

USER MANUAL

DigiFlow 2000

Digital Gas Flow Meter



110 Toledo Street • Farmingdale, NY 11735 • USA

www.Netechcorp.us

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Dear User,

We appreciate your purchase of the DigiFlow 2000 digital gas flow meter. Properly used, DigiFlow 2000 will deliver years of high performance and accuracy.

This User manual is designed to assist you in receiving the most from your DigiFlow 2000. **To properly use and maintain the instrument, please read and follow the instruction manual thoroughly.**

Netech Corporation is a leading innovative designer and manufacturer of advanced biomedical and industrial test instruments since 1987. We are ISO 9001:2015 registered and fully committed to continual improvement process. Further, we guarantee absolute satisfaction with our products.

Your business is important to us and we are dedicated to providing you with the best customer and technical service possible. Please contact us should you have any questions or concerns regarding your instrument.

We hope you will confide in us again when you are in need of an accurate, reliable, and affordable test instrument.

Sincerely,

NETECH CORPORATION

Patents / Copyright

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Quality Assurance

Netech Corporation is ISO 9001-2015 Certified. This instrument was thoroughly tested and inspected according to Netech's ISO 9001-2015 quality standards and test procedures. This DigiFlow 2000 was made to meet those specifications when shipped from factory.

Warranty

Netech warrants the DigiFlow 2000 against defects in materials and workmanship for one year from the date of original purchase. ***The standard warranty is extended for a second year if the instrument is returned to Netech for its recommended yearly recalibration.***

During the warranty period, we will repair or, at our discretion, replace at no charge a product that proves to be defective, provided you return the product shipping prepaid to Netech Corporation. *This warranty does not apply if the pressure sensor has been damaged by accident or misuse, or as the result of service or modification by other than Netech Corporation, or if its serial number is defaced or removed.*

Netech reserves the right to discontinue the DigiFlow 2000 at any time, and change its specifications, price, or design without notice and without incurring any obligation. Netech guarantees availability of service parts for 5 years after the manufacture of the unit is discontinued.

The warranty is void if you elect to have the unit serviced and / or calibrated by someone other than Netech.



The flow sensor is a very sensitive device. If it is damaged due to misuse it will not be covered under the warranty.

The purchaser assumes all liability for any damages or bodily injury that may result from the use or misuse of the unit by the purchaser, his employees, agents or customers.

In no event shall Netech Corporation be liable for consequential damages

Trademarks

Netech and DigiFlow 2000 are trademarks of Netech Corporation. Any other trademark names used in this manual are only for editorial purposes and benefit of the respective trademark owner, with no intention of improperly using that trademark.

Calibration

DigiFlow 2000 is calibrated using standards traceable to National Institute of Standards and Technology (NIST) and the unit is shipped with a calibration certificate.

Note: - *The calibration data provided is with air and verified with another gas at the discretion of the factory. If Calibration data for any other GAS is required, it must be requested at the time of order.*

Safety Considerations

General

Before using the DigiFlow 2000 read the instruction manual and familiarize yourself with all functions and controls.

Safety Symbols

WARNING

The “**WARNING**” sign denotes a hazard. It calls attention to a procedure, practice or the like, which, if not correctly performed or adhered to, could result in personal injury. Do not proceed beyond a “**WARNING**” sign until the indicated conditions are fully understood and met.

CAUTION

The “**CAUTION**” sign denotes a hazard. It calls attention to a procedure, practice or the like, which, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the instrument. Do not proceed beyond a “**CAUTION**” sign until the indicated conditions are fully understood and met.



The symbol to the left is the operator's manual symbol. When you see this symbol on the instrument, refer to the operator's manual.

Returns and Credits

Please note that only serialized products and their accessory items (i.e., products and items bearing a distinct serial number tag) are eligible for partial refund and/or credit. Non-serialized parts and accessory items (e.g., cables, carrying cases, auxiliary modules, etc.) are not eligible for return or refund. Only products returned within 60 days from the date of original purchase are eligible for refund/credit.

In order to receive a partial refund/credit of a product purchase price on a serialized product, the product must not have been damaged by the customer or by the carrier chosen by the customer to return the goods, and the product must be returned complete with all manuals, cables, accessories, etc. and in "as new" and resalable condition.

Products not returned within 60 days of purchase, or products, which are not in "as new", and resalable condition, are not eligible for credit return. The Return Procedure (see below) must be followed to assure prompt refund / credit.

Restocking Charges

Products returned within 30 days of original purchase are subject to a minimum restocking fee of 15 %. Products returned in excess of 30 days after purchase, but prior to 60 days, are subject to a minimum restocking fee of 20 %. Additional charges for damage and / or missing parts and accessories will be applied to all returns.

Return Procedure

All items being returned (including all warranty-claim shipments) must be sent freight-prepaid to our factory location. When you return an instrument to Netech Corporation, we recommend using United Parcel Service, Federal Express, DHL or Air Parcel Post.

We also recommend that you insure your shipment for its actual replacement cost.

Netech Corporation will not be responsible for lost shipments or instruments that are received in damaged condition due to improper packaging or handling. Use the original carton and packaging material for shipment.

Returns for Refund / Credit

A Return Material Authorization (RMA) number must be obtained from our service or customer service dept, before a product is returned for refund or credit. The RMA number should be clearly marked on the package along with a statement indicating the reason for return.

Repair and Calibration

Products returned for repair or recalibration must obtain an RMA (Return Material Authorization) from our service department. An example is shown below:

1. Obtain a RMA (Return Merchandise Authorization) for Repair or Recalibration from our Website at:
<https://www.netechcorp.us/RmaRequests>

or

Contact the Customer Service Department

Phone: 631-531-0100.

Fax: 631-531-0101

Toll Free: 800-547-6557

2. Provide model number (Netech Part Number), serial number, shipping, and billing information. Include the purchase order number or credit card information for the cost of the repair and/or recalibration when applicable.
3. Securely package your instrument within a sturdy case, surrounded by at least two inches of suitable shock absorbing material.
4. Include a copy of the purchase order, or reference your purchase order on your packing slip.
5. Include the completed RMA Form provided.
6. Ship the instrument to the following address:

**Netech Corporation
Service Dept.
110 Toledo Street
New York, 11735**

Email: Service@NetechCorp.US

Models and Part Numbers

Part Number	Description
780-01-LPM	0 to 1 LPM (1000 SCCM)
780-05-LPM	0 to 5 LPM (5000 SCCM)
780-10-LPM	0 to 10 LPM (10,000 SCCM)
780-15-LPM	0 to 15 LPM (15,000 SCCM)
780-20-LPM	0 to 20 LPM (20,000 SCCM)

Standard Accessories

The following standard accessories are included with each unit:

Part Number	Description
780-CASE	Die cut - Hard Carrying Case
660-HHS-002	Lithium Ion Battery Charger
780-Bard-Connector-Kit	Connector Kit

Optional Accessories

Various optional Accessories are available. Contact factory for part numbers.

Introduction

The **DigiFlow 2000** is a simple and easy to operate Gas Flow Meter intended for accurate measurement of volumetric flow, which is independent of temperature and pressure.

This bench-top, micro controller-based flow meter is designed for medical and hospital facilities, Field Service or in manufacturing and quality assurance applications.

The Digiflow 2000 measurement results are direct and require no correction for temperature and pressure, unlike the “bubble” and “diaphragm type” flow meters. This unit requires no water vapor corrections unlike bubble flow meters.

DigiFlow 2000 incorporates a highly accurate micro-mass flow sensor, which operate on the theory of heat transfer due to mass airflow, directed across the surface of the sensing element.

Netech recommends reading the following sections, detailed in this user manual, in order to familiarize with the functionality of the unit.

Features:

- User-selectable Multi-Gas units
- Accuracy of 2.5% Full Scale
- Menu driven and user friendly
- Non Corrosive Fluid & Gas
- Rechargeable Li –Ion polymer Battery

Specifications:

FLOW RANGES AVAILABLE: From 0 to 20 LPM

MAX. PRESSURE: 30 PSI

MAX. PRESSURE DROP: 2.5 H₂O (0.1PSI)

GASES: Air, N₂, O₂, CO₂, N₂O, ARG

ACCURACY: +/- 2.5% FS, +/- 1 Digit

SENSOR TYPE: Micro Bridge Mass Flow

POWER REQUIREMENTS:

One 7.4 volt Li-Ion rechargeable battery.

DISPLAY: 128 x64 Graphics display with back lighting.

CONNECTORS: ¼" NPT. (5 to 20 LPM Models)

PHYSICAL DIMENSIONS:

Size: 9.75 X 4.5 X 2.0 inches
(24.76 X 11.4 X 5.08 cm)

Weight: 1.1lb (.5 kg)

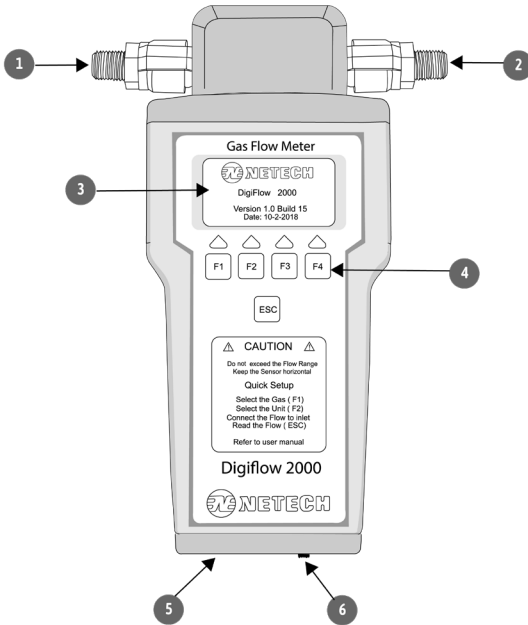
ENVIRONMENTAL:

Operating range: 60 to 95⁰ F (15 to 35⁰ C)

Storage Temperature: 0 to 122⁰ F (0 to 50⁰ C)

Relative Humidity: 90% (max)

Instrument Familiarization



1. Flow Input
2. Flow Output
3. LCD Graphics Display
4. Interactive Function Keys
5. Battery Charger Input
6. Power ON/OFF Switch

CAUTION

Before attempting to use DigiFlow 2000, please observe the following precautions:

1. When connecting the DigiFlow 2000 to a flow source, please ensure that the input pressure does not exceed 20 PSI.

Pressure levels in excess of 20 PSI will cause damage to the flow sensor.

2. Do not use DigiFlow 2000 to measure gases containing liquid or liquid vapor.
3. Do not exceed the maximum flow range of the unit. The operational range is indicated at the top of the unit. In the event of an over range condition, erroneous readings will occur and DigiFlow 2000 may require re-calibration.
4. Do not use DigiFlow 2000 to measure corrosive gases or H₂ gas and He gas.

If any of the above conditions are not followed and thereby result in damaging the transducer, repair(s) will not be covered under Warranty.

Functional Overview

On Power up, the micro-controller performs a self-test and displays the model and software version on the screen.

DigiFlow 2000 is powered by a Lithium- Ion rechargeable battery. Please ensure to fully charge the battery before use. If the “Low Battery” message appears while in use, turn the unit off and connect it to the battery charger.



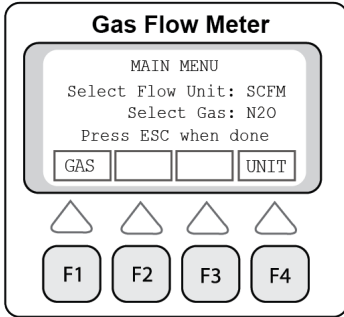
Low battery condition will result in erroneous readings.

Operations and Controls

The DigiFlow 2000 is designed to be user friendly with tactile soft keys and an interactive menu. The user can set up the unit by selecting an option from the graphics display as instructed. The Keypad consists of 5 menu keys marked F1 through F4 and ESC.

Menu Description

On Power up, after displaying the model and software version, the display defaults to the main menu as shown below:



UNIT: Unit of Measurement

The available unit selections are as follows.

- SCCM (Standard Cubic Centimeter per Minute).
- SCFM (Standard Cubic Feet per Minute)
- LpM (Liter per Minute).

GAS: Selection of gas under measurement

The available Gas selections are as follows.

- Air, O2, N2, Co2, ARG and N2O.

Flow Measurement



Turn off the flow supply before connecting it to Digiflow 2000.



Observe correct orientation with respect to input/output.

1. Connect the flow source to the Input of the flow sensor (marked on the top left-hand side).
2. Select the desired GAS, by pushing the F1 key. The Gas selected will display on the screen.

The available Gas selections are as follows.

- Air, O₂, N₂, Co₂, ARG and N₂O.

3. Push the F4 key to select the desired unit of measurement.

The available units are as follows:

- SCCM (Standard Cubic Centimeter per Minute).
- SCFM (Standard Cubic Feet per Minute)
- LpM (Liter per Minute).

4. Press “ESC” key to display the Measurement Menu.
5. The unit and the GAS selected in step 2 & 3 will be displayed on the screen. In the event you power off Digiflow 2000, the selections chosen will not change on power up. They are saved in the memory until a new selection is chosen.
6. The Measurement Menu will be displayed:
7. With the flow off, if the reading on the display is not “0000”, push F1 to reset the reading to zero.
8. Connect the source to the unit and start the flow. The real time flow and peak flow readings will display on the screen.
9. To reset the Peak reading, push F3.



Make sure the flow sensor is kept horizontal.

10. To Change the measurement unit press F4
11. During Flow measurement, if ESC is pressed, the display will prompt to disconnect the flow.

REGISTER YOUR PRODUCT ONLINE

Why it is Important?

Periodically, Netech releases information on software updates, product enhancements and new products. Once you register your warranty online, Netech will be able to send this important information to you.

Furthermore, upon successful completion of the warranty registration, please write to customerservice@netechcorp.us to receive your free gift!

ACTIVATE WARRANTY:

<https://www.netechcorp.us/WarrantyRegistrations/index>

Revision History

Release Date	Revision History	Revision #
01-11-2019	01-11-2019	R0
04-25-2019	01-11-2019	R1
09-10-2020	10-10-2020	R3



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