



OVERVIEW

ENERGY CONSERVATORY WARRANTY

EXPRESS LIMITED WARRANTY

Seller warrants that this product, under normal use and service as described in the operator's manual, shall be free from defects in workmanship and material for a period of 24 months, or such shorter length of time as may be specified in the operator's manual, from the date of shipment to the Customer.

LIMITATION OF WARRANTY AND LIABILITY

This limited warranty set forth above is subject to the following exclusions:

- With respect to any repair services rendered, Seller warrants that the parts repaired or replaced will be free from defects in workmanship and material, under normal use, for a period of 90 days from the date of shipment to the Purchaser.
- Seller does not provide any warranty on finished goods manufactured by others. Only the original manufacturer's warranty applies.
- Unless specifically authorized in a separate writing, Seller makes no warranty with respect to, and shall have no liability in connection with, any goods which are incorporated into other products or equipment by the Purchaser.
- All products returned under warranty shall be at the Purchaser's risk of loss. The Purchaser is responsible for all shipping charges to return the product to The Energy Conservatory. The Energy Conservatory will be responsible for return standard ground shipping charges. The Customer may request and pay for the added cost of expedited return shipping.

The foregoing warranty is in lieu of all other warranties and is subject to the conditions and limitations stated herein. No other express or implied warranty IS PROVIDED, AND THE SELLER DISCLAIMS ANY IMPLIED WARRANTY OF FITNESS for particular purpose or merchantability.

The exclusive remedy of the purchaser FOR ANY BREACH OF WARRANTY shall be the return of the product to the factory or designated location for repair or replacement, or, at the option of The Energy Conservatory, refund of the purchase price.

The Energy Conservatory's maximum liability for any and all losses, injuries or damages (regardless of whether such claims are based on contract, negligence, strict liability or other tort) shall be the purchase price paid for the products. In no event shall the Seller be liable for any special, incidental or consequential damages. The Energy Conservatory shall not be responsible for installation, dismantling, reassembly or reinstallation costs or charges. No action, regardless of form, may be brought against the Seller more than one year after the cause of action has accrued.

The Customer is deemed to have accepted the terms of this Limitation of Warranty and Liability, which contains the complete and exclusive limited warranty of the Seller. This Limitation of Warranty and Liability may not be amended or modified, nor may any of its terms be waived except by a writing signed by an authorized representative of the Seller.

TO ARRANGE A REPAIR

Please call The Energy Conservatory at 612-827-1117 before sending any product back for repair or to inquire about warranty coverage. All products returned for repair should include a return shipping address, name and phone number of a contact person concerning this repair, and the purchase date of the equipment.

Safety, warnings and troubleshooting information

- Follow all safety instructions provided when used with any TEC products.
- Do not operate the gauge if any liquid gets inside the gauge.
- If the inside of the gauge gets wet, immediately turn off the gauge and remove the batteries.
- Leave the battery compartment cover off to allow for drying.
- Dry the batteries with a towel and allow the batteries to air dry for at least 12 hours.
- Allow the gauge to air dry for at least 12 hours before inserting the batteries and powering back on.
- If a liquid gets inside the pressure ports, contact TEC at 612-827-1117.
- Do not attempt to dry any of the electrical connectors with a Q-Tip or similar item.

Lithium Ion battery safety and warnings

- Do not leave the batteries in direct sunlight or in an area heated by sunlight. The battery could generate heat, smoke or flames.
- Do not use the batteries when there is rust present, the batteries have a bad smell or if the batteries are damaged in any other way.
- Keep the batteries out of the reach of children and animals.
- If fluid from the battery leaks out and makes contact with skin, wash with soap and water. The fluid may cause irritation. If that happens please see a doctor immediately.
- Do not expose the batteries to extreme heat, flames or liquids.
- Do not modify or disassemble the batteries as this could result in leakage or explosion.
- When replacing the batteries in the gauge, use identical, fresh batteries.
- Always charge both batteries at the same time.

Touch screen use and care

- A screen protector is included with the DG-1000. Replacement screen protectors can be purchased from TEC.
- To clean the screen, use the microfiber cloth included with the DG-1000.
- Do not clean the screen with flux, water, acetone, ethanol, isopropyl alcohol, toluene or ammonia (glass cleaner).

Introduction

The DG-1000 is a two channel low pressure gauge that is intended to be used with equipment manufactured by The Energy Conservatory, or as a manometer.

Kit components

A standard DG-1000 kit includes

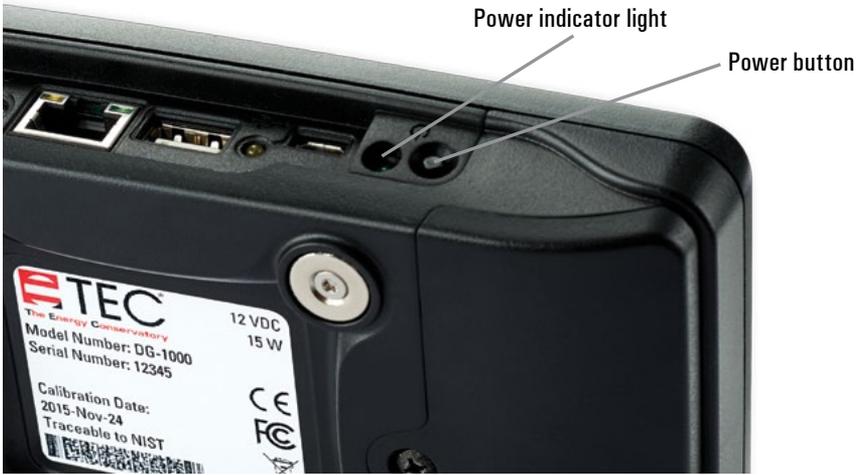
- Carrying case
- Two Lithium Ion batteries (installed)
- Micro USB cable
- Charger
- Parts bag with fan control cable, digital gauge extension tube and plastic hose connectors
- Screen protector
- 15' green hose
- 10' red hose
- Ground cable kit
- Recovery disk
- Overview booklet

Parts of the DG-1000



Power on the DG-1000

Turn on the DG-1000 by pressing and holding the power button until the green power indicator light turns on. The bootup process may take up to 40 seconds to complete, and the gauge is ready to be used when the Home screen appears (shown below).



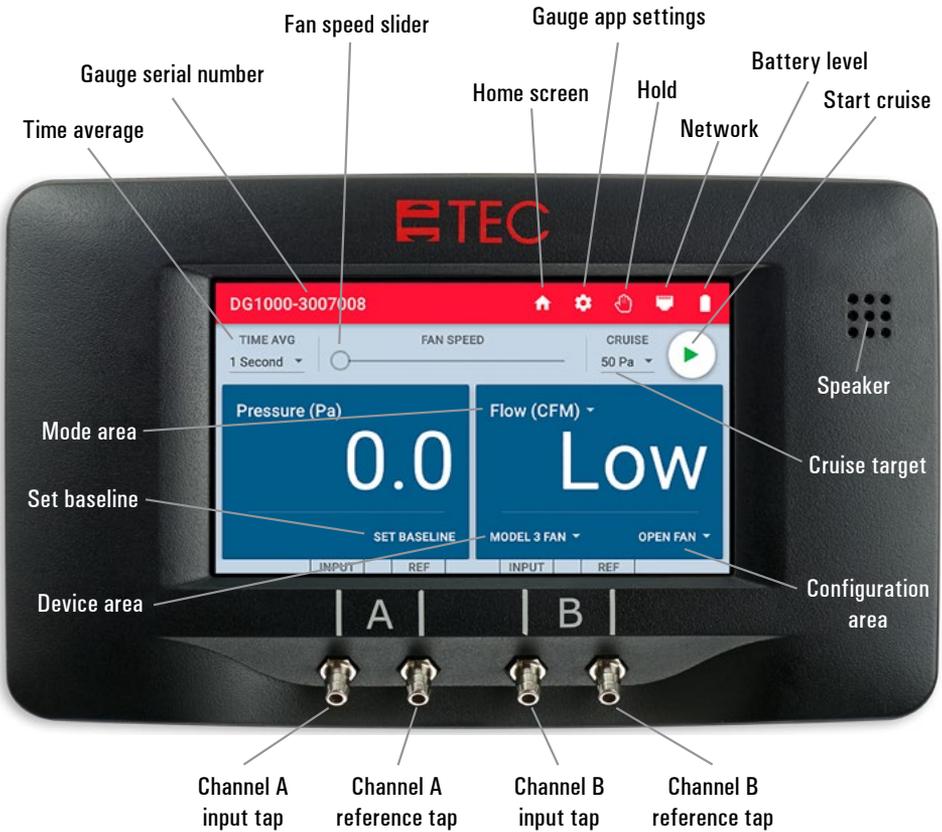
Launch the Gauge app

Touch the gauge icon to start the Gauge app. See the [DG-1000 Basic Use Quick Guide](#) to learn more about the Home screen (shown below).



Gauge app screen and pressure taps overview

To learn more about how to use the Gauge app, download the DG-1000 Basic Use Quick Guide at energyconservatory.com/dg1000guides



The function of Channel A is to measure a differential pressure between two locations. The Function of Channel B is to measure pressure at a device and convert it to an air flow.

To learn how to hook up the tubing to the pressure taps for a blower door or duct leakage test, download the Using the DG-1000 with the Minneapolis Blower Door Guide or the Using the DG-1000 with the Minneapolis Duct Blaster Guide. Both guides can be found at energyconservatory.com/dg1000guides.

Battery information

The DG-1000 uses two lithium-ion batteries that are rechargeable and replaceable. TEC recommends using only protected batteries with a button on one end, as seen here:



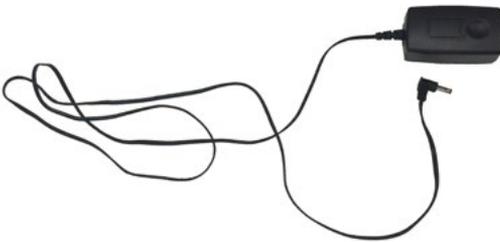
TEC recommends the Tenergy Li-Ion battery, model number 2600mAh, size 18650, 3.7v protected. Do not use unprotected batteries.

Battery run time and storage

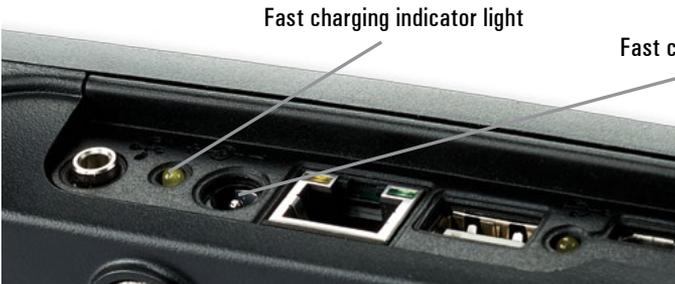
Battery run time is 15 hours, depending on WiFi use and screen brightness. To help preserve the battery run time, TEC recommends keeping the screen brightness at or below 40% and to turn off WiFi when not needed. All batteries self-discharge over time. TEC recommends charging the batteries for a few hours once every three months using the fast charger regardless of battery level. Batteries should be charged in temperatures between 32 degrees F and 105 degrees F.

Charging instructions

The batteries can be fully charged in about three hours using the fast charging port and included charger.* When the batteries are charging the fast charging indicator light will be on. The light will turn off when the batteries are fully charged. The gauge can be used during charging.



TEC recommends that only the included charger, the MEGA Electronics model FJ-SW1201500N, is used to charge the DG-1000.



* Charge the batteries overnight for optimal battery performance.

In addition to the fast charging port, the DG-1000 can also be slowly charged when connected to a computer via the micro USB port. When the gauge is connected, the micro USB charging indicator light will be on. It will take about 12 hours to fully charge the batteries using this port.



Micro USB charging indicator light

Micro USB port/charging port

Calibration information

The DG-1000 should be calibrated at the TEC calibration lab once every two years. A calibration label is located on the back of the gauge that includes the gauge serial number and the date it was last calibrated. This information is also available in the DG-1000 settings screen (see the Basic Use Quick Guide to learn more).



Calibration label

Temperature thresholds

The DG-1000 should be stored in a dry place with temperatures between -4 degrees F and 140 degrees F. Operating temperatures are between 42 degrees F and 105 degrees F.

Recovery disk



The recovery disk is a micro-SD card that should be used only if you need to reset the DG-1000 to the factory settings. If a situation arises where the recovery disk may need to be used, consult with TEC technical support first by calling 612-827-1117.

WiFi Password

The password for the networking setting WiFi (Create Network) is dg1000pw. To learn more about the DG-1000 networking settings, see the [Ports and Networking Basics Quick Guide](#).

DG-1000 specifications

COMPONENT	SPECIFICATIONS
No. of Independent Pressure Channels	Two
Pressure Range	-2,500 to +2,500 Pa (-10 to +10 in. H ₂ O)
Display Resolution	0.1 Pa for readings 0 - 999.9 Pa 1 Pa for readings 1000 Pa and larger
Accuracy at Typical Use Conditions ^{1,2}	0.9% of pressure reading or 0.12 Pa, whichever is greater
Units of Measure	Channel A - Pa (Future addition - in. H ₂ O) Channel B - Pa, CFM, CFM@75, CFM@50, CFM@25, ACH50, CFM@25/ft ² , CFM@25/100 ft ² , CFM@50/ ft ² , CFM@50/100 ft ² , CFM@75/ ft ² , CFM@75/100 ft ² (Future additions - in. H ₂ O and equivalent metric units)
Auto-zero	On start up and then once every 10 seconds. Tilt and motion compensation between auto-zeros.
Time Averaging	1, 5, 10 seconds and long-term (continuous update)
Operating Temperature Range ³	42° F to 105° F (5.5° C to 40° C)
Storage Temperature Range	-4° F to 140° F (-20° C to 60° C)
Display	480 x 272 pixels, 3.75 x 2.125 inches, capacitive touch screen
Display Backlight	User adjustable (default 40%)
Power	Two 18650 Lithium Ion batteries (replaceable) with AC charger/power adapter included
Battery Life	Over 15 hours of continuous use with default settings 13 hours of continuous use with default settings and wifi active
Auto-Off	Adjustable from 10 minutes to 2 hours
Dimensions	7.0 x 4.2 x 1.4 inches

DG-1000 specifications continued

COMPONENT	SPECIFICATIONS
Weight	15.7 oz
Calibration	Meets ASTM Standard E779-03, E1554-07, CGSB-149.10-M86, EN 13829, ATTMA Technical Standard 1 and NFPA 2001, RESNET and US ACE
Recommended calibration interval	Two years

¹Typical Conditions are a temperature range of 54° to 90° F, and a two year calibration interval.

²As Calibrated Accuracy is +/- (0.4% of reading + 0.045 Pa) under controlled conditions of 67° to 77° F, four month calibration interval, and pressure readings averaged for five seconds. All gauges are verified to meet this specification at all calibration pressures.

³For use at temperature conditions outside the typical conditions in Note 1, or the as-calibrated range in Note 2, add an additional 0.037% of pressure reading per degree F that you are outside the stated range.

Specifications subject to change without notice.

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Stylized images of the Blower Door is also a Registered Trademark.

Software Information

The Energy Conservatory (TEC) offers a variety of Windows-based programs. These programs can be found and downloaded for free at software.energyconservatory.com.

TEC also offers driver support for the DG-500, DG-700 and DG-1000. The drivers are designed to work with Windows-based computers with the following operating systems:

- Windows 7
- Windows 8
- Windows 8.1
- Windows 10

The drivers are available through Windows Update, and the DG-500 and DG-700 drivers can be downloaded from TEC at software.energyconservatory.com.

TEC also offers mobile apps for Apple and Android devices that can be found in the Apple App Store or the Google Play Store.

Instructional Videos

The Energy Conservatory (TEC) offers a variety of online instructional videos, including

- Minneapolis Blower Door™ Quick Guide
- Minneapolis Duct Blaster® Quick Guide
- Field Calibration Checks for Gauges
- Pressure and Airflow Basics
- Exhaust Fan Flow Meter
- TECLOG3
- TECTITE 4.0
- And many more

Visit www.YouTube.com/EnergyConservatory to see all of TEC's instructional videos.

More DG-1000 Guides

All DG-1000 guides are available online at energyconservatory.com/dg1000guides

Please refer to the guides listed below for further instructions.

- [DG-1000 Basic Use Quick Guide](#)
- [DG-1000 Ports and Networking Basics Quick Guide](#)
- [Connecting a Single DG-1000 Quick Guide](#)
- [Connecting Multiple DG-1000's Quick Guide](#)
- [Using the DG-1000 with the Minneapolis Blower Door](#)
- Using the DG-1000 with the Minneapolis Duct Blaster (coming soon)



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