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FILTRINOV

SELF-CONTAINED SINGLE-PIECE FILTRATION UNIT

Installation and operating instructions.
Read carefully and retain for future reference.



□ MX RANGE

FILTRINOV

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1 RECOMMENDATIONS

TO PREVENT WATER INGRESS INTO THE NON-WATERTIGHT TANK OF THE MX UNIT WE ADVISE YOU TO INSTALL A DRAIN ALL AROUND THE POOL THAT RUNS INTO A RELIEF WELL CONTAINING A BASEMENT SUMP PUMP.

- **CLEAN BOTH CARTRIDGES AT REGULAR INTERVALS**
- **ALWAYS LOCK THE LID SHUT AFTER COMPLETING MAINTENANCE WORK IN THE TANK**
- **DO NOT USE FLOCCULANTS OR «MULTIFUNCTIONAL» CHLORINE**

- These installation instructions are an integral part of the product and must be given to the user. This booklet should be retained for reference.

- Check the condition of the contents after unpacking the filtration unit.

- Before wiring up the unit, make sure the manufacturer's data is compatible with the planned system and does not exceed the maximum permitted limits of the particular item.

- Always cut the electrical power from the main consumer unit before carrying out any maintenance, handling or repair work.

Any repair work must be carried out by an authorised technical support service using only OEM spare parts. Failure to comply with the above requirements may cause unsafe operation of the filtration unit and will void the manufacturer's warranty.

A high-sensitivity, 30 mA cut-off device must be fitted at the head end.

TERMS AND CONDITIONS OF DELIVERY :

All items, including when sold postage and packing paid, are transported at the consignee's risk. The consignee must record any reservations regarding damage in transit in writing on the CARRIER'S delivery note and provide confirmation thereof within 48 hours by registered letter sent to the CARRIER.

VOLTAGE: before operating, check that the appliance voltage indicated on the data plate is the same as the mains voltage (usually 230 Volts AC).

FOREWORD :

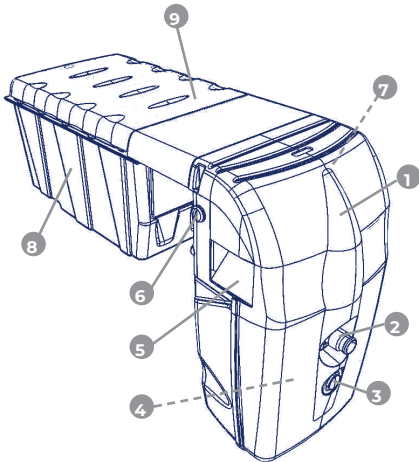
Thank you for purchasing this MX 18/25 filtration unit and for your trust in our company. You can rest assured that every effort has been, and will continue to be made to bring you complete satisfaction. This product has been carefully designed with your safety in mind.

Your new filtration unit comes with the same features as a traditional filtration system.

Reminder : a residual current device (maximum 30 mA) must be fitted upstream, and manually tested, as a safety measure to cut the low-voltage power to pool appliances.

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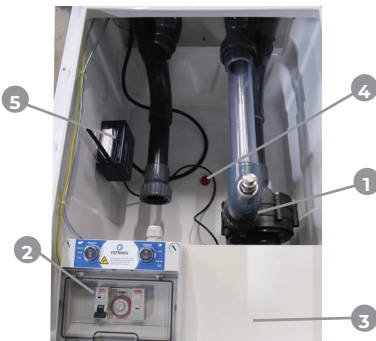
TECHNICAL DESCRIPTION OF THE FILTRATION UNIT



- 1 Filter access lid.
- 2 Multi-directional, high-flow nozzle.
- 3 LED light.
- 4 Dual filter cartridge housing incl. 2 leaf baskets.
- 5 Two suction skimmers.
- 6 Massage function air-flow control.
- 7 Counter-current system switch (pneumatic)
- 8 In-ground section containing :
Pumps/Control panel/Optional items.
- 9 Removable lid with mechanical lock

IN-GROUND SECTION

- 1 Filter pump
- 2 Control panel
- 3 Pool light transformer
- 4 Water drain opening
- 5 Remote control unit



SUBMERGED SECTION

- 1 2 Leaf baskets
- 2 2 Filter cartridges
- 3 2 Skimmers

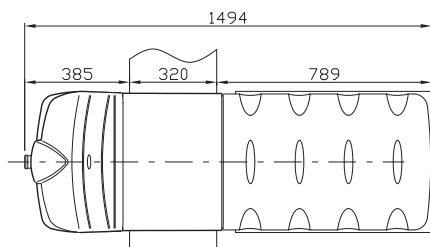
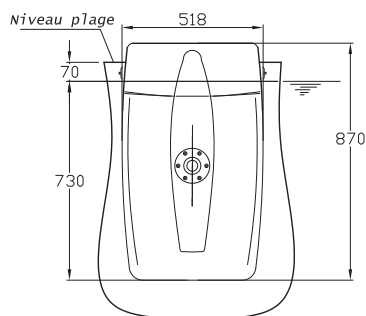
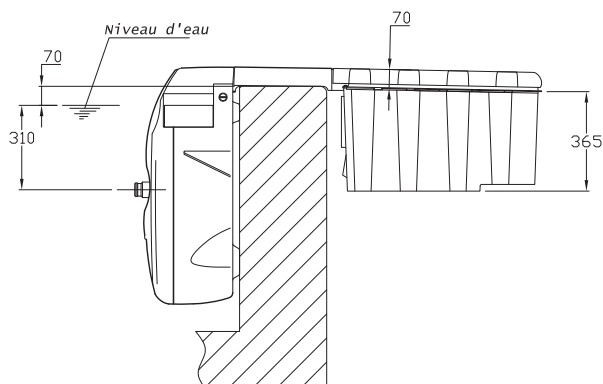


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INSTALLING THE FILTRATION UNIT

- Dig a pit into which the filtration unit tank will be placed.
- Remove the filtration unit from its packaging and place it carefully in position straddling and resting on the pool structure.
- Make sure the front, pool-side of the unit is positioned fully perpendicular to the pool wall.
- Feed in the electrical wiring and then fill in the pit with gravel all around the filtration unit tank.

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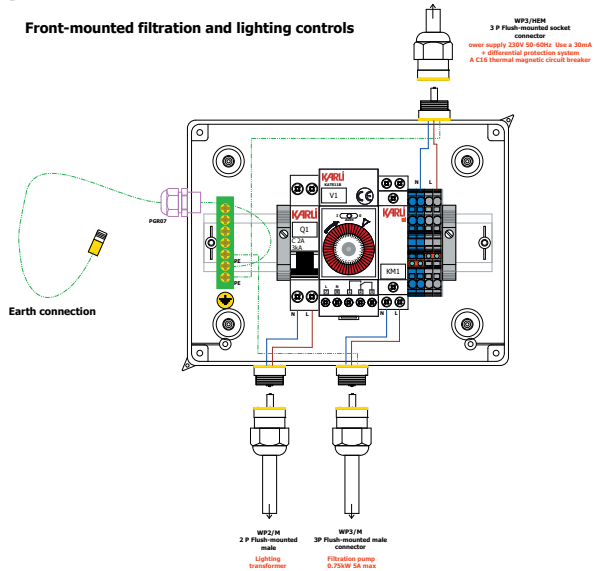


FILTRATION UNIT POWER SUPPLY

The filtration unit should be connected to an insulated electricity supply running directly from the main consumer unit with a 16A fuse or circuit-breaker, protected by a 30mA RCD (not included). Use a 3-wire cord, earth-live-neutral, with a 1.5 or 2.5 mm² section if less than 30 linear metres.

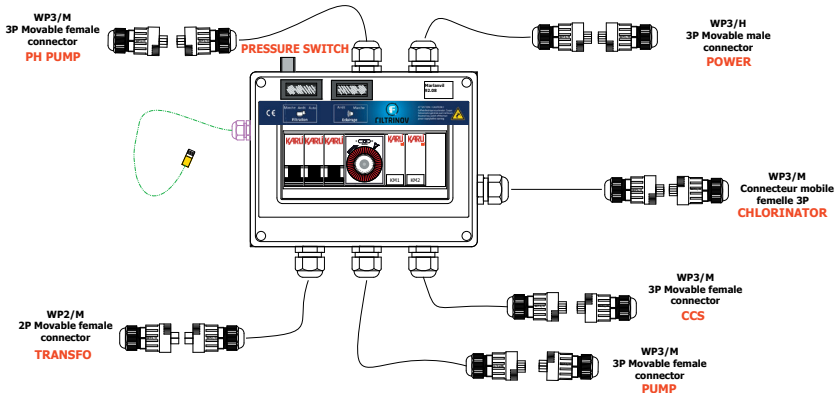
MX panel without options

Front-mounted filtration and lighting controls



A detailed wiring diagram is included in the control panel

MX panel with options



5 LED LIGHT

Your filtration unit includes a light as standard.

A MULTICOLOUR LED light option is also available in 11 non-animated colours incl. white and with 5 sequence programmes (remote control included)

(Manufacturer's guide included)



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6 SETTING THE TIMER

- **Continuous mode** (24-hour filtration)

Move the filter switch on the outside of the electrical panel to «Manual».

- **Auto mode** (timed filter operation)

Move the filter switch on the outside of the electrical panel to «Automatic».

Turn the clock hands to set the exact time relative to the pointer (triangle) on the right of the clock.

Push the segments outwards to set the scheduled «On» times.



**Sequencing principle:
Minimum 1 h of downtime after 4 h of operation.**

> See the instructions attached to the panel

7 STARTING THE FILTRATION UNIT

When the water in your pool is at the level of the skimmers, operate the filtration unit for the first time as follows :

1. Prime the pump by filling it with water through the hole provided
2. Screw in the Pool earth
3. Put the filtration unit in manual mode to start the pump



You are strongly advised to unscrew and remove the drain plug from the tank when you have finished installing the filtration unit.

Repeat the above steps if the priming procedure is not working after 2 minutes.

8 POOL-EARTH / FUNCTIONAL EARTH

It is vital that the pool be earthed in order to remove stray currents from the water.

Stray currents are not dangerous to people, but they do electrolyse the metal components in the pool, which increases corrosion. They can also disrupt the treatment probes, resulting in incorrect amounts of product being injected.

This is why FILTRINOV has included a pool earth with these products. Screw it into the threaded attachment point provided and connect it to the earth rod with a Ø 6 mm copper braid earth strap (parts not included).

A hole will have to be drilled in the tank to route the braid through the packing gland provided.



Water from the surface of the pool is drawn in by the skimmers and sent through the filter cartridges, where it is cleaned. It then travels on to the pump, which discharges it through the return nozzle back into the pool.

The filter cartridges must be washed every few complete filtration cycles.

The cartridge should be cleaned at least once a week and whenever the suction cleaner has been used. To clean the cartridge, remove the basket, lift out the cartridge and gently hose it down. Refit the cartridge once it is clean.

Your MX includes a cartridge housing at the bottom of the filter holder to fit the cartridge. Turn the cartridge a quarter turn downwards to slot it into place in the filter holder. Remember to fit the basket and its pre-filter.

All FILTRINOV filtration units are checked and tested with the utmost care and subject to FILTRINOV'S stringent quality controls.

The use of non FILTRINOV-approved parts and consumable items shall render the pump and hydraulic system warranty void.



EASYFILTER bags and cartridges are not approved by FILTRINOV.
Persistent clogging and risk of permanent damage to the pump.

The filtration time should be increased as the water temperature rises :

12° to 16° = 6 hours

16° to 24° = 8 hours

24° to 27° = 10 hours

27° to 30° = 12 to 14 hours or more



Sequencing principle : Minimum 1 h of downtime after 4h of operation.

VACUUM POINT FOR MANUAL SUCTION CLEANER OR HYDRAULIC AUTOMATIC CLEANER

- Connect one end of the hose to the suction cleaner ;
- Hold the suction cleaner by the handle and insert it into the pool ;
- Gradually insert the hose into the water until the water pushes out the air (tip : you can fill the hose with water by placing its tip in front of the return nozzle with the unit running) ;
- Feed the other end of the hose into the skimmer mouth and attach it to the skim vac plate that seals off the basket ;
- Place the other (plugged) skim vac over the other basket in order to block suction from the second skimmer and maintain best cleaning performance ;
- Only use when using the suction cleaner.



The cartridges should be cleaned at least once a week and whenever the suction cleaner has been used. To clean the cartridges, remove the baskets, lift out the cartridges and gently hose them down. Refit the clean cartridges and the baskets.



OPTIONAL BY-PASS (3-way valve)

The by-pass consists of a 3-way valve and a branch Tee.

You are advised to seal the pipe entries in order to prevent water getting into the tank.

Your heat pump is connected to the filtration unit by a \varnothing 50 PVC pipe.

- Place the 2 shutoff valves at the inlet and outlet of the heat pump so that it can be isolated during winter storage.

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TO HEAT PUMP

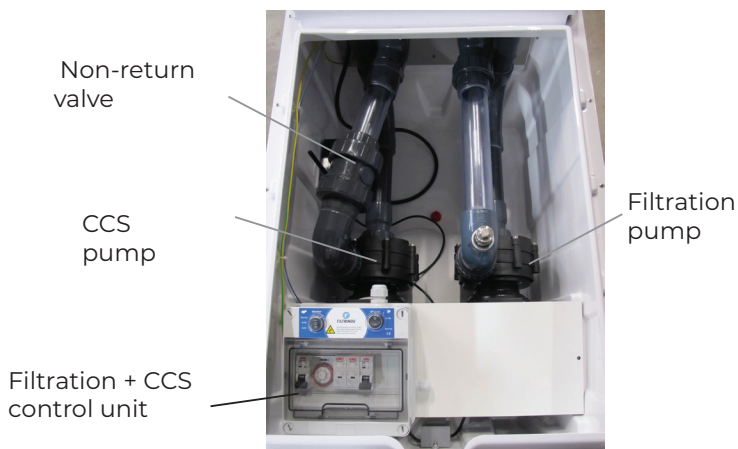


TO POOL RETURN

12 OPTIONAL COUNTER-CURRENT SYSTEM (CCS)

- **To switch on** the counter-current system, press the pneumatic push-button located on the side of the underwater section.
- **To stop** the counter-current system, press the push-button again.

Counter-current system pipework :



13 SALT CHLORINATOR

Consists of a cell and a chlorinator controller.

Read the accompanying settings, operating and maintenance guide.



BY PASS + CHLORINATOR + PH CONTROL

- The by-pass consists of a 3-way valve and a branch Tee. You are advised to seal the pipe entries in order to prevent the ingress of water into the tank.

- Chlorinator consists of a cell and a chlorinator controller.

- The pH controller consists of a peristaltic pump, a probe sensor, and an injector.



TO POOL RETURN



TO HEAT PUMP

CHLORINATOR + PH CONTROL

- Chlorinator consists of a cell and a chlorinator controller.

- The pH controller consists of a peristaltic pump, a probe sensor, and an injector.



It is strictly forbidden to store pH containers inside the tank.



We recommend a covered inspection pit (not provided) next to the tank for storing the container.



Read the accompanying settings, operating and maintenance guide.

• Active Winterising :

An actively winterised pool continues to operate at a slower than normal rate throughout wintertime.

This is the recommended winterising procedure in less cold regions. If you live in a harsher winter climate, you should choose to passively winterise your pool instead.

- First clean the pool structure, the water line, basket and cartridge.
- Next, shock the pool with chlorine.
- Run the filtration system non-stop for at least 12 hours.
- Then reset your timer to run the filtration system for 30 minutes every 3 hours (do not be afraid to increase the running time if the temperature is significantly below zero).
- Your pool will not require any more product treatments for the whole winter. Just **monitor the water's pH level** and adjust if necessary.
- Check and clean the basket and cartridge at regular intervals.
- We also recommend that you use winter floats in your pool.
- You can also cover your pool with a winter cover or tarp although this is not mandatory.

• Passive winterising and pump disassembly :

Passive winterising involves shutting down the filtration unit entirely.

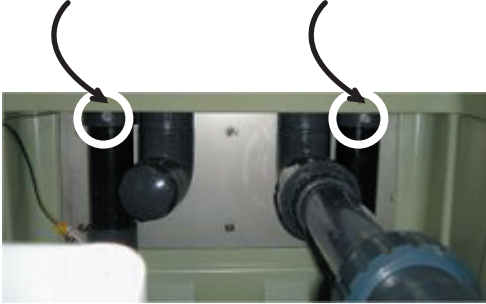
- First clean the whole of the pool and its equipment (floor and walls, water line, baskets, cartridges, etc).
- Check the water's pH level and adjust if necessary.
- Shock the pool with a chlorine treatment.
- Run the filtration system non-stop for at least 12 hours.
- Protect the filtration system from frost.



CAUTION : ALWAYS CUT THE ELECTRICAL POWER UPSTREAM OF THE FILTRATION UNIT FIRST

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- Undo the 2 bleed screws to drain the water from the pipes and prevent a siphon forming.



- Unscrew the pump inlet and outlet unions.
- Wait for the water to drain through the hole in the bottom of the tank.
- Disconnect the 3 pump wires from the electrical panel.
- Lift the pump out of the unit, taking care to keep the two small pins and the foam underneath the pump.
- Store the pump and the cartridges in a dry place (e.g. Garage, etc)
- We also recommend that you use winter floats in your pool.
- You can also cover your pool with a winter cover or tarp, although this is not mandatory.

When reassembling, remember to refit both bleed screws to the piping, otherwise you will not be able to prime the pumps.

FILTERS/PUMPS/CCS

PROBLEM : Low pressure flow and/or air bubbles in the pumped water flow

CAUSE	SOLUTION
Cartridges	<ul style="list-style-type: none"> SITUATION 1: The cartridges are dirty but not clogged. Clean the cartridges at more regular intervals (once every fortnight) SITUATION 2: Renew the cartridges if they are clogged SITUATION 3: If you are using a flocculent or anti-algae treatment, lower the water level by 20 cm and renew the cartridges
Leaf baskets	Clean the debris from the baskets at regular intervals and clean or renew the Netskims (skimmer socks/nets)
Pump	Clean the pump housing to remove any foreign matter and unblock the turbine
Water level	Check the water height, making sure it is $\frac{3}{4}$ of the way up to the skimmer niches
Priming	<ul style="list-style-type: none"> Check that the pump has been primed properly If it hasn't, remove the delivery system at the pump outlet, fill the pump with water and jolt-start the unit again on and off in quick spurts (5 seconds on, 1 to 2 seconds off); 3 or 4 times should be enough
Position of the unit	<ul style="list-style-type: none"> The 4 contact points on the rear of the side that is submerged in the pool should be hard against the pool wall This is only possible if you ensure that the tank section is perfectly horizontal and supported sufficiently high up to avoid strain that would pull the contact points away from the pool (see the installation guide)

PROBLEM : The pump does not start**• If there is no noise :**

CAUSE	SOLUTION
Power supply	<ul style="list-style-type: none"> Check the wiring from the pump to the unit's electrical enclosure Check the wiring from the electrical enclosure to the mains power supply Check the 30 mA circuit breaker at the line end
Pump switch	<ul style="list-style-type: none"> Check the wiring to the pump switch replace the switch if it is not working
Front-mounted 3-position switch (Auto/O/Manual) on the electrical enclosure	<ul style="list-style-type: none"> Put the switch in Manual mode If the pump still does not work, check the connections at the wire terminals behind the switch inside the enclosure If the problem is still not resolved, contact your retailer to have the switch replaced
Timer	<ul style="list-style-type: none"> Check the timer wiring inside the electrical enclosure Check that the 3-position switch (Auto/O/Manual) is turned to Auto mode Also turn the switch in the bottom left corner of the timer dial face to Auto Use the timer segments to set the filtration to start and stop at different periods If the filtration does not start, the timer is faulty and will have to be replaced

• If the power unit is making a noise :

CAUSE	SOLUTION
Turbine	Use a large flat-blade screwdriver at the rear and in the centre of the pump to try and release the turbine and get it turning
Condenser	Replace the condenser

PROBLEM : The pump cuts out and starts up again later

CAUSE	SOLUTION
Overheating power unit	<ul style="list-style-type: none"> To prevent the pump and its thermal circuit breaker from overheating, we advise you to programme your filter system to run for no more than 3 or 4 hours at a time with a 1-hour break between operating periods. Example : Water temperature: 24 °C; required filtration time: 12 hours. We recommend that you programme the filtration unit to work in stages from 7 am to 10 am then 11 am to 2 pm, 3 pm to 6 pm, and finally from 7 pm to 10 pm. We also recommend that you clean the cartridges. Excessively dirty cartridges significantly reduce the flow of water into the pump, causing it to overwork and overheat.

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PROBLEM : The pump does not switch off

CAUSE	SOLUTION
Crystal tube	The crystal tube along the inside the tank has come loose from its pneumatic switch after the side-mounted pneumatic button was used to start the CCS. Re-attach the tube.
Timer	<ul style="list-style-type: none"> Make sure that not all the timer segments are pushed out, causing the filtration system to run non-stop. If they are, push some back in to set OFF periods and then try to turn the dial forward in time by hand to an off period in order to stop the filter running. If the above step fails to switch the pump off, turn the front-mounted 3-position switch (Auto/O/Man) on the enclosure to O. The pump will stop, but the timer is not working and will have to be replaced.
Front-mounted 3-position switch (Auto/O/Man) on the electrical enclosure	<ul style="list-style-type: none"> Turn the switch to O If the pump is still running, check the connections at the wire terminals behind the switch inside the enclosure. If this still fails to switch the pump off, contact your retailer to have the switch replaced, and cut the mains electrical power to the filter unit.

LIGHTING**PROBLEM : The pool light does not come on.**

CAUSE (carry out the checks in the order shown)	SOLUTION
Lighting circuit breaker	<ul style="list-style-type: none"> Check whether the circuit breaker has been tripped and is still open If the circuit breaker has not stayed open, it is not working and will have to be replaced
Front-mounted 2-position (I/O) switch on the enclosure	<ul style="list-style-type: none"> Check that the switch is turned to I Check the connections at the terminals behind the switch inside the enclosure.
Transformer (220V/12V)	<ul style="list-style-type: none"> Check the transformer's output voltage (12V) If the transformer's output voltage is zero, it is not working and will have to be replaced.
Remote control system unit (blue enclosure with a black antenna, inside the tank)	<ul style="list-style-type: none"> Open the housing Press the small black button inside the housing; a small red LED next to it should come on If nothing happens, the remote control system unit is not working and will have to be replaced If the red LED comes on, configure the remote control (see paragraph 6 of the remote control unit instructions)
Remote control	<ul style="list-style-type: none"> Open the remote control battery compartment and check for oxidation, etc, the condition of the battery and that it is fitted the correct way round. Configure the remote control (see paragraph 6 of the remote control unit instructions). Look at the top of the remote to see whether it comes on when you press the button on the left. If nothing comes on, the remote control is not working and will have to be replaced.
Light	<ul style="list-style-type: none"> If none of the above items are found to be at fault, it is the light that does not work. It will have to be replaced using a niche (feed-through) system.

LIGHTING

PROBLEM : The light is blinking.

CAUSE	SOLUTION
Light	The light is reaching the end of its service life or is not/no longer watertight. Replace the light using a niche (feed-through) system.

AUTOMATIC WATER TREATMENT

PROBLEM : The electrolyser unit does not switch on..

CAUSE	SOLUTION
Electrolyser circuit breaker in the filtration electrical enclosure	<ul style="list-style-type: none"> • Check whether the circuit breaker has been tripped and is still open • If the circuit breaker has not stayed open, it is not working and will have to be replaced
Electrolyser unit	If the circuit breaker is working properly but the unit does not switch on, the electrolyser unit is out of order and will have to be replaced.

PROBLEM : The electrolyser is producing little or no chlorine.

CAUSE	SOLUTION
Electrolyser unit	<ul style="list-style-type: none"> • Set the treatment system to maximum operating capacity (10 for 100%) for 5 minutes • Take a voltage reading from the electrolysis cell terminals • If the voltage reading is between 0V and 2V, there is a problem with the electronics in the electrolyser unit (power board, etc)
Electrolysis cell	<ul style="list-style-type: none"> • Set the treatment system to maximum operating capacity (10 for 100%) for 5 minutes. • Take a voltage reading from the electrolysis cell terminals. • If the voltage reading is higher than 10V, the electrolysis cell is nearing the end of its service life (max. 15 days) or is not working (above 12V), and will have to be replaced.
Cartridges	Excessively dirty cartridges will quickly consume the chlorine that is generated to clean the pool, resulting in an incorrect chlorine production reading.
PH Level	The PH level should be between 7.0 and 7.2 to keep the chlorine at peak effectiveness

PROBLEM : The Nano pH pump does not switch on.

CAUSE	SOLUTION
Electrolyser circuit breaker in the filtration electrical enclosure	<ul style="list-style-type: none"> • Check whether the circuit breaker has been tripped and is still open • If the circuit breaker has not stayed open, it is not working and will have to be replaced
Nano PH pump	If the circuit breaker is working properly but the unit does not switch on, the electrolyser unit is out of order and will have to be replaced.

PROBLEM : The dosing pump is not injecting pH reducer.

CAUSE	SOLUTION
Container	The pH regulator container may be empty and need replacing.
Suction strainer	Check that the suction strainer (plunger in the container) is properly inserted in the container. Often, the container only needs to be displaced slightly for the plunger to no longer be inserted properly and stop the reducer being injected.
Hose	<ul style="list-style-type: none"> • The hose from the dosing pump to the container may have drawn in something that is preventing the pH reducer from reaching the pool. • The hose may also have a hole, possibly caused by the acidity level of the reducer. If so, it will have to be replaced. • We recommend that you replace the hose at least every two years as the acidity level of the pH reducer will gradually cause it to become porous.

PROBLEM : The pH probe is giving incorrect readings.

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CAUSE	SOLUTION
No «pool earth» fitted	<ul style="list-style-type: none"> • A stray current is probably interfering with your probe reading. Use a glass water to check if this is the case : <ol style="list-style-type: none"> 1. Dip the probe into a glass of tap water (pH level between 7.5 and 8.0) and see if the reading is consistent. 2. Next, dip the probe into a 7.0 reference solution. The reading should be around 7.0. If not, the probe needs to be recalibrated. 3. Next, dip the probe into a glass filled with water from the pool. Since the probe was calibrated properly in the previous step, the pH level shown will be correct. 4. To finish, put the probe back in its proper place (retaining clamp on the suction line). • If the reading matches the reading from the glass filled with water from the pool, there is no stray current in the pipes; the probe was not calibrated properly. • If the reading does not match the reading from the glass, you will need to install a «pool earth» to the system. A pool earth is a metal rod placed in slightly damp ground and connected to the terminal provided on the filtration unit line by a minimum 6 mm² braided connector. The "Pool Earth" acts as a stray current earthing device. • We always recommend connecting your system to a "pool earth".
pH probe	<p>Carry out the glass of water test mentioned above using a 7.0 reference solution. Calibrate the probe using the 7.0 solution and then dip it into a 10.0 reference solution. If the reading is not 10.0 or thereabouts, the probe is not working properly and will have to be replaced.</p>

