



NOTICE

NI-PFX-EN-0725-1-E En.

This manual is an integral part of the product. Please read the manual carefully before use, keep it for the life of the product, and pass it on to any future owners or users of this product. This manual describes the installation, operation, use and maintenance of the PREDICTIVE FLOWBOX®. This manual is intended for end-users. In case of doubt, please consult a professional.

I. OVERVIEW

A) INTENDED USE:

PREDICTIVE FLOWBOX® is designed to manage a building's hydraulic network. It reads and analyzes water consumption and can inform the user in the event of a leak or abnormal consumption.

If necessary, the water network can then be shut off remotely.

This solution is equipped with a solenoid valve, flow meter and temperature sensor. Automatic shut-off can be programmed when the building is unoccupied. PREDICTIVE FLOWBOX® is recommended for indoor use.

B) TECHNICAL SPECIFICATION:

PREDICTIVE FLOWBOX® measures the flow and transmits the information every second to the server via the wifi network to which it is connected, or via an Ethernet connection.

PREDICTIVE FLOWBOX® is equipped with a solenoid valve that allows water to be shut off remotely via a dedicated App.

PREDICTIVE FLOWBOX® can also detect abnormal consumption via the flow meter, and send an alert if the maximum threshold is exceeded.

This maximum threshold is determined by your consumption history, from the end of the first month of use.

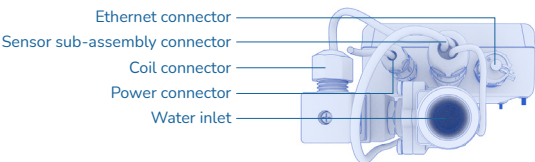
Please note that false positive alerts may occur during the first month of use. To configure the PREDICTIVE FLOWBOX®, you need to connect to the local wifi network, which is automatically generated on power-up.

II. TECHNICAL SPECIFICATIONS

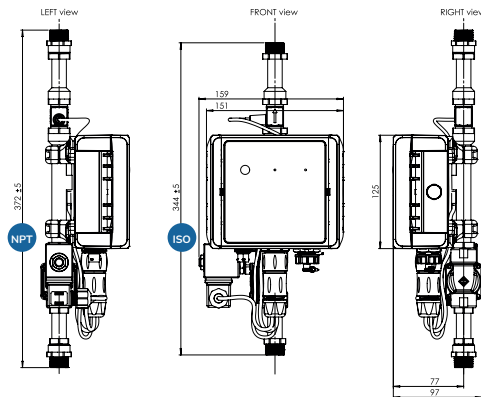
ELECTRICAL / CONNECTIVITY

AC/DC	Input 100-240VAC-50/60 Hz, Output 12VDC/1.5A 18W
AC Inputs Plugs	UK (G type), US (A/B type), AU (I type), EU (E/F type), CCC (A/B type)
Wifi	2.4-2.5 GHz - 802.11 b/g/n/e/i (802.11n up to 150 Mbps)
Ethernet Speed	100 Mbps
Connectivity Mode	DHCP, Static

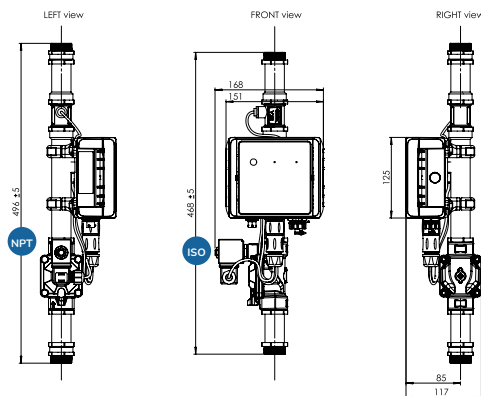
FLOW	1/2"	1"	2"
Flow range	1 à 30l/min	1 à 45l/min	22 à 400l/min
Flow accuracy		+/-1% of range	
Water temp. range		0 to +60°C	
Water temp. accuracy		+/-1°C	
Pressure		0.2 to 16 bar	
Ambient conditions	min. 5% to max. 95% non-condensing air humidity		



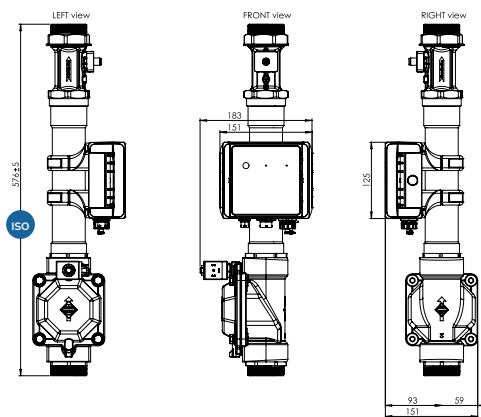
1/2" version



1" version



2" version



DIMENSIONS	1/2"		1"		2"
	ISO	NPT	ISO	NPT	
Dimensions (mm) (HWD)	344x168x98	372x168x98	468x168x117	496x168x117	576x183x151
Weight (kg)	1.490	1.470	2.650	2.750	12.88
Installation Space (included) (mm) (+/-5mm)	344mm +/-5	372mm +/-5	468mm +/-5	496mm +/-5	576mm +/-5
Fitting	1/2" ISO/NPT (brass chrome)		1" ISO/NPT (brass chrome)		2" ISO/NPT (brass chrome)
Temperature	0 to +80°C				

III. INSTALLATION

A) INSTALLATION PRECAUTION:

Prior to installation, ensure that the hydraulic system of the building or residence is compatible with the PREDICTIVE FLOWBOX®.

Be sure to meet all local building codes and requirements for the installation of a device such as the PREDICTIVE FLOWBOX®.

It is the responsibility of future users of the PREDICTIVE FLOWBOX® solution to ensure that the networks in which the FLOWBOXes will be installed are protected by an anti-hammer device (bladder, spring or other) in order to guard against any damage caused by shock waves due to the net stoppage of flows inside drinking water networks. The PREDICTIVE FLOWBOX® warranty does not cover any damage caused by the absence of a water hammer arrester or any other device that may impair the integrity of our solutions.

- The PREDICTIVE FLOWBOX® must be installed downstream of the water meter, shut-off valve, pressure reducer, and on the building's main cold water supply line.
- Make sure you have a minimum of 600mm of free linear circuit available to install the PREDICTIVE FLOWBOX®.
- Do not add a tank-effect element after the PREDICTIVE FLOWBOX®, such as an anti-scale station or a water softener.
- Ensure that the water intended for circulation in the PREDICTIVE FLOWBOX® is clean and free of any deposits and/or foreign matter. We recommend installing a filter upstream of the system.
- PREDICTIVE FLOWBOX® should only be used on a domestic plumbing system or similar. Do not install on a heating system. Do not install on a fire-fighting hydraulic system.
- If your plumbing system has more than one water inlet, this will distort consumption and leakage protection values. Water inlets must be located downstream of the PREDICTIVE FLOWBOX®.
- The PREDICTIVE FLOWBOX® can be installed either vertically or horizontally;
- It must be positioned so that it can be accessed quickly and easily, without having to damage any materials, e.g. behind a fixed wall. The front of the PREDICTIVE FLOWBOX® case must remain visually and manually accessible to ensure the easiest possible access to the device.
- PREDICTIVE FLOWBOX® requires access to a wifi network (WLAN/ IEE802.11bgn connectivity, 2.4 GHz range) and a smartphone or PC to be configured.
- Do not solder or weld joints on pipe in the vicinity of the PREDICTIVE FLOWBOX® This may damage the PREDICTIVE FLOWBOX®.

PREDICTIVE FLOWBOX® is waterproof, subject to the following conditions:

- Ensure that the power connector is locked;
- Make sure the case has not been subjected to any particular impact that could cause the product to lose its watertightness;
- If you are not using the Ethernet connector, please ensure that the plu stopper attached to the case is correctly screwed onto the connector;
- If you are using the Ethernet connector, please use only the connector supplied with your PREDICTIVE FLOWBOX®.

If your PREDICTIVE FLOWBOX® fails due to oxidation and the above conditions are not met, the warranty will not be honored.

III. INSTALLATION - CONTINUED

B) INSTALLATION AND ASSEMBLY:

It is advisable to install the PREDICTIVE FLOWBOX® on an existing installation. Before working on the unit, ensure that it is de-energized and that there are no electrical elements in its vicinity.

- Use the converter connectors supplied with the PREDICTIVE FLOWBOX®, checking that the connectors are correctly connected. Only the ISO<>NPT converter fittings supplied with the PREDICTIVE FLOWBOX® are to be installed. If other fittings are used, we cannot guarantee correct sealing of the product.
- Make sure that the PREDICTIVE FLOWBOX® and the hydraulic system to which it is connected are not leaking.
- Before starting installation, locate and shut off the main water supply line.
- Drain the water by opening the plumbing element located at the highest point of the installation.
- Open all other elements and leave them in the open position for the duration of the installation.
- Be sure to shut off your water supply before disconnecting your circuit.
- For ease of installation, we recommend using fittings with loose nuts, so that you can tilt the PREDICTIVE FLOWBOX® as required before tightening the fittings.
- Use the gaskets supplied when inserting the PREDICTIVE FLOWBOX® onto the pipe.
- Once the installation is complete, check the joints regularly for leaks, even after a few days.

Caution! When shutting off the water supply, any remaining water may leak out.

C) POWER-UP:

When commissioning the PREDICTIVE FLOWBOX®, check that your network is closed upstream and downstream. We will take no responsibility for any mishandling of the product and/or incorrect connection.

PREDICTIVE FLOWBOX® must be connected and commissioned in accordance with the following conditions:

- Dry PREDICTIVE FLOWBOX®;
- Dry environment;
- The PREDICTIVE FLOWBOX® must not be exposed to water within a radius of 5m (floor, wall, ceiling) when energized (to prevent the risk of electrocution);
- Use the power supply and main adapter supplied with the PREDICTIVE FLOWBOX®. To avoid the risk of fire and/or electric shock.
- It is also recommended to use only an electrical outlet equipped with a ground fault circuit interrupter.

Once the PREDICTIVE FLOWBOX® has been installed on the hydraulic network, connect the power supply to a dedicated plug. The PREDICTIVE FLOWBOX® will start up, the LED «power» button and the LED «connection» button will flash 4 times simultaneously, then the PREDICTIVE FLOWBOX® will close and reopen the solenoid valve in less than a second to check that it is operating correctly.

Once the PREDICTIVE FLOWBOX® has started up, the LED «power» button lights up steadily, then the LED «connection» button flashes slowly: the PREDICTIVE FLOWBOX® is waiting to be configured.

C) PRECAUTION FOR USE:

We advise you not to touch the PREDICTIVE FLOWBOX® if the mains supply is shut off for more than 5 minutes.

The solenoid valve's own components may generate heat after this time. The tolerance of the temperature displayed by the PREDICTIVE FLOWBOX® sensor is +/- 1°C.

In the event of sensor failure, contact with the hydraulic line may cause surface burns if the circulating water exceeds 50°C.

PREDICTIVE FLOWBOX® components must not be disassembled nor replaced. If a component has to be replaced, it must be done in accordance with the manufacturer's approval and recommendations.

In the event of a loss of power during closure (programmed or following a leak), the solenoid valve returns to its initial position: open.

Please observe the pictograms on the PREDICTIVE FLOWBOX® and its components.

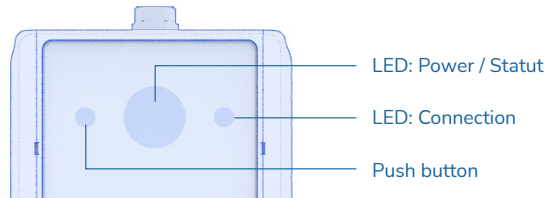


Do not open the case.
Risk of electric shock if water is present.



Risk of burns
(solenoid valve).

IV - DEVICE OPERATION



A) DESCRIPTION OF LEDS

LED BUTTONS		
CONNEXION BUTTON	Slow flashing	PREDICTIVE FLOWBOX® not configured; access point activated pending configuration.
	Rapid flashing	Attempt to connect to server.
	Lit	PREDICTIVE FLOWBOX® connected, normal operation.
	1 x Flash (ON 150ms, OFF 150ms)	Error of network local connection.
POWER BUTTON	2 x Flash (ON 150ms, OFF 150ms)	Error of gateway connection.
	10 x Flash (ON 150ms, OFF 150ms)	The webserver is enabled by manual sequence button.
	On	Solenoid valve open.
	Intermittent flashing	Solenoid valve closed.

B) DESCRIPTION OF BUTTON

ACTIONS ON THE CASE	
2x short press	Solenoid valve shut-off and Maintenance activation
10x short press	Launch self-test to check status of PREDICTIVE FLOWBOX® and its components
Long press <5s to 10s>	Delete current configuration

V - MAINTENANCE AND SERVICE

A) MAINTENANCE OF THE DEVICE AND ITS COMPONENTS

Do not use aggressive products to clean the PREDICTIVE FLOWBOX®.

Maintenance must be carried out by an approved professional.

To keep the solenoid valve in good working order, a brief closing and opening action is performed at night, when the hydraulic system is not in use.

The purpose of this action is to flush out any limescale that may have settled in the solenoid valve's mechanics. By default, this action is performed at night.

If required, a specific timetable can be set, or it can be deactivated. It is recommended to leave this option active to ensure proper operation of the PREDICTIVE FLOWBOX®.

Autotest function allows you to check that the PREDICTIVE FLOWBOX® and its components are operating correctly. To start an autotest procedure, press the push-button 5 times quickly.

Once the procedure has started, the PREDICTIVE FLOWBOX® will analyze and test each component.

Once the self-test is complete, the PREDICTIVE FLOWBOX® will indicate the status of the report by flashing the LEDs, depending on the result:

- Result OK: LED «power» button: slow flashing;
- KO result: LED «power» button and «connection» button: flashing rapidly in alternation.

B) IN THE EVENT OF A MALFUNCTION

Please contact our after-sales service at: support@predictiveflowbox.com

In order to process your request at best, please include in your e-mail:

- A description of your issue;
- The serial number of your PREDICTIVE FLOWBOX®;
- Your invoice or invoice number.

VI - CONDITIONS

A) TERMS OF SERVICE:

To use our product, you must create an account and accept the terms of service, which can be viewed online on the relevant region's web page.

B) NOTE ON PRIVACY POLICY:

We always ask your permission to share personally identifiable information and use your data. To learn more about our privacy policy, go to the relevant region's web page.

C) SUPPORT AND WARRANTY:

Our product comes with a 2-year limited warranty. For terms and conditions and product warranty information, visit your region's web page.

D) EU DECLARATION OF CONFORMITY:

FLOVEA hereby declares that the radio equipment is in conformity with Directive 2014/53/EU. The full text of the Declaration of Conformity is available at the following internet address: <https://docs.predictiveflowbox.com>

The operating frequency bands and maximum transmitted power limit are shown below: 2400 to 2484.5 MHz (20 dBm).

E) EU RADIATION EXPOSURE DECLARATION:

This equipment complies with EU radiation exposure limits defined for an uncontrolled environment. This equipment must be installed and used with a minimum distance of 35 cm between the PREDICTIVE FLOWBOX® and your body.

INFORMATION TO KEEP

Date of commissioning:

Serial no:

Invoice no:



SERVICE AND MANUFACTURER CONTACT:

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European Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE) requires that used household appliances are not disposed of in the normal municipal waste stream. Used appliances must be collected separately to optimize the rate of recovery and recycling of the materials from which they are made, and to reduce the impact on human health and the environment. The crossed-out wheeled-bin symbol is displayed on all products to remind you of your selective collection obligations.

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