



# ATEQ G620 QuickStart Guide





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-  We continuously work on improving our products. This is why information contained in this manual, the device and the technical specifications may be modified without prior notification.
-  Pictures and figures in this manual are non-contractual.






# Safety advisory / Warranty

## GOOD PRACTICES AND SAFETY INSTRUCTIONS

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### Safety recommendations

-  If the device is supplied with 100 / 240 V AC, it is mandatory to connect it to the ground with a good link to the ground, to protect against electric hazard or electrocution.
-  It is dangerous to change the status of the outputs.  
They can control power actuators or other equipment (mechanical, pneumatic, hydraulic, electrical or other) which can cause serious personal injury and damage to surrounding material.
-  For safety and quality measurement reasons, it is important, before powering on the device, to ensure that it is air supplied with a minimum operating pressure (0.6 MPa  $\pm$  15%).

### Recommendations for the test environment

Keep the test area as clean as possible.

### Recommendations for operators

ATEQ recommends that the operators who use the devices have training and a level of qualification that correspond to the job to perform.

### General recommendations

- Read the user manual before using the device.
- All electrical connections to the device must be equipped with safety systems (fuses, circuit breakers, etc.) adapted to the needs and in accordance with the applicable standards and rules.
- To avoid electromagnetic interference, electrical connections to the device must be shorter than 2 meters.
- Power supply plug must be grounded.
- Disconnect the device from the mains before performing any maintenance work.
- Shut off the compressed air supply when working on the pneumatic assembly.
- Do not open a connected device.
- Avoid splashing water on the device.

ATEQ is at your disposal for any information concerning the use of the device under maximum safety conditions.

We draw your attention to the fact that ATEQ cannot be held responsible for any accident related to a misuse of the measuring instrument, the workstation or non-compliance of the installation with safety rules.

In addition, ATEQ declines any responsibility for the calibration or the fitting of their instruments that is not done by ATEQ.

ATEQ also declines any responsibility for any modification (program, mechanical or electrical) of the device done without their written consent.








## AIR QUALITY REQUIREMENTS

The air supplied into the device must be clean and dry. Even though the device is provided with a filter, the presence of dust, oil or impurities may cause malfunction.

### Air quality requirements according to ISO standard 8573

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-  | The air must be clean and dry.
-  | The presence of impurities, oil or humidity in the air may cause deterioration which will not be covered by the warranty.
-  | When the instrument is working in vacuum conditions, impurities must be prevented from being drawn into its internal components.  
For this purpose, we strongly recommend that a suitable airtight filter is installed between the part under test and the instrument.

ATEQ recommends the following characteristics for the air supplied into the device.

Air characteristics		ISO standard 8573 class
Grain size and concentration	0.1 $\mu\text{m}$ and 0.1 $\text{mg}/\text{m}^3$	Class 1
Dew point under pressure	- 40°C dew	Class 2
Maximum concentration of oil	0.01 $\text{mg}/\text{m}^3$	Class 1

### Recommended additional equipment

ATEQ recommends the installation of this additional equipment:

- Air dryer to provide dry air at less than - 40°C dew point
- 25 microns and 1/100 microns double filter.



# Preamble

## ATEQ G620, LEAK TESTER

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ATEQ G620 is a leak tester working on continuous mode (AUTOSTART). This mode allows the operator to localize and repair the leak.



ATEQ G620 can memorize 128 different test programs.

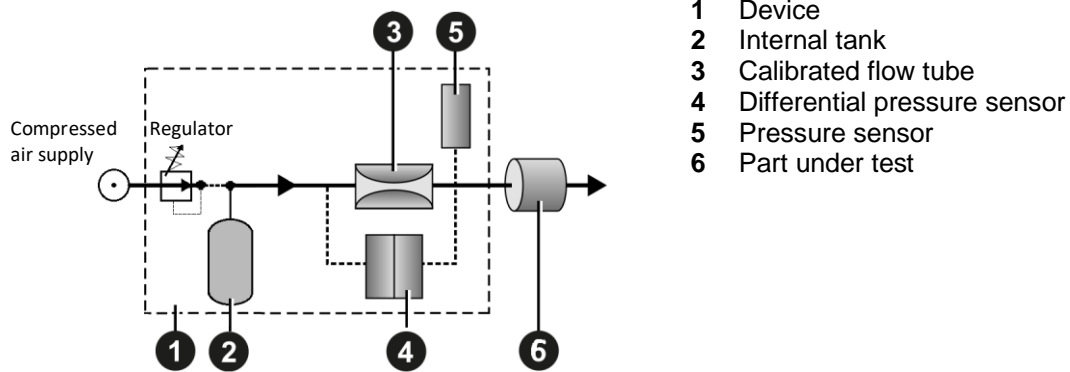


## LEAK TEST

### Measurement principle

When the part under test **6** is connected to the device **1**, the internal tank **2** is pre-filled at the test pressure and then, it moves through a calibrated flow tube **3** which causes a drop in pressure. The pressure drop is measured by a differential pressure sensor **4**. The pressure of the part under test **5** is measured by the sensor **5**.

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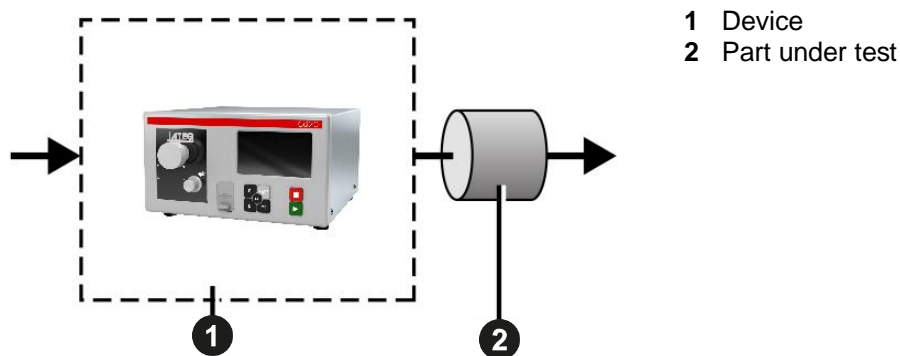


**i** Test volume must be lower than four times than the internal tank volume. Standard internal tank volume is 150 cc (option 300 cc).

### Direct measurement

Once the part is filled, the device measures the leak rate through the part.

The test pressure is applied to the device **1** and then to the input of the part under test **2**.



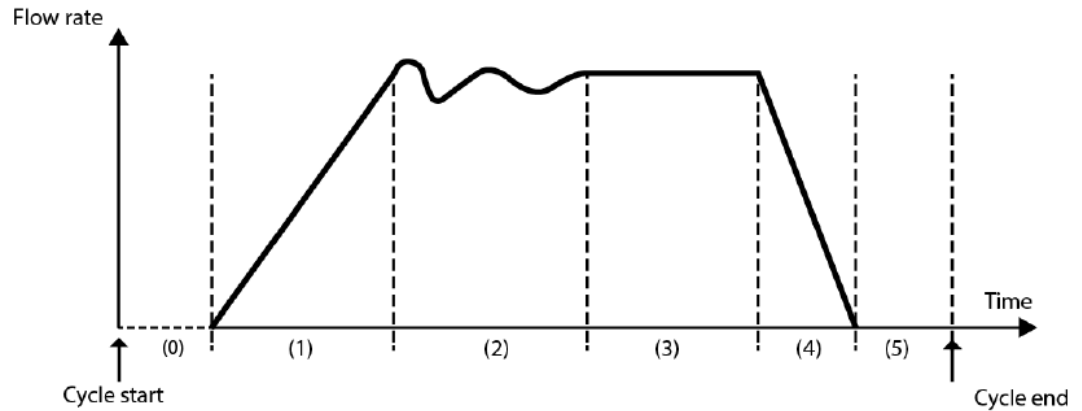


## PRINCIPLE OF A CYCLE

The measurement cycle is made of 4 main phases: fill, stabilization, test, dumping.



A Pressure auto zero additional phase "5" can be placed at the start or at the end of a cycle, depending on the requirement of the operator.



« STANDARD »  
Mode Cycle

- 1 Fill phase
- 2 Stabilization phase
- 3 Test
- 4 Dumping (option)
- 5 Pressure auto zero phase

« START AUTO »  
Mode Cycle

- 0 Waiting part connection in "Large Leak mode" (blowing air)
- 1 Fill phase
- 2 Stabilization phase
- 3 InfiniteTest time
- 4 Part is disconnected
- 5 Pressure auto zero





# Your ATEQ G620

## FRONT PANEL

The user interface is located on the front panel.

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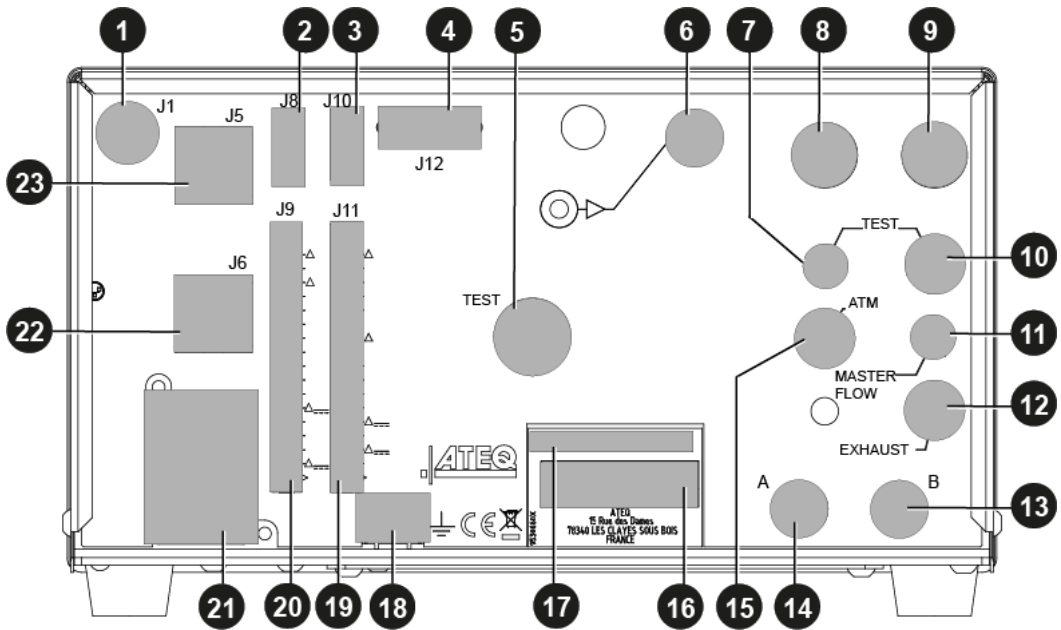
- 1 Display
- 2 Cycle keys
- 3 Navigation keys
- 4 USB connectors
- 5 Quick fitting to connect a Master leak
- 6 Regulator



| For more information, refer to User interface.



# CONNECTORS ON THE BACK PANEL (WITH ALL OPTIONS)





Ref	Name	Description
1	J1	Analog outputs - pressure and flow (option)
2	J8	Extender (not operational)
3	J10	Program selection extension connector (option)
4	J12	Printer RS232 connector / Modbus (option) or Profibus (option)
5	TEST	Test Output (part under test)
6	-	Input connector to the air filter (valves or regulator air supply)
7	TEST	Test Output when optional features like Shut Off, Dump, Bypass are installed (AVS 2.7/4 mm)
8	-	600 kPa specific quick fittings outputs (option)
9	-	600 kPa specific quick fittings outputs (option)
10	TEST	Test Output when optional features like Shut Off, Dump, Bypass are installed (AVS 3/5 or 4/6 mm)
11	Master flow	Master flow input only for Metrology adjustment/calibration (AVS 2.7/4 mm)
12	Exhaust	Exhaust output when optional Dump is installed (AVS 4/6 mm)
13	B	Pneumatic output for B automatic connector (option) (6 mm, 600 kPa)
14	A	Pneumatic output for A automatic connector (option) (6 mm, 600 kPa)
15	ATM	Output to be left to the atmosphere
16	-	Air supply energy information
17	ATEQ	Part number / Serial number
18	-	Ground
19	-	Relay board connector (digital inputs/outputs and 24 V DC - 2 A power supply)
20	-	Outputs code board connector (digital inputs/outputs) (option)
21	-	Connector for 24 V DC - 2 A or 100 / 240 V AC power supply
22	J6	Fieldbus connector
23	J5	Fieldbus connector



## POWER SUPPLY CONNECTORS

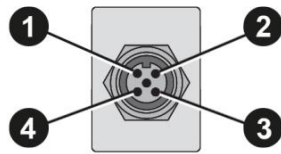
The device can be connected to an external power supply (24 V DC – 2A) or provided with an internal power supply (100 / 240 V AC) (option).

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### External supply

#### 24 V DC connector (J7)

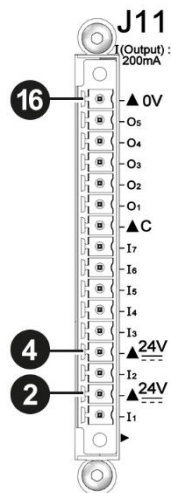
The device can be connected to a 24 V DC – 2A power supply through a M12 4 pins type connector.



Pin number	Signal
1	Not connected
2	+ 24 V DC
3	Not connected
4	Ground: 0 V

#### 24 V DC on the relay board connector (J11) (option)

The device can also be connected to a 24 V DC - 2 A power supply through J11 connector on the relay board.



Pin number	Signal
2	+ 24 V DC
4	+ 24 V DC
16	Ground: 0 V

| Apply 24 V DC to the pin 2 or 4




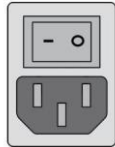
## Internal supply only

### 100 / 240 V AC connector (J7) (option)

The device can be connected to a 100 / 240 V AC power supply (option).  
This connector has an ON/OFF button.

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 It is mandatory to connect the device to the ground with a good link to the ground, to protect against electric hazard or electrocution.

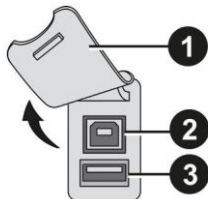


- 1 ON
- 0 OFF

## DIGITAL LINKS

### PC USB connectors (on front face)


USB connectors can be used for connecting miscellaneous compatible USB devices.  
The USB connectors are located under the rubber cover **1** (see figure).




- 1 Rubber cover
- 2 USB connector to PC
- 3 USB connector to USB key

 Do not connect two USB devices at the same time.

 Do not use a cable longer than 2 m.

 Push the rubber cover **1** slightly forward for an easy access to USB connectors **2** and **3**.

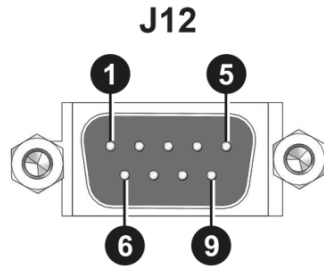
 Only use this connection for temporary communication. Connection to a PC cannot be used permanently because the communication can be disconnected by the PC.



## Printer RS232 connector / Modbus (option) or Profibus (option) (J12)

### RS232 - SubD 9 pins male connector (printer)

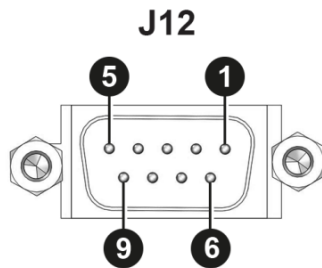
RS232 for printer, bar code reader, PC connection.



Pin number	Signal
1	Not used
2	RXD data input
3	TXD data input
4	Not used
5	Ground
6	Not used
7	RTS request to send
8	CTS clear to send
9	Not used

### RS232 - SubD 9 pins female connector (Profibus) option

Profibus: SubD 9 pins female connector.

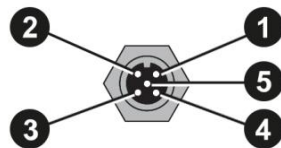


Pin number	Signal
1	PE (ground)
2	Not used
3	Data line A
4	CNTR - A (repeater control signal)
5	DGND (logic ground)
6	VP (supply)
7	Not used
8	Data line B
9	Not used

## Devicenet connectors (J5) (J6) (option)

### M12 type connector - 5 pins male connector (J5) (Devicenet input)

For connection to others ATEQ devices.

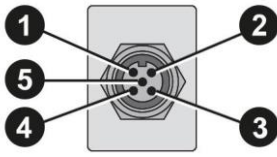


Pin number	Signal
1	Drain
2	V+
3	V-
4	CAN_H
5	CAN_L



## M12 type connector - 5 pins female connector (J6) (Devicenet output)

For connection to other ATEQ devices.

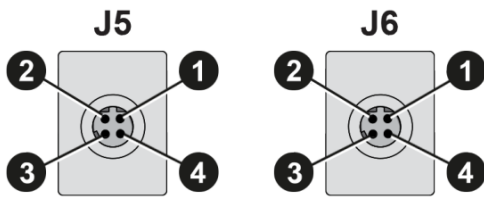


Pin number	Signal
1	Drain
2	V+
3	V-
4	CAN_H
5	CAN_L

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## Profinet connectors (J5 + J6) (option)

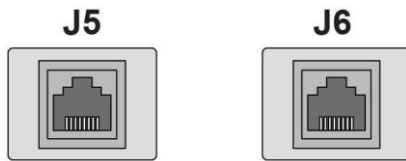
M12 D coded type connector - 4 pins female connector (J5 + J6)



Pin number	Signal
1	Ethernet Tx + (Transmit Data +)
2	Ethernet Rx + (Receive Data +)
3	Ethernet Tx (Transmit Data -)
4	Ethernet Rx (Receive Data -)

## Ethernet connector (J5 + J6) (option)

Standard connection Ethernet TCP / IP protocol.



One of these network protocols is available:

- Ethernet
- Profinet
- Ethercat



## DIGITAL INPUTS/OUTPUTS

The 24V DC power supply for the digital inputs can be provided by 2 means:

- The internal power supply of the device (0.3 A max)
- An external power supply provided by the customer.

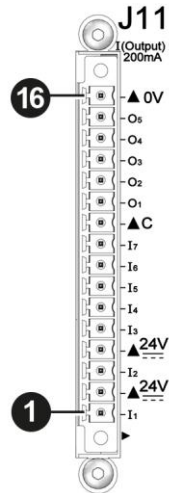
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**i** Inputs default mode is PNP. NPN mode is available on request.

### Relay board connector (J11) (option)

#### Characteristics

- Inputs
  - Activation: + 24 V DC
- Outputs
  - Dry contacts
  - 60 V AC / DC max - 200 mA max.



Pin number	Inputs / outputs	Description
1	Input 1	RESET
2	+ 24 V DC	Common
3	Input 2	START
4	+ 24 V DC	Common
5	Input 3	Program selection
6	Input 4	Program selection
7	Input 5	Program selection
8	Input 6	Program selection
9	Input 7	Program selection (programmable input)
10	Output	Common floating output
11	Output	Pass part
12	Output	Fail part
13	Output	Large Leak or Waiting test part (Autostart Mode)
14	Output	Warning
15	Output	End of cycle
16	0 V	Ground

**i** The device can be energized through the **J11** connector of the relay board (except if internal supply option)  
0 V to the pin **16**.  
24 V DC to the pin **2** or **4**.







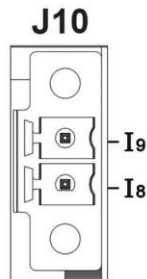
## Program selection extension connector (J10) (option)

The J10 connector is an extension of the J11 connector that enables the selection of 128 programs.

### Characteristics

— Inputs

- Activation: + 24 V DC.



Pin number	Inputs/outputs	Description
I8	Input 8	Program selection from 33 to 64 (programmable input)
I9	Input 9	Program selection from 65 to 128 (programmable input)

## Program selection (J11 and J10)

The connectors J11 and J10 (option) enable you to select a program from digital inputs. Combinations of connector pins to activate for program selection.

Program number	J11					J10	
	Pin 5 (input 3)	Pin 6 (input 4)	Pin 7 (input 5)	Pin 8 (input 6)	Pin 9 (input 7)	Pin 1 (input 8)	Pin 2 (input 9)
1	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0
3	0	1	0	0	0	0	0
4	1	1	0	0	0	0	0
5	0	0	1	0	0	0	0
6	1	0	1	0	0	0	0
7	0	1	1	0	0	0	0
8	1	1	1	0	0	0	0
9	0	0	0	1	0	0	0
10	1	0	0	1	0	0	0
11	0	1	0	1	0	0	0
12	1	1	0	1	0	0	0
13	0	0	1	1	0	0	0
14	1	0	1	1	0	0	0
15	0	1	1	1	0	0	0
16	1	1	1	1	0	0	0
17 to 32	X*	X	X	X	1	X	X
33 to 64	X	X	X	X	X	1	X
65 to 128	X	X	X	X	X	X	1

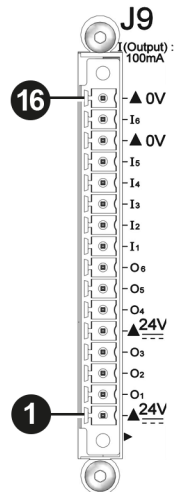
**i** | \* X is equal to 0 or 1 in function of the program number.



## Valve codes and auxiliary outputs board connector (J9) (option)

### Characteristics

- Outputs:
  - 24 V DC - 100 mA max per output.
- Inputs:
  - Activation: + 24 V DC.



Pin number	Inputs / outputs	Description
1	+ 24 V DC	Common (outputs 1, 2,3)
2	Output 1	Open collector
3	Output 2	Open collector
4	Output 3	Open collector
5	+ 24 V DC	Common (outputs 4, 5, 6)
6	Output 4	Open collector
7	Output 5	Open collector
8	Output 6	Open collector
9	Input 1	Programmable input
10	Input 2	Programmable input
11	Input 3	Programmable input
12	Input 4	Programmable input
13	Input 5	Programmable input
14	0 V	Ground
15	Input 6	Programmable input
16	0 V	Ground



## PNEUMATICS CONNECTORS

Pneumatic connectors used to connect the part under test are located on the back panel of the device.

### Pneumatic supply



The pneumatic supply has to meet specific requirements recommended by ATEQ. Refer to Good practices and safety instructions section.

A specific filter may be necessary.

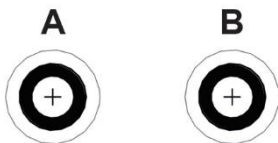
The air is supplied via the filter located on the back panel of the device.

### Plastic air filter



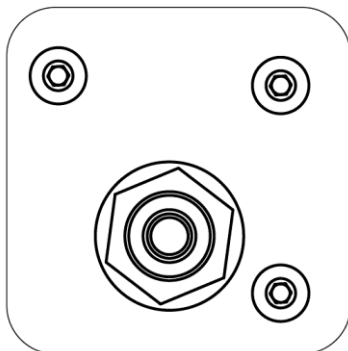
The plastic filter is used for 0.5 MPa range.  
The maximum pressure admissible is 690 kPa.

### Pneumatic outputs 0.6 MPa



A and B: automatic connectors option.  
These connectors are used to drive pneumatic caps on the part under test.

### Main Test connector



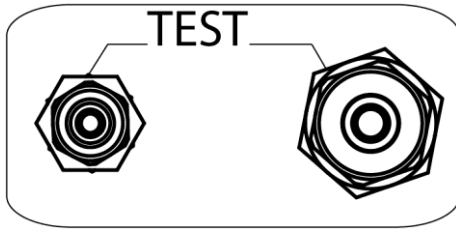
The test connector is used to connect the device to the part to test.

Metallic fitting diameter options (in mm):

- 2.7/4
- 3/5
- 4/6



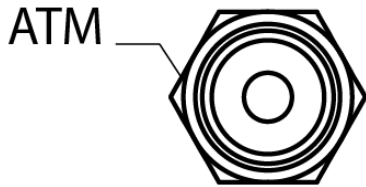
### Optional Test connector



When optional features like Shut Off, Bypass and Dump are installed, the main test connector has a cap. A new test connector is available according to the required size of the fitting (AVS 2.7/4 mm on the left or AVS 3/5 mm - 4/6 mm on the right).

### ATM connector

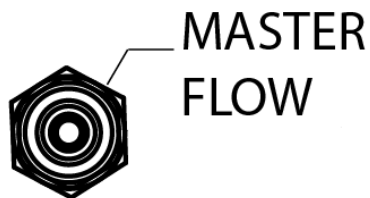
This connector needs to be open to atmosphere.



Quick fitting: 2.7/4 mm diameter.

### Master Flow connector

Used only by ATEQ for special calibrations.



AVS 2.7/4 mm diameter

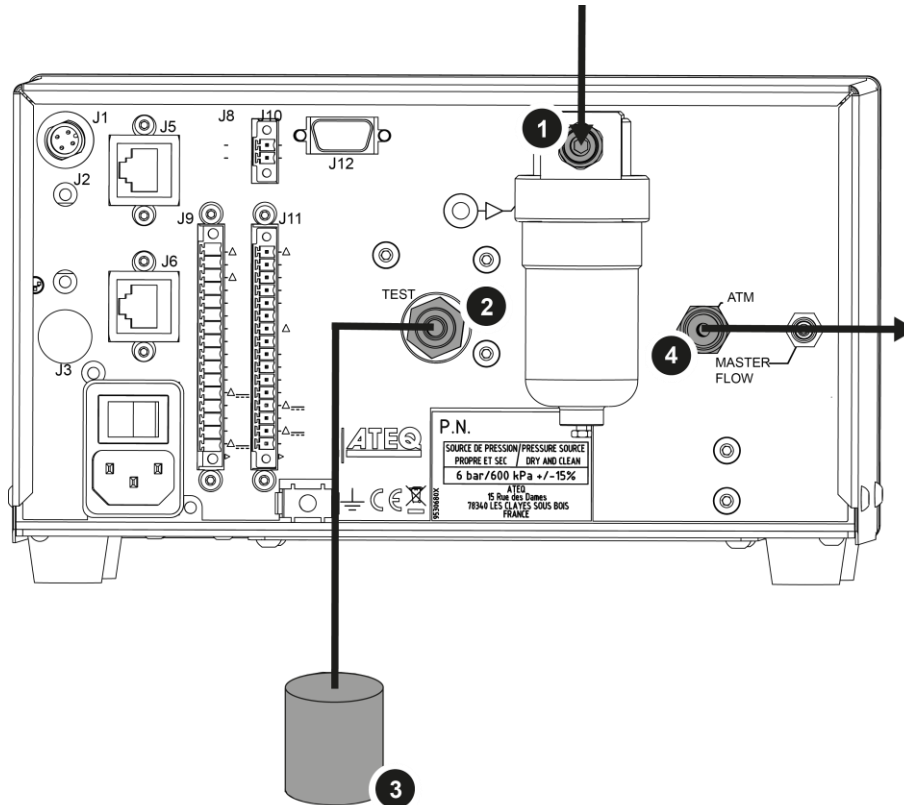


## PNEUMATICS CONFIGURATION

According to the part under test and the pressure range, different configurations can be used.

### G620 Standard version

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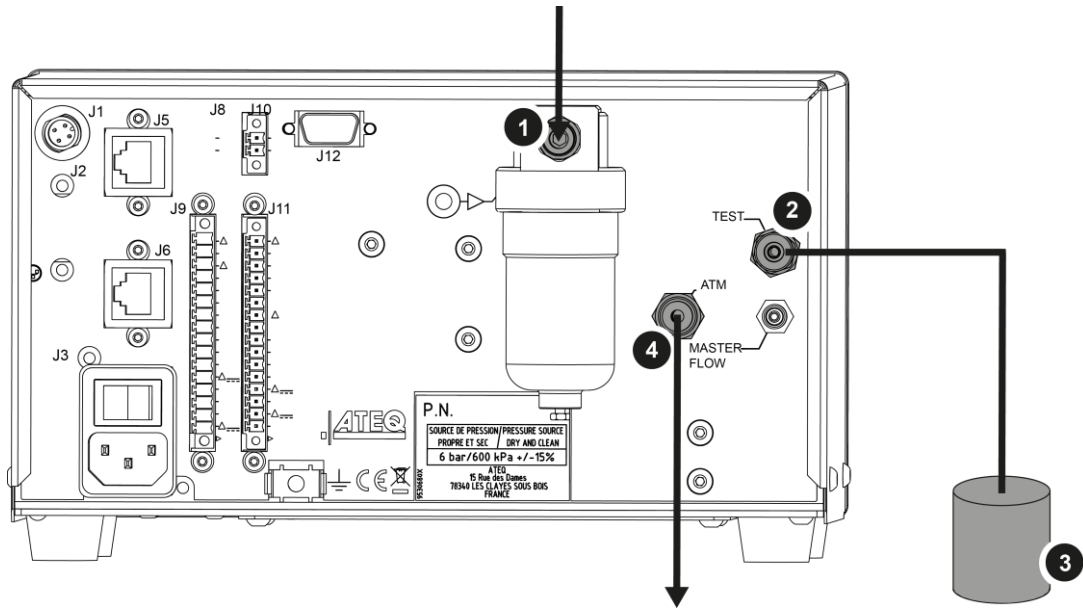


Connection	Option / description
Air supply to <b>1</b>	Connection of the air supply to the filter input (0.6 MPa)
<b>2</b> to <b>3</b>	Connection of the test output to the part under test (direct mode option)
<b>4</b> to ATM	Connector left free to the atmosphere



## G620 Option Bypass or Shut Off

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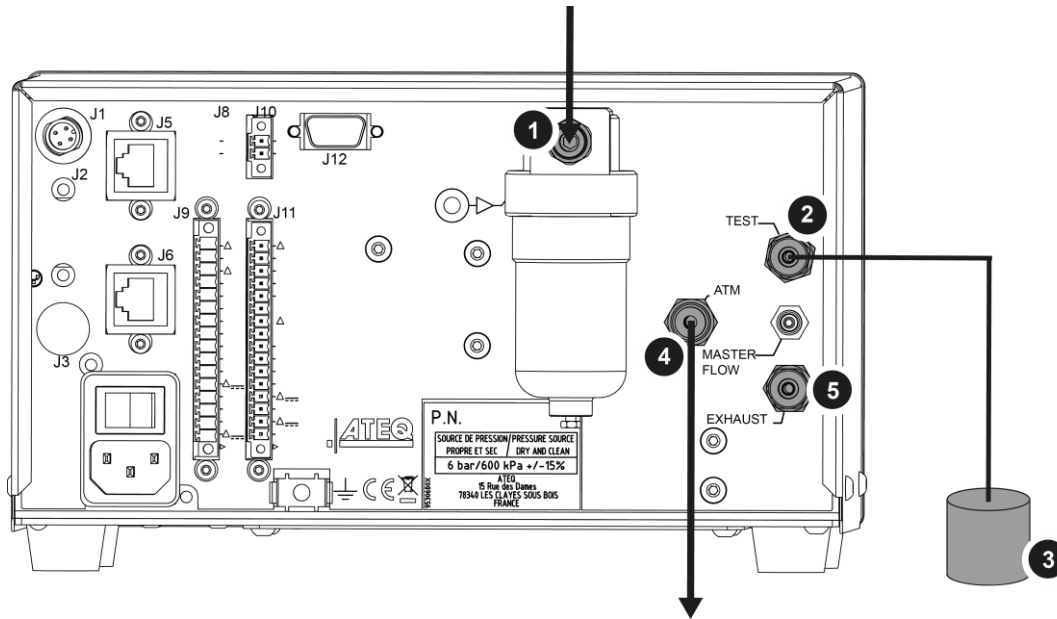


Connection	Option / description
Air supply to <b>1</b>	Connection of the air supply to the filter input (0.6 MPa)
<b>2 to 3</b>	Connection of the test output to the part under test (direct mode option)
<b>4 to ATM</b>	Connector left free to the atmosphere





## G620 Option Shut Off and Dump



Connection	Option / description
Air supply to 1	Connection of the air supply to the filter input (0.6 MPa)
2 to 3	Connection of the test output to the part under test (direct mode option)
4 to ATM	Connector left free to the atmosphere
5	Connector of the exhaust part



# User interface

## OVERVIEW

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The user interface comprises a display and user keys located on the front panel.





- 1 Display
- 2 Cycle keys
- 3 Navigation keys

## KEYS

### Cycle keys

The cycle keys are used to start and to stop a measurement cycle.

Key	Name	Function
	<b>Start</b>	On the <b>Program</b> screen, starts a measurement cycle and opens the <b>Measurement cycle</b> screen.
	<b>Reset</b>	Stops the measurement cycle in progress and returns to the <b>Program</b> screen.





## Navigation keys

The navigation keys are used to select menus/options and change parameter values.

Key	Name	Function
	<b>Up key</b>	Scrolls up or increases numerical values.
	<b>Down key</b>	Scrolls down or decreases numerical values.
	<b>OK</b>	Returns to the <b>MAIN MENU</b> screen or opens menus and options, validates parameters.
	<b>Esc</b>	Returns to previous screen (until the <b>Program</b> screen), escapes without modifying parameters.

## Smart key

**Smart key** is a programmable key that provides direct access to a function selected by the user.

Key	Name	Function
	<b>Smart key</b>	Starts a measurement cycle (default, programmable).

This key is programmable through the **MAIN MENU** screen:

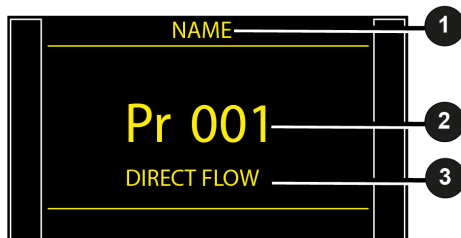
**MAIN MENU > CONFIGURATION > MISCELLANEOUS > SMART KEY**

## DISPLAY

The device uses 4 main screens.

## The Program screen

Use the **Program** screen to select a test program.



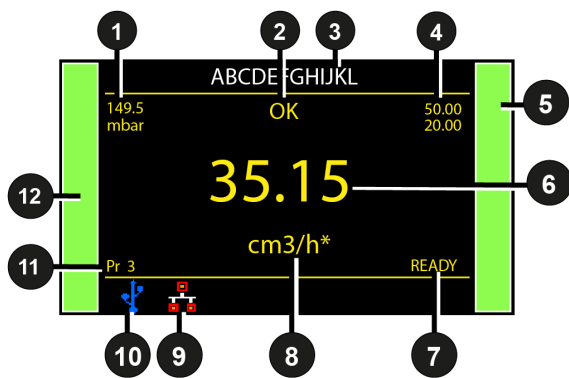
- 1 Current program name (here **NAME**)
- 2 Current program number (here **001**)
- 3 Test type (here **DIRECT FLOW**)

Access at startup of the device or by pressing several times **Esc**



## The Measurement cycle screen

The **Measurement cycle** screen displays the different values of the current test (or last one).

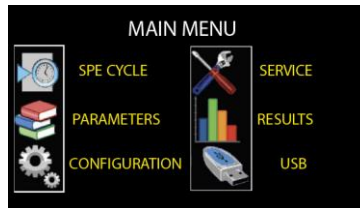


- 1 Test pressure measurement
- 2 Test result or step phase
- 3 Current program name
- 4 Test reject value
- 5 Vertical line test result
- 6 Flow measurement
- 7 Remaining time of the current phase or ready status
- 8 Measurement unit
- 9 Network
- 10 USB connected
- 11 Current program
- 12 Vertical line test result

## The MAIN MENU screen

The **MAIN MENU** screen gives access to different sections for managing the device and the test parameters.

**i** Access: from the **Program** screen, press **OK**.



Option	Description
<b>SPE CYCLE</b>	Specific procedures necessary to ensure the proper operation of measurement cycles (for example, adjustment of a pressure regulator).
<b>PARAMETERS</b>	Parameters of the test programs.
<b>CONFIGURATION</b>	General configuration of the device.
<b>SERVICE</b>	Maintenance of the device.
<b>RESULTS</b>	Test results, backup and display options.
<b>USB</b>	USB connection functions (backup, restore).



# Starting up

## POWER UP

### 1. Make sure that all the necessary connections are in place.

Electrical: such as power supply, inputs/outputs  
Pneumatic: including line pressure supply.

### 2. Power up your device

When power-up is completed, the **Program** screen is displayed, with last program used on screen

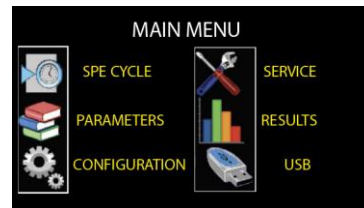


## PREPARING A PROGRAM

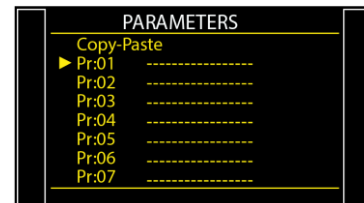
Use this procedure to configure a new test program.  
On the **MAIN MENU** screen:

### ACCESSING THE PARAMETERS

1. Select **PARAMETERS** using the up/down   keys and then press **OK**.

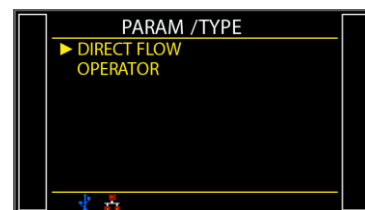


The program list is displayed.



### SELECTING A PROGRAM NUMBER

2. Select the program to configure and press **OK**.  
A list of the available measurement types is displayed:
  - **DIRECT FLOW** type
  - **OPERATOR** type





## CONFIGURING THE ASSOCIATED MEASUREMENTS

3. **Select the program to configure and press**   
The parameters of the selected measurement type are displayed.
4. **Define the measurement cycle parameters.**  
See: Modifying a parameter.

PARAM / Pr 001	
TYPE	: DIRECT FLOW
▶ COUPL. A	: 0.0 s
FILL TIME	: 0.0 s
STAB TIME	: 0.0 s
TEST TIME	: Inf. s
DUMP TIME	: 0.0 s
Press. UNIT	: bar
Max FILL	: 0.000

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## MODIFYING A PARAMETER

Use this procedure to complete the test program setup.

- The protection of the parameters is configurable. If the icon is displayed at the bottom of the screen, you must insert the USB unlocking device or enter a password before modifying a parameter.

On the **PARAMETERS** screen of the program (see: Preparing a program):

1. Press up/down to select the parameter to modify, and then press .

PARAM / Pr 001	
TYPE	: DIRECT FLOW
COUPL. A	: 0.0 s
FILL TIME	: 0.0 s
STAB TIME	: 0.0 s
▶ TEST TIME	: Inf. s
DUMP TIME	: 0.0 s
Press. UNIT	: bar
Max FILL	: 0.000

An arrow is displayed on the right of the parameter being modified.

PARAM / Pr 001	
TYPE	: DIRECT FLOW
COUPL. A	: 0.0 s
FILL TIME	: 0.0 s
STAB TIME	: 0.0 s
TEST TIME	: Inf. s
DUMP TIME	: 0.0 s
Press. UNIT	: bar
Max FILL	: 0.000

2. Use the up/down keys to modify the parameter value, and press to validate.

The arrow returns to the left of the modified parameter.

PARAM / Pr 001	
TYPE	: DIRECT FLOW
COUPL. A	: 0.0 s
FILL TIME	: 0.0 s
STAB TIME	: 0.0 s
▶ TEST TIME	: 2.0 s
DUMP TIME	: 0.0 s
Press. UNIT	: bar
Max FILL	: 0.000

3. Repeat these steps until all parameters are set.
4. To return to the MAIN MENU screen, press Esc as many times as necessary.



# ATEQ



## SELECTING A PROGRAM

If necessary, you can select another program.

1. Press up/down  .



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## STARTING AND STOPPING CURRENT CYCLE

Use the front panel keys to start/stop a measurement cycle.  
With the desired program displayed on the **Program** screen:

### STARTING A MEASUREMENT CYCLE

1. Press Start .

The cycle phases of the program are successively displayed:

**WAITING**  
**FILL**  
**STABIL.**  
**TEST**  
**DUMP**




At the end of the cycle, the results are displayed and **READY** appears at the bottom right of the screen.



During the measurement cycle, you may press  to access the **MAIN MENU** screen and set parameters for a next measurement cycle.

### STOPPING A CYCLE

2. Press Reset  to immediately stop the current measurement cycle and return to the Program screen.



# User adjustments

## OPTIONS OF THE MENUS

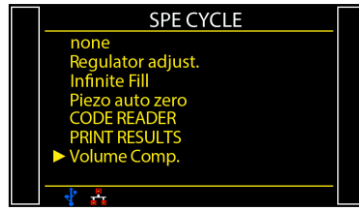
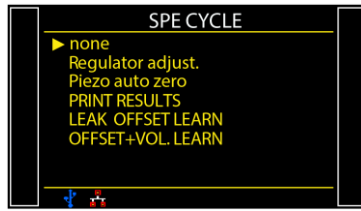
Different menus are accessible on the **MAIN MENU** screen.



For more information, refer to the Reference Manual.

## SPECIAL CYCLE MENU menu

Use this menu to carry out specific procedures necessary to ensure the proper operation of measurement cycles (for example, adjustment of pressure regulator).



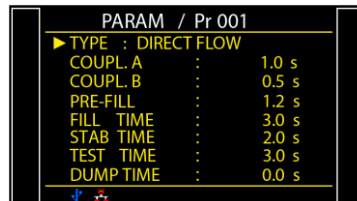
Label	Special cycle	Description of the cycle
<b>none</b>	None	No special cycle selected
<b>Regulator adjust.</b>	Regulator adjustment	Test pressure adjustment using front panel regulator
<b>Piezo auto zero</b>	Piezo auto zero	Pressure and leak AutoZero
<b>PRINT RESULTS</b>	Print results	Print results (infinite test time)
<b>LEAK OFFSET LEARN</b>	Automatic leak offset learning	Special cycles to determine leak offset
<b>OFFSET+VOL. LEARN</b>	Automatic offset + volume learning	Special cycles to determine leak offset and test Volume coefficient using Master leak
<b>Inf Fill</b>	Infinite fill	Pressurize the part with an infinite fill time
<b>Code Reader</b>	Code reader	Bar code learning (bar code reader)
<b>Volume Comp.</b>	Volume compute	Special cycles to determine test Volume coefficient using Master leak

## TO START SPECIAL CYCLES...

1. On the **SPECIAL CYCLE MENU** screen, select a cycle, and press **OK** to validate.
2. Press **Start** to execute the cycle.
3. To stop the current cycle press **Reset** .

## PARAMETERS menu

Use this menu to configure the measurement cycle associated to each test program.





## Default parameters of the **FLOW** type tests

Label	Parameter	Description
<b>COUPL. A</b> or <b>COUPL. B</b>	Coupling time	Required times when instrument manage automatic jigs
<b>FILL TIME</b>	Fill time	Time to pressurise the part under test
<b>STAB TIME</b>	Stabilization time	Time to stabilise the flow
<b>TEST TIME</b>	Test time	The flow in the part must be between the minimum and maximum reject level.
<b>Press. UNIT</b>	Pressure units	Pressure unit (bar, mbar, PSI, Pa, kPa, MPa)
<b>Max FILL</b>	Maximum fill pressure	Maximum level of the fill pressure
<b>Min FILL</b>	Minimum fill pressure	Minimum level of the fill pressure
<b>VOLUME UNIT</b>	Test part volume unit	Volume unit displayed: — SI System: l, ml, mm <sup>3</sup> , cm <sup>3</sup> — US System: cu in, cu ft.
<b>VOLUME</b>	Volume	Test Part Volume coefficient
<b>FLOW UNIT</b>	Reject unit	Flow rate unit displayed: — SI System: cm <sup>3</sup> /h, cm <sup>3</sup> /min, cm <sup>3</sup> /s, ml/h, ml/min, sccm, ml/s, l/h — US System: in <sup>3</sup> /h, ft <sup>3</sup> /h, in <sup>3</sup> /min, in <sup>3</sup> /s, sccm.
<b>Max Flow</b>	Maximum reject	Upper flow rate limit. Above this limit, the part is considered as defective.
<b>Min Flow</b>	Minimum reject	Lower flow rate limit. Under this limit, the part is considered as defective.
<b>FUNCTIONS</b>	Functions	Access to additional functions

## Additional functions

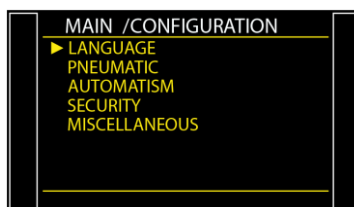
Label	Function	Description
<b>24V OUTPUTS</b>	Auxiliaries output 24 V	Available outputs for external automatism
<b>AUTO CONNECT</b>	Automatic connector	Function to manage automatic jigs
<b>AUTO START</b>	Automatic start	Starts automatically when the test part is connected
<b>BUZZER</b>	Buzzer	Buzzer activation configuration
<b>CODE READER</b>	Bar code reader	Bar code configuration
<b>DISPLAY MODE</b>	Display Mode	Flow measurement resolution
<b>DUMP</b>	Dump	Allows dump function
<b>END OF CYCLE</b>	End of cycle	Several automatism case depending on fail part management
<b>FILL MODE</b>	Fill types	Special filling methods
<b>FILTER</b>	Filtering	Stabilize the measurement values
<b>MIN Flow</b>	Minimum flow level	Allows Minimum Flow level
<b>NAME</b>	Name	Program customization
<b>NEGATIVE</b>	Negative	Allows negative flow measurement
<b>OFFSET</b>	Offset	Flow offset
<b>PEAK HOLD MAX</b>	Peak hold	Give as result, the highest flow during the test time





Label	Function	Description
<b>PR:SEQUENCE</b>	Sequencing	Allowed program automatic sequencing
<b>PRE-FILL</b>	Pre-fill types	Special filling methods
<b>PRESS. CORR.</b>	Pressure correction	Calculate flow measurement at a specific pressure value, whatever the real test pressure is
<b>REWORK LIMIT</b>	Rework limits	Additional levels for specific reworkable parts
<b>SIGN</b>	Sign	Return opposite result
<b>STAMPING</b>	Stamp	Pneumatic or electric output to identify the part
<b>STD CONDITIONS</b>	Standard conditions	Calculate measured flow in other ATM pressure and temperature condition (displays the unit with an *)
<b>UNITS</b>	Units	Access to International System or American or Custom Units
<b>VALVE CODES</b>	Valve codes	Available outputs for external automatism

## CONFIGURATION menu

Use this menu to configure your ATEQ device.



Label	Function	Description
<b>LANGUAGE</b>	Language	Selection of the language displayed on the screen
<b>PNEUMATIC</b>	Pneumatics	Configuration of the pneumatics functions of the device
> <b>PIEZO AUTO AZ</b>	Piezo auto zero	Auto-zero every ten minutes
> <b>Press. UNIT</b>	Pressure unit	Pressure unit by default for the new programs
> <b>NEGATIVE ALA.</b>	Negative alarm	Allows negative alarm flow level (same for all programs)
> <b>DUMP</b>	-	Option that allows dump function and valve type (NC or NO)
> <b>SHUT OFF</b>	-	Option that allows shut off function
<b>AUTOMATISM</b>	Automatism	Configuration of the different communications between the device and its environment
> <b>USB</b>	-	Sending result frames to a PC
> <b>RS232</b>	-	Configuration of the communication type on the RS232 port
> <b>Date &amp; Time</b>	-	Setup of the built-in clock
> <b>CODE READER</b>	-	Bar code reader configuration
> <b>OUTPUTS CONFIG.</b>	-	Configuration of the programmable outputs
> <b>INPUTS CONFIG.</b>	-	Configuration of the programmable inputs
<b>SECURITY</b>	Security	Security functions
> <b>ACCESS</b>	-	Parameters access mode (key or password)
> <b>START OFF</b>	-	Deactivation of the Start  on the instrument front panel. Programs can only be started from the instrument relay board.
<b>MISCELLANEOUS</b>	Miscellaneous	
> <b>SMART KEY</b>	-	Configuration of the assigned function to the Smart key 
> <b>BARGRAPH</b>	-	Bargraph display configuration

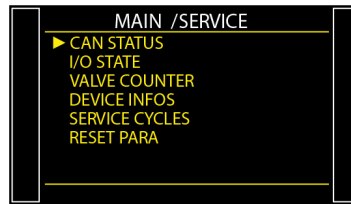






## SERVICE menu

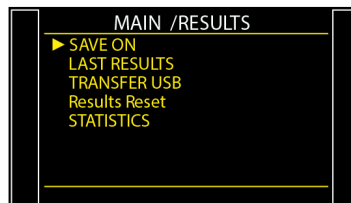
Use this menu to do the maintenance of your device (status check, internal tests...).



Label	Function	Description
<b>CAN STATUS</b>	Internal network state	State of the internal network of the device
<b>I/O STATE</b>	Inputs/outputs state	State of the inputs/outputs
<b>VALVE COUNTER</b>	Valves wear function	Approximate state of the valves wear
<b>DEVICE INFOS</b>	Device information	Information about the device, program version, built in components etc.
<b>SERVICE CYCLES</b>	Special service cycles	Allows to display more special cycles to carry out device internal tests
<b>RESET PARA</b>	Parameters reset	Reset to factory configuration

## RESULTS menu

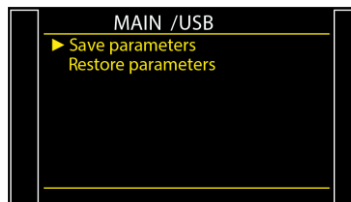
In this section, manage measurements results.



Label	Function	Description
<b>SAVE ON</b>	-	Define memory location (internal or external USB stick)
<b>LAST RESULTS</b>	Results display	Last 1500 results carried out by the device
<b>TRANSFER USB</b>	Results transfer	Transfer all results to USB stick on CSV file
<b>Results Reset</b>	Results erasing	The results are lost after the reset!
<b>STATISTICS</b>	Results statistics	Statistics for each program

## USB menu

This section describes save and restore parameters on an external USB device.



Label	Description
<b>Save parameters</b>	Save parameters on an external USB memory device for restoring later
<b>Restore parameters</b>	Restore parameters from an external USB memory device





# Specifications

## CHARACTERISTICS

Technical characteristics of the device.

Main characteristics:

Characteristics	Values
Case dimensions: Height x Width x Depth	150 x 250 x 270 mm
Overall dimensions	150 x 250 x 360 mm
Format	Half 19-inch rack
Mass	About 8 kg (17.6 lbs)
Electrical power supply	— 100 / 240 V AC - 50 W - 50/60 Hz — 24 V DC - 2 A.
Overvoltage category	II
Pneumatic air supply (0 to 0.5 MPa range)	Air supply: 0.6 MPa ± 15%
Protection	Device protection level IP2
Pneumatic connections: (inside / outside diameters)	2.7/4 to 4/6 mm
Operation temperature	+5 °C to + 45 °C (+ 41 °F to 113 °F)
Storage temperature	0 °C to +60 °C (32 °F to 140 °F)
Operation altitude	Up to 2000 m (6500 ft)
Relative humidity	80 % at 31 °C (87 °F) and 50 % at 40 °C (104 °F)