vacuum Cap - The Vacuum Vent Cap diverts wind over 3 tapered rectangular surfaces. This causes a vacuum at the outlet of the chimney providing maximum draft. Cap is more effective when placed with flat side to prevailing wind.

FAMCO: This chimney cap increases updraft and prevents downdrafts caused from wind. This works by forcing the wind to alter its direction over one of three gores on the cap. The change of direction creates an area of lower density air (partial vacuum) at the outlet of the pipe. Lower density air creates draft within the exhaust pipe, helping to remove exhaust gases and increasing overall efficiency. The positioning of the cap relative to the prevailing winds is not critical but is slightly more effective when placed with its flat side facing the winds.



Declarations & Bylaws Sections Relating to Chimneys

*Relevant portions italicized and underlined; some **bolded** for emphasis*

Declarations

- Sec. II, 5 – Unit Boundaries, Residential Units:
The boundaries of each residential unit is the center of the framing for the party walls, the top of the sub-floor, the bottom of the floor joists between the units, or *the [bottom] of the trusses in the Villas*, and the exterior face of the framing of the unit exterior walls and the upper face of the foundation of the attached garages. The exterior wall coverings and roofs are excluded and are general common elements. The exterior surface of the unit front door and exterior surface of the Villa unit garage doors are general common elements and not part of the unit. However, the windows and patio doors are part of the unit.
- Sec. III, 2 – Use of Common Elements – Interior and Exterior Maintenance and Repair:
Each Unit Owner shall have the exclusive right to paint, repaint, tile, wax, paper, panel, carpet, brick or otherwise maintain, *refinish and decorate* the interior surfaces of the walls, ceilings, floors, and doors within the unit, *provided such* Owner pays the cost thereof and *does not affect the structural integrity, safety or change the appearance, materials, or style of the exterior of the unit, building, or common areas in which the unit is located, without the written approval of the Association.* However, window coverings must either be natural wood or off white exterior coloring for uniformity of the project.

The Association shall maintain, paint, repair and replace the exterior of the residential units, buildings and exterior common elements as necessary and shall assess the Unit Owners according to the terms of this Declaration.

Cf. Sec. VII, 3 - Changes, Repairs, and Liens

- Sec. V, 4 – The Association – Failure to Comply:
Each Owner shall strictly comply with the provisions of this Declaration, the Bylaws of the Association, and the rules, regulations, decisions and resolutions of the Association adopted pursuant thereto as the same may be lawfully amended from time to time. *Failure to comply with any of the same shall be grounds for an action to recover sums due for damages or injunctive relief or both, and for reimbursement of all costs, including reasonable attorney's fees incurred in connection therewith,* which action shall be maintainable by the Manager or by the Board of Directors in the name of the Association, on behalf of the Owners or by an aggrieved Owner where there has been a failure of the Association to bring such action within a reasonable time, or by the Declarant, its successors or assigns.
- Sec. V, 8, (c) – Levying Assessments – When Made – Purposes:
Assessments may also be made for the payment of limited common element

expenses maintained, repaired, or replaced by the Association; provided that, at the discretion of the Board of Directors, the Unit Owners may be charged only for the limited common element expenses relating to their respective units or buildings. The Unit Owners may be required by the Association to pay certain of their respective limited common element expenses directly as in the case of the commercial units. Assessments may be made for a Reserve Account which will be set up in approximately 3-5 years for repair and replacement of roofing, pavement and for repainting or replacement of exterior siding.

Bylaws

- Sec. 8, S – Powers and Duties of the Board of Directors:
To make or provide for repairs, alterations and improvements to the general common elements consistent with properly managing the Condominiums and in the best interest of the Unit Owners, and all mortgagees.

This relative to assessments for said repairs, alterations, or improvements assessed to Unit Owners collectively and individually.