

WATER SOFTENER mod. H8

 **USER AND MAINTENANCE MANUAL**



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WARNINGS FOR THE USER

- This equipment must not be used by children or by people with physical, mental or sensory impairments, or by people lacking experience, unless they are supervised by someone responsible for their safety or they have received instructions regarding the correct and safe way to use the equipment and were warned against the risks.
- Never try to repair the equipment by yourself: you may cause damage. Ask your seller for assistance.
- Never touch or use the water softener with wet or damp hands or feet, or barefoot.

1. INTRODUCTION AND GENERAL INFORMATION

1.1 OBJECTIVE OF THE MANUAL

This instruction manual is addressed to qualified personnel who must have knowledge of the health and safety rules of the place of installation. The objective of this manual is to give useful information and warnings, both to the installer and the user, regarding: **HOW TO STORAGE AND KEEP THE EQUIPMENT BEFORE USE:**

- Place and room conditions
- Expiry date

FOR THE INSTALLER

- Precautions for hygienic safety
- Equipment description and features
- Place and mode of installation
- Activation
- Procedures to follow after a period of inactivity of the equipment
- Equipment disposal
- Solutions to some problems

FOR THE USER

- Instructions for the periodic rinsing of the resins
- Instructions for the care and cleaning of the equipment
- Health and hygiene warnings concerning the water produced by the equipment.

The manual also gives you the guidelines to avoid any improper use of the equipment and it specifies the installer and the user's responsibilities, therefore we suggest to read through this manual before installing or using the water softener. If the instructions are not followed, the manufacturer will decline responsibility for any damage caused to people, things or animals and will consider the guarantee null and void.

1.2 KEEPING THE MANUAL

This manual is an integral part of the product. It must be kept with care by the user and it must accompany the equipment, even in case of a property transfer.

1.3 EQUIPMENT IDENTIFICATION

The equipment is identified by the numbers written in bold on the bottom left side of the label (pic. 2, I) on the softener's tank, on the package and on the back of this manual.

1.4 DECLARATION OF COMPLIANCE

This product complies with the Community Regulations and national laws applicable at the moment of its entrance on the market. The declaration of compliance signed by the manufacturer is available on request and online.

1.5 HYGIENIC SAFETY NORMS AND TIFQ TESTING

This equipment has been tested to verify its compliance with the hygienic safety regulations specified by the Italian rules on the subject, the Legislative decree n. 31/2001, according to Ministerial decree 25/2012. It is necessary to use original replacement parts for repairs and maintenance to guarantee hygienic safety. To preserve hygienic safety, we recommend to remove the equipment from the package only at the moment of installation. The equipment has been tested by the TIFQ Institute for the Hygienic Quality of Food Technology in their licensed laboratory (see table, end of manual).

1.6 RECOMMENDATIONS AND WARNINGS FOR THE STORAGE:

- Store the water softener in a dry place
- The temperature in the storage place must be between 0 and 35 °C
- We recommend to use the equipment within 24 months

FOR THE INSTALLER

We suggest to install the equipment after carefully reading the instruction manual. Should complications arise, we suggest asking your seller for assistance. The seller's information is written on the last page of this manual.

FOR THE USER

- Never try to repair the equipment by yourself: you may cause damage. Ask your seller for assistance.
- For manual regeneration and regular salt refillings, read the **“ACTIVATION AND INSTRUCTIONS FOR REGENERATION”**.
- Cleaning the water softener is part of the user's duties. The manufacturers are not responsible for any damage or harm that may derive by not following these precautions.

2. ABOUT THE EQUIPMENT

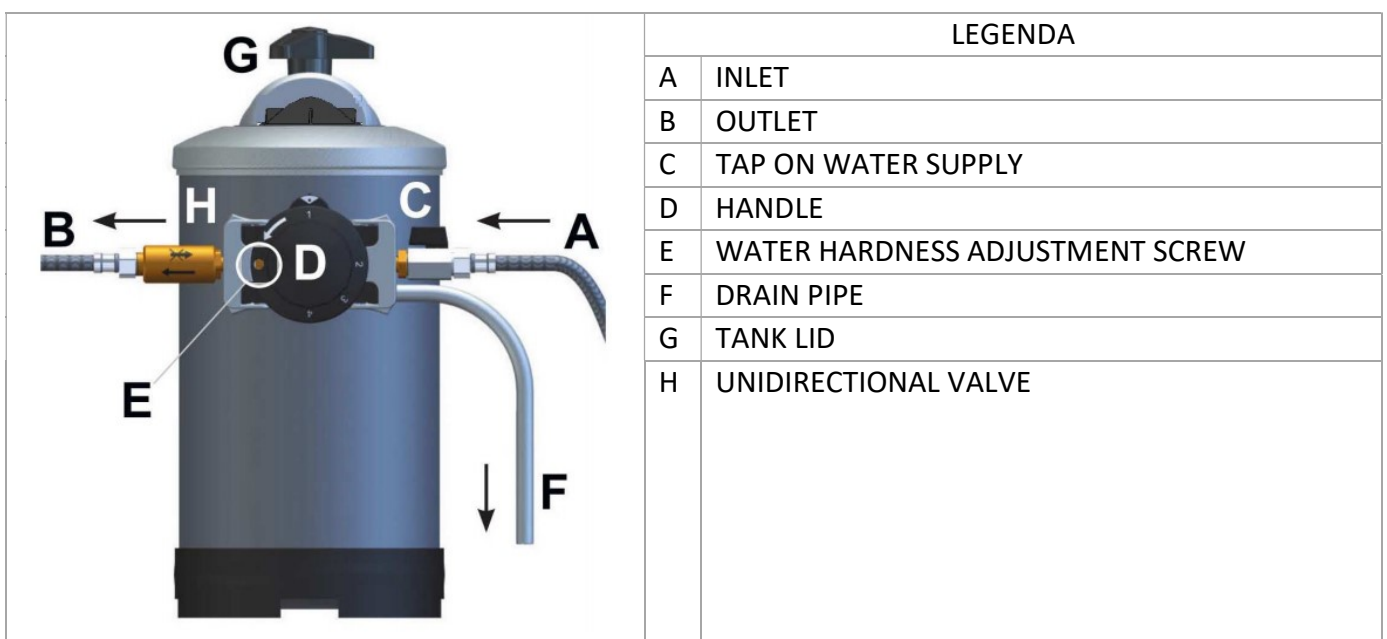
2.1 HOW DOES IT WORK?

The cationic resins in the softener's tank transform calcium carbonate in sodium carbonate which is water-soluble at the working temperatures of both coffee and ice machines. The transfer of sodium ions between the resins and water is imperative to soften drinking water, but this process tends to decline in proportion to the flow rate and to the consumption of water. For this reason, it is necessary to regenerate the exhausted resins by making water and salt flow through them, therefore returning them to their active state. The resins gradually lose their cationic function, and consequently their efficiency, with each regeneration. We recommend replacing them after seven years of use.

2.2 EQUIPMENT DESCRIPTION

Main components of the water softener are:

- 1 IV valve allowing use of water even during resins regeneration
- 1 tank containing the resins for water softening
- 1 tank lid



2.3 THE PACKAGING CONTAINS

- 1 complete water softener IV
- 1 instruction manual
- 1 drain pipe
- 2 joints for connection to the water supply network

2.4 TECHNICAL FEATURES

Pressure of feed water:	0,1 ÷ 0,8 MPa (1 ÷ 8 bar)
Nominal flow rate at 4 bar:	800 l/h
Room temperature:	4°C - 35°C
Joints for the connection to the water network:	- inlet 3/4 "G (for normal washing machine or model trimmer hose) - outlet for D. = 8x6 hose)

2.5 FEATURES OF FEED WATER

Feed water must be:

- Drinkable and clean
- Temperature must be between 6° and 25°C
- Hardness must be below 900 ppm CaCO₃ (90°F)

2.6 EQUIPMENT PERFORMANCE BASED ON WATER HARDNESS

MODEL	h [mm]	WEIGHT [kg]	RESIN [l]	SALT/RIG. [kg]	LITRES OF WATER SOFTENED, BASED ON HARDNESS				
					20°F 11°d 200 ppm CaCO ₃	30°F 16°d 300 ppm CaCO ₃	40°F 22° d 400 ppm CaCO ₃	50°F 28°d 500 ppm CaCO ₃	60°F 33°d 600 ppm CaCO ₃
IV8	400	8	5,6	1	1680	1120	840	672	560

3. INSTALLATION

3.1 PACKAGING

- Before the installation, check that the equipment was not damaged by the transport and does not show any anomaly. In case of doubt, ask your seller.
- Don't throw the package away for some time, being careful to keep any dangerous or small parts of the package away from children.

3.2 CHOOSING THE PLACE OF INSTALLATION

- Ensure that any other water treatment machine is not present upline of the place of installation.
 - Ensure that feed water comes from a drinking water pipe. We recommend to check the chemical and physical parameters of the drinking water as well as its hardness before installation.
 - Install the equipment near a floor sink to dispose of the waste water produced by the regeneration.
 - Install the equipment in a dry place easily accessible to maintain, regenerate and clean the equipment.
- Do not install the equipment in dirty and unhygienic places or in any place difficult to clean.
- Ensure that room temperature in the place of installation is between 4°C and 35°C.
 - Keep away from corrosive or acid products.
 - Do not install in places where electric or personal safety regulations are openly disregarded.
 - Hydric pressure must not be under 0.1 Mpa (1 bar) or over 0.8 Mpa (8 bar). (We recommend at least 3 or 4 bar)
 - If water pressure is over 8 bar, it will be necessary to install a pressure regulator.
 - Salt packages or boxes must not be kept in humid places or in direct contact with the floor: keep it, for example, on a wooden pallet.

3.3 CONNECTION TO THE WATER NETWORK (pic. 2)

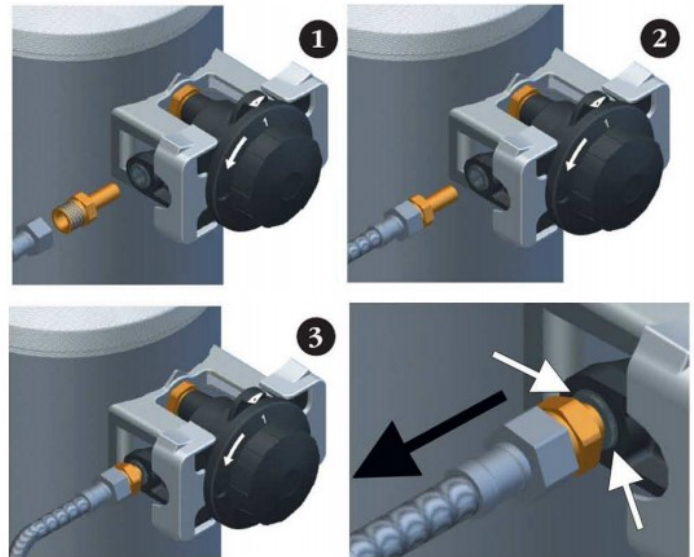
The connection of the equipment to the water system must be done according to all applicable rules, following the instructions of the manufacturer and qualified personnel. During the installation use pipes, hoses, valves and components which comply with the applicable Italian rule on hygienic safety, the Ministerial Decree 174/2004. They must be kept in their sealed package until the moment of installation to preserve their hygienic safety. It is forbidden to use components that are not suitable for drinking water contact or components whose hygienic safety was compromised, as they could corrupt the quality of treated water and the equipment itself. Check if there are hygienic safety taps on the input and output of the equipment. Remove them only during this phase and not before.

3.3.1 QUICK JOINTS

The pipes are connected to the valve by quick joints. Connect the water inlet (A) and outlet (B) pipes to the joints in the package, tightening them safely. To connect the joint to the valve it is necessary to insert it all the way in. The metal inserts of the quick joint will prevent the pipe from disconnecting. To remove the pipe it is necessary to depressurize the tank, then press on the black ring that surrounds the pipe next to the insertion and extract the pipe.

Ensure that:

- The water inlet and outlet pipes comply with the regulations on drinking water pipes.
- A water inlet tap (C) must be installed by the user between the water system and the water softener to ensure that water flow can be interrupted in case of necessity.
- It is advisable to install a one-way valve (H) on the outlet to avoid unwanted refluxes.
- Install a tap to take a sample of the outlet water in order to test its hardness. All pipes must be free, not crushed or constricted.



3.4 CONNECTION TO THE DRAIN SYSTEM

Waste water resulting from the regeneration is funnelled into the floor sink by the flexible pipe (pic. 1, E) included in the package.

Warning: keep the drain pipe suspended over and not immersed in the water of the sink (pic. 1, L). At the end of the installation, before opening the water inlet tap (pic. 1, C), rinse the resins as explained in the chapter "ACTIVATION AND INSTRUCTIONS FOR THE REGENERATION".

4. ACTIVATION AND INSTRUCTIONS FOR THE REGENERATION

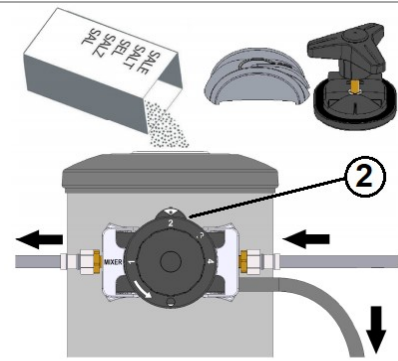
4.1 RINSING THE RESINS

Turn the valve handle on number 4, backwash mode. Open the water inlet tap and let the water flow through the flexible pipe (E) until it is clean. Turn the handle back on number 1.

4.2 PERIODIC REGENERATION

Position 2 (DEPRESSURIZATION MODE)

- Turn the valve handle on number 2. Loosen the cover handle and wait until depressurization.
- Remove the lid and add the required quantity of salt according to the model (1.0 kg)



Cleaning

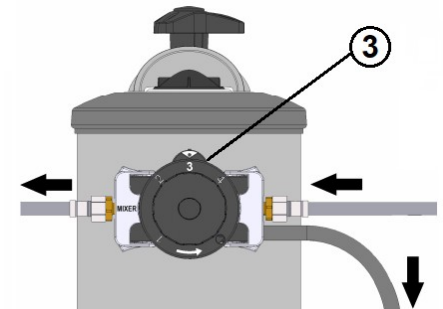
Clean the lid and the seal from any salt residue.
Clean the upper part of the water softener from any salt residue and clean both the tank and under the cover of the weld joint of any leaked salt water.
The manufacturer does not take responsibility for the corrosion of the tank caused by the failure to follow these instructions.

- Put the lid back on (pic. 1, G) and tighten the cover handle (pic. 1, F) safely.



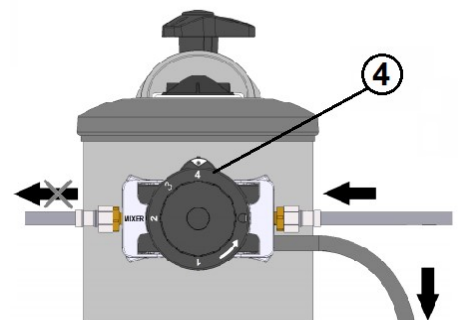
Position 3 (RINSING MODE)

- Turn the valve handle on number 3.
- Let the salt water come out from the drain pipe until the water is fresh (around 40 minutes)



Position 4 (BACKWASH CLEANING MODE)

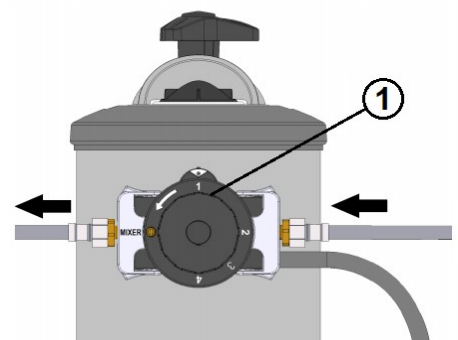
- Turn the valve handle on number 4 and wait for 30 seconds (during the backwash mode, the water softener does not supply water)



Position 1 (SERVICE MODE)

- Put the valve handle back on number 1, service mode.

WARNING: during regeneration, the machine connected to the water softener is supplied with non-softened water.



4.3 MIXER CONTROL

The regulator (REG.) has a special screw. By gradually loosening the screw, the equipment leaves a residue of hardness in the exiting water. The more you loosen the screw, the more hardness it leaves. This operation must be performed with care. At the end of the operation, it is necessary to check the hardness levels.

Attention: the hardness levels in water must be periodically checked by the installer.



5. MAINTENANCE FOR THE INSTALLER:

5.1 CHANGING THE RESINS

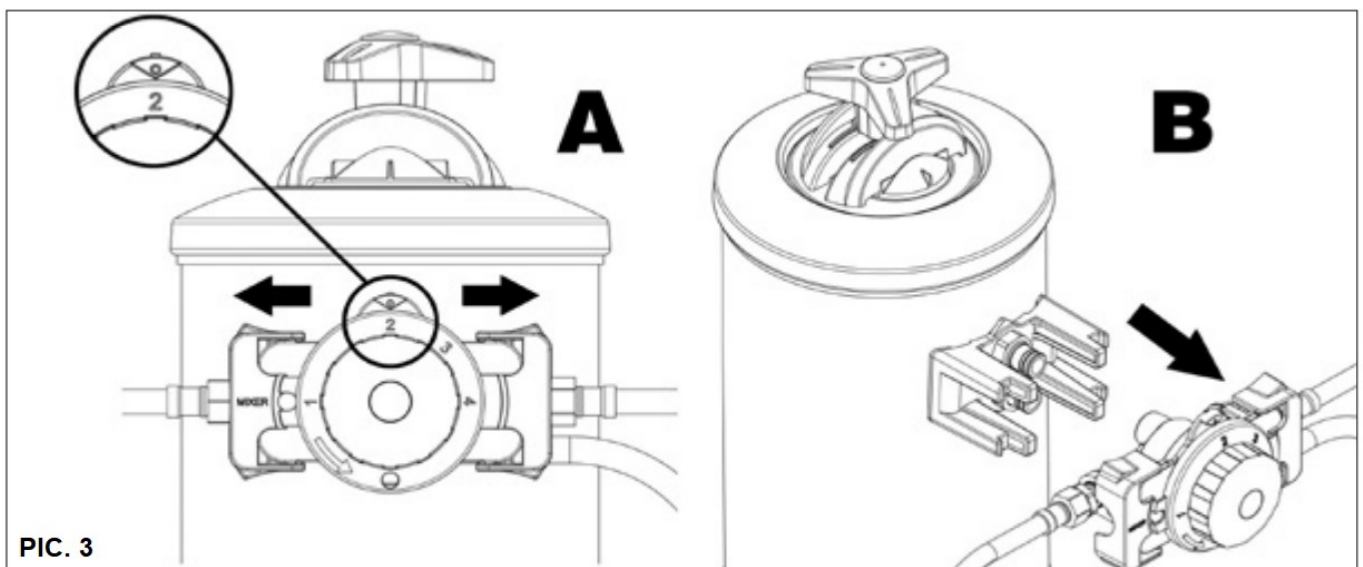
The resins' softening capacity ends after 5-7 years. This period can vary based on the characteristic of the feed water and the quantity of softened water. After this period of time, the user needs to decide if it is enough to change the resins or if it is better to replace the water softener itself.

To change the resins it is necessary to turn the valve handle on number 2 (pic. 3). Wait a few seconds until tank depressurization. When water stops coming out of the drain, move the plastic blocks outwards (pic. 3, A). It will then be possible to separate the valve from the tank (pic. 3, B) Bring the tank to an appropriate place to change the resins and clean the interior of the tank. Open the lid and change the resins.

Do not throw the resins in the sewers. The resins are not biodegradable and must be considered a non-hazardous waste (EU code CER 190905).

After changing the resins, clean the lid seal and the upper part of the softener from any resin residue. Close the lid and connect the valve to the tank. Close the blocks and turn the handle on number 4. Let the water flow from the drain pipe until it is clean.

Turn the handle back on number 1.



5.2 RESIN PRESERVATION AND ACTIVATION AFTER A LONG PERIOD OF INACTIVITY

If the water softener is not to be used for more than 30 days, it is necessary to do a double regeneration first and then leave the water softener with the lid closed. We suggest avoiding a period of inactivity longer than 12 months. It is forbidden to reactivate the system after this period of inactivity. If the period of inactivity is shorter than 12 months, it is necessary to rinse the resins and do a manual regeneration (paragraph 4.1 and 4.2) before reactivating the equipment.

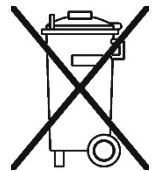
6. IMPROPER USE OF THE EQUIPMENT

This equipment has been designed to soften drinking water for domestic and technological use. The equipment must not be used for any different purpose and it must not be modified or tampered with in any way. Any other use than the one specified in this manual is improper and therefore dangerous. The manufacturer cannot be considered responsible for any damage caused by improper, mistaken or illogical use of the equipment.

- It is forbidden to feed the equipment with any liquid other than drinking water.
- It is forbidden to introduce in the tank any products other than salt (NaCl).

7. EQUIPMENT DISPOSAL

Any waste must be disposed of according to the applicable regulations. The water softener was built with non-hazardous materials like polymers and stainless steel, and they must be disposed of according to the applicable rules. Do not throw the resins in the sewer. The resins are not biodegradable. They are classified as non-hazardous waste and must be disposed of accordingly (EU code CER 190905)



APPARECCHIATURA AD USO DOMESTICO PER IL TRATTAMENTO DI ACQUE POTABILI

Questo apparecchio è un addolcitore ad uso domestico collegato solo ed esclusivamente alla rete dell'acqua potabile.

I valori rappresentati si riferiscono ad una sperimentazione su 2540 litri con acqua domestica potabile ed 1 ciclo di rigenerazione manuale, in accordo con PO interno TIFQLab.

I valori di parametro sono in rispondenza a quanto indicato dal **Decreto legislativo del 2 Febbraio 2001, n. 31 e successivi recepimenti**.

EQUIPMENT FOR DOMESTIC TREATMENT OF DRINKING WATER

This equipment is a water softener for domestic use, to be connected exclusively with the water system.

The following values refer to a test on 2540 litres, with domestic drinking water and 1 cycle of manual regeneration, in compliance with TIFQ internal regulations on testing.

The parameters comply with the values indicated by the Italian norms on the subject, the **Legislative decree n.31, February 2, 2001, and following transpositions**.

Parametro Parameters Paramètres Parameter Parámetro Параметры Parametry	Riferimento normativo (D.lgs. 2 febbraio 2001, n. 31 e successivi recepimenti) Prescriptive values according to Legislative decree n.31, February 2, 2001, and following transpositions Valeurs normatifs selon la loi italienne Décret Législatif du 2 février 2001, n.31, et transpositions suivantes Rechtssetzender Hinweis (D.lgs. 2. Februar 2001, n. 31 und folgende Maßnahme) Referencia normativa (Ley de 2 de Febrero 2001, n. 31 y siguientes reconocimientos) Нормативная ссылка (Зак. Акт от 02.02.2001,н.31 с посл. дополн.) Norma (wg rozporządzenia Rep. Włoskiej z dn. 2 lutego 2001, n. 31 i dalsze zmiany)	Acqua domestica potabile di prova Domestic drinking water for testing Eau domestique potable d'essais Test Haustrinkwasser Agua doméstica potable de prueba Домашняя питьевая вода для пробы Wartości dla wody pitnej poddanej testom przed uzdatnieniem	Acqua domestica potabile di prova trattata Domestic drinking water for testing, treated Eau domestique potable d'essais traitée Bearbeitetes Test Haustrinkwasser Agua doméstica potable tratada Обработанная домашняя питьевая вода для пробы Wartości dla wody pitnej uzdatnionej
Durezza Hardness	15 - 50 °f (valori consigliati - recommended values)	Min. 16,80 - Max. 17,60	Min. 0,10- Max. 0,30
Conduttività Conductivity	2500 µScm-1 a 20°C	Media 291	Media 300
Torbidità Turbidity	Accettabile e senza anomale variazioni Acceptable and lacking anomalous variations	Max. 1 NTU	Max. 1 NTU
Ammonio Ammonium	0,50 mg/L	Non rilevato Not detected	Non rilevato Not detected
Calcio Calcium	100 mg/L (consigliato - recommended)	Min. 45,48- Max. 47,26 mg/L	Min. 0,44 - Max. 0,95 mg/L
Magnesio Magnesium	50 mg/L (consigliato - recommended)	Min. 13,13 -Max. 14,05 mg/L	Min. 0,09 - Max. 0,15 mg/L
Sodio Sodium	200 mg/L	Min. 3,34 - Max. 3,85 mg/L	Min. 89,27 - Max. 92.12 mg/L
Ferro Iron	200 µg/L	Min. 2,37 - Max. 3,38 µg/L	Min. 1,26 - Max. 6,17 µg/L
Escherichia Coli	0 UFC/ 100 ml	Non rilevato Not detected	Non rilevato Not detected
Pseudomonas Aeruginosa	0 UFC/ 250 ml	Non rilevato Not detected	Non rilevato Not detected

I materiali costituenti il sistema di addolcimento a contatto con l'acqua potabile risultano conformi ai requisiti del D.M. 6 aprile 2004, n. 174

ATTENZIONE: questa apparecchiatura necessita di una regolare manutenzione periodica al fine di garantire i requisiti di potabilità dell'acqua potabile trattata ed il mantenimento dei miglioramenti come dichiarati dal produttore.

UTILIZZARE SECONDO MANUALE D'USO E MANUTENZIONE

La sperimentazione è stata eseguita presso
TIFQLAB - Università della Calabria

The drinking water-contact materials of the water softener comply with the parameters requested by the Italian laws (D.M. 6 aprile 2004, n.174).

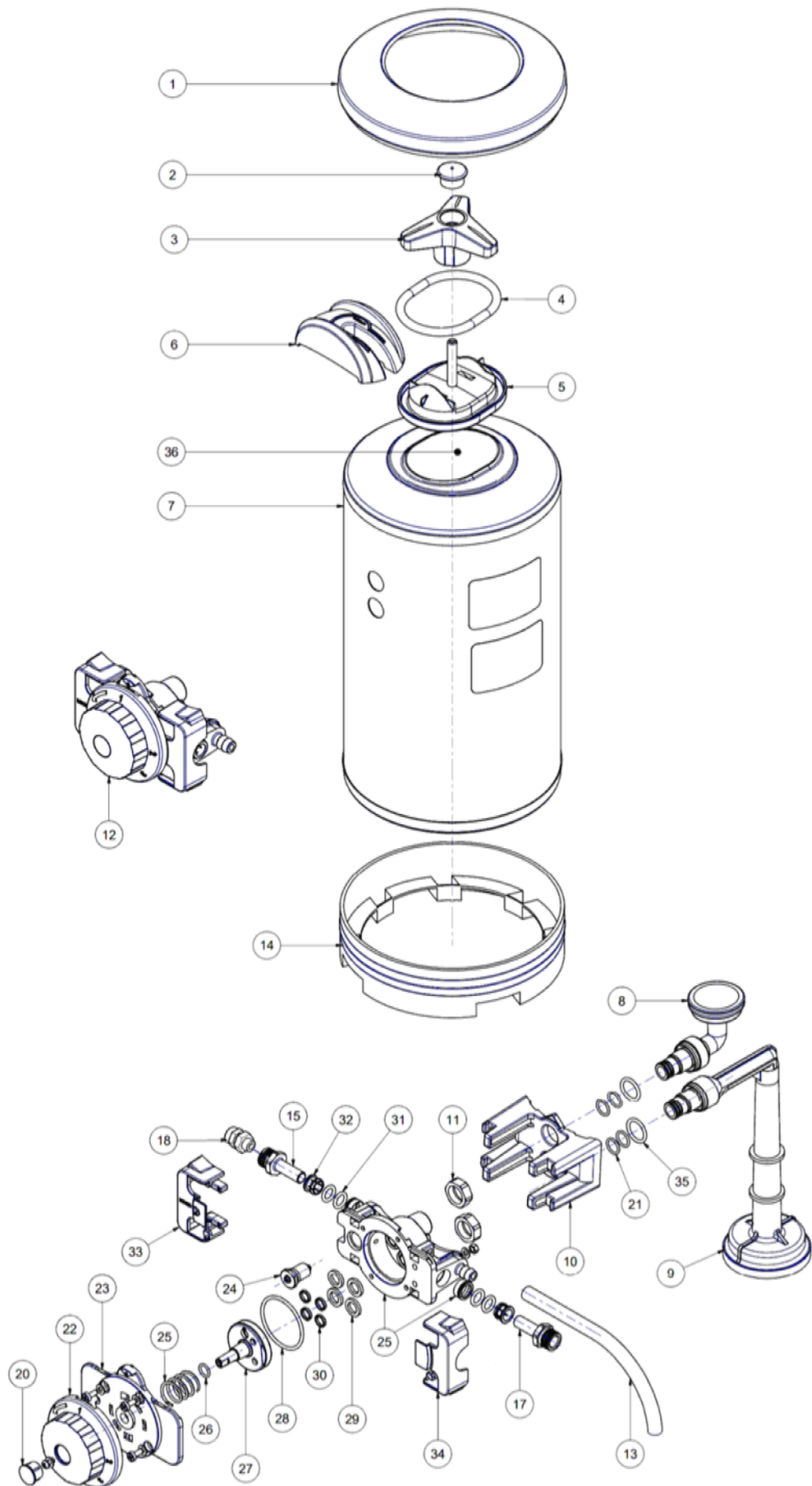
WARNING: this equipment needs periodic maintenance to guarantee the treated drinking water requirements and to maintain the features declared by the manufacturer.

THE EQUIPMENT MUST BE USED FOLLOWING THE RULES IN THE MANUAL

Testing by TIFQLAB
Testing by TIFQLAB - Università della Calabria

8- EXPLODED DRAWING AND SPARE-PART LIST

Pos.	Codice - Item	Descrizione	Description
1	B12	PROFILO COPRI SALDATURA	WELDING COVER
2	C16	TAPPO PER MANOPOLA	KNOB CAP
3	C15	MANOPOLA TAPPO IN NYLON	NYLON CAP KNOB
4	C14	GUARNIZIONE TAPPO 72x7 TN	CAP JOINT
5	C18	CORPO TAPPO IN PLASTICA + TIRANTE	PLASTIC CAP BODY + STAY BOLT
6	C17	STAFFA TAPPO IN PLASTICA	PLASTIC CAP CLAMP
7	B50	BOMBOLA 8 litri	8 liters CYLINDER
8	D19	FILTRO ENTRATA IV	INPUT IV WIRE
9	D24	FILTRO USCITA IV8	OUTLET IV8 WIRE
10	VB1	FLANGIA IV	IV FLANGE
11	V3	DADO FILTRO IV	IV FILTER NUT
12	VB0	VALVOLA IV SENZA ATTACCHI	IV VALVE WITH NO CONNECTION
13	TUBO	TUBO SCARICO IN GOMMA 8 x 12	8x12 RUBBER EXHAUST PIPE
14	B3	BASAMENTO	BASE
15	VB3	RACCORDO 3/8"G-T10	3/8"G-T10 PIPE-FITTING
17	VB4L	RACCORDO 3/4"G-T10	3/4"G-T10 PIPE-FITTING
18	NPR119	RACCORDO 8x6 - 1/4"	8x6 - 1/4" PIPE-FITTING
20	VB5	TAPPO MANOPOLA IV	IV KNOB CAP
21	VB6	O-RING 114	OR JOINT 114
22	VB7	MANOPOLA IV	IV KNOB
23	VB8	COPERCHIO VALVOLA IV	IV VALVE CAP
24	VB36	MISCELATORE IV	IV MIXER
25	VB12	MOLLA VALVOLA IV DIA.21x26	IV VALVE SPRING Ø21x26
26	VB13	O-RING 108	OR JOINT 108
27	VB14	SELETTORE IV	IV SELECTOR SWITCH
28	VB15	O-RING 3175	OR JOINT 3175
29	VB16	GUARNIZIONI PIATTE IV	IV FLAT JOINT
30	VB18	BUSSOLE DERLING	DERLING BUSH
31	J16	O-RING JG10	OR JOINT JG10
32	J07	PINZETTA JG10	PLIERS JG10
33	VB2	BLOCCO VALVOLA IV CON FORO	IV VALVE BLOCK WITH HOLE
34	VB20	BLOCCO VALVOLA IV SENZA FORO	IV VALVE BLOCK NO HOLE
35	F3	O-RING 3075	OR JOINT 3075
36	Z25	SACCO DI RESINA DA 25 Lt.	25 Liters RESIN SACK



DATA INSTALLAZIONE • INSTALLATION DATE
INSTALLATIONSdatum • DATE INSTALLATION
FECHA INSTALACIÓN • ДАТА УСТАНОВКИ • DATA INSTALACJI

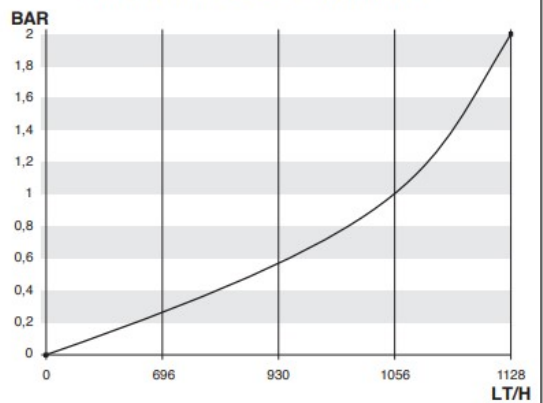
DATA RIGENERAZIONE • REGENERATION DATES • REGENERIERUNGSDATUM
DATE RÉGÉNÉRATION • FECHAS REGENERACIÓN • ДАТА РЕГЕНЕРАЦИИ • DATA REGENERACJI

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**DIAGRAMMA PERDITE DI CARICO
PRESSURE LOSS CHARACTERISTICS
GRAPHIQUE CHUTE DE PRESSION
DRUCKVERLUST DIAGRAMM
DIAGRAMA PÉRDIDAS DE CARGA
WYKRES STRATY CIŚNIENIA
ДИАГРАММА О ПОТЕРЕ ДАВЛЕНИЯ**

Flow Rate (LT/H)	Pressure Loss (BAR)
0	0.0
696	0.25
930	0.55
1056	1.0
1128	2.0



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