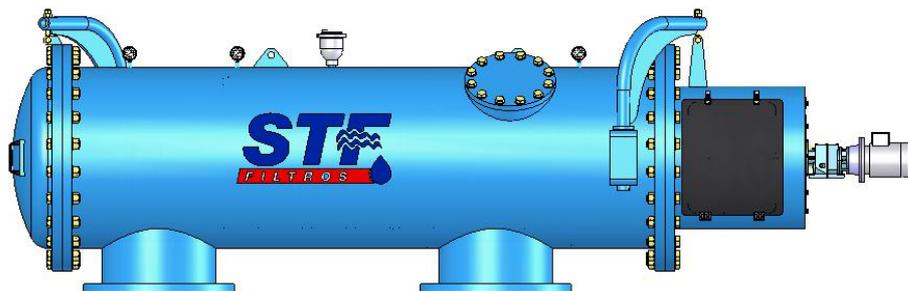




OPERATING AND MAINTENANCE MANUAL



AUTOMATIC SCREEN FILTER

FMA SERIE 5000



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INTRODUCTION

GENERAL

STF congratulates you for your 5000 STF Series Automatic Screen Filter.

This filter is an important member of our product line, used in agriculture, water treatment, water cleaning systems and other industrial applications. All STF products are easy to install, operate and maintain.

WARRANTY

The 5000 STF Automatic Screen Filter are warranted for 2 years from the date of original sale to be free of defective materials and workmanship when used within the working specifications for which the product was designed and under normal use and service

The manufacturer assumes no responsibility for installation, removal or unauthorized repair of defective parts and the manufacturer will not be liable for any crop loss or other consequential damages resulting from any defects or from installer's negligence.

This warranty is expressly in lieu of all other warranties, express or implied, including the warranties of merchantability and fitness for particular purposes and of all other obligations or liabilities of manufacturer.

No agent, employee or representative of the manufacturer has authority to waive, alter or add to the provisions of this warranty or to make any representations or warranty not contained herein.

SAFETY INSTRUCTIONS

1. Before installing or operating the filter, this manual has to be read carefully.
2. Be aware that the filter can start the flushing operation automatically.
3. No changes or modifications at the equipment can be made without previous approval and agreement of the manufacturer.
4. The installation of the filter must be carried out with the necessary care to avoid the risk of shock.
5. Take care when lifting up and placing the equipment to avoid damages.
6. Ensure that there is enough space to carry out the maintenance of the equipment.
7. Before any maintenance, switch off the equipment and the electrical connection.
8. Check that the equipment is not under water pressure before carrying out any maintenance work.
9. Don't turn on the equipment without having installed all safety elements
10. Don't carry out any maintenance than the ones indicated in this manual.
11. Only use original spare parts.

TECHNICAL CHARACTERISTICS

Filter model STF - FMA	5000	
Diameter Inlet /Outlet	20"	
Maximum flow m ³ /h	5000	Note A
Filtration surface cm ²	51000	
Minimum working pressure	2 bar	
Maximum working pressure	10 bar	Note B
Weight Kg.	1810	
Cleaning valve	3"	
Cleaning time	33 seconds	
Cleaning flow m ³ /h	79	Note C
Volume consumed per cleaning litres	730	Note C
Operating voltage	Monophasic (220v 50 Hz)	Note E
Control voltage	24 V DC	
Electrical motor	1 HP	
Electrical consume	1,4 Amp (220v/250v)	
Body filter and coating	Carbon steel S-235-JR EPOXI-POLYESTER powder paint	Note D
Suction scanner	Stainless steel AISI-316	
Screens	Stainless steel AISI-316	
Cleaning valves	Plastic body	

NOTE A: Optimum flow depends on quality of the water. Consult manufacturer. Values for 125 microns filtration degree, and medium quality water.

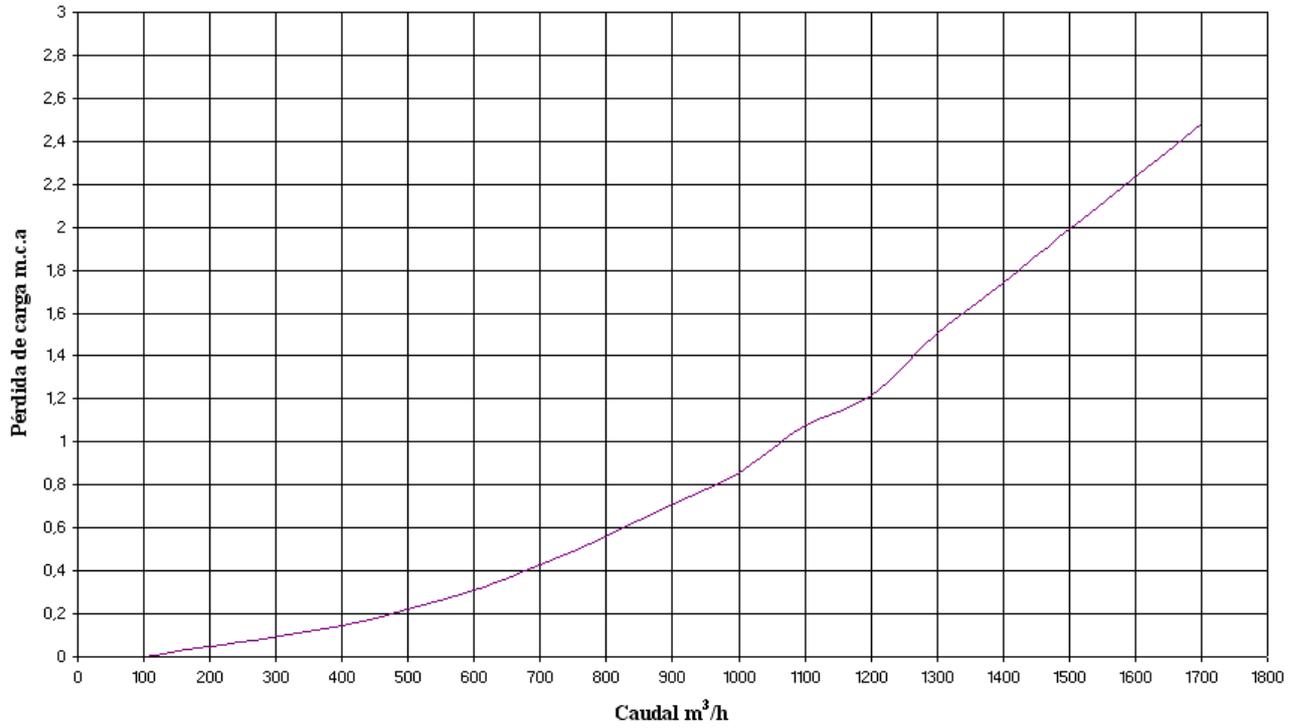
NOTE B: Other pressures under request.

NOTE C: Measured at 2 bar.

NOTE D: Under request in AISI 304/316

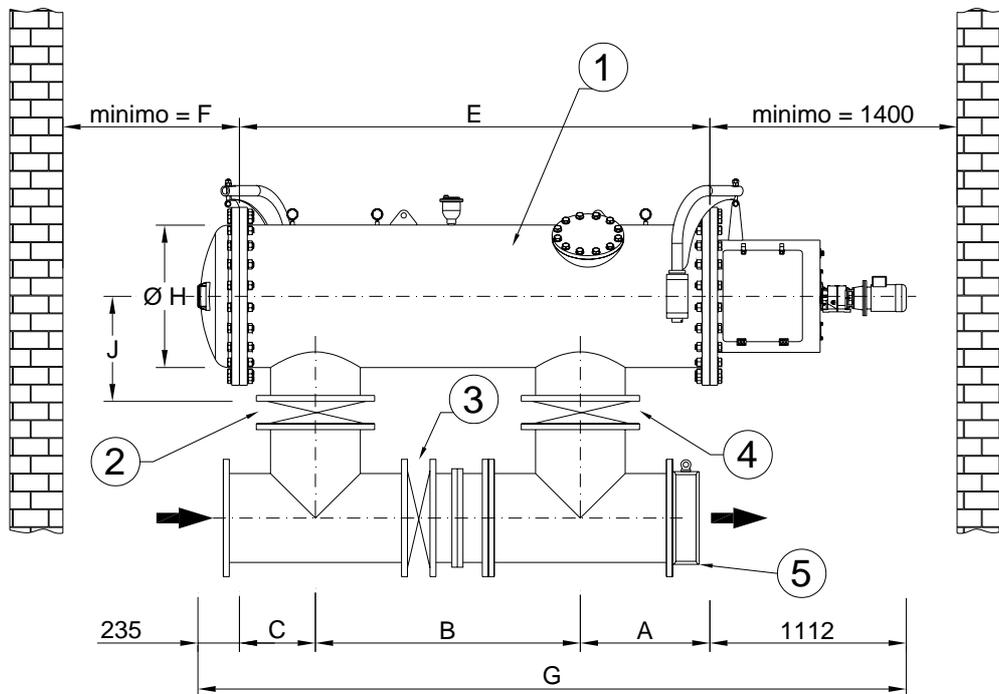
NOTE E: Any voltage under request.

HEAD LOSS GRAPHICS



NOTE: Values for 125 microns cartridge. For other filtration degrees, consult manufacturer.

DIMENSIONS AND DESIGN



1. Selfcleaning screen filter Serie 5000
2. Inlet butterfly valve
3. By-pass valve
4. Outlet butterfly valve
5. Retaining valve

MODEL	DIMENSIONS (mm)									FILTRATION SURFACE (cm ²)
	A	B	C	DN	E	F	G	H	J	
FMA 5020	733	1500	430	500	2663	1400	4010	812	600	51.000

INSTALLATION AND START UP

1. Ensure that the direction of the water flow is following the marked arrows in the equipment.
2. When reflux is posible, install a non-return valve for protection against water hammer. *STF shall not be responsible for damages in the equipment due to water hammer, or superior pressures to maximum design pressure.*
3. When installing only one filter, include a by-pass in order to carry out the maintenance without interrupting the system flow.
4. Install isolating butterfly valves on the inlet and the outlet of the filter.
5. Connect the equipment to the power supply
6. Turn the switches of the board to the ON position.
7. Gradually open the butterfly valves to the inlet and outlet of the equipment; close the by-pass valve (if there is one).
8. The equipment comes factory set, (Pressure differential 0.3 bars; safety time between flushing 12 hours).
9. If the outlet pressure is less than 2 bar (outlet at atmospheric pressure) it will be necessary to add a pressure sustaining control valve.

FAILURES DETECTION

CAUTION!!!!!!!, before manipulating the filter verify that there is not pressure inside and the control panel is turn off.

1. *The clean water pressure gage (central pressure gage) marks less than 1 bar, whereas the entrance pressure gage is over its habitual pressure.*
 - *The cartridge is dirty and it will not be able to recover by means of automatic flushings. Close the outlet butterfly valve. Wait until the second pressure gage reach 2 bar. Press the manual flushing button (4) three or four consecutives times.*
 - *Once clean the cartridge progressively, open the outlet butterfly valve until being able to pressurize the line.*
2. *The motor of the automatic filter rotates during flushing but does leave water by the flushing valve :*
 - Verify that the flushing valve is in the position AUTO
 - Verify that the plastic filter is not dirty. Clean the plastic filter.
 - Verify that the solenoid works correctly. In other case, replace it.
 - Verify that there is not any obturation in the water-drainage collector.
3. *The motor don't rotate when the flushing cycle begins :*
 - Verify the voltage and the relays correct operation.
 - If the motor does not receive 220v between three terminals of the coupling box, and between two of them the current is smaller or zero, replace the condenser located in the control panel.

- If the motor receives 220V, remove the back polyester cover (nº41) and disassemble the cardan joint. Once released, try to rotate the motor moving the fan. If scanner it is blocked, open the cover of the filter (nº32) and verify if some internal impediment exists..

4. *The flushing valve does not close completely*

- Open the valve pushing the three-way valve at OPEN position, once open place the three-way valve at CLOSE position (repeat the operation several times if it is necessary). If the flushing valve closes, return the three-way valve to auto.
- Verify that nothing obturate the diaphragm of the valve.
- Verify that the solenoid works correctly (a click is heard whenever signal arrives to him).

5. *The pressure gage of the inlet camera is not equalled with one of the cleaning camera*

- *The coarse screen is dirty. Open the cover (nº32) extract the coarse screen and clean with water.*

6. *The filter does not stop to clean until it appears the alarm by consecutives flushings :*

- Verify if pressure differential between the inlet and outlet pressures gages exists. If the pressure differential is greater than 0.3 bar to return to step 1.
- If pressure differential does not exist, disconnect the pipes of inlet and outlet to the pressure switch and allow that it leaves water to verify that they are not clogged.