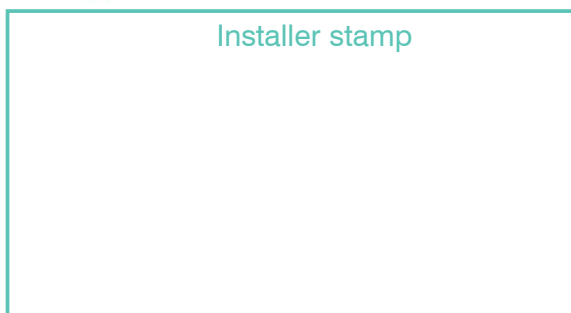


mini FL4A

Operating instructions



Installer stamp



mini FL4A Programmer

The new Lama Mini programmer, FL4A, presents similes characteristic at the FL8I programmer but with a notable size and price reduction.

The programmer starts the filtering cycle. When the pressure difference P+ and P-, taken by the FL4A sensors exceeds the data previously stored in the memory, which may be modified by the user, the FL4A goes on to cleaning the filter, which has several phases controlled by a timer (also able to be modified by the user).

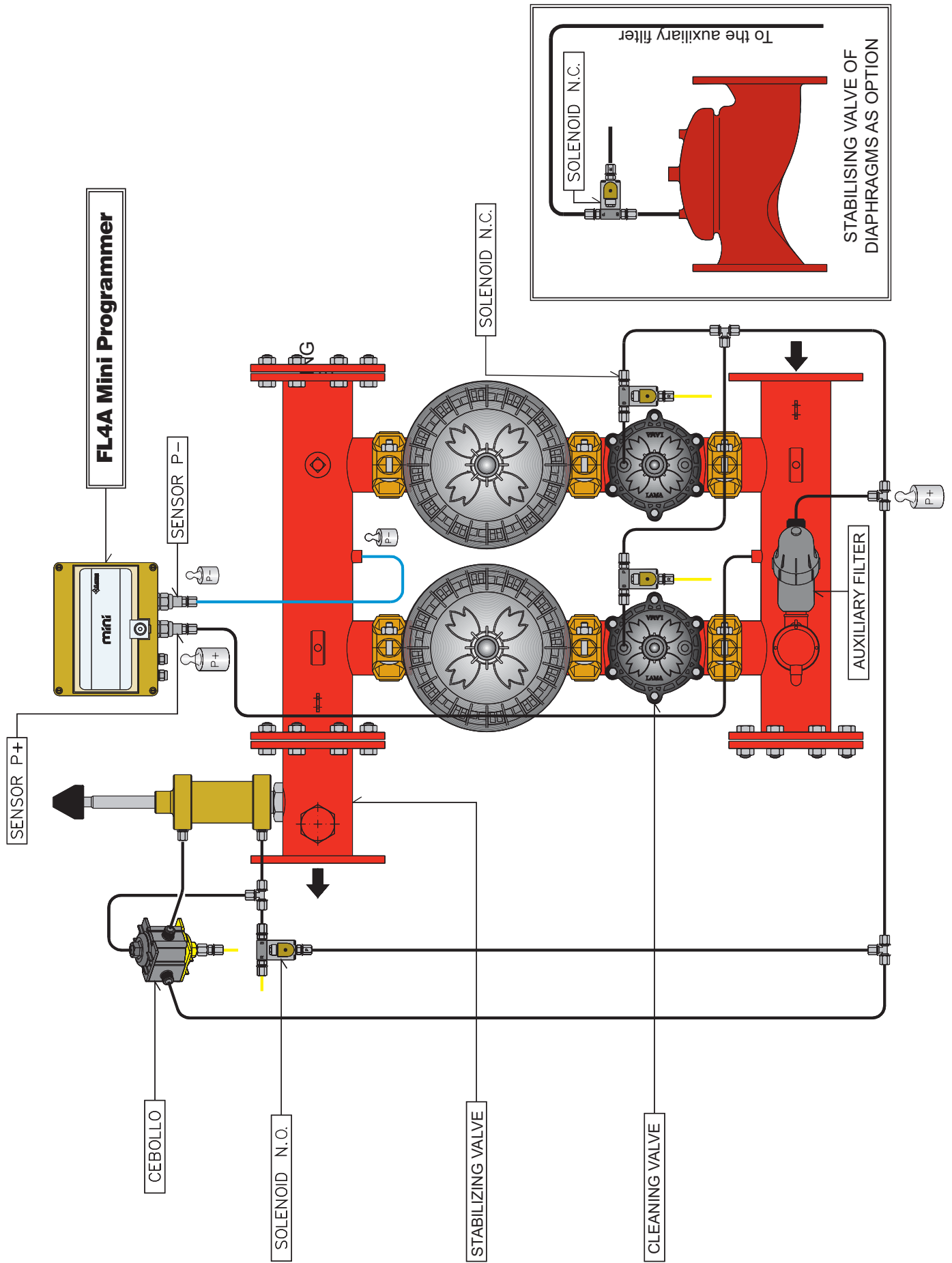
The parameters which control the programmer are delivered with a standard programme for the filter they are made for, although they may be shaped by the user in order to adapt the filtering and cleaning on the specific conditions of each installation.

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Introduction and technical features:	5
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Standard programming recommended according to model:....	8
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In la Puebla del Río, Seville. (Spain)
Fernando Lama S.L.© 2005
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Version 0.0

Mini programmer assembling scheme





mini programmer

P+: Is the inlet pressure in the filtration headers.
P-: Is the outlet pressure in the filtration headers.
PD: Is the differential pressure, standard 0,5 Kg/cm².

FL4A Cleaning programmer

Introduction:

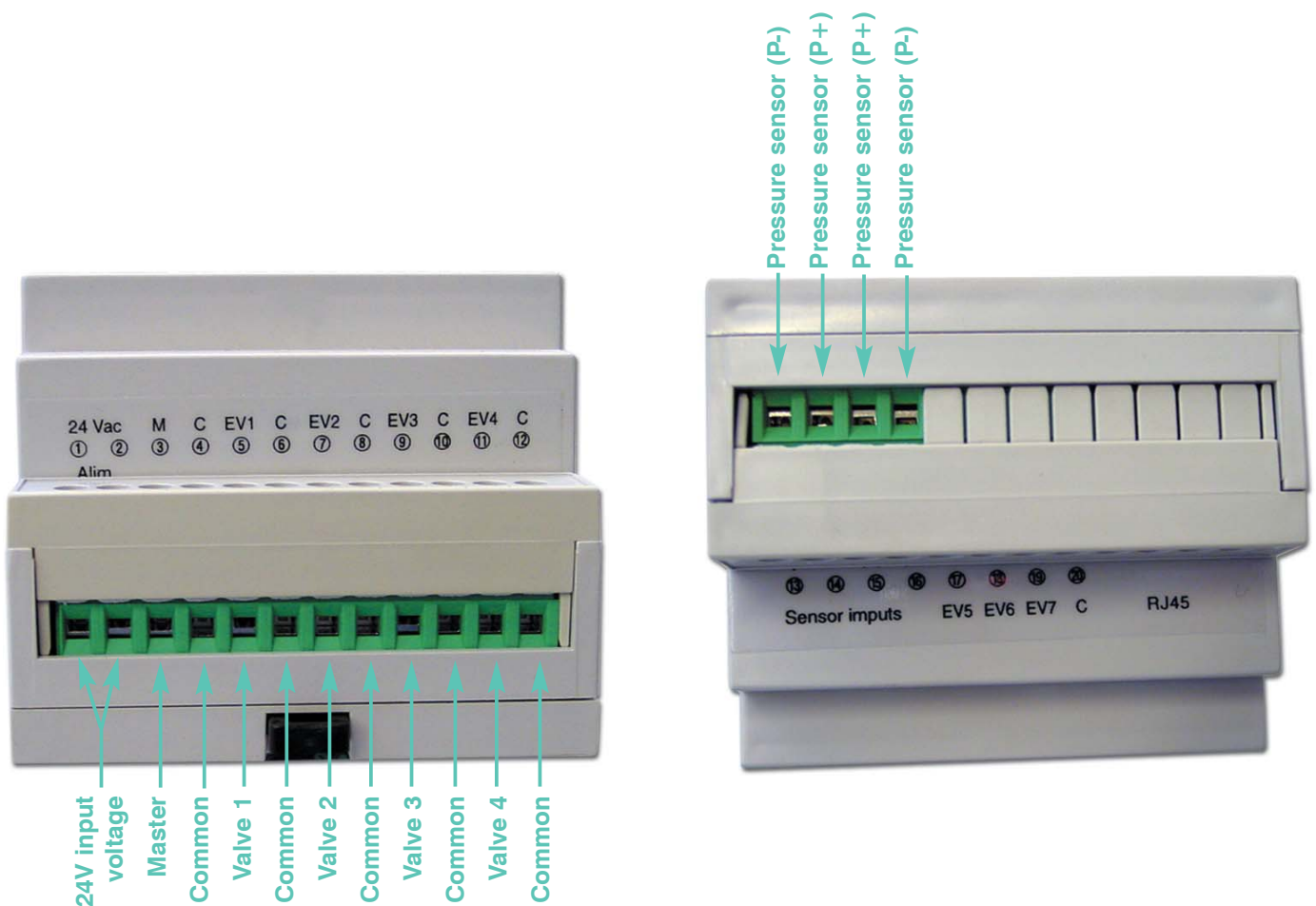
- The programmer is shaped at the factory with a set of standard parameters.
- The following user's guide deals with the modifiable options by the final user, for such cases where a change of said parameters are required.
- There are other options in the programmer, which can only be modified by the expert team of Lama for certain cases.
- Never try to modify the parameters which are not shown in this guide, as serious damage could be done and/ or cancel the guarantee of the programmer.
- Language, spanish

Technical features:

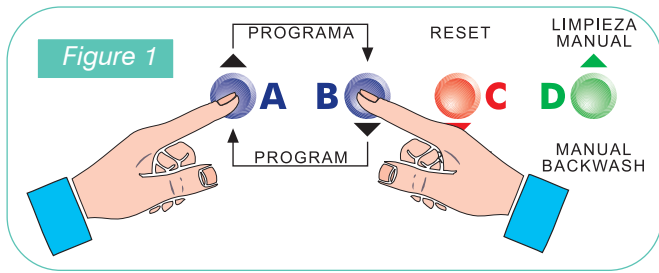
- Inlet tension: 115V / 230V.
- No. of outlets: De 1 a 4.
- Outlet tension at solenoid: 24V.
- Watertight security chamber.
- Language: Spanish
- Pressure rank between 0.1 and 10 Kg/cm².
- Magnetocaloric of protection.

Electrical connection:

Connection 230V AC

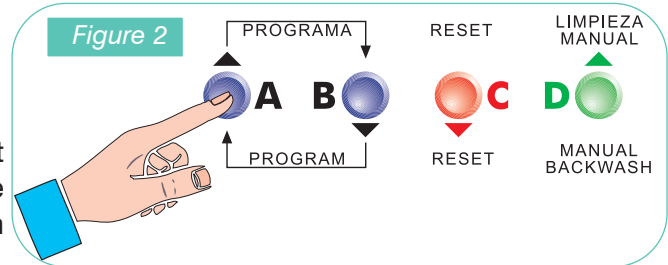


Personalised programming of the user



In order to have access to the menu of the user's programming, press the two blue buttons (A and B) simultaneously (Figure 1)

To go from one menu to another press the first blue button (A) of the control panel (Figure 2). The position of the cursor indicates the chosen option in the menu (Figures 3 and 4).



Introducing data into the FL4I programmer

In general, data is introduced into the programmer by pressing the green button (D) which increases a unit (figura 3), and by pressing the red button (C), a unit of the chosen option is reduced (figura 4)

Figure 3

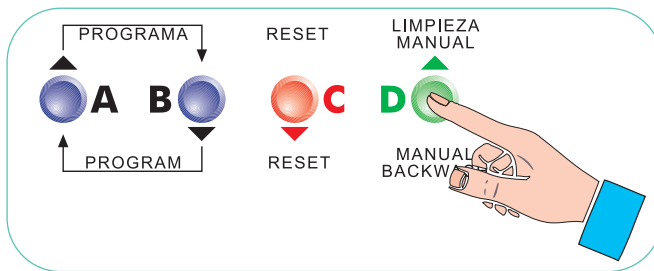
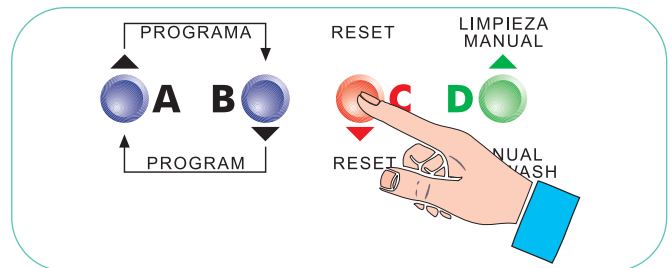


Figure 4



The decimal data (Differential pressure) is modified by the green button (D) in creasing the decimals a unit (figure 5) and by pressing the red button (C) the decimals are reduced a unit (figure 6), whole data can not be modified.

Figure 5

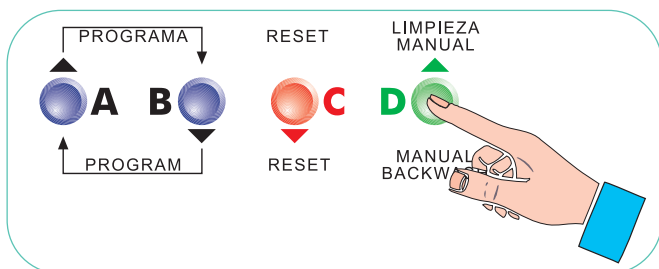
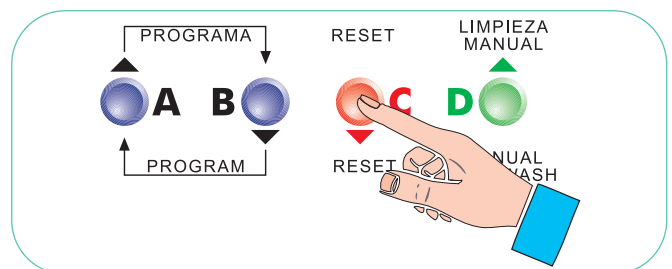


Figure 6



FL4A cleaning programmer

Programming screens

• **LIMPIEZA HORARIA (cleaning time):** It establishes the time taken between two cleaning cycles, programmed by a clock.

LIMPIEZA
HOR. 000

DURACION
LAV 000

• **DURACIÓN LAVADOS (duration cleaning proceses):** Period of time between the beginning and the end of a filter cleaning process, it can be programmed between 0 and 255 seconds.

• **T. ENTRE LAVADOS:** Tiempo entre lavados, período de tiempo que transcurre entre el final de un proceso de limpieza y el inicio del siguiente, programable entre 0 y 255 segundos.

T. ENTRE
LAV. 000

FILTROS
000

• **FILTROS (filters):** The filtering station indicates the number of filters the pad has.

• **TIEMPO INICIO M. (initial time M):** Initial time of the master valve. It specifies the delay time of the master valve until the beginning of the cleaning cycle. It can be programmed between 0 y 255 seconds.

TIEMPO
INIC. 000

TIEMPO
FINAL 000

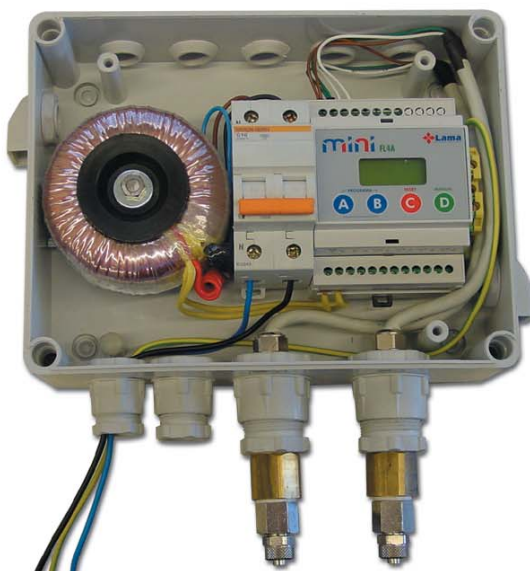
• **TIEMPO FINAL M. (final time M):** Time for ending the setting off of the master valve, in order to avoid lower pressures at the end of the cleaning cycle. It can be programmed between 0 a 255 seconds.

• **TIEMPO P.D. (P.D time) .:** Differential Pressure Time. It is the time of delay from the moment the pressure difference is detected to the beginning of the cleaning cycle. It can be programmed between 0 and 255 seconds

TIEMPO
P.D. 000

PRESION
DIF. 0,5

• **PR.DIFERENCIAL (Differential PR):** Differential pressure, it is the difference between the inlet pressure (P+) and the outlet pressure (P-) to start the cleaning cycles. It can be programmed between 0.1 and 0.9 BAR



RotaSenior and Rotativo Models

- Cleaning time: minimum 24 hours.
- Duration of cleaning processes: minimum 20 seconds.
- Time between cleaning processes: minimum 10 seconds.
- PD Time: minimum 30 seconds.
- Initial time master valve: minimum 10 seconds
- Final Time master valve: minimum 5 seconds
- Differential pressure: 0,5 kg/cm²

RotaSenior Vip and Vip Rotativo Models.

- Cleaning time: minimum 24 hours.
- Duration of cleaning processes: minimum 45 seconds.
- Time between cleaning processes: minimum 25 seconds.
- PD Time: minimum 30 seconds.
- Initial time master valve: minimum 10 seconds
- Final time master valve: minimum 5 seconds
- Differential pressure: 0,5 kg/cm²

MasterMegadisc 4" Models .

- Cleaning time: minimum 24 hours.
- Duration of cleaning process: minimum 45 seconds.
- Time between cleaning processes: minimum 25 seconds.
- PD Time: minimum 30 seconds.
- Initial time master valve: minimum 10 seconds
- Final time master valve: minimum 5 seconds
- Differential pressure: 0,5 kg/cm²

MasterMegadisc 6" Models .

- Cleaning time: minimum 24 hours.
- Duration of the cleaning process: minimum 60 seconds.
- Time between cleaning processes: minimum 35 seconds.
- PD Time: minimum 30 seconds.
- Initial time master valve: minimum 15 seconds
- Final time master valve: minimum 15 seconds
- Differential pressure: 0,5 kg/cm²

Calados, Carballinos and Sand Headers

- Consult.



Product guarantee

- Lama guarantees all its products for 1 year.
- This product has passed factory testing according to the relevant standards.
- The period of guarantee against perforation by corrosion is 2 years.
- The maximum and minimum working pressures, minimum backwash pressure and filtering and backwashing flow rates are specific to each product type. This data is contained in the technical literature for each product.
- Lama will, at its option, repair or replace any goods that are defective due to faulty workmanship or use of poor quality materials subject to testing by our qualified personnel, but will not be liable to repair or replace goods in any other circumstances. Replacement goods will be exchanged for the faulty goods.
- The filter is guaranteed to block the passage of particles larger than the micron rating of the filter element being used.

THE GUARANTEE DOES NOT COVER THE FOLLOWING

- Maintenance and periodical cleaning.
- Mesh screens perforated by sharp elements and stones.
- Wear caused by overuse of the materials, abrasion or high temperatures.
- Higher or lower voltages than specified for electric controllers.
- Differential presostat, solenoids or controllers affected by moisture.
- Hydrocyclone wear by sand and stone abrasion.
- Higher or lower pressures than those indicated in the specifications of each product.
- Acid environments or waters, decantings, precipitations, algae or bacterial agglutinations.
- Damage due to water hammer or external impacts.
- Incorrect or inadequate assembly or operating below minimum pressures.
- Both valves and solenoids if flow from drainage tubes is restricted.
- Third party damage, theft or vandalism.

CLAIMS TO GUARANTEE

- This product has passed factory tests and has met quality standards. Nevertheless, should you find any fault, please contact your point of purchase, quoting the product and reference codes on this guarantee or on the filter itself.
- For any claim it is obligatory the presentation of this document or the article codes and reference that appear here

Product:

Reference/Lot:

Date: of in 200.....

Signature:

