



## INSTRUCTION MANUAL

# DigiMano 2000

## Pressure / Vacuum Meter



Netech Corporation  
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*Dear User:*

*We appreciate your purchase of the Digimano 2000 Digital Pressure Vacuum Meter. Properly used, the instrument will deliver years of high performance and accuracy.*

*This instruction manual has been designed as a tool to assist you in getting the most from your Digimano 2000. In order to properly use and to maintain this instrument, please read the manual carefully.*

*Netech is recognized as an innovative designer and manufacturer of advanced biomedical and industrial test instruments. We are ISO 9001-2000 Registered and fully committed to a continuous 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 consider us again when you have a requirement for accurate, reliable, affordable test instruments.*

*Sincerely,*  
**NETECH CORPORATION**

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## **Quality Assurance**

Netech Corporation is ISO 9001-2000 Certified. This instrument was thoroughly tested and inspected according to Netech's ISO 9001-2000 quality standards (ISO/IEC 17025) and test procedures, and was found to meet those specifications when it was shipped from the factory.

## **Warranty**

Netech warrants the Digimano 2000 against defects in materials and workmanship for one year from the date of original purchase.

During the warranty period, we will repair or, at our option, 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 product 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 Digimano 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 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 Digimano 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.

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## **GENERAL DESCRIPTION**

The Digimano 2000 is a portable instrument designed to measure the pressure and vacuum of non-corrosive fluids and gases. It is housed in an aluminum case. A large 3½ digit LCD display presents measurement results in one of five selectable engineering units.

To provide superior performance, the Digimano 2000 uses one of the latest semiconductor pressure sensors. It is powered by one 9-Volt alkaline battery. Optionally, an AC adapter may be used.

The Digimano 2000 is available in sixteen models with different engineering units of display, pressure ranges, and accuracies.

The Digimano 2000 is CE marked and is shipped with a Certificate of Calibration traceable to the NIST.

The Digimano 2000 is a rugged instrument that performs its measurements quickly, accurately, and with ease.

## CONTROLS AND INDICATORS

- 1. Display:** A 3½ Digit LCD indicates the result of the measurement being made.
- 2. On-Off Button:** Turns the Digimano 2000 pressure meter on and off.
- 3. Unit Button:** Selects the desired unit of measure for display. A lit LED will indicate the unit.
- 4. Zero Button:** Automatic adjustment of zero.
- 5. Peak Button:** Selects peak pressure reading.
- 6. Low Battery Indicator:** LoBat appears in upper left corner of display.
- 7. Pressure Port:** 1/8" FPT adaptable to any standard fitting.
- 8. Connector for AC Adapter:** Use optional part 302 AC adapter.



## OPERATING INSTRUCTIONS

1. Turn the Digimano 2000 on and allow two minutes for the transducer to warm up and stabilize.
2. Select the desired engineering unit of measure to be displayed. The previously selected unit will be displayed when the instrument is first turned on.
3. With no pressure applied the display should read zero (0). If not, push the automatic zero button.
4. Connect the Digimano 2000 to the device to be tested or to a pressure vacuum line.
5. Read the pressure or vacuum in the measurement units selected. The negative sign (-) will be displayed when reading vacuum measurements.
6. For peak pressure readings push the PEAK button. The display will alternate between "PE" and the maximum pressure reading since entering peak mode. To return to normal operation push the PEAK button again.
7. The display update rate may be increased by holding the PEAK and UNIT buttons



down when pushing the ON button. Hold the buttons down until HH appears in the display.

8. Over time the initial reading at startup may drift slightly from zero. This offset may be permanently stored by pushing the UNIT and ZERO buttons while turning the meter on. Hold the buttons until the display reads "0000" then "----". Turn the meter off and on and the new zero offset will be stored in memory.

## **PRECAUTIONS**

1. Do not exceed the rated maximum pressure of the instrument. Although a transient pressure of two times the rating will generally be tolerated, prolonged exposure to higher pressure may cause sensor damage.
2. Do not connect the instrument to corrosive gases or highly ionic fluids.
3. Do not continue to use the instrument if it is wet.
4. Avoid using at extreme temperatures.
- 5.

## **Trouble Shooting**

When inaccurate pressure vacuum readings are suspected, check the following items:

1. Install a fresh 9 Volt alkaline battery.
2. Turn the Digimano 2000 on and verify that the display reads zero with no pressure applied to the instrument,  $00 \pm 1$  count .
3. Push the automatic zero button.
4. Connect the instrument to a pressure source, apply a known pressure, and verify the reading within the specifications of the Digimano 2000, at  $0.1\% \pm 1$  count or  $0.05\% \pm 1$  count depending upon model.

## CALIBRATION

The Digimano 2000 pressure vacuum meter is shipped from the factory fully calibrated with a Certificate of Calibration traceable to NIST. Annual calibration is recommended. Contact the Customer Service Department for instructions for returning the instrument to Netech for either calibration or repair.

## SPECIFICATIONS

**Display:** 3-1/2 Digit 0.5 in LCD.

**Polarity Display:** The negative sign (-) is displayed when there is a vacuum reading.

**Accuracy:** 0.1% full scale  $\pm$  1 count or 0.05%  $\pm$  1 count depending upon model (Pressure Only).

**Operating Temperature:** 0<sup>0</sup> C to 40<sup>0</sup> C

**Media Compatibility:** Non-corrosive fluids and gases.

**Maximum Pressure:** Double the rated Pressure.

**Power:** One 9 volt alkaline battery or optional AC adapter.

**Low Battery Indicator:** LO BAT on display if battery Voltage is  $\leq$  6.8 volts.

**Physical Dimensions:**

Size: 4.75 X 2.5 X 1.5 in (12 X 6.5 X 4 cm)

Weight: 11.9 oz (0.34kg)

### Digimano 2000 Models:

Model #	Range	Accuracy
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Display: cmH<sub>2</sub>O, mBar, inH<sub>2</sub>O, mmHg, PSI.

220-02cmH <sub>2</sub> O/PSI	-0.6 to 2	PSI	0.1% FS
220-10cmH <sub>2</sub> O/PSI	-3 to 10	PSI	0.1% FS
220-25cmH <sub>2</sub> O/PSI	-8 to 25	PS	0.1% FS
220-50cmH <sub>2</sub> O/PSI	-10 to 50	PSI	0.1% FS
220-95 cmH <sub>2</sub> O/PSI	-10 to 95	PSI	0.1% FS
220-150PSI- KPA	-10 to 150	PSI	0.1% FS
220-200cmH <sub>2</sub> O	0 to 200	PSI	2.0% FS

Display kPa, mBar, inH<sub>2</sub>O, mmHg, PSI.

220-02PSI	-0.6 to 2 PSI	0.1% FS
220-10PSI	-3 to 10 PSI	0.1% FS
220-25PSI	-8 to 25 PSI	0.1% FS
220-50PSI	-14 to 50 PSI	0.1% FS
220-95PSI	-14 to 95 PSI	0.1% FS
220-50PSI-05	-14 to 50 PSI	0.05% FS
220-100PSI-05	-14 to 100 PSI	0.05% FS
220-50PSI-UL	-14 to 50 PSI	0.1% FS
220-10PSI-UL	-14 to 100 PSI	0.1% FS
220-200PSI-UL	-14 to 200 PSI	1.0% FS

## ACCESSORIES

Description	Part Number
Tubing and Connector Set	220-203
User Manual	Digimano 2000 Rev 2

## OPTIONAL ACCESSORIES

Description	Part Number
Soft Carrying Case	201
Precision Syringe Pump	204
110 Volt AC Adapter	302
220 Volt AC Adapter	302-220



**Digimano 1000 with Syringe Pump**

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