


WELLBORN
CABINET. INC.


talk



shop



search



classifieds



CHANNELS

 Business
 Design/Architecture
 Product Information
 How-To

 Renovation &
 Restoration

Sponsors & Web sites

 Conferences/Contests/
 Trade Shows

GREATEST HITS

[2000-2001 Cost Vs.
Value Report](#)
[Find-A-Pro](#)
[Guide to Building
Products](#)
[HomeTech](#)
[residential architect](#)
[Spotlight Collection](#)
[Tools of the Trade
Buyer's Guide](#)
[Virtual Remodeling Tour](#)

CBUILD SITES

[BUILDER Online](#)
[TOOLS OF THE TRADE
Online](#)
[OLD-HOUSE JOURNAL
Online](#)
[WORLD OF CONCRETE
Online](#)
[eplans.com](#)
[cbuild.com](#)
[Advertising Info](#)

TODAY'S HOT LIST

[A Message from
REMODELING's Paul
Deffenbaugh](#)
[ihousing Conference,
June 12-13, 2001](#)
[Home](#) / [How-To](#) / [Renovation & Restoration](#)
OLDHOUSE
FORUM

April 2000

 MA
 V
 cor
 The

Ventilating an Attic

By Mary Ellen Polson

Attic ventilation is one of the most poorly understood functions of a house, old or otherwise--particular in terms of its relationship to insulation. Most of us know that insulation helps a house stay more comfortable in winter and summer, cutting heating and cooling bills accordingly. When the attic is poorly ventilated, however, insulation can't compensate effectively for temperature extremes--or handle the potentially damaging moisture build-up that's likely to ensue.

Before the advent of air-retarding housewraps, weather-tight windows, and weatherstripping, houses tended to be fairly leaky. Cracks and gaps in the house's weather envelope allowed most of the water vapor created by respiration, cooking, dishwashing, bathing, and clotheswashing to escape. Even for old houses, this is no longer likely to be true. Houses are built (and restored) tighter these days, and contemporary households use far more water than those of a century ago.

Through the dynamics of air movement in a house, a lot of this moisture can end up in the attic, where it condenses on rafters and roof decking. Left unchecked, this condensation can saturate the roof, attic floorboards, insulation, and even walls and ceilings.

Properly ventilating an attic "has everything to do with the performance of the roof shingles and the energy integrity of the insulation," says John S. Morris Jr., manager of contractor services for Globe Building Materials Inc. "If the insulation is wet, its R-value goes way down."

Modern building codes for ventilation require one square foot of free vent area for each 300 square feet of attic area. (Screens and louvers reduce the free area by two-thirds.) If the house lacks a vapor retarder between the living space and the attic, or lacks intake vents, the requirement doubles to one square foot for every 150 square feet of attic space.

While the gable vents found in many old houses may approach these minimum standards, they allow for only limited air flow, especially across the underside of the roof deck. A more effective means of ventilating an attic is to create a path that enables natural thermal patterns to exhaust the heat and moisture that tends to collect there.


[Next Page >](#)



WELLBORN CABINET, INC.

Stock and
Semi-Custom

talk

shop

search

classifieds

CHANNELS

Business
Design/Architecture
Product Information
How-To
Renovation &
Restoration

Sponsors & Web sites

Conferences/Contests/
Trade Shows

GREATEST HITS

[2000-2001 Cost Vs.
Value Report](#)

[Find-A-Pro](#)

[Guide to Building
Products](#)

[HomeTech](#)

[residential architect](#)

[Spotlight Collection](#)

[Tools of the Trade
Buyer's Guide](#)

[Virtual Remodeling Tour](#)

CBUILD SITES

[BUILDER Online](#)

[TOOLS OF THE TRADE
Online](#)

[OLD-HOUSE JOURNAL
Online](#)

[WORLD OF CONCRETE
Online](#)

[eplans.com](#)

[cbuild.com](#)

[Advertising Info](#)

TODAY'S HOT LIST

[A Message from
REMODELING's Paul
Deffenbaugh](#)

[ihousing Conference,
June 12-13, 2001](#)

[Home](#) / [How-To](#) / [Renovation & Restoration](#)

OLDHOUSE
JOURNAL

MA
Ve
co

April 2000 [The](#)

Ventilating an Attic

continued

By Mary Ellen Polson

Just as you would size a boiler to the size of your house, you'll need to size vents to the size of your attic. Intake and exhaust vents work in tandem, meaning they must be of equal air-flow capacity in order to work properly. (Building codes supply formulas to ensure a proper balance of intake vents to exhaust vents.)

Since warm air rises, the exhaust vents should be placed at or near the roof ridge. (Ridge vents were developed for just this purpose.) Intake vents should be positioned as low as possible on the roof, normally in the eave soffits. If the roof is insulated (and it should be), there must be a void of at least 1 H" between the underside of the roof deck and the insulation, which should have a vapor retarder on the attic side. Once all the elements are in place, air at ambient temperature flows in through the soffit vents, helping to draw hot or moist air toward the roof ridge, where it can escape through the ridge vent.

While builders install ridge vents as a matter of course in new construction, adding one to an old house is usually a retrofit--a job that's best done when the roof needs a new set of shingles. Because of the relationship between poor ventilation and the potential for shingle failure, most of the major asphalt roofing manufacturers have developed ridge vents that work with their other roofing products.

"The biggest challenge we roofing manufacturers face is convincing homeowners that they need more ventilation," Morris says. Homeowners looking at a \$6,000 or \$7,000 roofing job don't usually want to hear that incorporating a new ventilation system will add 10 to 20% to the project's cost.

Those additional dollars can potentially offset every dime you'll spend on a new roof. "Proper ventilation can mean the difference between early failure and long life for a new roof," Morris says. "Doing things the right way will cost you a little bit more money, but it's going to save you a lot of grief in the long run."

[< Previous Page](#)

[Next Page >](#)



talk shop search classifieds

CHANNELS

- Business
- Design/Architecture
- Product Information
- How-To
 - Renovation & Restoration
- Sponsors & Web sites
- Conferences/Contests/Trade Shows

[Home](#) / [How-To](#) / [Renovation & Restoration](#)

OLDHOUSE JOURNAL
 MA Ve
 cor
 April 2000 Th

Ventilating an Attic

The Thermal Effect

By Mary Ellen Polson

An effective ventilation system uses the thermal effect (the property of warm air to rise and cool air to fall) to create a natural circulation of air in an insulated attic. Placing intake vents at the lowest point in the attic (usually in the eaves) and exhaust vents at the highest point (the ridge) speeds the movement of air, wicking moisture from the attic in winter and excess heat in summer.

[< Previous Page](#)

GREATEST HITS

- [2000-2001 Cost Vs. Value Report](#)
- [Find-A-Pro](#)
- [Guide to Building Products](#)
- [HomeTech](#)
- [residential architect](#)
- [Spotlight Collection](#)
- [Tools of the Trade](#)
- [Buyer's Guide](#)
- [Virtual Remodeling Tour](#)

CBUILD SITES

- [BUILDER Online](#)
- [TOOLS OF THE TRADE Online](#)
- [OLD-HOUSE JOURNAL Online](#)
- [WORLD OF CONCRETE Online](#)
- [eplans.com](#)
- [cbuild.com](#)
- [Advertising Info](#)

TODAY'S HOT LIST

- [A Message from REMODELING's Paul Deffenbaugh](#)
- [ihousing Conference, June 12-13, 2001](#)