

MD20REM-H2CH

Digital pressure gauge – Pressure max 1 bar



**Firmware
Version 2.3**

According to the Regulations

UNI 7129	Below 35 kW
UNI 11137	Automatic litre dispersion calculation
UNI 11137	Leak check for systems with a max of 18 dm ³
UNI 11137	Valve leak check
UNI 11528	Above 35kW 6° Type
UNI 11528	Above 35kW 7° Type
UNI 10435	Above 35kW

Main features

Instant measurement of pressures on the scales: **bar, mbar, mmH₂O, Pa, hPa, PSI, Torr**
Measures and performs all the **UNI 11137-UNI 7129-UNI 11528-UNI 10435 tests**
Measures pressure up to 1 bar
Measures constant automatic barometric pressure
Measures the volume of a gas system
Measures the volume of a tank or container
Measures the ambient temperature from -10°C to 50°C
Easy to use
Navigation buttons
Facilitated data entry program
Easy user data entry
Facilitated entry of the date of the system being tested
Menu Program
It stores the read data and then transmits it to a PC
Data transmission program "**MD20REM-H2CH provider**" to be installed on PC
Language selection: Italian, English, German.
IR transmission for portable printer
Prints all events via portable printer
1 USB port used for: battery charging and data transmission
4 row by 20 column backlit alpha numeric display
LITHIUM POLYMER Batteries
Long autonomy
Microprocessor-controlled battery charger
Possibility of working with mains voltage
Equipped with a stand for use

Check the contents of the package

Check that the package contains all of the items listed below.

USB cable for battery charging and data transmission
Spiral tube complete with fittings used for pneumatic connection
MD20REM-H2CH pressure gauge instructions
Warranty certificate
Calibration certificate

Information note between Pressure and Temperature:

**For each degree C. of temperature the
pressure varies by approximately 10 mmH₂O**

To define a steady state of air, **three macroscopic variables** are required, each capable of direct measurement.

These variables are **pressure, temperature** and the **volume**; the state of an air gas of volume **V**, at pressure **P**, and at temperature **T** is then defined by Boyle's law:

$P \cdot V = n \cdot R \cdot T$. Where **n** is the number of gram molecules constituting the gas and **R** is a universal constant. The possible states of a gas at constant pressure and volume are expressed by the Gay-Lussac laws: **at constant pressure the volume of a gas increases as the temperature increases, or vice-versa.**

Therefore connecting the instrument with **variable temperatures**, the instrument will undoubtedly record a final pressure that is different from the initial one.

This is normal and is not the result of an instrument malfunction.

IMPORTANT NOTE:

With the pressure gauge turned on without pressure it is evident that the numbers after the point do not remain still. This is not a calibration defect or uncertainty, but rather the advantage of the high precision of this instrument. It should be remembered that reading occurs at 18 bits.

When the instrument is placed under pressure calibration takes place automatically.

Important Warning

The digital pressure gauge **MD20REM-H2CH** leaves the factory accompanied by a test and calibration certificate.

This corresponds to the calibration declared by the sample instrument, **based on international standard norms.**

The evaluation of the measurement uncertainty is "**B category**",

The ordinary and extraordinary maintenance of the digital pressure gauge and the **CALIBRATION**, whose natural expiry is **ONE YEAR**, must be performed by authorised personnel, using compliant equipment.

For your safety

To prevent risks of damage to the product or injury to you and to third parties, before using the pressure gauge, carefully read the following safety warnings in their entirety. Keep them so that anyone who uses the appliance can consult them beforehand.

In the event of a malfunction, turn off the appliance immediately.

If you detect smoke or an acrid or unusual odour coming from the appliance or from the mains adapter.

Immediately turn off the pressure gauge, disconnect the power supply from the mains, and send the equipment to the nearest assistance centre.

Use the instrument with caution in the presence of flammable gases.

To avoid risks of explosions or fires, always use the appliance under close supervision, without leaving it unattended.

Do not keep the bag strap wrapped around your neck.

Be extremely careful, especially when equipping the instrument with a shoulder strap, and especially in the presence of young children.

Do not try to disassemble the appliance.

Contact with internal components of the pressure gauge can cause injury. In case of faults, the product must be repaired exclusively by qualified personnel. If the appliance breaks following a fall or crushing, contact the Assistance Centre for the necessary repairs.

Observe the due precautions when handling the batteries.

The battery must never be exposed to temperatures above 60°C.

To ensure optimal shelf life, use the batteries at room temperature.

If used at low temperatures, the durability may decrease.

Do not disassemble the batteries and do not throw them into fire as they could explode.

Never dispose of batteries in normal waste. Follow the local regulations for disposal.

Use the appropriate cables supplied.

In order to preserve the conformity of the product with the regulations, to connect to the input and/or output terminals of the pressure gauge, use only the cables supplied for this purpose or marketed separately by the manufacturer **BEINAT S.r.l.**

USB KEY.

To avoid damage and to prevent possible risks, the USB stick containing the software programs and manuals relating to this product must not be reproduced and must be carefully stored.

Avoid contact with liquid crystals.

If the monitor breaks, be careful not to injure yourself from glass fragments and avoid liquid crystals coming into contact with your skin, eyes or mouth.

Precautions

To enjoy your **MD20REM-H2CH**, digital pressure gauge for a long time and with satisfaction, use and store it bearing in mind the following precautions.

Do not allow it to become wet.

The pressure gauge is not waterproof. If immersed in water or exposed to high humidity levels, it could cause serious damage.

Avoid dropping it.

Heavy impacts against hard surfaces and significant vibrations can damage the appliance.

Avoid high magnetic fields.

This pressure gauge should not be used or stored in the presence of radiations or high magnetic fields. Static electricity or magnetic fields produced by equipment such as radio transmitters can interfere while data is being collected, can damage the data stored in memory or the internal circuits of the pressure gauge.

Avoid sudden changes in temperature.

Sudden changes in temperature can cause condensation to form and the batteries may deliver less voltage. Above a certain temperature (approximately 45°C) the monitor turns black. To make it visible again, cool it by placing it in the refrigerator for a few minutes.

Cleaning

Never clean the appliance with chemical products. If necessary wash with a damp cloth.

Pneumatic Connection

The **MD20REM-H2CH pressure gauge** has an input to measure a maximum pressure from ± 1 bar. The pressure connections are located on the head of the instrument, (see page 5). There are two inputs available, one with positive pressure and one with negative pressure. The latter is used to measure a pressure difference between two measurements or to check the draft efficiency in flues.

To measure pressure

Apply the supplied pipe to the dedicated inlet, being sure to leave the depression inlet open.

To measure depression

Apply the supplied pipe to the dedicated inlet, being sure to leave the pressure inlet open.

To measure the difference between two pressures.

Apply the higher pressure to the positive inlet and the other to the negative inlet.

The pressure difference that the instrument will measure between one inlet and another will appear on the display.

N.B. The higher pressure must always be connected to the positive input.

Battery Notions and Recharging



Charging via PC



Charging via 230V mains

Technical data of the LITHIUM POLYMER battery

Nominal voltage of the **7.4V battery pack**, current **1050 mA**.

Operating time 8 hours approximately with batteries charged

Battery charging time approximately 10 hours.

N.B. Do not recharge the battery in an ATEX area

Before turning on the pressure gauge

At the time of purchase, the battery is not fully charged.

Please charge for at least 8 hours.

Loading with PC

Connect the battery charger connector to the micro USB socket located on the bottom of the instrument and then to the USB socket of any PC.

During charging, the battery level indicator (a graduated bar on the screen) will indicate the battery charge status.

230V mains voltage charging

Connect the battery charger connector to the micro USB socket located on the bottom of the instrument and then connect the battery charger to a power socket.

During charging, the battery level indicator (a graduated bar on the screen) will indicate the battery charge status.

Use

The battery must never be exposed to temperatures above 40°C.

To ensure optimal shelf life, use the batteries at room temperature.

If used at both low and high temperatures the durability may decrease.

Protection

For greater protection of the batteries and of the instrument, an additional control has been integrated.

When the batteries fall below a pre-set minimum limit, the following message lights up:

"LOW VOLTAGE DETECT". The instrument remains blocked; **To reset, proceed as follows:**

Connect the **MD20REM-H2CH** to the mains voltage via the supplied power supply, or to the PC. Then

the following text appears **"WAIT RESET SW..."**

Leave the **MD2REM-H2CH** to charge for **at least 10 hours**.

Note

When the pressure gauge must be used for a long time, the instrument can be powered with 230V mains voltage via external power supply.

Before start-up

Thank you for choosing a **BEINAT S.r.l.** digital pressure gauge **MD20REM-H2CH**.

This manual has been designed to help you obtain maximum functionality and automatic efficiency of the product.

Read these instructions carefully before starting use and always keep it nearby when using the instrument. The illustrations and text on the screens in this manual may differ from what is actually displayed.

MD20REM-H2CH components and controls

1) ON button.

Holding it down for 3 seconds turns it on.

2) OFF button.

Holding it down for 3 seconds turns it off.

3) SELECT button.

Press it to select the scales relevant to the desired pressure measurement. **mbar, mmH₂O, hPa, PSI.**

4) Test button.

It is used to enter the system verification menu according to the **UNI** regulations.

6) Menu selection button.

Press this button to access the instrument settings.

7) Enter button..

It is used to confirm the data entered.

8) Print button.

To print the Ticket of the measurements taken.

9) Left navigation button.

Pressing this button moves the cursor to the RIGHT of the screen.

10) UP navigation button.

Pressing this button moves the cursor UP on the screen.

11) Left navigation button..

Pressing this button moves the cursor to the LEFT of the screen.

12) Dwn navigation button..

Pressing this button moves the cursor DOWN on the screen.

13) Battery charging and data transmission connection.

This USB connector is used to connect the instrument to the battery charger which can be performed via PC or from a 230V mains (see paragraph on page 4).

Furthermore, from this USB port it is possible to transmit and receive data from the PC.

14) USB service port.

Attention!

This port is only used by authorised technicians.

Any violation may preclude damage to the processor

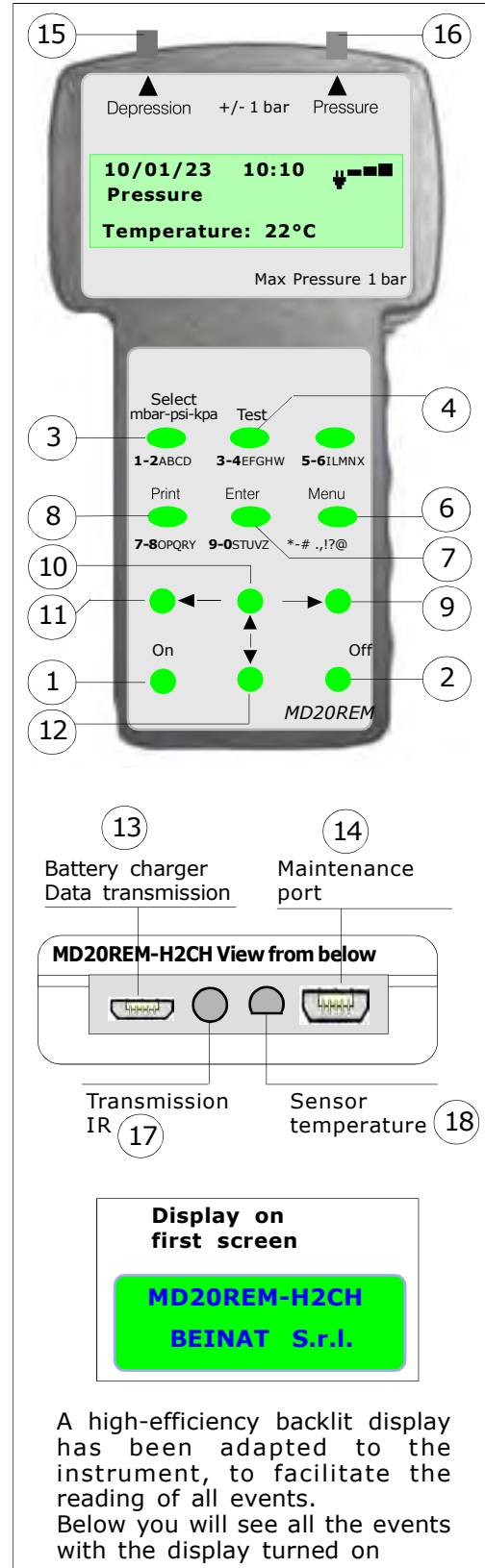
15) Pneumatic connection for measuring mbar depression.

16) Pneumatic connection for measuring mbar pressure.

17) IR infra-red port. It is used to transmit data to a printer.

18) Ambient temperature probe.

This probe detects the ambient temperature, temperature scale from -10°C to 50°C.



Display on first screen

MD20REM-H2CH
BEINAT S.r.l.

A high-efficiency backlit display has been adapted to the instrument, to facilitate the reading of all events. Below you will see all the events with the display turned on

Switching on and off

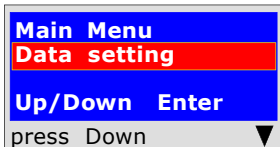
POWER ON. Turn on the pressure gauge by pressing the power button "**ON**" being sure to hold it down for 3 seconds: The window containing the instrument model, firmware version and serial number will be displayed. After 5 seconds, the words "STABILISATION IN PROGRESS" will appear. Wait a few seconds, and the main window will open.

SHUTDOWN. To turn off the pressure gauge, press the "**OFF**" button, being sure to hold it down for 3 seconds

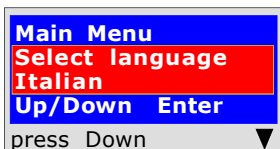
Navigate through the Menu

Press this button to activate the "**Menu**", program. From here it is possible to set the device for and to select the work mode of the **MD20REM-H2CH** pressure gauge.

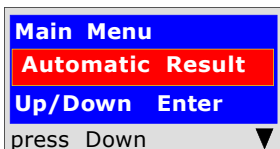
To scroll the menu use the Up and Down buttons, to confirm press Enter



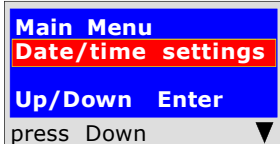
This program is used to enter the data of the operating company. Pressing the "**Enter**" button the tool will prompt to "Enter Password". You will find the password on the warranty card. Follow the instructions that are requested.



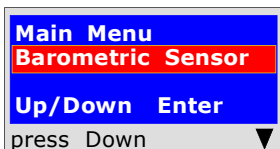
This function is used to configure the language to be used. press the "Down" or "UP" buttons to select the desired language; press "Enter" to confirm.



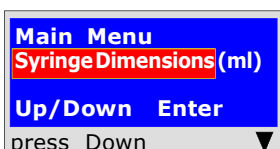
This function is used to configure the automatic outcome for leak tests, **excluding the UNI 11137 Regulations**. Press the "Down" or "UP" buttons to activate or deactivate them. Pressing "ENTER" confirms. When active, the test result appears on the instrument and on the ticket.



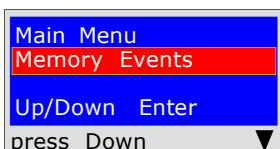
This program is used to insert the current date and time. Pressing the "**Enter**" button the tool will prompt to enter the date and time. Follow the instructions that are requested.



This program is used to activate the barometric sensor. Pressing the "**Enter**" button, the instrument will ask whether or not want to activate the barometric pressure control. Use the "**Down**" or "**UP**" buttons to activate or deactivate it. Press "**Enter**" to confirm. When activated, the text appears on the main screen.



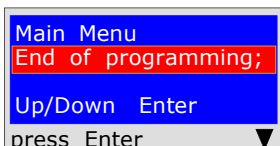
This program is used to select the type of syringe available to perform the dispersion tests. Press the "**Enter**" button and the instrument will ask the following: the size of the syringe in millilitres (the equivalent in cc). To enter the numbers, press the appropriate keys (similar to when sending an SMS). To move forward/back, use the navigation keys; for white spaces use the key with the number 1.



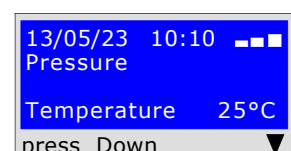
This program is used to read stored events. Pressing the "**Enter**" button the instrument will enable reading of all the tests performed up to a **maximum of 6 events**.

Deletion from memories

- 1) Select the test to be deleted with the **Up/Down** button.
- 2) Confirm it with the **Right** button.
- 3) Press the **Menu** button;
- 4) with the **Up/Down** buttons select **yes/no** and press **Enter** to confirm.



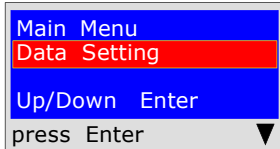
Pressing the "**Enter**" button the instrument will finish the Menu routine and will return to the main screen



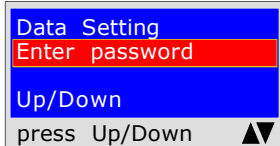
Entering user data

In order for the instrument to respect the **Regulations** it is necessary to enter your personal data. Start the guided configuration which accompanies the user in entering personal data, such as:

- 1) First name, surname or company data
 - 2) Street, postcode, city, telephone, VAT number, etc.
- To do this, follow the instructions on the screen.



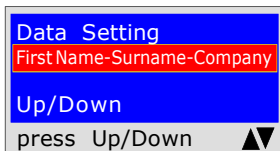
Starting from the " **Menu** " button you will find the " **Data Setting** " program. Press " **Enter** " to enter the " **Data Setting** " program



To protect your personal data before accessing programming it is necessary to **enter the Password (***)** Once inserted, press **Up/Down**. If you make a mistake, the tool exits the configuration.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To go forward/back use the navigation keys. For white spaces use the number key 1.

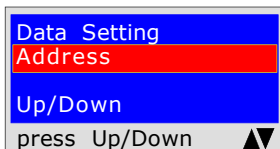


The program prompts to enter your **business name**. Remember that you have a total of 20 characters available.

Once inserted, press **Up/Down**.

To enter characters or numbering, press the appropriate buttons (similar to when sending an SMS).

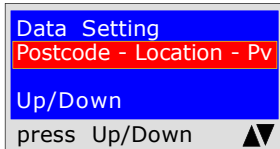
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the address** of the company name. Remember that you have a total of 20 characters available. Once entered, press **Up/Down**.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

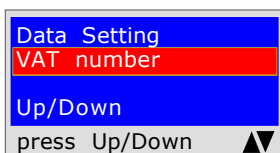
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter the **Postcode the City and the Province** where your company name is located, remembering that you have a total of 20 characters available. Once inserted, press **Up/Down**.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

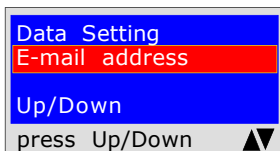
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the VAT number** of the company name. Remember that you have a total of 11 characters available. Once entered, press **Up/Down**.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

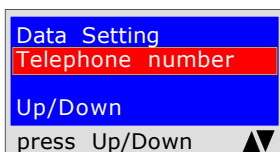
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter the **E-mail address** of the company name, remembering that you have a total of 20 characters available. Once entered, press **Up/Down**.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

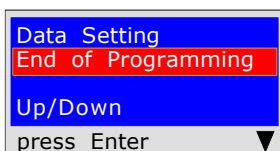
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter the telephone number of the company name, remembering that you have a total of 20 characters available. Once entered, press **Up/Down**.

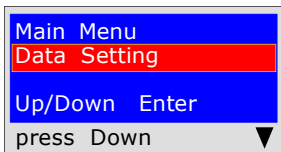
To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

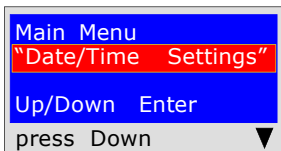


You have now finished entering your personal data. To exit press **Enter**

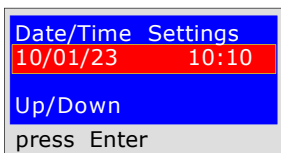
Date and time insertion



Starting from the " **Menu** " button
Pressing the " **Down** " button you will find the program:
" **Date/Time Settings** "



Pressing the " **Enter** " button you will find the insertion program



The program prompts to enter the "day, month, year" date and then the current time "Hour and Minutes". To move from one group of digits to another use the " **Up or Down** " navigation buttons.
If during insertion the digits are the same, simply move with the " **Right or Left** " navigation button
To enter, press the appropriate numbers (as when sending an SMS).
Once inserted, press **Down** to exit

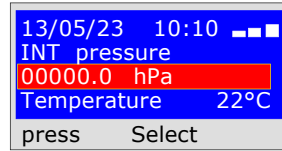
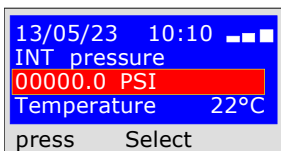
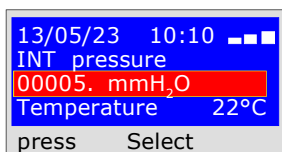
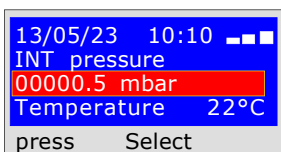
How to measure pressures, and.... Direct reading of an eventless pressure

The instrument has been designed to measure air and gas pressures.
Depending on requirements and on the regulations, pressures can be measured with these types of scales:
mbar - mmH₂O - hPa - PSI - Torr.
To select the scales press the " **Select** " button

READING

- 1) Select the desired scale: **mbar - mmH₂O - hPa - PSI - Torr.**
- 2) Connect the pipe to the desired inlet, positive or negative.
- 3) Connect the pipe to the source of pressure or depression to be measured.
- 4) Read the value directly.

N.B. These readings are not stored. To print the event press **Print**



Beinat S.r.l.
PRESSURE GAUGE MOD. **MD20REM-H2CH**
Firmware version V 2.3
Serial number: **0102**
Calib. Date: 10/05/23

COMPANY
BIANCHI GIOVANNI
VIA ROMA 155
10000 MILAN
VAT no. 02434381200
info@lapolipo.it
Tel. 023111457562

Instant Measurement
(date)15.05.23 (time) 09:54
(scale)**mbar** 00010.6

(time) **09:54**

Operator: _____
Signature: _____

Tests and Measurements according to the Regulations

UNI 7129

below 35kW (max250 dm3)

The UNI7129/01 regulation Below 35kW (max 250 dm3) requires the installer to check the tightness of the gas system at a pressure of **at least 100 mbar**, (1000mmH₂O) for a **stabilization time of 15 minutes and 5 minutes of testing**.

The Stabilization test is performed through the **MD20REM-H2CH**. **15 minutes** of stabilization have elapsed, the reading is performed **Actual TEST, for another 5 minutes**.

Between the initial pressure and the final pressure of the actual test, a pressure drop of less than 0.2 mbar (2mmH) must not be detected. (OR).

The test is positive if the pressure drop does not exceed 0.2 mbar.

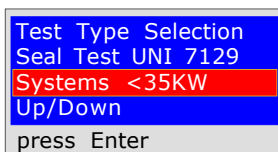
N.B. The two measurements, stabilisation and test, are performed automatically.

ATTENTION !!

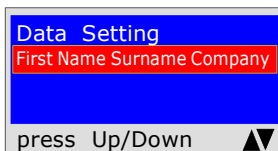
During the tests, take into account the fact that the temperature does not undergo sudden variations.

For each degree Celsius of temperature the pressure varies by approximately 10 mmH₂O.

Actions: Turn on the instrument, select the pressure in **mbar** with the SELECT button, press the TEST button and follow the operations reported below.



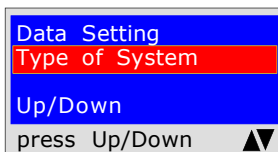
The instrument prompts whether to perform this test, press ENTER



The program prompts to enter **the location of the system** where the test is being performed. Remember that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

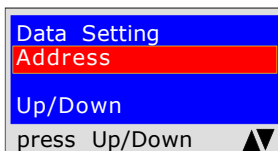
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the type of system**, whether for civil use, heating, industrial use, or anything else, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

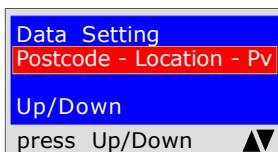
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the address of the building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

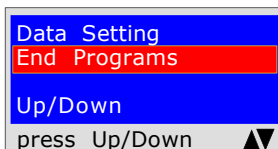
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the post code, the city and the province** of the **building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

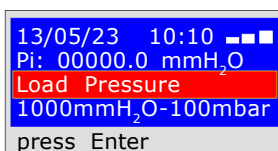


The program prompts whether to finish entering the data.

Press **Up/Down** to re-read the data entered.

To modify any data use the navigation keys, and correct.

Press **ENTER** to finish and exit the program.



The program prompts to enter **the pressure**. To achieve this, proceed as follows:
1) Connect the extended pipe connected to the positive inlet, which is located at the top of the instrument.

2) The scale is automatically set to mmH₂O.

3) Connect the other end of the pipe to the pressure source to be measured.

4) Pressurised the pipe with a **minimum of 1000 mmH₂O (100mbar)**.

Press **ENTER**.

Next Tests and Measurements according to the Regulations

UNI 7129 below 35kW (max250 dm3)

```
13/05/23 10:10 ■■■
Pi: 01000.1 mmH2O
Time: h 00.19.16
Pf: 01000.5 mmH2O
press Enter
```

Now the instrument automatically starts the leak check. On the display you will notice that the **Time** starts the countdown; the test lasts 20 minutes.

```
test UNI 7129
Seal
13/05/23 09:03
Up/Down Enter
press Up/Down-Ent▲▼
```

After 20 minutes it is possible to read on the **MD20REM-H2CH** all the data detected by the test

To navigate, press the **Up/Down** buttons, to exit press **ENTER**

```
Confirm Save
Event in Memory
No/Yes
Up/Down Enter
press Up/Down-Ent▲▼
```

The instrument prompts whether to store the detected data.

To do this, select **Yes/No** by pressing **Up/Down**. Press **ENTER** to confirm.

If saving is not confirmed within 30 seconds, the **MD20REM-H2CH** stores the event regardless

```
Print Ticket?
No/Yes
Up/Down Enter
press Up/Down-Ent▲▼
```

The instrument prompts whether to print the ticket proving the test.

Select **Yes/No** pressing the **Up/Down** buttons.

Select "**Yes**", turn on the printer and place it in line with the pressure gauge transmitter; press **ENTER**.

```
Keep the Prev. data
No/Yes
Up/Down Enter
press Up/Down-Ent▲▼
```

When performing several tests "**TEST**" or to repeat a test.

The instrument keeps in memory the data of the building where the test is being performed. The latter are only lost if the instrument is turned off. To reinsert them, select **Yes/No**, with the **Up/Down** buttons and press **ENTER**.

Beinat S.r.l.

PRESSUREGAUGEMOD.MD20UREM-H2CH

Firmware version V 2.3

Serial number: **0102**

Calib. Date: 10/05/23

COMPANY

BIANCHI GIOVANNI

VIA ROMA 155

10000 MILAN

VAT no. 02434381200

info@lapolipo.it

Tel. 023111457562

Seal Test UNI 7129 < at 35kW

(date)15.05.23 (time) 09:54

Unit of measurement: mmH2O
STABILISATION

Pi: 1000.1

Sta. Time: h 00.15

Pf: 0980.0

Difference: 0020.1

Temperature 25°C

TEST

Pi: 0980.0

Test Time: h 00.15

Pf: 0969.9

Difference: 0010.1

Temperature 25°C

[]Test Passed

[]Test NOT Passed

Franco Riva

Independent Business

Via I Maggio 54

Verona

Operator:

Signature:

Tests and Measurements according to the Regulations

**UNI 11528 6^a type > 35kW
for external pipes**

6^a type: pipelines for maximum operating pressures above 0.04 up to 0.5 bar;

Measurement of the **tightness** of gas systems as required by UNI 11528, **above 35kW of 6^a Type for external pipes.**

UNI 11528 requires that the installer must verify the tightness of the gas system at a pressure of at least **1 bar**. The test is positive if there is no pressure drop.

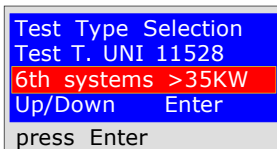
The leak test for a gas system **6th Type** must be performed with a pressure of **at least 1 bar**, with a **pressure stabilisation time of 15 minutes, and the actual test of 4 hours.**

N.B. The two measurements, stabilisation and test, are performed automatically.

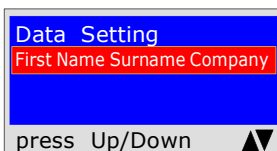
ATTENTION !!

During the tests, take into account the fact that the temperature does not undergo sudden variations. For each degree Celsius of temperature the pressure varies by approximately 1 mbar.

Actions: Turn on the instrument, select the pressure in **mbar** with the SELECT button, press the TEST button and follow the operations reported below.



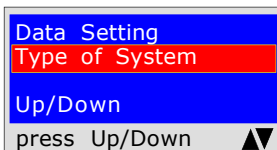
The instrument prompts whether to perform this test, press ENTER



The program prompts to enter **the location of the system** where the test is being performed. Remember that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

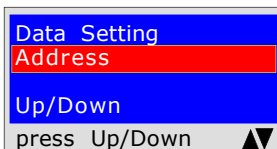
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the type of system**, whether for civil use, heating, industrial use, or anything else, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

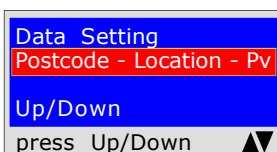
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the address of the building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

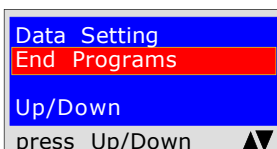
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the post code, the city and the province** of the **building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

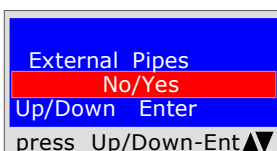


The program prompts whether to finish entering the data.

Press **Up/Down** to re-read the data entered.

To modify any data use the navigation keys, and correct.

Press **ENTER** to finish and exit the program.



The program asks if the gas pipe is underground or external To respond:

Press **Up/Down** to select "YES" or "NO"

Once the desired data has been selected, Press **ENTER**

Next Tests and Measurements according to the Regulations

UNI 11528 6^a type > 35kW for external pipes

```
13/05/23 10:10 ■■■
Pi: 000000.1 mbar
Load Pressure
1000 mbar - 1 bar
press Enter
```

The program prompts to enter **the pressure**. To achieve this, proceed as follows:

- 1) Connect the extended pipe connected to the positive inlet, which is located at the top of the instrument.
- 2) The scale is automatically selected at mbar.
- 3) Connect the other end of the pipe to the pressure source to be measured.
- 4) Pressurise the pipe with a **minimum of 1000 mbar, (1 bar)** Press **ENTER**.

```
13/05/23 10:10 ■■■
Pi: 000000.1 mbar
Time: h 00.14.46
Pf: 00000.1 mbar
press Enter
```

STABILISATION TEST

Now the instrument automatically starts the stabilisation control on the display. You will notice that the **Time** starts the countdown. The test lasts 15 minutes.

```
13/05/23 10:10 ■■■
Pi: 000000.1 mbar
Time: h 03.59.59
Pf: 00000.1 mbar
press Enter
```

LEAK TEST; pressure 1000mbar

Now the instrument automatically starts checking the actual tightness on the display. You will notice that the **Time** starts the countdown;
The test lasts 4 hours

```
Test T. UNI 11528
Seal
13/05/23 09:03
Up/Down Enter
press Up/Down-Ent▲▼
```

At this point the **MD20REM-H2CH** enables reading of all the data detected by the test

To navigate, press the **Up/Down** buttons, to exit press **ENTER**

```
Confirm Save
Event in Memory
No/Yes
Up/Down Enter
press Up/Down-Ent▲▼
```

The instrument **MD20REM-H2CH** prompts whether to store the detected data.

To do this, select **Yes/No** by pressing **Up/Down**. Press **ENTER** to confirm.

If saving is not confirmed within 30 seconds, the **MD20REM-H2CH** stores the event regardless.

```
Print Ticket?
No/Yes
Up/Down Enter
press Up/Down-Ent▲▼
```

The instrument prompts whether to print the ticket proving the test.

Select **Yes/No** pressing the **Up/Down** buttons. Select **"Yes"**, turn on the printer and place it in line with the pressure gauge transmitter; press **ENTER**.

```
Keep the Prev. data
No/Yes
Up/Down Enter
press Up/Down-Ent▲▼
```

When performing several tests **"TEST"** or to repeat a test.

The instrument keeps in memory the data of the building where the test is being performed. The latter are only lost if the instrument is turned off.

BEINAT S.r.l.
PRESSURE GAUGE **MD20REM-H2CH**
Firmware version V 2.3
Serial number: **0102**
Calib. Date: 10/05/23

COMPANY
BIANCHI GIOVANNI
VIA ROMA 155
10000 MILAN
VAT no. 02434381200
info@lapolipo.it
Tel. 023111457562

Test T. UNI 11528
6° type > at 35kW
(date)15.05.23 (time) 09:54

Unit of measurement: mmH2O
STABILISATION
Pi: 1000.1
Sta. Time: h 00.15
Pf: 0980.0
Difference: 0020.1
Temperature 25°C

TEST
Pi: 0980.0
Test Time: h 00.15
Pf: 0969.9
Difference: 0010.1
Temperature 25°C

[] Test Passed
[] Test NOT Passed

Franco Riva
Independent Business
Via I Maggio 54
Verona

Operator:

Signature:

Tests and Measurements according to the Regulations

**UNI 11528 6^a type > 35kW
for underground pipes**

6^a type: pipelines for maximum operating pressures above 0.04 up to 0.5 bar;

Measurement of the **tightness** of gas systems as required by UNI 11528, **above 35kW of 6^a Type for underground pipes.**

UNI 11528 requires that the installer must verify the tightness of the gas system at a pressure of at least **1 bar**. The test is positive if there is no pressure drop.

The leak test for a gas system **6th Type** must be performed with a pressure of **at least 1 bar**, with a **pressure stabilisation time of 15 minutes, and the actual test of 24 hours.**

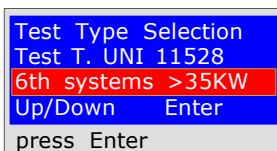
If some sections of pipe are not visible, the test must be performed before covering.

N.B. The two measurements, stabilisation and test, are performed automatically.

ATTENTION !!

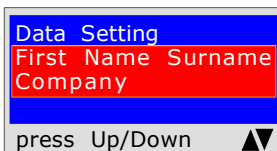
During the tests, take into account the fact that the temperature does not undergo sudden variations. For each degree Celsius of temperature the pressure varies by approximately 1 mbar.

Actions: Turn on the instrument, select the pressure in **mbar** with the SELECT button, press the TEST button and follow the operations reported below.



Test Type Selection
Test T. UNI 11528
6th systems >35KW
Up/Down Enter
press Enter

The instrument prompts whether to perform this test, press ENTER

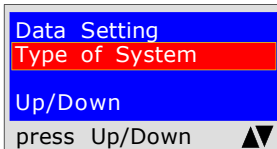


Data Setting
First Name Surname
Company
Up/Down
press Up/Down

The program prompts to enter **the location of the system** where the test is being performed. Remember that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

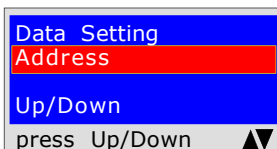


Data Setting
Type of System
Up/Down
press Up/Down

The program prompts to enter **the type of system**, whether for civil use, heating, industrial use, or anything else, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

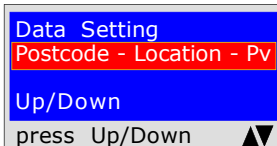


Data Setting
Address
Up/Down
press Up/Down

The program prompts to enter **the address of the building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

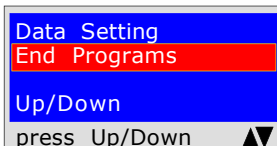


Data Setting
Postcode - Location - Pv
Up/Down
press Up/Down

The program prompts to enter **the post code, the city and the province** of the **building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.



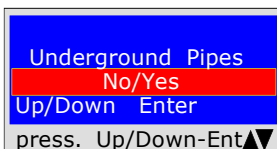
Data Setting
End Programs
Up/Down
press Up/Down

The program prompts whether to finish entering the data.

Press **Up/Down** to re-read the data entered.

To modify any data use the navigation keys, and correct.

Press **ENTER** to finish and exit the program.



Underground Pipes
No/Yes
Up/Down Enter
press. Up/Down-Ent

The program asks if the gas pipe is underground or external To respond:

Press **Up/Down** to select "YES" or "NO"

Once the desired data has been selected, Press **ENTER**

Next Tests and Measurements according to the Regulations

**UNI 11528 6° type > 35kW
for underground pipes**

```
13/05/23 10:10
Pi: 000000.1 mbar
Load Pressure
1000 mbar - 1 bar
press Enter
```

The program prompts to enter **the pressure**. To achieve this, proceed as follows:
1) Connect the extended pipe connected to the positive inlet, which is located at the top of the instrument.
2) The scale is automatically selected at mbar.
3) Connect the other end of the pipe to the pressure source to be measured.
4) Pressurise the pipe with a **minimum of 1000 mbar, (1 bar)** Press **ENTER**.

```
13/05/23 10:10
Pi: 000000.1 mbar
Time: h 00.14.46
Pf: 00000.1 mbar
press Enter
```

STABILISATION TEST
 Now the instrument automatically starts the stabilisation control. On the display you will notice that the **Time** starts the countdown;
 The test lasts 15 minutes.

```
13/05/23 10:10
Pi: 000000.1 mbar
Time: h 03.59.59
Pf: 00000.1 mbar
press Enter
```

LEAK TEST; pressure 1000mbar
 Now the instrument automatically starts checking the actual tightness on the display. You will notice that the **Time** starts the countdown. **The test lasts 24 hours**
When performing this test, remember to connect the instruments to the electrical mains

```
Test T. UNI 11528
Seal
13/05/23 09:03
Up/Down Enter
press Up/Down-Ent
```

At this point the **MD20REM-H2CH** enables reading of all the data detected by the test
 To navigate, press the **Up/Down** buttons, to exit press **ENTER**

```
Confirm Save
Event in Memory
No/Yes
Up/Down Enter
press Up/Down-Ent
```

The tool prompts whether to store the detected data.
 To do this, select **Yes/No** by pressing **Up/Down**.
 Press **ENTER** to confirm.
 If saving is not confirmed within 30 seconds, the **MD20REM-H2CH** stores the event regardless.

```
Print Ticket?
No/Yes
Up/Down Enter
press Up/Down-Ent
```

The instrument prompts whether to print the ticket proving the test.
 Select **Yes/No** pressing the **Up/Down** buttons.
 Select **"Yes"**, turn on the printer and place it in line with the pressure gauge transmitter; press **ENTER**.

```
Keep the Prev. data
No/Yes
Up/Down Enter
press Up/Down-Ent
```

When performing several tests " **TEST** " or to repeat a test.
 The instrument keeps in memory the data of the building where the test is performed. The latter are only lost if the instrument is turned off.

BEINAT S.r.l.
 PRESSURE GAUGE **MD20REM-H2CH**
 Firmware version V 2.3
 Serial number: **0102**
 Calib. Date: 10/05/23

COMPANY
 BIANCHI GIOVANNI
 VIA ROMA 155
 10000 MILAN
 VAT no. 02434381200
 info@lapolipo.it
 Tel. 023111457562

**Test T. UNI 11528
 6° type > at 35kW**
 (date)15.05.23 (time) 09:54

Unit of measurement: mmH2O
 STABILISATION
 Pi: 1000.1
 Sta. Time: h 00.15
 Pf: 0980.0
 Difference: 0020.1
 Temperature 25°C

TEST
 Pi: 0980.0
 Test Time: h 00.15
 Pf: 0969.9
 Difference: 0010.1

Temperature 25°C

[]Test Passed
 []Test NOT Passed

Franco Riva
 Independent Business
 Via I Maggio 54
 Verona

Operator:
 Signature:

Tests and Measurements according to the Regulations

**UNI 11528 7^a type > 35kW
for external pipes**

7^a type; pipelines for maximum operating pressures up to 0.04 bar;

Measurement of the **tightness** of gas systems as required by UNI 11528, **above 35kW of 7^a Type for external pipes.**

UNI 11528 requires that the installer must verify the tightness of the gas system at a pressure of at least **0.1 bar**. The test is positive if there is no pressure drop.

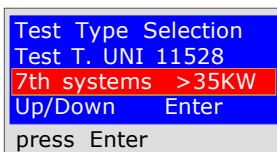
The leak test for a **7^a Type** gas system must be performed with a pressure of **at least 0.1 bar**, with a pressure stabilization time **of 15 minutes, and the actual test of 30 minutes.**

N.B. The two measurements, stabilisation and test, are performed automatically.

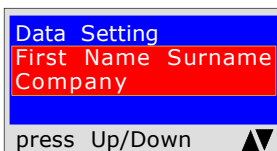
ATTENTION !!

During the tests, take into account the fact that the temperature does not undergo sudden variations. For each degree Celsius of temperature the pressure varies by approximately 1 mbar.

Actions: Turn on the instrument, select the pressure in **mbar** with the SELECT button, press the TEST button and follow the operations reported below.



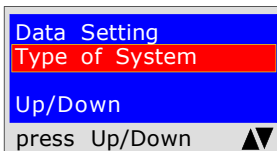
The instrument prompts whether to perform this test, press ENTER



The program prompts to enter **the location of the system** where the test is being performed. Remember that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

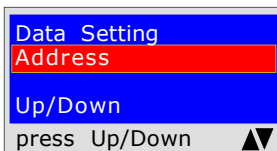
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the type of system**, whether for civil use, heating, industrial use, or anything else, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

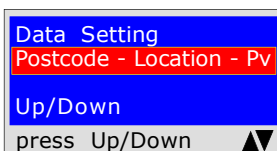
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the address of the building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

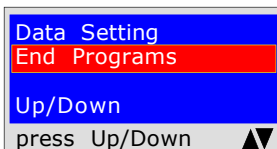
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the post code, the city and the province** of the **building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

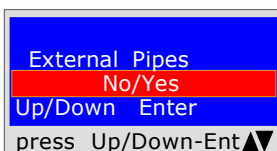


The program prompts whether to finish entering the data.

Press **Up/Down** to re-read the data entered.

To modify any data use the navigation keys, and correct.

Press **ENTER** to finish and exit the program.



The program asks if the gas pipe is underground or external To respond:

Press **Up/Down** to select "YES" or "NO"

Once the desired data has been selected, Press **ENTER**

Next Tests and Measurements according to the Regulations

UNI 11528 7^a type > 35kW for external pipes

```
13/05/23 10:10 --■
Pi: 00000.1 mbar
Load Pressure
1000 mbar - 1 bar
press Enter
```

The program prompts to enter **the pressure**. To achieve this, proceed as follows:

- 1) Connect the extended pipe connected to the positive inlet, which is located at the top of the instrument.
- 2) The scale is automatically selected at mbar.
- 3) Connect the other end of the pipe to the pressure source to be measured.
- 4) Pressurise the pipe with a **minimum of 1000 mbar, (1 bar)** Press **ENTER**.

```
13/05/23 10:10 --■
Pi: 00000.1 mbar
Time: h 00.14.46
Pf: 00000.1 mbar
press Enter
```

STABILISATION TEST

Now the instrument automatically starts the stabilisation control. On the display you will notice that the **Time** starts the countdown; The test lasts 15 minutes.

```
13/05/23 10:10 --■
Pi: 00000.1 mbar
Time: h 00.99.59
Pf: 00000.1 mbar
press Enter
```

LEAK TEST; pressure 100mbar

Now the instrument automatically starts checking the actual tightness on the display. You will notice that the **Time** starts the countdown; **The test lasts 30 minutes**
When performing this test, remember to connect the instruments to the electrical mains

```
Test T. UNI 11528
Seal
13/05/23 09:03
Up/Down Enter
press. Up/Down-Ent▲▼
```

At this point it enables reading of all the data detected by the test
To navigate, press the **Up/Down** buttons, to exit press **ENTER**

```
Confirm Save
Event in Memory
No/Yes
Up/Down Enter
press. Up/Down-Ent▲▼
```

The tool prompts whether to store the detected data.
To do this, select **Yes/No** by pressing **Up/Down**. Press **ENTER** to confirm.
If saving is not confirmed within 30 seconds, the **MD20REM-H2CH** stores the event regardless.

```
Print Ticket?
No/Yes
Up/Down Enter
press. Up/Down-Ent▲▼
```

The instrument prompts whether to print the ticket proving the test.
Select **Yes/No** pressing the **Up/Down** buttons. Select **"Yes"**, turn on the printer and place it in line with the pressure gauge transmitter; press **ENTER**.

```
Keep the Prev. data
No/Yes
Up/Down Enter
press. Up/Down-Ent▲▼
```

When performing several tests **" TEST "** or to repeat a test.
The instrument keeps in memory the data of the building where the test is being performed. The latter are only lost if the instrument is turned off.

BEINAT S.r.l.
PRESSURE GAUGE **MD20UH2CH**
Firmware version V 2.3
Serial number: **0102**
Calib. Date: 10/05/23

COMPANY
BIANCHI GIOVANNI
VIA ROMA 155
10000 MILAN
VAT no. 02434381200
info@lapolipo.it
Tel. 023111457562

Seal Test UNI 11528
7° type > at 35kW
(date)15.05.23 (time) 09:54
External Pipes
Unit of measurement: mbar
STABILISATION
Pi: 1000.1
Sta. Time: h 00.15
Pf: 0980.0
Difference: 0020.1
Temperature 25°C

TEST
Pi: 0980.0
Test Time: h 00.15
Pf: 0969.9
Difference: 0010.1
Temperature 25°C

[] Test Passed
[] Test NOT Passed

Franco Riva
Independent Business
Via I Maggio 54
Verona

Operator:

Signature:

Tests and Measurements according to the Regulations

**UNI 11528 7^a type > 35kW
for underground pipes**

7^a type; pipelines for
maximum operating
pressures up to 0.04 bar;

Measurement of the **tightness** of gas systems as required by UNI 11528, **above 35kW of 7^a Type for underground pipes.**

UNI 11528 requires that the installer must verify the tightness of the gas system at a pressure of at least **1 bar**. The test is positive if there is no pressure drop.

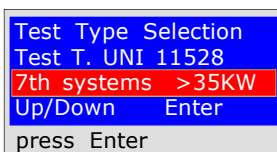
The leak test for a **7^a Type** gas system must be performed with a pressure of **at least 1 bar**, with a pressure stabilization time **of 15 minutes, and the actual test of 30 minutes**. If some sections of pipe are not visible, the test must be performed before covering.

N.B. The two measurements, stabilisation and test, are performed automatically.

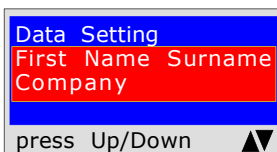
ATTENTION !!

During the tests, take into account the fact that the temperature does not undergo sudden variations. For each degree Celsius of temperature the pressure varies by approximately 1 mbar.

Actions: Turn on the instrument, select the pressure in **mbar** with the SELECT button, press the TEST button and follow the operations reported below.



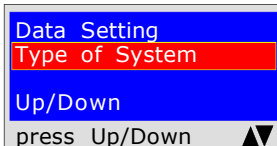
The instrument prompts whether to perform this test, press ENTER



The program prompts to enter **the location of the system** where the test is being performed. Remember that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

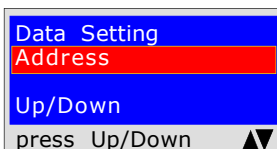
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the type of system**, whether for civil use, heating, industrial use, or anything else, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

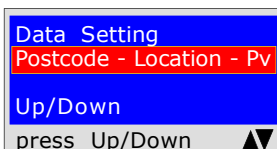
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the address of the building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

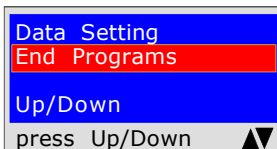
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the post code, the city and the province** of the **building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

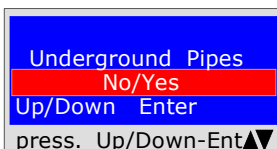


The program prompts whether to finish entering the data.

Press **Up/Down** to re-read the data entered.

To modify any data use the navigation keys, and correct.

Press **ENTER** to finish and exit the program.




The program asks if the gas pipe is underground or external To respond:

Press **Up/Down** to select "YES" or "NO"


Once the desired data has been selected, Press **ENTER**

Next Tests and Measurements according to the Regulations


**UNI 11528 7^a type > 35kW
for underground pipes**

13/05/23 10:10 
Pi: 00000.1 mbar
Load Pressure
1000 mbar - 1 bar
press Enter


The program prompts to enter **the pressure**. To achieve this, proceed as follows:
1) Connect the extended pipe connected to the positive inlet, which is located at the top of the instrument.
2) The scale is automatically selected at mbar.
3) Connect the other end of the pipe to the pressure source to be measured.
4) Pressurise the pipe with a **minimum of 1000 mbar, (1 bar)** Press **ENTER**.

13/05/23 10:10 
Pi: 00000.1 mbar
Time: h 00.14.46
Pf: 00000.1 mbar
press Enter


STABILISATION TEST
 Now the instrument automatically starts the stabilisation control. On the display you will notice that the **Time** starts the countdown;
 The test lasts 15 minutes.

13/05/23 10:10 
Pi: 00000.1 mbar
Time: h 00.29.59
Pf: 00000.1 mbar
press Enter


LEAK TEST; pressure 1000mbar
 Now the instrument automatically starts checking the actual tightness on the display. You will notice that the **Time** starts the countdown;
The test lasts 30 minutes
When performing this test, remember to connect the instruments to the electrical mains

Test T. UNI 11528
Seal
13/05/23 09:03
Up/Down Enter
press. Up/Down-Ent 


At this point it enables reading of all the data detected by the test
 To navigate, press the **Up/Down** buttons, to exit press **ENTER**

Confirm Save
Event in Memory
No/Yes
Up/Down Enter
press Up/Down-Ent 

The tool prompts whether to store the detected data.
 To do this, select **Yes/No** by pressing **Up/Down**. Press **ENTER** to confirm.
 If saving is not confirmed within 30 seconds, the **MD20REM-H2CH** stores the event regardless.

Print Ticket?
No/Yes
Up/Down Enter
press Up/Down-Ent 

The instrument prompts whether to print the ticket proving the test.
 Select **Yes/No** pressing the **Up/Down** buttons. Select **"Yes"**, turn on the printer and place it in line with the pressure gauge transmitter; press **ENTER**.

Keep the Prev. data
No/Yes
Up/Down Enter
press Up/Down-Ent 

When performing several tests **" TEST "** or to repeat a test.
 The instrument keeps in memory the data of the building where the test is being performed. The latter are only lost if the instrument is turned off.

BEINAT S.r.l.
 PRESSURE GAUGE **MD20REM-H2CH**
 Firmware version V 2.3
 Serial number: **0102**
 Calib. Date: 10/05/23

COMPANY
 BIANCHI GIOVANNI
 VIA ROMA 155
 10000 MILAN
 VAT no. 02434381200
 info@lapolipo.it
 Tel. 023111457562

**Test T. UNI 11528
 7° type > at 35kW**
 (date)15.05.23 (time) 09:54
 Underground Pipes
 Unit of measurement: mbar
STABILISATION
 Pi: 1000.1
 Sta. Time: h 00.15
 Pf: 0980.0
 Difference: 0020.1
 Temperature 25°C

TEST
 Pi: 0980.0
 Test Time: h 00.15
 Pf: 0969.9
 Difference: 0010.1
 Temperature 25°C

Test Passed
 Test NOT Passed

Franco Riva
 Independent Business
 Via I Maggio 54
 Verona

Operator:
 Signature:

Tests and Measurements according to the Regulations

UNI 11137 Automatic volume test

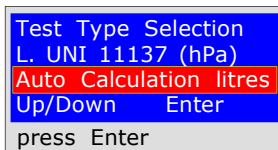
Verification of the sealing requirements, with an indirect method, as required by the standard **UNI 11137**. The test of **dispersions** in gas conduction systems consists of searching for any leaks by detecting the pressure drop over time.

Any pressure drop measured is related to the volume of the internal system and translated into the flow rate of dispersed gas.

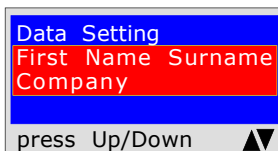
Before performing the test with gas, open doors and/or windows to ensure air exchange and close all valves, making sure there are no leaks unrelated to the test.

Before performing this test, remember to have selected the size of the syringe based on the size of the system, moving from the main menu. **Otherwise measurement will be incorrect** see table on p. 30

Actions: Turn on the instrument, select with the **SELECT** button the pressure in **hPa**, press the **TEST** button once and **3** times **Down** and follow the operations below



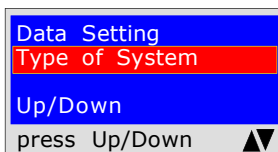
The instrument prompts whether to perform this test, press ENTER



The program prompts to enter **the location of the system** where the test is being performed. Remember that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

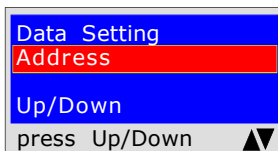
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the type of system**, whether for civil use, heating, industrial use, or anything else, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

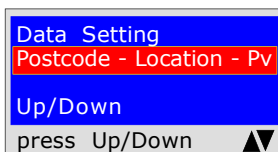
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the address of the building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

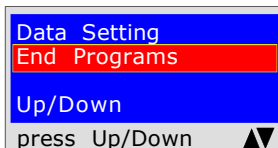
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the post code, the city and the province** of the **building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

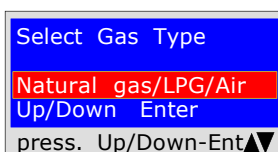


The program prompts whether to finish entering the data.

Press **Up/Down** to re-read the data entered.

To modify any data use the navigation keys, and correct.

Press **ENTER** to finish and exit the program.



The program asks what type of gas the test should be used with:

Natural Gas and/or LPG Gas, or Air.

To select the type of gas press the **Up/Down** keys and once the gas has been selected press **ENTER**.

Next Tests and Measurements according to the Regulations

UNI 11137 Automatic volume test

```
13/05/23 10:10
Pi: -00000.1 hPa
Load Pressure
With aspirated syringe
press Enter
```

The program prompts to enter **the pressure**, . To do this, proceed as follows:

- 1) Connect the extendible pipe, connected to the appropriate inlet, located in the upper part of the instrument.
- 2) Connect the syringe and be sure to: **select the correct size** from the **Menu** program and to position it **with the plunger open** .
- 3) Connect the other end of the pipe to the pressure source to be measured.
- 4) Pressurise the pipe with mains gas, which must not be higher than: **approximately 22 hPa for natural gas, approximately 30 hPa for LPG gas, approximately 50 hPa for air.**

Press **ENTER**.

```
13/05/23 10:10
Pi: 00000.1 hPa
Time: h 00.00.60
Pf: 00000.0 hPa
press Enter
```

Now the instrument automatically starts the stabilization check which lasts 1 min. It is possible to read the time running directly on the display.

```
13/05/23 10:10
Pi: 00000.1 hPa
Download Syringe
press Enter
```

Now the instrument prompts to discharge the gas contained in the syringe. Press **ENTER**.
N.B. It is advisable to drain the syringe slowly to prevent air from escaping between the plunger and cylinder.

```
13/05/23 10:10
Pi: 00000.0 hPa
T.: 00.00.05 00.00
Pf: 00000.7 hPa
press Enter
```

Now the instrument automatically calculates the quantity of litres that the system disperses.
The tests last:
1 minute for natural gas.
2.5 minutes for LPG.
3 minutes in air.

```
L.UNI 11137 (hPa) Auto
Litre calculation
13/05/23 09:03
Up/Down Enter
press. Up/Down-Ent
```

At this point it enables reading of all the data detected by the test
To navigate, press the **Up/Down** buttons, to exit press **ENTER**.

```
Confirm Save
Event in Memory
No/Yes
Up/Down Enter
press. Up/Down-Ent
```

The tool prompts whether to store the detected data.
To do this, select **Yes/No** by pressing **Up/Down**. Press **ENTER** to confirm.
If saving is not confirmed within 30 seconds, the **MD20REM-H2CH** stores the event regardless.

```
Print Ticket?
No/Yes
Up/Down Enter
press. Up/Down-Ent
```

The instrument prompts whether to print the ticket proving the test.
Select **Yes/No** pressing the **Up/Down** buttons. Select **"Yes"**, turn on the printer and place it in line with the pressure gauge transmitter; press **ENTER**.

```
Keep the Prev. data
No/Yes
Up/Down Enter
press. Up/Down-Ent
```

When performing several tests **"TEST"** or to repeat a test.
The instrument keeps in memory the data of the building where the test is being performed. The latter are only lost if the instrument is turned off.

BEINAT S.r.l.
PRESSURE GAUGE **MD20REM-H2CH**
Firmware version V 2.3
Serial number: **0102**
Calib. Date: 10/05/23

COMPANY
BIANCHI GIOVANNI
VIA ROMA 155
10000 MILAN
VAT no. 02434381200
info@lapolipo.it
Tel. 023111457562

**L.UNI 11147 (hPa) Auto
Litre calculation**
(date)15.05.23 (time) 09:54
Natural Gas.
Unit of measurement: hPa

Pi: 0200.1
Pf: 0200.0
Difference: 0000.1

Initial (L) 000.00
Final (L) 000.00
Litres Lost: 000.01
Pf: 0200.0
Litres Hour 000.01

[] Test Passed
[] Test NOT Passed

Franco Riva
Independent Business
Via I Maggio 54
Verona

Operator:

Tests and Measurements according to the Regulations

UNI 11137

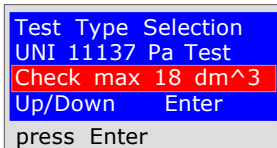
Check max 18 dm³

Measurement of dispersions in domestic gas systems suitable for all systems with the indirect method, as required by the Standard [UNI 11137 of art. 6.2.2](#)

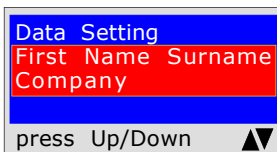
The test procedure must be performed with the natural pressure of the gas in the network at a maximum pressure of: **22 hPa for natural gas and 30 hPa for LPG gas**

Before performing the test with gas, open doors and/or windows to ensure air exchange and close all valves, making sure there are no leaks unrelated to the test.

Actions: Turn on the instrument, press the **TEST** button once and **4** times **Down** and follow the operations below



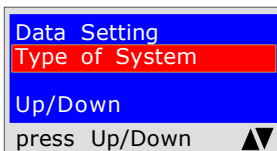
The instrument prompts whether to perform this test, press ENTER



The program prompts to enter **the location of the system** where the test is being performed. Remember that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

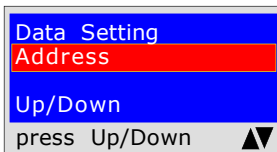
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the type of system**, whether for civil use, heating, industrial use, or anything else, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

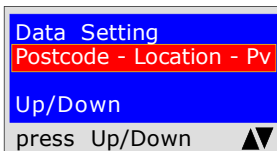
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the address of the building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

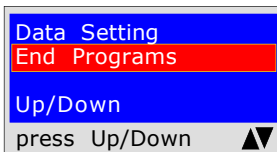
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the post code, the city and the province** of the **building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

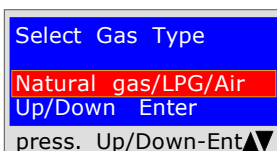


The program prompts whether to finish entering the data.

Press **Up/Down** to re-read the data entered.

To modify any data use the navigation keys, and correct.

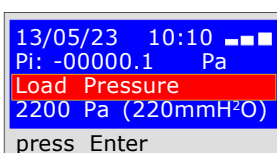
Press **ENTER** to finish and exit the program.



The program asks what type of gas the test should be used with:

Natural Gas (methane) and/or Town Gas (LPG).

To select the type of gas press the **Up/Down** keys and once the gas has been selected press **ENTER**.



The program prompts to enter **the pressure**. To do this, proceed as follows:

1) Connect the extendible pipe, connected to the appropriate inlet, located in the upper part of the instrument.

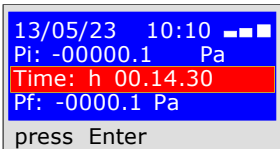
2) Connect the other end of the pipe to the pressure source to be measured.

3) WITH NATURAL gas, Pressurise the pipe with mains gas **2200 Pa approx.** Press **ENTER**.

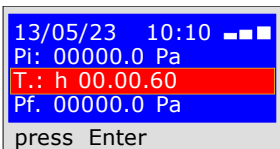
4) WITH LPG gas, Pressurise the pipe with mains gas at **3000 Pa approx.** Press **ENTER**.

Next Tests and Measurements according to the Regulations

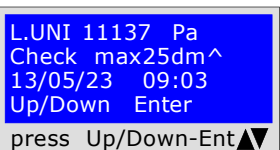
UNI 11137 Check max 18 dm³



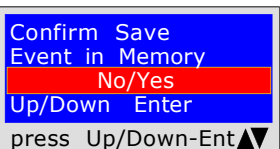
Now the instrument automatically starts the stabilization check which lasts 10 seconds.
The time elapsing can be read directly on the display.



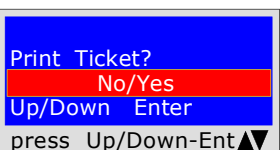
The tool now automatically starts the verification check. On the display you will notice that the **Time** will start the countdown;
The test lasts exactly **1 minute for natural gas and 2 minutes for LPG gas.**
N.B. the leak must not exceed 100 Pa (1 millibar)



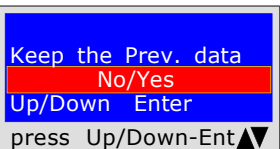
At this point it enables reading of all the data detected by the test
To navigate, press the **Up/Down** buttons, to exit press **ENTER**.



The tool prompts whether to store the detected data.
To do this, select **Yes/No** by pressing **Up/Down**. Press **ENTER** to confirm.
If saving is not confirmed within 30 seconds, the **MD20REM-H2CH** stores the event regardless.



The instrument prompts whether to print the ticket proving the test.
Select **Yes/No** pressing the **Up/Down** buttons.
Select **"Yes"**, turn on the printer and place it in line with the pressure gauge transmitter; press **ENTER**.



When performing several tests **" TEST "** or to repeat a test.
The instrument keeps in memory the data of the building where the test is being performed. The latter are only lost if the instrument is turned off.

BEINAT S.r.l.
PRESSURE GAUGE MD20REM-H2CH
 Firmware version V 2.3
 Serial number: **0102**
 Calib. Date: 10/05/23

COMPANY
 BIANCHI GIOVANNI
 VIA ROMA 155
 10000 MILAN
 VAT no. 02434381200
 info@lapolipo.it
 Tel. 023111457562

UNI 11137 Test (Pa)
Check max 25 dm³
 (date)15.05.23 (time) 09:54

Natural Gas
 Pi: (Pa) 02200
 Pf: (Pa) 02198
 Diff:(Pa) 00002
 dPmax(Pa: 00002

Test OK

Franco Riva
 Independent Business
 Via I Maggio 54
 Verona

Operator:
 Signature:

Tests and Measurements according to the Regulations

UNI 11137

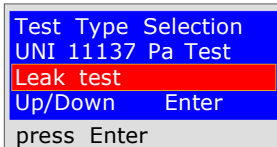
Seal Test

Leak check of the meter valve, as required by the Standard UNI 11137 art. 6.2.3

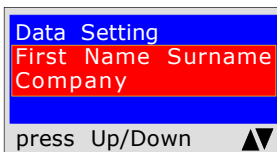
The test procedure is performed directly in the gas mains pipe to check the tightness of the meter valve.

Before performing the gas test, open doors and/or windows to ensure air exchange.

Actions: Turn on the instrument, select with the **SELECT** button the pressure in **mmH₂O**, press the **TEST** button once and **6** times **Down** and follow the operations below



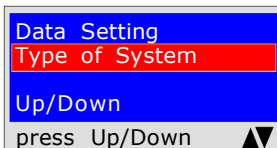
The instrument prompts whether to perform this test, press ENTER



The program prompts to enter **the location of the system** where the test is being performed. Remember that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

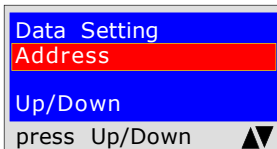
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the type of system**, whether for civil use, heating, industrial use, or anything else, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

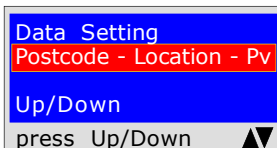
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the address of the building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

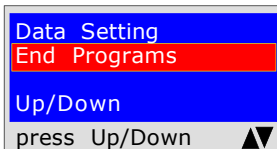
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the post code, the city and the province** of the **building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

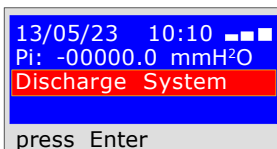


The program prompts whether to finish entering the data.

Press **Up/Down** to re-read the data entered.

To modify any data use the navigation keys, and correct.

Press **ENTER** to finish and exit the program.



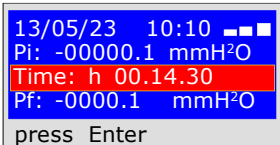
The program prompts to discharge **the pressure**. To do this, proceed as follows:

- 1) Close the gas meter valve.
 - 2) Discharge the gas pressure to the outside.
 - 3) Connect the extendible pipe connected to the appropriate inlet, which is located in the upper part of the instrument.
 - 4) Connect the other end of the pipe to the pressure source to be measured.
- Press **ENTER**.

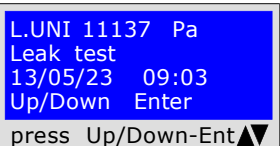
Next Tests and Measurements according to the Regulations

UNI 11137

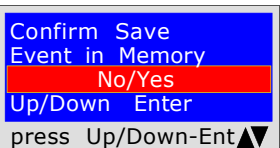
Seal Test



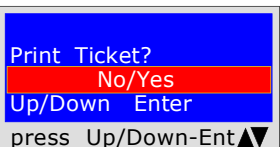
Now the instrument automatically starts the leak check. On the display you will notice that the **Time** starts the countdown; The test lasts exactly **15 minutes**.



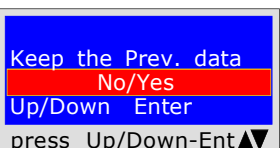
At this point it enables reading of all the data detected during the test
To navigate, press the **Up/Down** buttons. To exit press **ENTER**



The tool prompts whether to store the detected data.
To do this, select **Yes/No** by pressing **Up/Down**. Press **ENTER** to confirm.
If saving is not confirmed within 30 seconds, the **MD20REM-H2CH** stores the event regardless.



The instrument prompts whether to print the ticket proving the test.
Select **Yes/No** pressing the **Up/Down** buttons.
Select **"Yes"**, turn on the printer and place it in line with the pressure gauge transmitter; press **ENTER**.



When performing several tests **"TEST"** or to repeat a test.
The instrument keeps in memory the data of the building where the test is being performed. The latter are only lost if the instrument is turned off.

Seal Requirements of an internal system ref. UNI 11137 art 4			
Gas type	Suitable seal	Temporary seal	Inappropriate seal
Methane Natural Gas	0....1.0 l/h >	1.0.... 5.0 l/h	> 5.0 l/h
LPG	0....0.4 l/h	> 0.4.... 2.0 l/h	> 2,0 l/h

BEINAT S.r.l.
 PRESSURE GAUGE **MD20REM-H2CH**
 Firmware version V 2.3
 Serial number: **0102**
 Calib. Date: 10/05/23

COMPANY
 BIANCHI GIOVANNI
 VIA ROMA 155
 10000 MILAN
 VAT no. 02434381200
 info@lapolipo.it
 Tel. 023111457562

Ver. UNI 11137
Leak test
 (date)15.05.23 09:54

Unit of measurement: mmH2O

Pi: 00000.1
 Pf: 00000.0
 Difference: 00000.1
 Test Passed
 Test NOT Passed

Franco Riva
 Independent Business
 Via I Maggio 54
 Verona

Operator:
 Signature:

Tests and Measurements according to the Regulations

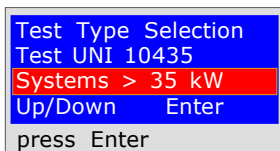
UNI 10435 > 35kW

Measurement of dispersions from gas systems for thermal power plants with the indirect method, as required by the Standard [UNI 10435](#)

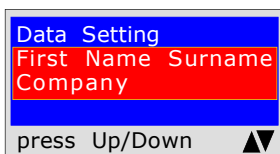
The test procedure must be performed with the natural pressure of the gas in the network at a maximum pressure of: **22 hPa for natural gas and 30 hPa for LPG gas**

Before performing the test with gas, open doors and/or windows to ensure air exchange and close all valves, making sure there are no leaks unrelated to the test.

Actions: Turn on the instrument, press the **TEST** button once and **6** times **Down** and follow the operations below



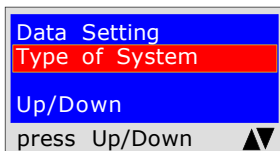
The instrument prompts whether to perform this test, press ENTER



The program prompts to enter **the location of the system** where the test is being performed. Remember that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

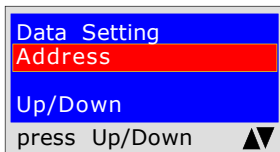
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the type of system**, whether for civil use, heating, industrial use, or anything else, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

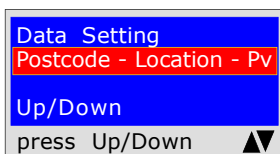
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the address of the building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

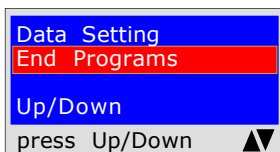
To move forward/back use the navigation keys. For white spaces use the key with the number 1.



The program prompts to enter **the post code, the city and the province** of the **building** in which the test is being performed, remembering that you have a total of 20 characters available.

To enter characters, press the appropriate buttons (similar to when sending an SMS).

To move forward/back use the navigation keys. For white spaces use the key with the number 1.

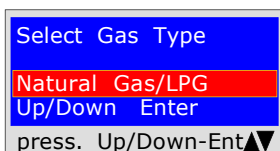


The program prompts whether to finish entering the data.

Press **Up/Down** to re-read the data entered.

To modify any data use the navigation keys, and correct.

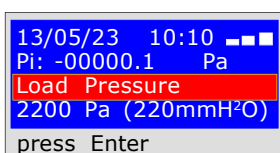
Press **ENTER** to finish and exit the program.



The program asks what type of gas the test should be used with:

Natural Gas (methane) and/or Town Gas (LPG).

To select the type of gas press the **Up/Down** keys and once the gas has been selected press **ENTER**.



The program prompts to enter **the pressure**. To do this, proceed as follows:

1) Connect the extendible pipe, connected to the appropriate inlet, located in the upper part of the instrument.

2) Connect the other end of the pipe to the pressure source to be measured.

3) WITH NATURAL gas, Pressurise the pipe with mains gas **2200 Pa approx.** Press **ENTER**.

4) WITH LPG gas, Pressurise the pipe with mains gas at **3000 Pa approx.** Press **ENTER**.

Next Tests and Measurements according to the Regulations

UNI 10435 > kW

```
13/05/23 10:10 --■
Pi: -00000.1 Pa
Time: h 00.14.30
Pf: -0000.1 Pa
press Enter
```

Now the instrument automatically starts the stabilization check which lasts 1 minute.
The time elapsing can be read directly on the display.

```
13/05/23 10:10 --■
Pi: 00000.0 Pa
T.: h 00.00.60
Pf: 00000.0 Pa
press Enter
```

The tool now automatically starts the verification check. On the display you will notice that the **Time** will start the countdown;
The test lasts exactly **15 minutes**.
N.B. the leak must not exceed 100 Pa (1 millibar)

```
L.UNI 10435
> 35kW
13/05/23 09:03
Up/Down Enter
press Up/Down-Ent▲▼
```

At this point it enables reading of all the data detected by the test
To navigate, press the **Up/Down** buttons, to exit press **ENTER**.

```
Confirm Save
Event in Memory
No/Yes
Up/Down Enter
press Up/Down-Ent▲▼
```

The tool prompts whether to store the detected data.
To do this, select **Yes/No** by pressing **Up/Down**. Press **ENTER** to confirm.
If saving is not confirmed within 30 seconds, the **MD20REM-H2CH** stores the event regardless.

```
Print Ticket?
No/Yes
Up/Down Enter
press. Up/Down-Ent▲▼
```

The instrument prompts whether to print the ticket proving the test.
Select **Yes/No** pressing the **Up/Down** buttons.
Select **"Yes"**, turn on the printer and place it in line with the pressure gauge transmitter; press **ENTER**.

```
Keep the Prev. data
No/Yes
Up/Down Enter
press Up/Down-Ent▲▼
```

When performing several tests **"TEST"** or to repeat a test.
The instrument keeps in memory the data of the building where the test is being performed. The latter are only lost if the instrument is turned off.

BEINAT S.r.l.
PRESSURE GAUGE **MD20REM-H2CH**
Firmware version V 2.3
Serial number: **0102**
Calib. Date: 10/05/23

COMPANY
BIANCHI GIOVANNI
VIA ROMA 155
10000 MILAN
VAT no. 02434381200
info@lapolipo.it
Tel. 023111457562

Test UNI 10435
Systems > 35 kW
(date)15.05.23 (time) 09:54

Natural Gas
Pi: (Pa) 02200
Pf: (Pa) 02198
Diff:(Pa) 00002
dPmax(Pa: 00002

Test OK

Franco Riva
Independent Business
Via I Maggio 54
Verona

Operator:

Signature:

Connection to Personal Computer

The digital pressure gauge **MD20REM-H2CH** can be connected to a Personal Computer via USB cable.

Why connect it to a Personal Computer? For various and useful reasons including:

1. To configure or modify the data of the company that must perform the tests.
 2. To configure or change the date and time,
 3. To receive the data collected from the various systems examined and to create a useful database of all customers,
- thus maintaining useful and easy-to-consult storage for several years.

Configuration

Together with the pressure gauge **MD20REM-H2CH** a diskette containing the program is delivered "**MD40S provider**" to install on your Personal Computer.

To use the **MD20REM-H2CH Provider** your computer must be compatible with one of the following Windows operating systems:

- * Windows 98
- * Windows 2000 professional
- * Windows XP Professional and/or Home Edition
- * Windows VISTA Professional and/or Home Edition

Minimum requirements

PC with CPU Intel Pentium or Centrino or ADM Athlon

Memory : min. 64 MB RAM or greater

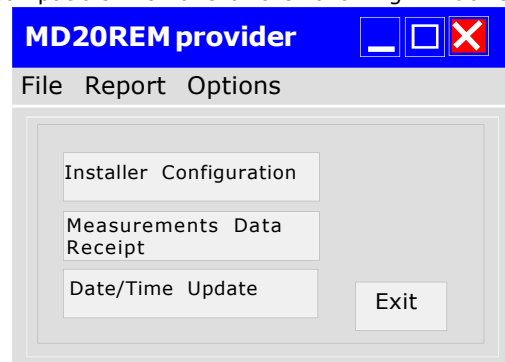
SVGA Monitor with 640X480 resolution

Installing the program

Insert the diskette into the PC, press "**SETUP.EXE**"

The program begins installing, follow the installation according to the prompts that appear.

At the end you will also find the program link in the Start start-up programs.



Warranty

WARRANTY.

The equipment is guaranteed for a period of 3 years from the date of manufacture, subject to the conditions described below. Components recognised as faulty will be replaced free of charge.

With the **exclusion and replacement** of plastic or aluminium cases, bags, packaging, any batteries, and technical data sheets.

The equipment must arrive carriage paid at the company **BEINAT S.r.l.**

Failures due to tampering by unauthorised personnel are excluded from the warranty. As well as incorrect installations or negligence resulting from phenomena unrelated to the normal functioning of the appliance.

The company **BEINAT S.r.l.** is not liable for any damage, direct or indirect, caused to persons, animals or property by product failures or by the forced suspension of its use.

Insurance

INSURANCE. The equipment is protected by SOCIETA' REALE MUTUA liability insurance PRODUCTS for a maximum value of 1,500.000 Euro against the damage that this equipment could cause in the event of non-functioning.

Technical features

1st power supply	8.4 V.dc via built-in batteries
2nd power supply	230 V.ac with power supply
Type of batteries	NIMH
Consumption	40mA
Battery autonomy	approximately 10 hours
External battery charger	500mA 9V
Charging control	controlled by microprocessor
Charging time with depleted batteries	Approximately 8 hours
Battery discharge control	shown on the display
Converter	16 Bit
Alpha numeric display	4 lines for 20 characters
Event Storage	6
Non-condensate work humidity	from 0 to 90%
Printing.....	Via IR
Electromagnetic compatibility	EC
Dimensions and weight	105*210*40mm - approximately 0.4kg.

Pressures: from 0 bar to 1 bar

Pressure detection probe.....	Incorporated
Measuring range	/- 1bar (~10.000 mmH ₂ O)
Pressure overload	0.4bar
Maximum seal pressure	/- 1.4bar (~14,000 mmH ₂ O)
Resolution	0.1 mbar
Precision.....	+/- 10mbar

Temperature:

Temperature detection probe	Built-in -10°C to 50°C
Operating temperature	0°C ÷ 50°C

Readings and Measurements

These operations must be performed respecting the method and manner illustrated in this booklet;

Remember that measurements performed with **depleted batteries** (1 flashing notch) can **distort the measurements**.

The readings on the instrument display and on tickets have a lower resolution than that used by the processor.

The result of the calculations, therefore, cannot be deduced from the visible figures alone.

Instrument and Calibration Precision

Measurement Type	Instrument Used	Serial Number	Measurement Range	Uncertainty	Resolution
Pressure 4 bar	DRUCK	0745/99-09	0 ÷ 4 bar	± 0.1% F.S	1 mbar
	DPI5030		(0 ÷ 400000 Pa)		100Pa

Some Conversion Tables

Unit of Measurement	Symbol	Pa	hPa	bar	mbar	at	mmH ₂ O
Pascal	Pa	1	0,01	0,00001	0,01	0,00001	0,1
Hecto Pascal	hPA	100	1	0,001	1	0,0001	10
bar	bar	100000	1000	1	1000	0,0001	10000
millibar	mbar	0,01	1	0,001	1	0,001	10
Technical Atmosphere	at	100000	1000	1	1000	1	10000
millimetres H ₂ O	mmH ₂ O	10	0,01	0,0001	0,1	0,0001	1
PSI	PSI	0.000145038	0,0145038	1.45038	0,0145038	1.45038	0,00145038

Unit of Measurement	Symbol	KW	W	Kcal/h	BTU
Kilowatt	KW	1	1.000	859	3.412
Wat	W	0,001	1	0.859	3.412
Calorie kilo per Hour	Kcal/h	0,001163	1,163	1	3968
Brithis termal Unit hour	BTU/h	0,000295	0,293	0,252	1

Unit of Measurement	Symbol	m ³	dm ³	l/h
Metre Cubed	m ³	1	1.000	1.000
Decimetre Cubed	d ³	0,001	1	1
Litre per Hour	l/h	0,001	1	1

Conversion and diameter tables

Diameter of some weld-free steel pipes

DN	inches	mm.external	mm. internal	mm radius
15	1/2	21,3	16,7	8,35
20	3/4	26,9	21,7	10,85
25	1"	33,7	28,5	14,25
32	1"1/4	42,4	36,6	18,3
40	1"1/2	48,3	42,5	21,25
50	2"	60,3	53,9	26,95
65	2"1/2	76,1	69,7	34,85
80	3"	88,9	81,7	40,85
100	4"	114,3	106,3	53,15
125	5"	139,7	130,7	65,35
150	6"	168,3	159,3	79,65
200	8"	219,1	207,9	103,95
250	10"	273,0	260,4	130,2

Diameter of some copper pipes

mm.external	mm. internal	mm radius
6X1	5	2,5
8X1	7	3,5
10X1	9	4,5
12X1	11	5,5
14X1	13	6,5
15X1	14	7
16X1	15	7,5
18X1	17	8,5
22X1	21	10,5
28X1	27	13,5
35X1,5	33,5	16,75
42X1,5	40,5	20,25
54X1,5	52,5	26,25

Examples of pipe volumes

Diameter (inches)	Diameter (mm)	Litres contained in each meter of pipe
3/4"	21,7	0,37
1"	28,5	0,64
1" e 1/4	36,6	1,05
1" e 1/2	43,5	1,49
2	53,9	2,28
2 e 1/2	69,7	3,82

Syringe selection (ml) Volume to be measured (l)

50 ml	up to 10 litres
100 ml	from 10 to 50 litres
200 ml	from 50 to 100 litres

Approximately 2ml per litre over 100 litres

Accessories



Portable thermal printer

To complete this instrument for instrumental testing, and for the issuing of the declaration of conformity, **BEINAT S.r.l.** has adopted this type of thermal printer, as its innovative solution compared to systems that use an impact method.

The elegance, size and weight, combined with the flexibility of use, make this printer a useful work tool.

Description of the printer

The printer consists of an ABS body equipped with a cover through which it is possible to access the paper roll and the printing mechanism.

The multifunction button, the red LED and the IR transmission are housed on the front

Paper replacement

To change the paper roll proceed as follows:

Open the printer cover and position the roll of paper, respecting the direction of rotation of the paper as indicated in the figure below

NOTES

INSURANCE. The equipment is protected by SOCIETA' REALE MUTUA for liability insurance PRODUCTS for a maximum value of 1,500.000 Euro against the damage that this equipment could cause in the event of non-functioning.

WARRANTY. The equipment is guaranteed for a period of 3 years from the date of manufacture, subject to the conditions described below.

Components recognised as defective will be replaced free of charge, **excluding** plastic or aluminium cases, bags, packaging, any batteries, and technical data sheets.

The equipment must arrive carriage paid at the company **BEINAT S.r.l.**

The warranty excludes faults due to tampering by unauthorised personnel, as well as incorrect installations or negligence resulting from phenomena unrelated to the normal functioning of the appliance.

The company **BEINAT S.r.l.** is not liable for any damage, direct or indirect, caused to persons, animals or property by product failures or by the forced suspension of its use.



"END OF LIFE" DISPOSAL OF ELECTRICAL AND ELECTRONIC APPLIANCES

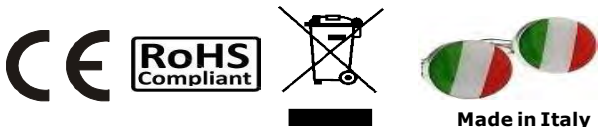
The dustbin symbol on the product or on its packaging indicates that this product cannot be treated as household waste. Instead, it must be taken to a specific collection point for the recycling of electrical and electronic equipment, such as:

- points of sale, when purchasing a new product similar to the one to be disposed of;
- local collection points (waste collection centres, local recycling centres, etc.).

By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and for human health, which could be caused by inappropriate waste disposal of this product.

Recycling materials will help conserve natural resources. For more detailed information regarding the recycling of this product, please contact your local office, your household waste disposal service or the store where you purchased this product.

Attention: in some countries of the European Union the product does not fall within the scope of application of the national law transposing the European Directive 2002/96/EC, and therefore there is no obligation for separate collection at the "end of life" in force in them.



Pressure gauge MD20REM-H2CH *The styling is by b & b design*


Dealer's stamp and signature

Purchase date:

Serial Number:

Beinat S.r.l. following the aim of improving its products, reserves the right to modify the technical, aesthetic and functional characteristics at any time and without giving any notice.

BEINAT S.r.l.
 Via Fatebenefratelli 122/C 10077, S. Maurizio C/se (TO) - ITALY
 Tel. 011.921.04.84 - Fax 011.921.14.77
 http:// www.beinat.com

 **Sales** - info@beinat.com
Technical assistance - produzione@beinat.com