

DigiFlow 2000

User Manual



▶ **Compact**

▶ **Lightweight**

▶ **Easy to Use**

Mass Flow Meter
(Digital Gas Flow Instrument)



Innovative Instruments Since 1987

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Notices

Copyright

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Quality Assurance

Netech is ISO 9001-2015 Registered. This instrument was thoroughly tested and inspected according to Netech's ISO 9001-2015 quality system and test procedures and found to meet those specifications when it was shipped from the factory. Calibration measurement Instruments are traceable to the NIST (National Institute of Standards and Technology).

Trade Mark

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

Unpacking and Inspection of the Unit

Before unpacking the DigiFlow 2000, inspect the shipping box for any visual damage. If damage is found, do not unpack the unit and immediately notify the shipping carrier. If no damage is found to the shipping box, open the box and perform a visual inspection of the DigiFlow 2000. If any damage to the unit is observed please contact Netech Customer Service.

Technical Support

For technical support questions, either email

Techsupport@NetechBiomedical.com or Call 1-800-547-6557

or (1-631-531-0100)

Refunds and Credits

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.

Restocking Charges

Products returned within 30 days after purchase are subject to a restocking charge of 15%. Products must be shipped prepaid in original shipping cartons with all accessories and parts. Additional charges will be applied for any missing parts or accessories.

Repair and Recalibration

Products returned for repair or recalibration must obtain a RMA (Return Material Authorization) from our service department after completing a service request form our website <https://www.NetechBiomedical.com/repair> or contact Netech Customer Service

Department at CustomerService@NetechBiomedical.com

Calibration

The DigiFlow 2000 is factory calibrated, thoroughly tested, and meets Netech's ISO 9001-2015 quality standards.

Any attempt to remove or tamper with the calibration seal will void the warranty.

General Contact Information

Netech Corporation, 110 Toledo St, Farmingdale, NY 11735.

Phone: 631-531-0100, (or) 1-800-547-6557

Website: www.NetechBiomedical.com

Email: sales@NetechBiomedical.com

SYMBOL	DESCRIPTION
	Caution: Important Safety Information
	Hazardous Voltage
	Conforms to European Union Directive



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.

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

Warnings



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.



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



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.***



Do not use DigiFlow 2000 to measure gases containing liquid or liquid vapor.



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 recalibration.



Do not use DigiFlow 2000 to measure corrosive gases or H₂ gas and He gas.

Introduction

Description

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 micromass 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.

DigiFlow 2000 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

General 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 35 0 C)

Storage Temperature: 0 to 1220 F (0 to 50 0 C)

Relative Humidity: 90% (max)

Part Numbers and Ordering Information

Part Number: **780-01-LPM:** DigiFlow 2000 Digital Gas Flow Meter (0 to 1 LPM)

780-05-LPM: DigiFlow 2000 Digital Gas Flow Meter (0 to 5 LPM)

780-10-LPM: DigiFlow 2000 Digital Gas Flow Meter (0 to 10 LPM)

780-15-LPM: DigiFlow 2000 Digital Gas Flow Meter (0 to 15 LPM)

780-20-LPM: DigiFlow 2000 Digital Gas Flow Meter (0 to 20 LPM)

Standard Accessories (Included with the unit):

780-CASE: Hard Carrying Case

660-HHS-002: Lithium Ion Battery Charger

780-Bard-Connector-Kit: Connector Kit

Instrument Familiarization

Before getting started, it is important to get familiar with the control and operation of the unit.



Figure 1. Gas Flow Meter Controls

Number	Description
1	Flow Input
2	Flow Output
3	LCD Graphics Display
4	Interactive Function Keys
5	Battery Charger Input
6	On/Off Switch

Functional Overview

On Power up, the micro-controller performs a selftest 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.



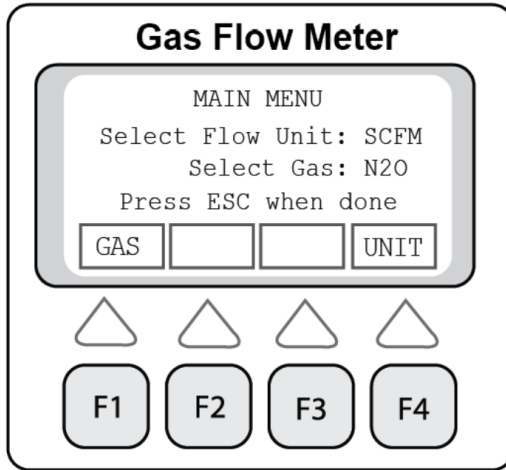
Low battery condition will result in erroneous readings.

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 on the following page:



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:

- CCM (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.

Warranty

Netech warrants this instrument to the original purchaser, as purchased from a Netech distributor or dealer, will conform to the written specification as of the date of its manufacture, for two years from the date of purchase. The second-year warranty is contingent upon returning the unit to the factory for the annual recalibration at the end of the first year warranty. Netech warrants this instrument against defects in materials and workmanship. If the instrument fails to conform to these warranties, Netech will repair or replace the unit and/or its components within a reasonable period; if the DigiFlow 2000 is returned, shipping prepaid, to Netech's facility at Farmingdale, NY, USA within the warranty period as expressed above.

These warranties are made upon the expressed condition that:

- 1. The purchaser promptly notifies Netech in writing of any nonconformity with the above warranty including a detailed explanation of the alleged deficiencies.*
- 2. The DigiFlow 2000 is returned to Netech at the buyer's expenses only after obtaining the proper RMA authorization from Netech.*
- 3. Netech will not be liable for any incidental or consequential damages.*
- 4. In the opinion of Netech upon inspection, the DigiFlow 2000 has not been misused, altered, or damaged due to the abnormal handling and/or operation.*
- 5. Repairs to the DigiFlow 2000 and/or its components have not been made by anyone other than Netech or one of its authorized repair agents.*
- 6. The DigiFlow 2000 has not been modified, altered, or changed in any manner by anyone other than Netech or one of its authorized repair agents.*
- 7. All shipping and handling charges will be billed to the purchaser.*

THIS WARRANTY EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE. NETECH IS NOT LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES FROM ANY MISUSE OF THE INSTRUMENT.

To receive free software and firmware updates, please fill out and send the warranty registration card or fill out online warranty registration: -
<http://www.NetechBiomedical.com/warranties>

Appendix: A

Current Revision: R2 08/12/25

Pages revised from the previous Revision (R1).



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