

Inside:

- New Regulations in California
- Calibration of Magnehelic Gauges Being Discontinued
- Filter Grill Attachment Panel
- Duct Mask
- Meet Judy Wendt
- Upcoming Shows

New Energy Regulations in California

California is often the starting place for new ideas and programs, and the latest state energy code requirements are no exception. Beginning October 1st, 2005 HVAC contractors in California are required to perform an airtightness test on existing duct systems whenever a residential air conditioning or heating system is replaced.¹ Tested duct systems must be brought down to a leakage rate of less than 15% of total system air flow as part of the changeout work.

The new California regulations (which are part of the state's Title 24 Energy Code) appear to be the first time that a state building code has required testing and sealing of existing duct systems. A number of states, including California, have previously incorporated these type of requirements into new construction standards. In a letter sent to all California homeowners, the state Energy Commission (CEC) suggests that the ductwork in a typical California house leaks approximately 30% of the system's conditioned air to the outside, leading to high energy bills and poor indoor air quality, as well as contributing to the high electrical demand which resulted in power blackouts during the summer of 2000.

The testing and sealing of the ductwork is done by the HVAC contractor who is installing the new air conditioning or heating system. The contractor needs to measure the duct leakage before beginning any work and then test again after the work is completed. If the 15% total leakage target can not be achieved, the contractor can meet the new duct sealing standard by either reducing leakage by 60% from the initial level, or by determining that all accessible leaks have been sealed by performing both a visual and smoke test of the complete system. The Title 24 regulations also include a verification system which requires 1 in 7 jobs to be inspected by an independent third party. All third party testers must be HERS (Home Energy Rating System) certified in the state of California.

To help contractors with the new requirements of Title 24, the CEC, along with utilities and other organizations, have sponsored an extensive series of training classes. Training classes range from a short two day session for the HVAC contractor to a week long training for



The Energy Conservatory
2801 21st Avenue South
Minneapolis, MN 55407
(612) 827-1117
Fax (612) 827-1051
www.energyconservatory.com
info@energyconservatory.com

the certified third party testers. In addition, the CEC has also produced a series of videos that can be viewed on-line at their website. The videos include both technical and procedural training, and often include pointed question and answer sessions with HVAC contractors. Some important links to help you understand more about the new Title 24 regulations include:

California Energy Commission - www.energy.ca.gov

Direct access to Title 24 information on the CEC website - www.energy.ca.gov/title24

Videos and presentations on Title 24 Retrofit - www.buildingmedia.com/cec05/cd/

These organizations are responsible for the certification of the third party testers:

CHEERS - California Home Energy Efficiency Rating System - www.cheers.org

CalCERTS - California Certified Energy Rating & Testing Services - www.calcerts.com

Don't Forget about Airflow, Charge and Combustion Safety

Remember, sealing leaks in a duct system should always be part of a larger total system diagnostic procedure which includes examining total system airflow, refrigerant charge, airflow delivery to rooms and proper operation of vented combustion appliances. Simply sealing duct leaks without checking these other important performance parameters can sometimes lead to additional comfort and safety problems.

(Footnotes)

¹ This requirement does not apply in coastal climate zones or if certain high efficiency equipment and duct insulation is installed.

Calibration of Magnehelic Gauges Being Discontinued

Approximately three years ago, The Energy Conservatory discontinued offering Magnehelic (analog) gauges as an option with its Minneapolis Blower Door systems. The development of our new line of digital pressure gauges has dramatically improved test accuracy and ease of use, and has made use of the old analog gauges increasingly obsolete. In addition, the significant time and cost associated with calibration and repair of existing Magnehelic gauges has made it difficult to provide maintenance services for these gauges.

As a result, calibration support for Magnehelic gauges is being discontinued as of Jan 1, 2006. Magnehelic gauges which are under warranty (2 years from date of purchase) will be serviced as usual. Although calibration support is not available after the warranty period, Magnehelic gauges can be sent to TEC to be *checked* for accuracy for a fee of \$15 per gauge. The accuracy of the gauge will be tested and recorded, however calibration adjustments of these gauges will not be performed. All gauges will be returned with a copy of the "as-found" test results. For enhanced testing accuracy, TEC recommends that Magnehelic gauges be replaced with digital pressure gauges.

An alternative for you is to send your Magnehelic gauges to the manufacturer, Dwyer Instrument in Michigan City, IN. They can perform complete recalibration and repair of the gauges. To contact them you can visit their website at www.dwyer-inst.com.

Filter Grille Attachment Panel

When pressurizing a duct system with the Minneapolis Duct Blaster, a central return grille is often the location chosen to attach the Duct Blaster fan to the ductwork. In this application, the square transition piece is typically taped to the outside of the filter grille (after removing the filter), the flex duct from the Duct Blaster is secured over the transition piece, and then the remaining portion of the grille is sealed off with masking tape.

In order to speed up the attachment process, we have designed a special filter grille attachment panel which quickly fits into the open filter slot of a 20x20 filter grille and clips the Duct Blaster fan in place. To use the attachment panel, first open the filter grille door, remove the existing filter, and push the attachment panel into the open filter slot. The H-channel gasket on the edges of the attachment panel provides an airtight seal between the gasket and the filter slot, and will securely hold the attachment panel in place. The Duct Blaster fan is then mounted directly onto the attachment panel (without the flex duct) using 4 clips on the attachment panel. In addition to saving time connecting up the Duct Blaster system, this attachment method provides greater fan flow by eliminating restrictions caused by the flex duct.

The 20x20 filter grill attachment panel costs \$60 and is in stock. **Note:** The attachment panel can only be used when pressurizing a duct system.



Duct Mask Temporary Register Sealing Tape

Providing a temporary seal on HVAC registers is an important and sometimes time-consuming part of conducting a duct leakage test. Duct Mask is an adhesive backed plastic film that can reduce the time and hassle of sealing off the duct system, and make you look more professional to your customers.

Duct Mask is used to provide a quick temporary seal on registers when measuring duct leakage with a Duct Blaster® or Minneapolis Blower Door™. The adhesive backed film can be easily removed from the register without harming the register's factory finish. Duct Mask is also great for Duct Cleaners who need a simple and inexpensive way to seal registers for duct cleaning.

- Duct Mask comes in both 8 inch and 24 inch wide rolls.
- Duct Mask is perforated every 4 inches (8 inch wide rolls), or every 24 inches (24 inch wide rolls) to provide a quick, custom, one-step installation.
- Duct Mask is affordable, about \$0.10 for a standard 6 inch x 10 inch register, or about \$2.50 per house.
- Duct Mask is available by the case, which includes six 200 foot long (8 inch wide) rolls, or two 200 foot long (24 inch wide) rolls.
- Duct Mask is also great for sealing registers when duct cleaning!

A case of 8 inch Duct Mask is \$130. A case of 24 inch Duct Mask is \$155.

Meet Judy Wendt

Hello, my name is Judy Wendt. I have worked for The Energy Conservatory since 1991. I am often the voice you will here when you call our company. It has been a pleasure getting to know many of you, and even meeting some of you face to face.

Some of my duties include processing orders and handling receivables and payables. It is rewarding to work with people that place such high value on conservation and sound environmental practices.

I live in St. Paul with my husband, two dogs and two cats. We have three grown children. I enjoy traveling at any opportunity within the US and beyond.

Upcoming Shows

The following is a list of industry tradeshows where TEC will be exhibiting. If you are in the area, stop by the booth and see some of the new products first hand.

National Weatherization Conference, New Orleans, LA December 11-14, 2005

www.eere.energy.gov/weatherization/conference/

Better Buildings Conference, Wisconsin Dells, WI, January 30-31, 2006 www.ecw.org/betterbuildings

RESNET Conference, Feb, 27 - March 1, San Antonio, TX, www.natresnet.org

Air Conditioning Contractors of America, San Jose, CA, March 28-30 www.acca.org

ACI Home Performance Conference, Austin, TX, May 22-26 www.affordablecomfort.org

UPDATE



The Energy
Conservatory

2801 21st Avenue S Suite 160 Minneapolis MN 55407

Presorted Standard
U.S. Postage
PAID
Permit No. 7053
St. Paul, MN