



Inside:

- Affordable Comfort 2002
- New Prices for TrueFlow™ Air Handler Flow Meter and Exhaust Fan Flow Meter
- Website and Telephone Update
- Technical Bulletin 200
- Tech Tip: Using a USB Serial Adapter with your APT System
- New Duct Blaster® carrying case



The ENERGY
CONSERVATORY

DIAGNOSTIC TOOLS TO MEASURE BUILDING PERFORMANCE

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Affordable Comfort Conference and Trade Show—2002

Many times we are asked by our customers where they can obtain practical building science training that won't cost thousands of dollars. Our answer always includes a description of the Affordable Comfort Conference that is held each year. This year the Affordable Comfort Conference and Trade Show will take place in Cincinnati, Ohio from April 15th through to the 20th. The Energy Conservatory has been a supporter and sponsor of this important event since its inception over 15 years ago. As each year passes, the number of attendees has increased as well as the number and quality of the presentations. This year will be no exception.

The core conference, entitled "Advancing Building Performance", starts at 8:30 AM on Wednesday the 17th and concludes on the afternoon of Friday the 19th. The core conference includes a wide variety of traditional sessions including the fundamentals of building performance, the latest in diagnostic techniques, retrofit issues and solutions, and mechanical ventilation options. Other sessions will be on Profiting from Home Performance, Training and Certification, Head Scratchers (a series of sessions that deal with the tougher issues and the answer is not known), Electric Efficiency and Beyond, and many more.

The individual sessions are lead by prominent building science practitioners and program designers from around the United States and Canada. Learn from the people that have been in the trenches, crawlspaces, and basements, and have developed innovative and effective solutions to the most complex performance problems.

In addition to the core conference, Affordable Comfort has a number of full and half day short courses starting on Monday and continuing until Saturday. The short courses provide you with an intensive "hands-on" and "in-field" training experience from the experts. The short courses are an added cost to the base conference price, but provide you with an unparalleled learning experience. There is even a one-day energy rater re-certification course offered on Saturday the 20th. To learn more about the conference, visit www.affordablecomfort.org for all of the details. You will find their complete program on the website with a list of sessions and

(Continued on page 2)

(Affordable Comfort continued from page 1)

speakers. If there is only one conference you can attend all year, this is the one you need to go to. For information on the host city of Cincinnati Ohio you can visit <http://cincyusa.com/>.

When you are not attending the various sessions, there is a large trade show where you can see many of the products that the experts use. This year, as in the past, The Energy Conservatory will have an extensive display of our products including our latest gadgets. As an incentive to visit our booth, The Energy Conservatory will be giving out a coupon for a FREE recalibration of a Digital Pressure Gauge or APT System. The coupon is valid for 6 months and is only available if you visit our booth. In addition, we are donating a Blower Door and APT System to the Conference to be raffled off at the end of the Trade Show.

New Duct Blaster® Carrying Case

Using our products includes transporting them from job to job and from your car to the house. Sometimes that trip is harder on the carrying case than on the product itself. Over the years, we have tried to provide our customers with reliable carrying cases for all of The Energy Conservatory products. However, based on your feedback, we have decided it was time to improve the durability and usability of the Duct Blaster carrying case.

To address this need, we have developed a new and improved Duct Blaster case that is stronger, larger and more professional looking. The new case has added protection in the bottom and sides, and is made from an extremely durable material that is similar to the ballistic nylon used on expensive luggage. Roomier pockets hold your gauge and accessories with ease, and the opening for the Duct Blaster fan is larger and now comes with a heavy duty zipper. We started using the new case in November of 2001 and have heard rave reviews from our customers. For those of you who want to replace your older carrying cases, we are offering the new cases at a special price of \$75 for a limited time. The new case will normally sell for \$150. Call us for more information.

Technical Bulletin 200

Enclosed with this copy of your newsletter is Technical Bulletin 200. The Energy Conservatory has recently become aware that some pressure sensors installed in the Digital Gauge and APT systems between January 2000 and September 2001 may experience a larger than expected drift in sensor output during the first 3-12 months of operation. Please read this bulletin carefully for instructions on sending your instruments to us for a free

TECH NOTE—Serial & USB Ports

The computer industry has made some changes that require a few changes to how the Automated Performance System (APT) communicates with many new laptop computer systems. The current trend for computers is the use of Universal Serial Bus (USB) ports instead of traditional serial ports. In fact, many laptops being manufactured today (and all in the future) do not have a traditional serial port with a 9 pin connector. Presently our APT system only has a serial port connection to communicate with a computer. To help our customers with this problem, we have identified an off the shelf adapter that will convert any USB port on a laptop or desktop into a traditional serial connection. While there are many of these adapters on the market, we have had the best results with the Belkin USB Serial Adapter Model F5U103. The Belkin USB adapter is approximately \$80 and is available from www.belkin.com. A software CD is included that walks you through the set-up process.

Another benefit of the Belkin adapter is the ability to support DOS applications (such as our TECLOG data logging program). Use of this advanced feature is described in the Belkin manual. We are presently working on a Windows version of the TECLOG program which will make data logging with new Windows computers much easier. If you have a question, or have found another solution that we should know about, please email us at info@energyconservatory.com.

recalibration. If it is not included in this newsletter, you can find a copy of this bulletin at our website (www.energyconservatory.com/support.html).

Update on the TrueFlow™ Air Handler Flow Meter and the Exhaust Fan Flow Meter – New Price

For several months now our latest new products, the TrueFlow™ Air Handler Flow Meter and the Exhaust Fan Flow Meter have been available. During this time we have heard from many people about the successes they have had in using these products.

The Exhaust Fan Flow Meter was originally designed for use in verifying the air flow of bathroom exhaust fans. In Minnesota, the new energy code allows a continuously running bath fan to meet the requirements for inducing fresh air into the house. In order for this bath fan option to be accepted by the building inspector, the fan flow needs to be verified by a performance test. In many cases the air flow from the exhaust fan is too low to be measured by a commercial flow measuring hood. The Exhaust Fan Flow Meter can measure flows from 125 cubic feet per minute down to 10 cubic feet per minute (CFM) with an accuracy of +/- 10%, so even very small exhaust fan flows can be easily and accurately measured.

After seeing our new Exhaust Fan Flow Meter, some enterprising individuals thought about how they can use the device to measure the air flow through outside air intakes used in heat recovery ventilators and in return plenum fresh air intakes. As with bathroom exhaust fans, flow rates through air intakes are often too low to be accurately measured by commercial flow hoods. In this application, the Exhaust Fan Flow Meter is placed over the intake damper on the outside of the house. The flexible gasket on the Metering Box helps to ensure a tight fit over the exterior finish. With the use of the DG-3 Digital Gauge, air flow rates are quickly measured. Using this reading, the correct amount of outside air to the HVAC system can be easily adjusted and verified.

The TrueFlow Air Handler Flow Meter is changing the way some of our customers do their work on a daily basis. Alex Walter, a heating contractor from Colorado, has been using his TrueFlow Meter so

much that he has designed a “TrueFlow Furnace Air Flow Protocol” form that he uses on every job. Alex first measures the static pressure of the system with the existing filter in place, with the filter removed and then with the TrueFlow Meter installed. He then measures the actual air flow of the system using the DG-3 Digital Pressure Gauge connected to the True Flow metering plate. With these critical pieces of information, he can quickly determine if the system is moving the correct air flow, and if not, what can be done to correct the problem. Using this procedure, Alex has found many cases of improperly sized HVAC systems and incorrectly designed and installed duct work. The TrueFlow Meter ensures that Alex is giving his customers the best service by measuring the performance of the systems he repairs and installs.

In other news related to these products, we have just reduced our prices on the TrueFlow Meter and the Exhaust Fan Meter. The new price for the TrueFlow Meter Kit is \$975 and includes a 14x20 metering plate, a 20x20 metering plate, 8 different spacers to adjust the size of the TrueFlow plate to match various filter sizes, a static pressure probe, tubing, manual, charts, and a durable carrying case. The new price for the Exhaust Fan Flow Meter is now \$170. This includes the 13”x16”x 8”(deep) Metering Box and a 6 foot extension pole to help reach tall ceilings. Both of these products can be used with any existing DG-2 or DG-3 gauge. All DG-3 gauges manufactured and shipped after April 1, 2001 have the ability to directly display air flow readings from either product using the fan select feature of the gauge. DG-3 gauges sold prior to April 2001 can be upgraded with this feature for a cost of \$25. We recommend that DG-3 upgrades be done when you send your gauge in for its annual recalibration. To find out more about the TrueFlow Air Handler Flow Meter or the Exhaust Fan Flow Meter, visit our website at www.energyconservatory.com.

Upcoming Shows

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

- Affordable Comfort, Cincinnati, April 16 – 18, 2002 www.affordablecomfort.org
- Controlled Environments Testing Association, Las Vegas, April 27—30, 2002 www.cetainternational.org
- Energy Out West, Spokane, WA, May 20-24, 2002 capps.wsu.edu/EOW02
- ComforTech, Baltimore, September 12– 13, 2002 www.contractingbusiness.com/comfortech
- Energy & Environmental Building Association, Phoenix, October 10 – 11, 2002 www.eeba.org

TEC Website & Telephone Update

Recently, we have experienced a number of problems with our telephones and website. For those of you that had problems reaching us, we thank you for your patience and hope that you will continue to receive the service you have come to expect from The Energy Conservatory. We believe that all of the telephone problems have been resolved. At the same time we also experienced a number of problems with our website and internet service provider. The majority of these problems have also been solved but we continue to experience some minor website difficulties. We hope that these problems will be resolved very quickly as well. Again, thank you for your patience.

We have recently updated the user manuals for the Minneapolis Blower Door™ as well as the Minneapolis Duct Blaster®. These updated manuals

are now available on our website at www.energyconservatory.com/manuals.html. The manuals are in a Portable Document Format (pdf). This format allows us to create the manual and then distribute it over the World Wide Web with all of the illustrations and complete text available to you. In order to read a pdf file, you will need Adobe Acrobat Reader installed on your computer (most computers already have this installed). If it is not already installed, you can download this program for free by visiting www.adobe.com/products/acrobat/readmain.html. The Blower Door and Duct Blaster manual files are large due the amount of information contained in each manual. This means that if you are accessing the internet with a slow dial-up modem connection, it will take a very long time to download the manuals. If you are accessing the internet with a DSL, cable modem or other high speed connection, each download will only take 3 or 4 minutes.

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