

The ENERGY CONSERVATORY

Duct Blaster®

Diagnostic Tools to Measure Building Performance

Minneapolis Duct Blaster® Duct Airtightness Testing System



minneapolis duct blaster®



The development of the Minneapolis Duct Blaster more than 15 years ago has revolutionized performance testing of forced air distribution systems for builders, HVAC contractors, and utility DSM programs. The Minneapolis Duct Blaster is a calibrated air flow measurement system used to test and document the airtightness of forced air duct systems in both houses and light commercial buildings. The Duct Blaster fan is directly connected 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.

Duct airtightness measurements are used to diagnose and demonstrate leakage problems, estimate efficiency Leaks in supply ducts cause expensive conditioned air to be dumped into the attic, crawlspace or garage instead of the house.

The Duct Blaster is the preferred system for Title 24 testing in California, as well as compliance testing for Energy Star and other performance-based programs throughout the country.

leakage, and certify the quality of duct system installation.

Return duct leaks pull outside air (hot in the summer, cold in the winter) into the duct system, forcing the cooling or heating systems to run longer to keep the house comfortable. Return leaks can pull pollutants and irritants such as mold, insulation fibers, pollen and dust directly in the house.

Minneapolis Duct Blaster Features

- The lightweight Duct Blaster fan weighs just 7 pounds (3.18 kg), but delivers enough air flow (1,500 CFM, 708 l/s, 2,548 m³/h) to test the leakiest duct systems.
- Quick and accurate airtightness measurements from 10 CFM (5 l/s, 17 m³lh) to 1,500 CFM (708 l/s, 2,548 m³/h).
- Compatible with both pressurization and depressurization testing.
- New Cruise Control feature will automatically control the speed of the Duct Blaster fan during testing.
- The Duct Blaster can be easily used in new construction applications where a Blower Door can't be used (e.g. before sheet rock is installed).
- Standard instrumentation includes the DG-700 Pressure and Flow Gauge. The DG-700 gauge contains 2 precision pressure sensors which provide simultaneous display of both duct pressure and Duct Blaster fan flow readings. It's specialized "CFM@25" feature makes it extremely easy to get quick and accurate total leakage test results.
- The Duct Blaster, when accompanied by the FlowBlaster™, can also easily be used as a powered flow measuring hood to accurately measure air flows through registers, grills, and exhaust fans.
- Padded nylon carrying case with shoulder strap for easy transport to the job.



When pressurizing the ductwork, the Duct Blaster fan can be mounted directly to the HVAC System.

The Duct Blaster can also be used to measure the total amount of air moving through the air handler.



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Minneapolis Duct Blaster Kit includes

- Duct Blaster Fan with Fan Speed Controller.
- DG-700 Digital Pressure and Flow Gauge.
- Three Flow Rings.
- Twelve feet (3.7 m) of 10 in. (25 cm) diameter flex duct.
- Heavy Duty Carrying Case.
- Static pressure probe.
- Sample roll of DuctMask™ Temporary Register Seal.
- Manual and Duct Blaster Training Video.

DVD-Vid

• TECBLAST Software CD

Minneapolis

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Duct Blaster®

Video Quick Guide

Duct Blaster Training Video

- Overview of all components of the Duct Blaster System.
- Walk-through of how to set-up the Duct Blaster.
- How to seal registers using Duct Mask.
- Conducting a one-point total duct leakage pressurization test.
- Video can also be downloaded from The Energy Conservatory website.

Duct Blaster Accessories



Duct Mask[™] Temporary Register Seal

- Duct Mask is used to provide a quick temporary seal on registers and grills when measuring duct airtightness with a Duct Blaster or Blower Door.
- With Duct Mask you can reduce the time and hassle of sealing off the duct system, and look more professional to your customers.
- Duct Mask is an adhesive backed film that comes in both 8 in. (20 cm) and 24 in. (61 cm) wide rolls. An easy to use belt dispenser is provided with the 8 in. wide rolls.
- Duct Mask is perforated every 4 in. (10 cm) for 8 in. wide rolls, or every 24 in. for 24 in. wide rolls, to provide a quick, custom, one-step installation.
- Duct Mask is affordable enough to be used with every test.

TECBLAST™ Duct Airtightness Test Software

- Easy entry of test data on user friendly entry screens.
- Calculation and display of duct airtightness test results including leakage rate in CFM, leakage area in square inches, leakage as a percent of system airflow, and estimated annual system efficiency loss from the measured leakage rate.
- Built-in report generator includes the choice of a one page easy-to-read homeowner report, or a two page technical report.
- TECBLAST lets you print your company logo directly on the reports for a professional image.
- Available for free download.

FlowBlaster™ Capture Hood Accessory

- Turns the Duct Blaster fan into a battery powered capture hood.
- Includes flow conditioner section with fabric hood.
- New combination fan speed controller and rechargable battery pack.
- Runs for up to 60 minutes on a full charge.
- Measures from 10 to 300 CFM.
- All cables and parts included.
- FlowBlaster manual.









duct blaster specifications

Maximum Flow:	1,500 CFM at free air (708 l/s, 2,548 m³/h). 1,350 CFM at 50 Pa (637 l/s, 2,293 m³/h).
With flex duct attached:	1,250 CFM at free air (590 l/s, 2,123 m³/h). 1,000 CFM at 50 Pa (472 l/s, 1,700 m³/h).
Minimum Flow:	10 CFM (Ring 3) (5 l/s, 17 m³/h).
Fan Dimensions:	10 in. (25 cm) inlet diameter, 7 in. (17.8 cm) length.
Fan Weight:	7 lbs. (3.18 kg), 8.5 lbs. (3.86 kg) with 3 flow rings.
Flow Accuracy:	+/- 3% using DG-700.
Calibration:	Meets ASTM Standard E779-03, E1554-07, CGSB-149.10-M86, El ATTMA Technical Standard 1, NFPA 2001 and ASHRAE 152.
Power:	110V or 220V.

Specifications subject to change without notice.

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Other building diagnostic products available from The Energy Conservatory



The Minneapolis Blower Door™ is used to measure the airtightness of buildings.



Infrared Cameras by Flir help speed up diagnostic work, especially when used with a Blower Door.



The TrueFlow® Air Handler Flow Meter, (shown with DG-700 Gauge) is used to measure the total amount of air moving through an air handler.

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To Order, or for more information contact: The Energy Conservatory

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