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## Customer Spotlight – EUZ of Germany

Over the past 10 years the use of energy efficient residential building techniques in Germany has grown rapidly. Many new homes in Germany now incorporate airtight construction, mechanical ventilation, elimination of thermal breaks using high-grade insulation systems and super efficient window technologies. In addition, there has been a rapid growth in the use of renewable generation technologies, primarily wind turbines and solar photovoltaics. This rapid evolution in Germany has been driven by a combination of factors including relatively high fuel prices, large government subsidies, and a well educated, environmentally conscious population.

A major contributor to Germany's success in utilizing energy efficient technologies is an organization called EUZ (Energy and Environment Center). Located 40 kilometers south-east of Hannover, EUZ provides a wide range of services including technical training for building trades, photovoltaic research, airtightness testing, consulting on energy efficiency program design and community education classes. EUZ offices are located in a countryside compound consisting of a low energy guest house and conference center, organic gardens, solar panel testing areas, grass roofed storage sheds, a reed bed sewage system, and a cogeneration power station. EUZ is a leading researcher in the practical application of photovoltaic panels and an instructor to local utilities, school districts, businesses and building trades nationwide.

Since 1992, The Energy Conservatory (TEC) has been fortunate to work with EUZ in bringing performance testing tools such as the Minneapolis Blower Door and Automated Performance Testing (APT) System to Germany and surrounding countries. In 1998, our joint efforts resulted in the development of a new CE labeled 230V Blower Door system (the Model 4 Minneapolis Blower Door) and a German language version of our popular APT control software TECTITE. EUZ's sales and training efforts have been so successful over the past few years that they have now become our largest single customer. As an example of their innovative efforts to promote airtight home construction, EUZ has organized a biannual Blower Door Symposium in Germany. The 3rd Symposium was held in October

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1999 and was attended by almost 200 builders, engineers, architects and trades people from all over Germany, as well as Latvia and the Czech Republic. The speakers were highly regarded researchers and practitioners of advanced building science.

In June of this year, the World Expo 2000 will open in Hannover displaying a vast array of cultural and technological achievements from around the globe. A showcase exhibit at Expo 2000 will be the Kronsberg Village, a new development of 1000 residential dwelling units utilizing the latest in energy efficient and environmentally sustainable technologies and development approaches. As part of the Kronsberg Village, EUZ will oversee the development of 90 extremely low-energy houses (called Passive Houses in Germany). By virtually eliminating thermal breaks, creating very airtight structures (about 0.2 ACH50), using new super efficient selective windows and appropriate solar orientation, and incorporating a German-built mechanical ventilation system which uses about 20 watts of electricity and has a recovery efficiency of over 90%, these Passive Houses will reduce average annual space heating energy consumption to around 10 kWh/m<sup>2</sup> (or about \$50 per year for a 2000 ft<sup>2</sup> house with natural gas heating). Following the Expo 2000 demonstration, a large national program using subsidized mortgages will be implemented to encourage use of the Passive House design on a wide scale.

For more information about EUZ, you can visit their websites at [www.e-u-z.de](http://www.e-u-z.de), or [www.blowerdoor.de](http://www.blowerdoor.de). More information on the German Passive House program can be found at [www.passivehouse.com](http://www.passivehouse.com).

## **EEBA, Pulte & Build America**

EEBA, the Energy Efficient Building Association, is back in full swing with the recent EEBA Conference in Baltimore. The Conference had an impressive array of speakers delivering EEBA's message on how to design and build energy efficient, healthy and environmentally responsible buildings. This year's list of speakers included Dave Beck, VP of Pulte Homes in Las Vegas, Nevada. Dave spoke on how Pulte Las Vegas has successfully increased consumer demand and improved the quality of their homes by incorporating state of the art construction practices through DOE's Building America and Greenstone Industry's Engineered for Life (EFL) programs. The programs have been so successful that Pulte Las Vegas has committed to having every one of their homes built to the rigid standards for Building America and Engineered For Life. (See the last issue of TEC Update for a description on how these programs work.)

Pulte has 42 divisions around the country and each is operated as an independent unit. Because of the independence of each division, not all have adopted the Building America and EFL programs. However, Dave indicated that due to the overwhelming success in Las Vegas, all divisions will adopt some version of the Building America and EFL programs in the near future. One particularly interesting comment made by Dave was that he plans to give presentations to other builders in his area about Pulte's success. He will actually encourage his competitors to adopt the same approach as Pulte. One reason for this is the large amount of training that goes into each of the trades that work on a home. If Pulte were to remain the only builder in the area with such a program, Pulte could only use a small select group of trades people to work on their homes. On the other hand, if all builders were to adopt the same manner of construction outlined in the Building America and EFL programs, then all the trades people in the area would be well-trained on how to build a home that is airtight, durable, efficient, and ventilated properly.

The next EEBA conference will be in November of 2000. Visit their website for more information about the 1999 conference and watch for updates on the 2000 conference at [www.eeba.org](http://www.eeba.org).

### The EEBA Mission

EEBA is a nonprofit organization that promotes the awareness, education and development of energy efficient, environmentally responsible buildings and communities.

### TECBLAST™ is coming (March 2000)

Those of you conducting duct leakage tests using the Minneapolis Duct Blaster® will soon be able to quickly document and present the results of your test to a homeowner or client. TECLBLAST, the latest Windows based software from The Energy Conservatory, makes it easy to enter, analyze and store duct leakage test data. Like our popular Blower Door program (TECTITE), TECLBLAST includes user friendly entry screens, a choice of professional looking reports, and on-screen help. TECLBLAST calculates and displays duct leakage rates, leakage areas, and estimated annual energy and system efficiency impacts from the measured duct leakage. Let TECBLAST help you sell profitable duct leakage diagnostics and repair services to your customers.

TECBLAST costs \$150 and is designed specifically for the Minneapolis Duct Blaster® duct leakage testing system.

### Affordable Comfort West and the TellTale House

Affordable Comfort, a not for profit educational service organization, sponsors regional training programs for building professionals on how to improve the efficiency, durability and indoor air quality of old and new homes. These training programs consist of 1-3 day events which focus on one or two aspects of how to remodel, repair, build, and diagnose homes. The last event was Affordable Comfort West, January 25 – 27, 2000 in San Ramon, CA. At that event the new and improved TellTale House model home was shown. This working model demonstrates how HVAC systems, exhaust fans, and combustion devices interact in a typical home. Over the past two years, the TellTale House has been successfully used in training programs throughout the United States. Other training events are scheduled for February 1, 2000, LaCrosse, WI and February 3, 2000, Bloomington, MN.

Training programs by Affordable Comfort will put you in front of industry experts who provide you with the latest techniques for improving the way homes are built and remodeled. Call Affordable Comfort at 800-344-4866 for more information, or visit their website at [www.affordablecomfort.org](http://www.affordablecomfort.org).



#### Calibration and Repair Information

As a customer, you appreciate the quality that TEC puts into each and every product. And with each product comes a two year warranty against workmanship and defects. Our Digital Pressure Gauges and APT Systems provide highly accurate pressure measurements. Under normal operation, these instruments should have their calibration checked annually in order to maintain their published accuracy specifications. Calibration is performed by TEC for a small fee. In addition, TEC provides complete repair and warranty services at its Minneapolis facility.

If you need to return any of our products for either calibration or repair, please include a letter describing the service you would like to have performed. If there is a problem, please include a description of the symptoms so that we can find the problem and correct it. Also provide a contact person and complete street address so that we can ship the product back to you as fast as possible.



## 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 Association of Home Builders – January 14 – 16, 2000, Dallas

Lennox Vision 2000 – January 23 – 25 – Las Vegas

American Society of Heating, Refrigerating, Air-Conditioning Engineers – February 7 – 9, Dallas

Energy Design Conference – Feb 29 – March 1 – Duluth, MN

Tri-State Refrigeration Service Engineers Society Annual Meeting – March 17 – 18, Bettendorf, IA

Affordable Comfort – April 3 – 7, Columbus, OH

## Trademarks

TEC is flattered that so many people use our Minneapolis Duct Blaster® System for testing duct work in residential construction and for research. From this extensive use, many customers write articles about their work or their research and the equipment used to perform the testing. We at TEC ask that when you use the phrase Duct Blaster in an article or other published material, please include the ® symbol after the phrase or provide some notation that the Duct Blaster is a registered trademark of TEC. Thanks.

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