



The **ENERGY**  
**CONSERVATORY**

Blower Door

Duct Blaster®

Digital Gauges

Infrared Cameras

Exhaust Fan Flow Meter

TrueFlow® Meter

APT



## Blower Door

The Minneapolis Blower Door™ has long been recognized as the best designed and supported building airtightness testing system in the world. Combined with specialized accessories and complete testing procedures developed by The Energy Conservatory, the Minneapolis Blower Door is the system of choice for utility programs, energy raters, HVAC contractors, builders and weatherization professionals. The powerful and rugged Blower Door fan provides unmatched airflow performance, while the innovative design of the aluminum frame makes it easy to seal into any door opening. Instrumentation options include either the DG-700 gauge or the APT system.

Blower Door tests are used to measure the airtightness of building envelopes, diagnose and demonstrate air leakage problems, estimate natural infiltration rates, estimate efficiency losses from building air leakage, and certify construction integrity.



## Duct Blaster®

The development of the Minneapolis Duct Blaster® has revolutionized performance testing of forced air distribution systems for builders, HVAC contractors, and utility programs. The Minneapolis Duct Blaster is a calibrated airflow measurement system designed to test and document the airtightness of forced air duct systems in both houses and light commercial buildings. The Duct Blaster fan is connected directly to the duct system, typically at a central return, or at the air handler cabinet. With the remaining registers and grills temporarily taped off, duct airtightness is measured by either pressurizing or depressurizing the duct system and precisely measuring the fan flow and duct pressure using the DG-700 gauge.

Duct airtightness measurements are used to diagnose and demonstrate leakage problems, estimate efficiency losses from duct leakage, and certify the quality of duct system installation.



## Digital Gauges



DG-500 Pressure Gauge

Today's building performance test procedures require diagnostic tools that are versatile, accurate and easy to use. The Energy Conservatory's line of Digital Pressure Gauges set new standards for performance testing equipment. Each model comes with simultaneous display of two independent pressure channels, automatic zeroing and a communication port for using the gauges as pressure data loggers when connected to a computer.

The DG-500 Digital Pressure Gauge provides high resolution measurement of pressure or velocity. The DG-700 Pressure and Flow Gauge is programmed to operate with other Energy Conservatory test devices, such as the Blower Door, Duct Blaster, TrueFlow® Meter and Exhaust Fan Flow Meter, to provide airflow measurements during building performance test procedures. The DG-700 has a built in "Cruise Control" feature to maintain constant building pressures, and can be used with our TECTITE software to fully automate the Blower Door test.

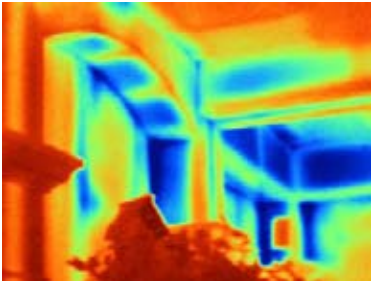


DG-700 Pressure and Flow Gauge with New Cruise Feature

## Infrared Cameras

Infrared cameras have been successfully used as a building diagnostic tool for over a decade. From verifying insulation integrity to finding thermal bridges, there is no better tool for diagnosing hidden performance problems. And when used in conjunction with a Blower Door, an infrared camera can quickly expose air leakage sites that are buried deep inside ceiling, wall and floor assemblies.

The BCam SD Infrared Camera from Flir uses a state-of-the-art detector and technology to provide amazing thermal sensitivity during building inspections. The lightweight BCam SD provides fully radiometric images with the ability to display temperature, dewpoint or insulation alarms. It has a 7 hour battery life on a full charge and a laser pointer for locating the center of the infrared image. Recording images couldn't be easier - simply press the camera's "pistol grip trigger" to record images to the SD card for easy transfer to your computer.



## Exhaust Fan Flow Meter

The Exhaust Fan Flow Meter is designed to make quick and accurate measurements of airflow through residential exhaust fans. During the measurement procedure, the Exhaust Fan Flow Meter is placed directly over the grille of an operating exhaust fan. The Metering Box is pushed up against the wall or ceiling so that the flexible gasket on the end of the Metering Box creates an air tight seal around the grille. The airflow through the Metering Box can be displayed on a DG-700 gauge (sold separately), or can easily be calculated using a pressure reading taken from the Metering Box.



## TrueFlow<sup>®</sup> Meter

The Energy Conservatory's TrueFlow<sup>®</sup> Air Handler Flow Meter is designed to provide a simple and accurate measurement of airflow through residential air handlers. The airflow rate through residential air handlers is an important variable in estimating and optimizing the performance of heat pumps and air conditioners.

The TrueFlow Meter temporarily replaces the filter in a typical air handler system during the airflow measurement procedure. If the filter location is directly adjacent to the air handler, the TrueFlow Meter will measure the total air handler flow. If the filter is located remotely at a single central return, the TrueFlow Meter will measure the air flow through the central return. Airflow readings can be displayed on a DG-700 gauge (sold separately), or can be calculated using pressure readings taken during the test procedure.



## APT

The Automated Performance Testing (APT) System defines the state-of-the-art in building diagnostics by combining computerized control of the Minneapolis Blower Door system with multi-channel pressure measurement and data logging capabilities. The APT system is operated from a user supplied laptop computer using custom software developed by The Energy Conservatory. During an automated airtightness test, the APT system adjusts the speed of the Blower Door fan while simultaneously monitoring and recording the building pressures and fan flow rates. The APT can be configured to record pressures from attached building zones (attics, garages, etc.) during the test to help diagnose complex air leakage paths.

When used with our TECLOG software, the APT becomes a powerful data logging system with up to 8 high resolution pressure channels and 8 analog voltage channels that can be connected to optional CO, temperature, and relative humidity sensors.



## Software

**TECTITE** is The Energy Conservatory's building airtightness test analysis program for Windows computers. The TECTITE program makes it easier than ever to enter, analyze and store Blower Door test data. The program's built-in report generator and graphing capabilities makes it simple for you document and present the results of a Blower Door test to a homeowner or client. TECTITE also works with both the DG-700 and APT system to automate the Blower Door test procedure.

**TECBLAST** helps you sell profitable duct testing and repair services by quickly analyzing duct airtightness test results. TECBLAST's user friendly entry screens and choice of professional looking reports makes it simple and fast to document and present test results to your customers. TECBLAST is designed specifically for use with the Minneapolis Duct Blaster system.

**TECLOG** is The Energy Conservatory's data logging program for Windows® based computers. TECLOG can monitor and store data from the on-board differential pressure channels of the DG-700, DG-500 or APT. Data can also be monitored and stored through the differential analog voltage input channels of the APT when connected to optional sensors.

## The Energy Conservatory

Located in Minneapolis, Minnesota, The Energy Conservatory (TEC) is known worldwide as a leader in the building performance testing industry. Since 1981, our goal has been to provide building professionals with the specialized tools and support needed to create more efficient, affordable and healthy buildings. TEC continues to set the standard for specialized airflow and pressure measuring devices used to monitor and analyze the complex interactions which determine building performance.

Innovative design and careful engineering have given TEC a reputation for providing the most reliable, accurate and versatile performance testing products on the market today. The Energy Conservatory has an experienced staff of professionals with a wide range of technical skills and field experience. When your personnel have questions on the use of our products or how to handle unusual situations they encounter, you can count on us to give dependable answers.

For more information visit our website at [www.energyconservatory.com](http://www.energyconservatory.com). At our website you will find complete product brochures as well as product manuals and other valuable resources. Or call us at 612-827-1117.



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**DIAGNOSTIC TOOLS TO MEASURE BUILDING PERFORMANCE**