

# Minneapolis Blower Door™

- Measure airtightness level of building envelopes
- Diagnose air leakage problems
- Estimate natural infiltration rates
- Estimate efficiency losses from building air leakage
- Code compliance

For 30 years, the **Minneapolis Blower Door™** has been the system of choice for utility programs, energy raters, HVAC contractors, builders, insulation contractors and weatherization professionals.



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**Performance Testing Tools**

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**ETEC™**  
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# Anatomy of the Minneapolis Blower Door

## 1 Lightweight, durable door frame and panel

- Snap-together aluminum frame with compact case.
- Sets up in seconds and fits an 8-foot door without special parts.
- Precision cam lever mechanism securely clamps the nylon panel into the door opening.

## 2 DG-700 pressure and flow gauge

- Most accurate Digital Pressure Gauge on the market to meet all airtightness testing standards for residential and commercial buildings.
- Two precision sensors provide simultaneous display of building pressure and fan flow. Stable auto-zero to eliminate sensitivity to orientation and temperature.
- Specialized @50 and @25 test modes make it simple to conduct one-point airtightness tests.
- Four separate time-averaging modes accurately measure fluctuating pressures (1, 5, 10 second & long-term).
- "Baseline" feature lets you measure and record a baseline pressure reading and then display the baseline-adjusted reading.
- USB, serial or WiFi Link for computer connection.

## 3 Fan-cooled, solid-state digital speed controller

- State of the art precision control of fan speed.
- Compatible with Cruise Control feature and automated testing.

## 4 Powerful and reliable calibrated fan

- Powerful 3/4 hp motor.
- Comes with rings A and B to measure down to 300 CFM. Optional rings C, D and E extend the low range to 11 CFM.
- Lightweight and rugged injection molded fan housing.



## 5 Automated Testing

Automated testing with your computer automatically captures building pressure and fan flow measurements. Reduces operator error, ensures tests are done the same way every time and improves test accuracy in windy weather.

- DG-700 can connect to a laptop computer for automated testing using serial connector, USB or TEC WiFi Link.
- Cruise 75, 50, 25 and 0 Pa building pressure without connection to a computer. The Cruise Control feature automatically adjusts the speed of the Blower Door fan to maintain a constant building pressure while you perform additional diagnostics or air-sealing procedures.

# Multi-fan Blower Door Systems

Airtightness testing of larger buildings requires more fan flow. The Minneapolis Blower Door can be configured to install 2 or 3 fans in a single doorway, making it possible to measure the airtightness of almost any size room or building.

## Blower Door Accessories and Options

### Standard Minneapolis Blower Door Kit includes:

- Fan with variable speed controller and fan control cable
- Two flow rings (A and B) and No-flow plate
- DG-700 Pressure and Flow Gauge
- TECTITE™ Building Airtightness Testing Software
  - Calculates building airtightness test results including leakage areas, ACH50, CFM50, building leakage curve, estimated natural and design infiltration rates and the estimated savings of air-sealing.
  - Compatible with both manual Blower Door tests and automated tests using a DG-700 or APT System.
  - Calculation procedures and reports are done in accordance with CGSB-149.10-M86. Mechanical ventilation requirements calculated in accordance with ASHRAE 62.2.
  - Easy to use data entry screens, file storage and file retrieval features.
  - RESNET testing options
- 16-foot (5 meter) USB cable
- Fabric door panel with viewing window
- Five piece adjustable aluminum door frame and frame case
- Padded attaché case for gauge, manuals, tubing, speed controller and fabric panel, with room for a laptop computer and other documents



### Optional equipment includes:

- Wireless connection to your laptop using TEC WiFi Link.
- Smoke puffer
  - A convenient source of a refillable, dense and persistent white smoke for diagnosing air leakage sites.



- Fan cases
  - Choose from two: a lightweight, heavy duty, water resistant nylon case or a nylon case padded with high density foam.
- Pressure pans
  - This duct leakage diagnostic tool identifies exterior air leakage in duct systems. Because you don't have to tape off registers and grills, it is an extremely quick diagnostic procedure. Two sizes available.



# Blower Door Specifications

COMPONENT	SPECIFICATIONS		
<b>Model 3 Blower Door Fan</b>	<b>Maximum Flow</b>	6,300 CFM at free air (2,973 l/s, 10,700 m <sup>3</sup> /h)	
		5,350 CFM at 50 Pa (2,524 l/s, 9,090 m <sup>3</sup> /h)	
		4,900 CFM at 75 Pa (2,360 l/s, 8,495 m <sup>3</sup> /h)	
	<b>Minimum Flow</b>	300 CFM with Ring B (141 l/s, 510 m <sup>3</sup> /h)	
		85 CFM with Ring C (40 l/s, 144m <sup>3</sup> /h)	
		30 CFM with Rings D (14 l/s, 51 m <sup>3</sup> /h)	
		11 CFM with Rings E (5 l/s, 18 m <sup>3</sup> /h)	
	<b>Dimensions</b>	20 in. (50 cm) inlet diameter, 10.25 in (26 cm) length	
	<b>Weight</b>	33 lbs. (15 kg) with Flow Rings A & B	
	<b>Flow Accuracy</b>	+/- 3% with DG-700, Rings D & E +/- 4% or 1 CFM	
<b>Calibration</b>	Meets ASTM Standard E779-03, E1554-07, CGSB-149.10-M86, EN 13829, ATTMA Technical Standard 1, NFPA 2001, RESNET and USACE		
<b>Power</b>	3/4 hp motor available in 110V or 220V		
<b>Adjustable Frame and Frame Material</b>	<b>Frame Material</b>	Extruded aluminum	
	<b>Width</b>	28 in. to 40 in. (71 cm to 101 cm)	
	<b>Height</b>	52 in. to 96 in. (132 cm to 244 cm)	
	<b>Seal</b>	EPDM flexible gasket	
	<b>Panel Material</b>	Nylon with built-in vinyl window	

Specifications subject to change without notice.

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The Minneapolis Duct Blaster® is used to measure the airtightness of ductwork.



The "b" Series Infrared Camera helps speed up diagnostic work, especially when used with a Blower Door.



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

## Complete service and technical support is built in.

All of our products come with a full two-year warranty on parts and labor, and access to the most knowledgeable customer service staff in the industry. If you have questions on the use of our products or how to handle unusual situations, you can count on us to give dependable answers. We always stock a complete line of replacement parts and can respond quickly to any service or equipment problem.

Our nearly 30 years of expertise goes beyond simply knowing about equipment. The Energy Conservatory's on-going research, active participation with technical associations, and close working relationships with the world's leading building scientists keeps us involved in the development and field testing of many of the performance testing industry's techniques. This means you always have the most up-to-date information and testing procedures.

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