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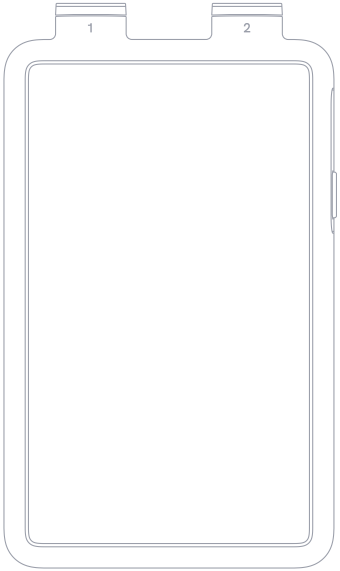

DPM5

Digital Pressure Meter

User Manual

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March 2026

Notices

Copyright release

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Unpacking and inspection

Follow standard receiving practices upon receipt of the instrument. Check the shipping carton for damage. If damage is found, stop unpacking the instrument. Notify the carrier and ask for an agent to be present while the instrument is unpacked. There are no special unpacking instructions but be careful not to damage the instrument when unpacking it. Inspect the instrument for physical damage such as bent or broken parts, dents, or scratches.

Technical support

For application support or answers to technical questions, contact technical support at: www.flukebiomedical.com/support/technical-support.

Claims

Our routine method of shipment is via common carrier, FOB origin. Upon delivery, if physical damage is found, retain all packing materials in their original condition and contact the carrier immediately to file a claim. If the instrument is delivered in good physical condition but does not operate within specifications, or if there are any other problems not caused by shipping damage, contact Fluke Biomedical or your local sales representative.

Returns and repairs

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 Fluke Biomedical, we recommend using United Parcel Service, Federal Express, or Air Parcel Post. We also recommend that you insure your shipment for its actual replacement cost. Fluke Biomedical 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. If they are not available, we recommend the following guide for repackaging:

- Use a double-walled carton of sufficient strength for the weight being shipped.

- Use heavy paper or cardboard to protect all instrument surfaces. Use nonabrasive material around all projecting parts.
- Use at least four inches of tightly packed, industry-approved, shock-absorbent material around the instrument.

Returns for partial refund/credit

Every product returned for refund/credit must be accompanied by a Return Material Authorization (RMA) number, obtained from our Order Entry Group at 1-440-498-2560 or orders@flukebiomedical.com.

Repair and calibration

Fluke Biomedical recommends calibration and repair by an authorized service provider. A list of authorized service providers can be found at: www.flukebiomedical.com/service.

To ensure the accuracy of the Product is maintained at a high level, Fluke Biomedical recommends the product be calibrated at least once every 12 months. Calibration must be done by qualified personnel.

Certification

This instrument was thoroughly tested and inspected. It met Fluke Biomedical's manufacturing specifications when shipped from the factory. Calibration measurements are traceable to the International System of Units (SI) through National Metrology Institutes such as NIST (USA), NMI (Sweden), NIM (China), etc. Devices for which there are no SI-traceable calibration standards are measured against in-house performance standards using accepted test procedures.

WARNING

Unauthorized user modifications or application beyond the published specifications may result in electrical shock hazards or improper operation. Fluke Biomedical will not be responsible for any injuries sustained due to unauthorized equipment modifications.

Restrictions and liabilities

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Intended use

The DPM5 (the product) is intended to be used to test and verify the basic operation of pneumatic tourniquets, noninvasive blood pressure monitors, sphygmomanometers, ventilators, respirators, compressor pumps, suction equipment, and dialysis machines, including measurement and generation of static pressures for cuffs, compressors, etc., measuring vacuum pressure for suction and extraction equipment, testing occlusion and pressure relief valves.

The intended user is a trained biomedical equipment technician who performs periodic preventative maintenance checks on medical devices in service. Users can be associated with hospitals, clinics, original equipment manufacturers and independent service companies that repair and service medical equipment. The end user is an individual, trained in medical instrumentation technology.

This product is intended to be used in the laboratory environment, outside of the patient care area, and is not intended for use on patients, or to test devices while connected to patients. This product is not intended to be used to calibrate medical equipment. It is intended for over the counter use.

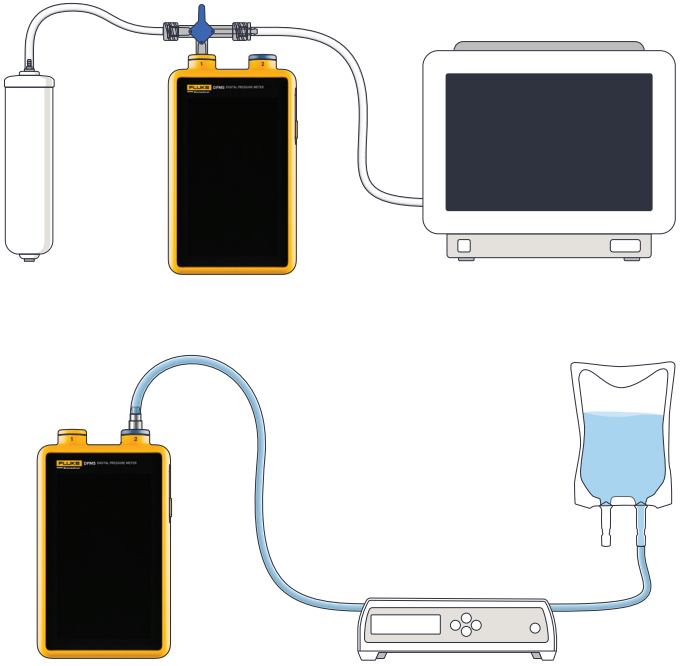


Figure 1: Examples of intended use for the product.

Safety information

Read the safety information and all instructions before you use the product.

A **Warning** identifies hazardous conditions and actions that could cause bodily harm or death.

A **Caution** identifies conditions and actions that could harm the product, the equipment under test, or cause permanent loss of data.

⚠ Warning

To prevent possible electrical shock, fire, or personal injury:

- *Carefully read all safety information before you use the product.*
- *To prevent electrical shock, fire, or other personal injury, use the product only as specified.*
- *Do not alter the product and use only as specified.*
- *Do not use the product if it is damaged.*
- *Do not use the product if it operates incorrectly.*
- *Use this product indoors only.*
- *Do not use the product around explosive gas, vapor, or in damp or wet environments.*
- *Do not put the product near heat or fire. Do not leave the product in direct sunlight.*
- *Use only the external power supply included with the product.*
- *Do not connect the product to a patient or equipment connected to a patient. The product is intended for equipment evaluation only and should never be used in diagnostics, treatment, or any other capacity where the product would come in contact with a patient.*
- *Make sure accessories and fittings are securely connected before use.*
- *Have an approved technician service and/or repair the product.*

Symbols

Table 1 details symbols applicable to the product and user manual.

For a full list of applicable product symbols, please visit: www.flukebiomedical.com/resource/certification-sheets.

Table 1: Symbols

Symbol	Description
⚠	Warning – Consult user documentation
🕮	Consult user documentation.
	Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information.

Product overview

Figure 2: Front side of the product.

Table 2: Front side of the product

Item	Description
1	Port 1, male luer lock.
2	Port 2, miniature quick-connect plug.
3	USB-C, for charging and PC communication.
4	On/off power button.
5	Touch screen

Standard accessories

Accessories included in the product:

- Power supply and AC plugs (for various regions)
- USB-C cable (for charging and PC communication)
- Carrying case
- Tubing and fittings kit for various applications:
  - Soft silicon tube, opaque. Max pressure 20 psi.
  - Medium tube, clear. Max pressure 100 psi.
  - Hard tube, clear. Max pressure 145 psi.

How to measure

The DPM5 Digital Pressure Meter is designed to measure the positive and negative pressures of medical devices in either liquid or gaseous form to assist in repair and quality control.

Pressure meter
Measures positive and negative pressures in dry noncorrosive gases and water on port 1 and 2.

Pressure source
Provides controlled pressure sourcing for functional testing on port 1.

Leak test
Determines system leak rates to ensure integrity on port 1.

Pressure relief test
Verifies the pressure threshold for a relief valve on port 1.

Occlusion test
Verifies the pressure threshold for an occlusion alarm in an infusion pump on port 2.

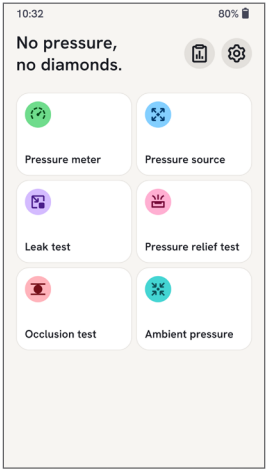
Ambient pressure
Displays the current atmospheric pressure, using an internal barometer.

The home screen

From the home screen, all the different measurement apps are selectable.

From the upper right corner you can access stored results and settings.

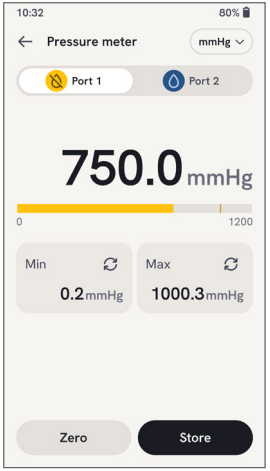
Press and hold the power button for two to three seconds to turn the product on or off.



Measurements

The product has several measurement apps. On each measurement screen, it is possible to select pressure unit in the upper right corner.

The product has two ports for pressure measurements. Port 1 (male luer lock) is for dry noncorrosive gases only, while Port 2 (miniature quick-connect plug) measures noncorrosive gases and water.

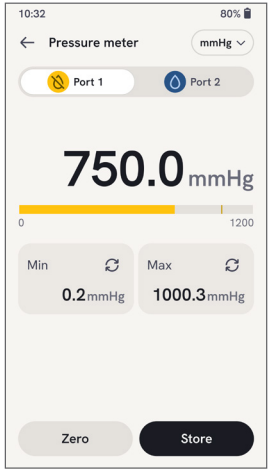


Caution

Allowing water into Port 1 can damage the Product.

Store results using the button in the lower right corner of the measurement screen.

Pressure meter



The Pressure meter app can be used with Port 1 for dry noncorrosive gases and Port 2 for both dry noncorrosive gases and water.

To use the pressure meter:

1. Tap the Pressure meter app.
2. Select Port 1 or Port 2.
3. Select measurement unit in the upper right corner.
4. Connect gas/water source to the appropriate port.
5. Measurement values are continuously updated on the screen. The pressure displayed is a 50 ms moving average.

Tap the arrows to reset the min and max values.

Tap the store button in the lower right corner to store the measurement. Stored measurements can be viewed later via the result list.

Note

Always use tubing rated for the pressure being measured.

Zeroing the sensors

In the Pressure meter app, the sensors can be zeroed. Zeroing will also clear the minimum and maximum values.

Zeroing is done per port. To zero a port, ensure the port is free of connections and open to atmosphere. Tap the Zero button. The zeroing applies to all apps using that port.

Pressure source

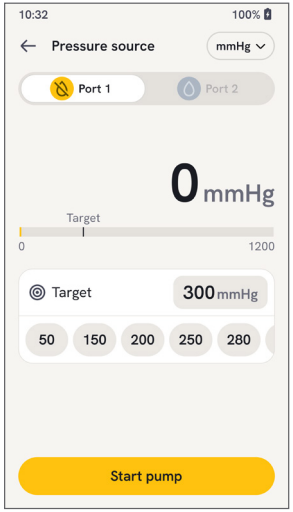
With this app, the product sources pressure.

To use the pressure source:

1. Tap the Pressure source app.
2. Select measurement unit in the upper right corner.
3. Connect Port 1 to the device under test.

Caution

Allowing water into Port 1 can damage the Product.



4. Tap the target pressure number to adjust the pressure target, or use one of the suggested values.
5. Start the pump.

Tap the store button in the lower right corner to store the measurement. Stored measurements can be viewed later via the result list.

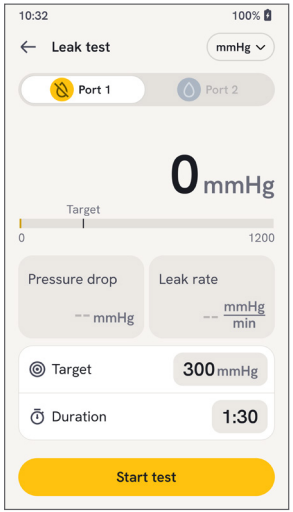
Stop the pump when the test is finished.

To vent the system and release the pressure, tap the reset button.

Note

If the sourced pressure is unstable, try increasing the volume of the system. Adding a buffer volume will increase the stability of the measurement. If the pressure is still unstable, check for leaks in the system.

Leak test



This app is used to check leak rate of a system.

To perform a leak test:

1. Tap the Leak test app.
2. Select measurement unit in the upper right corner.
3. Connect Port 1 to the device under test.

Caution

Allowing water into Port 1 can damage the Product.

4. Tap the target pressure number to adjust the pressure target, or use one of the suggested values.
5. Tap the duration time to set the duration of the test
6. Start the test.

The product will pump to the target pressure, let the system settle and then start measuring the leak rate as the pressure drop per minute.

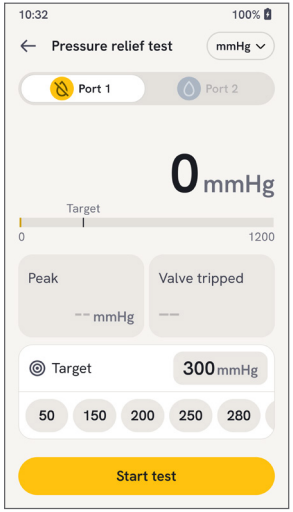
When the test is finished, the product vents the system to release the pressure.

Tap the store button in the lower right corner to store the measurement. Stored measurements can be viewed later via the result list.

Note

If the sourced pressure is unstable, try increasing the volume of the system. Adding a buffer volume will increase the stability of the measurement. If the pressure is still unstable, check for leaks in the system.

Pressure relief test



This app is used to test at what pressure a relief valve will activate.

To perform a pressure relief test:

1. Tap the Pressure relief test app.
2. Select measurement unit in the upper right corner.
3. Connect Port 1 to the device under test.

Caution

Allowing water into Port 1 can damage the Product.

4. Tap the target pressure number to adjust the pressure target, or use one of the suggested values.
5. Start the test.

The product will pump to the target pressure. The product detects if the relief valve of the device under test releases during the test or not, and indicates this. The peak pressure is also recorded.

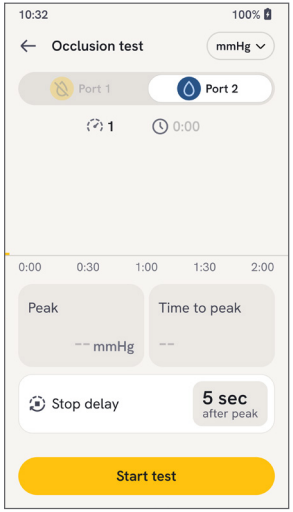
When the test is finished, the product vents the system to release the pressure.

Tap the store button in the lower right corner to store the measurement. Stored measurements can be viewed later via the result list.

Note

If the sourced pressure is unstable, try increasing the volume of the system. Adding a buffer volume will increase the stability of the measurement. If the pressure is still unstable, check for leaks in the system.

Occlusion test



An occlusion test can be used to verify the occlusion behavior of an infusion pump, such as the peak pressure. For correct pressure releases, position the product horizontally and ensure that the infusion pump is in level with Port 2.

To perform an occlusion test:

1. Tap the Occlusion test app.
2. Select measurement unit in the upper right corner.
3. Connect Port 2 to the device under test.
4. Start the test.

The peak pressure captured is the highest pressure recorded, using a 50 ms moving average window.

Time to peak is the time passed from the start of the test until the most recently recorded peak pressure.

By selecting a stop delay the test can be automatically finished when no new peak pressure is recorded within the stop delay duration.

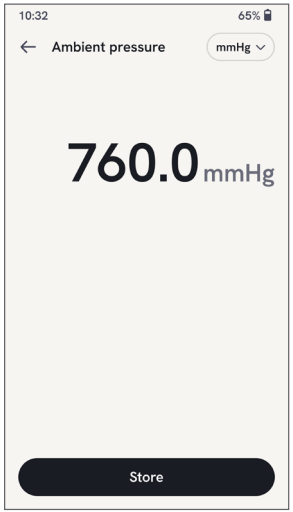
Tap the store button in the lower right corner to store the measurement. Stored measurements can be viewed later via the result list.

Note

When measuring on an infusion pump with a noncontinuous flow, e.g. peristaltic pump, you might need to increase the stop delay to prevent the measurement from ending in the pause between contractions in the infusion pump.

To turn off the stop delay functionality, select 0 min and 0 sec. When the stop delay is turned off, the measurement must be manually stopped. The maximum run time is 99 hours.

Ambient pressure



The product has an internal barometer that measures ambient pressure.

To measure ambient pressure:

1. Tap the Ambient pressure app.
2. Select measurement unit in the upper right corner.
3. Connect Port 2 to the device under test.
4. Measurement values are continuously updated on the screen.

Tap the store button in the lower right corner to store the measurement. Stored measurements can be viewed later via the result list.

Stored results

To view stored results, tap the results icon in the upper right corner of the home screen. Tap an individual result to bring up more information.

All stored results can be cleared from the result list.

The product can store 4096 measurements. When the storage is full the oldest measurements will be erased.

PC communication

Export results

Stored results can be exported from the product. Visit the product page on www.flukebiomedical.com for more information.

Remote mode

The product has a remote command interface. Contact your sales representative for more information.

Firmware update

Visit the product page on www.flukebiomedical.com for more information.

Settings

Settings can be reached from upper right corner of the home screen.

Display

Adjust the screen brightness.

Date & time

Set time and date and the time and date formats.

Language

The interface is available in several languages.

About

Information about the system, such as serial number, firmware version and calibration date.

Factory reset can be initiated from this screen. A factory reset will remove all results and settings done by the user.

Maintenance

Cleaning

Turn off the product and disconnect the power adapter before cleaning with a cloth dampened with a mild detergent solution.

Charging the battery

Use the provided charger to charge the product via the USB port.

When the product is turned off and connected to the charger, a solid red LED light will indicate that the product is charging. When the LED light turns off, the product is fully charged.

When the Product is turned on, the charging status and battery percentage are displayed on the screen. The product is fully functional while charging and may be used with the charger connected.

Troubleshooting

Red LED flashing when the Product is connected to the charger.
This indicates that charging is not occurring. Only use the charger supplied with the Product. Try disconnecting and reconnecting the charger. If the issue persists, contact customer support.

Sourced pressure not stable.
If there is not enough volume in the connected system, the sourced pressure can be unstable. Try increasing the volume by connecting a larger buffer volume. If the pressure is still unstable check for leaks in the system.

Corrosive liquids in Port 2.
If a potentially corrosive solution (salts) enters Port 2, the port must be flushed with water. Connect a syringe with clean water and push into the port. Pull the plunger of the syringe back and forth, performing a pumping action to remove air in the system and infuse water. Continue pumping until no bubbles appear.

General specifications

Safety standard.....Complies with IEC 61010-1:2010, pollution degree 2

EMC standard.....Complies with IEC 61326-1:2013

Dimensions (w × d × h) .....90 × 37 × 154 mm (3.5 × 1.46 × 6.1 inches)

Weight .....400 g (0.88 pounds)

Operating temperature.....+10 to +40 °C (+50 to +104 °F)

Operating humidity .....10 – 90 %, non-condensing

Storage temperature .....–20 to +50 °C (–4 to +122 °F)

Storage humidity.....5 – 95 %, non-condensing

Atmospheric pressure.....70 – 107 kPa, altitude up to 3000 m (10 000 ft)

Battery .....Built-in rechargeable lithium-ion. (<3600 mAh, 3.6V)

Battery life.....>24 h continuous use (measuring).

Charging.....5 V DC, 2 A

Connectivity .....USB-C for charging and PC communication

Display .....5-inch touch screen

Data storage .....4096 measurements

Mounting.....Standard ¼" tripod thread

Measurement specifications

Measurement units .....mmHg, inHg, psi, mbar, bar, atm, kPa, cmH_2O, inH_2O

Barometer

Range .....65 – 110 kPa

Accuracy.....± 1 %

Port 1

Medium .....Dry noncorrosive gases only

Connector .....Male luer lock

Range .....0 – 1200 mmHg (0 – 23 psi)

Accuracy.....± 0.2 % or 0.5 mmHg (whichever is greater)

Additional 0.02 % per °C for temperatures < 20 °C and > 25 °C

Resolution .....0.1 mmHg

Pressure source range .....10 – 1200 mmHg

Pressure source accuracy.....± (1 % + 1 mmHg)

Pressure source resolution.....1 mmHg

Pressure relief test range.....100 – 1200 mmHg

Internal leak rate.....< 0.5 %/min or < 1 mmHg/min (whichever is greater), while connected to a 500 mL rigid volume

Port 2

Medium .....Dry noncorrosive gases and water

Connector .....Miniature quick-connect plug

Range .....-725 – 7500 mmHg (-0.96 – 10 bar)

Accuracy.....± (0.5 % + 2 mmHg)

Resolution .....0.1 mmHg

Internal leak rate.....< 0.5 %/min or < 1 mmHg/min (whichever is greater), while connected to a 500 mL rigid volume

Limited warranty and product support

Fluke Biomedical warrants this instrument 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 Fluke Biomedical determines to be defective, provided you return the product, shipping prepaid, to Fluke Biomedical. This warranty covers the original purchaser only and is not transferable. The warranty does not apply if the product has been damaged by accident or misuse or has been serviced or modified by anyone other than an authorized Fluke Biomedical service facility. NO OTHER WARRANTIES, SUCH AS FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSED OR IMPLIED. FLUKE SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, INCLUDING LOSS OF DATA, ARISING FROM ANY CAUSE OR THEORY.

This warranty covers only serialized products and their accessory items that bear a distinct serial number tag. Recalibration of instruments is not covered under the warranty.

This warranty gives you specific legal rights and you may also have other rights that vary in different jurisdictions. Since some jurisdictions do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you. If any provision of this warranty is held invalid or unenforceable by a court or other decision-maker of competent jurisdiction, such holding will not affect the validity or enforceability of any other provision.

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