

THINCLEAR MULTI CARTRIDGE FILTER



INSTALLATION & USER MANUAL

Please read carefully and keep for future reference

! PLEASE READ CAREFULLY!

**These installation instructions are an integral part of the product.
They must be given to the installer and kept by the user.**

If you lose the manual, please refer to the website: www.poolex.fr

The instructions and warnings contained in this manual must be read carefully and understood, as they provide important information on the safe handling and operation of the filter.

Keep this manual in an accessible place for future reference.

Installation must be carried out by a qualified professional in accordance with current regulations and the manufacturer's instructions. Incorrect installation may result in physical injury to people or animals, as well as mechanical damage for which the manufacturer cannot be held responsible under any circumstances.

After unpacking the filter, please check the contents for any damage.

Before connecting the filter, check that the data given in this manual is compatible with the actual installation conditions and does not exceed the maximum authorised limits for the product in question.

In the event of a fault and/or malfunction, the power supply to your technical room must be cut off and no attempt must be made to repair faults on the tank. Repair work must only be carried out by an authorised technical assistance service using original spare parts.

Failure to comply with the above clauses may adversely affect the safe operation of the filter.

To ensure that the filter remains efficient and in good working order, it is important to ensure that it is regularly maintained in accordance with the instructions supplied.

If the filter is sold or transferred, always ensure that all the technical documentation is passed on with the equipment to the new owner.

This filter is designed exclusively to treat swimming pools. Any other use should be considered inappropriate, incorrect or even dangerous.

Any contractual or non-contractual liability of the manufacturer/distributor shall be deemed null and void for damage caused by errors in installation or operation, or by failure to comply with the instructions provided in this manual or with the installation standards in force for the equipment which is the subject of this document.

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Packing

Your THINCLEAR filter comes with 1 box, 1 bag with connectors and 1 set of instructions:

Carton contains :

FILTER	PF-TCR330	PF-TCR430	PF-TCR530	PF-TCR680
Tank	1	1	1	1
Tank cover + Pre-assembled seal	1	1	1	1
Pre-mounted locking ring	1	1	1	1
Nuts screwed onto the filter inlet and outlet	2	2	2	2
Filter cartridge	4	4	4	8

	PF-TCR330	PF-TCR430	PF-TCR530	PF-TCR680
Multilingual manual	1	1	1	1

The sachet contains :

	PF-TCR330	PF-TCR430	PF-TCR530	PF-TCR680
Horizontal outlet pressure gauge	1	1	1	1
O-rings for fittings	2	2	2	2
Adhesive fitting D.50mm	2	2	2	2
Adhesive fitting D.63mm	2	2	2	2
Steam trap with O-ring	1	1	1	1

Safety instructions

The installation and maintenance of the upstream electrical parts must be carried out by a professional electrician. Otherwise there is a risk of electrocution, serious injury, material damage and even life-threatening consequences.

Before any maintenance or operation, make sure that all the machines, in particular the circulation pump, are switched off so that the filter is no longer under pressure:



Never unscrew the cover collar while the pump is running.

Clean the pump pre-filter regularly to ensure that the water circulates properly and without excess pressure.

In low-temperature conditions, particularly when active wintering is no longer possible (ask your dealer for advice), we strongly recommend that you drain the water from the filter using the drain screw at the bottom of the tank.

Do not operate without water and do not connect the filter directly to the water supply network, as the pressure of some distribution networks may be higher than the maximum working pressure of the filter.

Check that your equipment is compatible with each other, in particular the flow rates and working pressures, as well as the planned dimensions for the volume of water to be treated.

To ensure the transparency and integrity of the plastics, do not clean the filter with products that degrade plastics (detergents, solvents, etc.).

Be careful not to break the various plastic parts, and there is no need to overtighten the screws/nuts.

Always maintain the right level of disinfectant and a pH of around 7.2.

The person responsible for the installation must read this manual carefully. If any incorrect or erroneous operation occurs, please contact your nearest authorised dealer or technical support service.

In the event of a damaged part, please give priority to the purchase of a replacement part from the manufacturer or an authorised dealer.



FAILURE TO OBSERVE THESE WARNINGS MAY RESULT IN MATERIAL DAMAGE, ELECTRIC SHOCK, COMPLICATIONS, OTHER SERIOUS INJURY OR DEATH.

CAUTION - To avoid any risk of injury, do not allow children to use this appliance.

WARNING - Intensive use of the pool and high temperatures may require long filtration times (even 24 hours a day) to maintain a satisfactory level of cleanliness and water quality.

Operating principle

Your pool filter is the main component of your technical room, ensuring that your water is clean and clear. Then there are the chemical treatment components.

To do this, your pool filter contains several cartridges (4 or 8 depending on the model) that mechanically eliminate all waste, larger than the filtration fineness of the media used, that is suspended in the water and introduced by nature or by swimmers.

The pool water is sucked through the pipe system and drawn to the top of the filter by the filtration pump.

Water enters through the top of the filter, passes through the filter cartridges and impurities are mechanically blocked by the cartridges.

The water rises to the top, then falls back down and leaves the lower part of the filter. Once filtered, it is pumped back into the pool through the pipe system driven by the filtration pump.

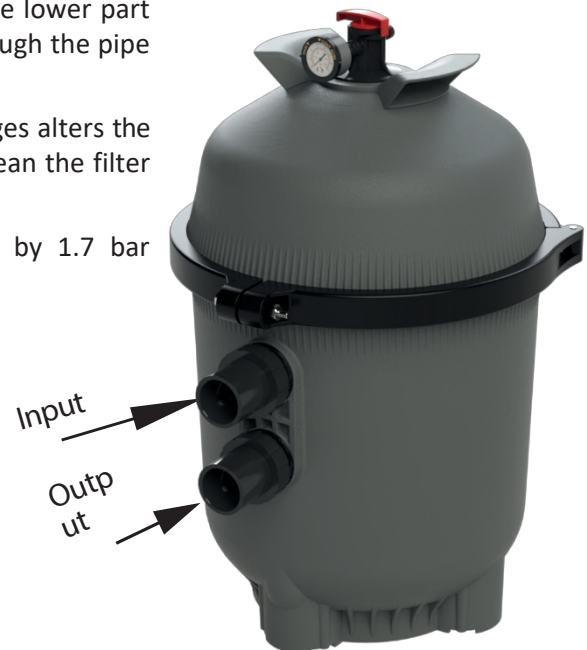
The accumulation of waste retained in the filter by the cartridges alters the flow rate and increases the pressure. It is then necessary to clean the filter cartridges.

Wash the cartridges when the initial pressure is increased by 1.7 bar (25PSI).

In order to achieve optimum water quality, it is important that the filtration time is long enough:

$$\text{Filtration Time} = \text{Water T}^\circ / 2$$

But if the water temperature is above 26°C, additional filtration time may be required, until continuous filtration (24 hours a day) is achieved above 30°C.



Installation

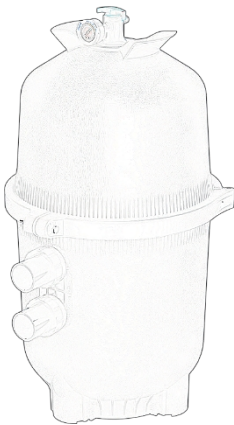
Preamble

Before starting installation, check that your equipment is compatible with each other (flow rates and working pressure) and that it is sized for the volume of water to be treated.

Model	PF-TCR330	PF-TCR430	PF-TCR530	PF-TCR680
Filtration area (m2)	30.66	39.95	49.24	63.17
Filtration flow rate (m3/h)**	18	20	25	32
Maximum flow (m3/h)	28.1	34.1	34.1	34.1
Max. working pressure (bar)	3.5	3.5	3.5	3.5
Vertical clearance	34	48	67	81
Horizontal clearance	46	46	46	46
Max. temperature (°C)	43	43	43	43
Pool volume (m ³)*	110	120	145	190

* Calculation based on average water recycling over 6 hours.

** Estimated filtration rate based on an approximate filtration speed of 0.5 m3/h/m2.



Only simple tools (screwdrivers and spanners) and PVC pipe adhesive are needed to install and maintain the filter.

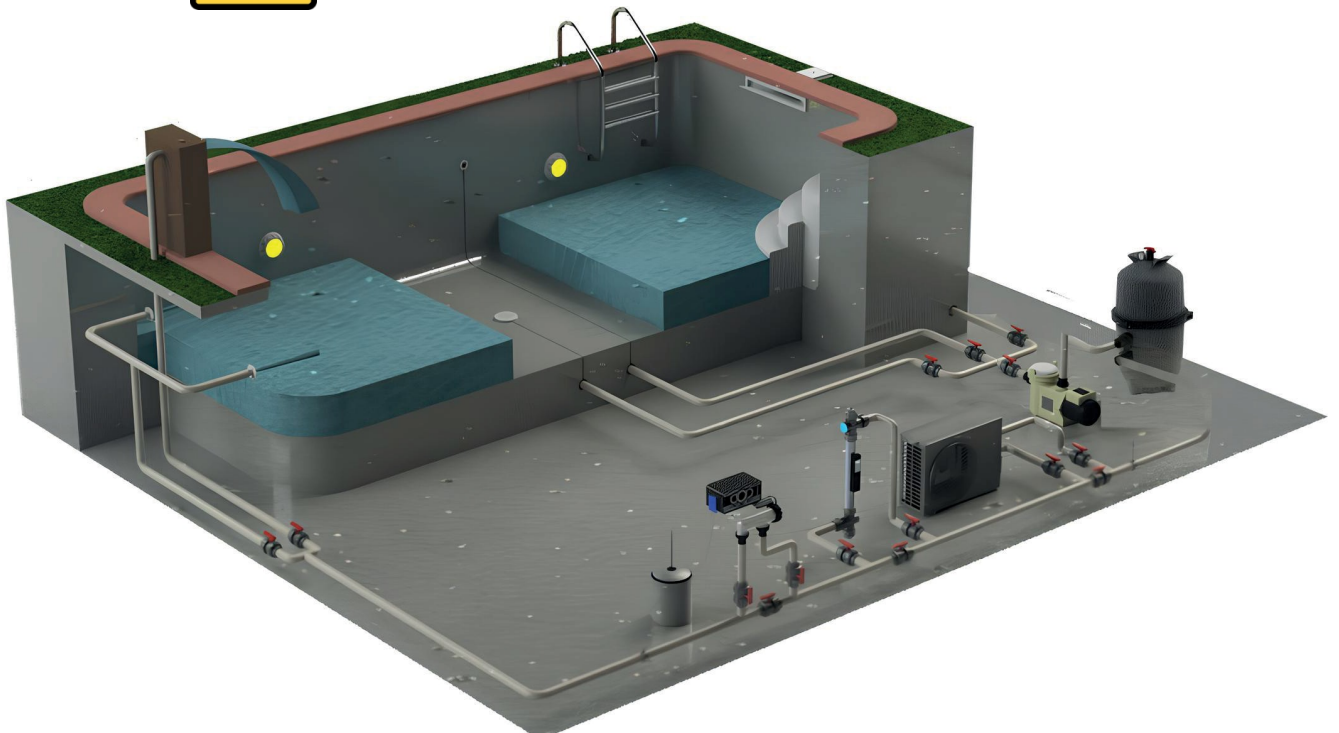
The filter must be installed on a flat concrete surface or equivalent very firm ground.

Position the filter so that the connections are accessible for use and maintenance.

Ideally, the filter should be installed as close as possible to the pool in the equipment room, preferably 50cm below the water level.



Always use PVC swimming pool pipes of the correct diameter.

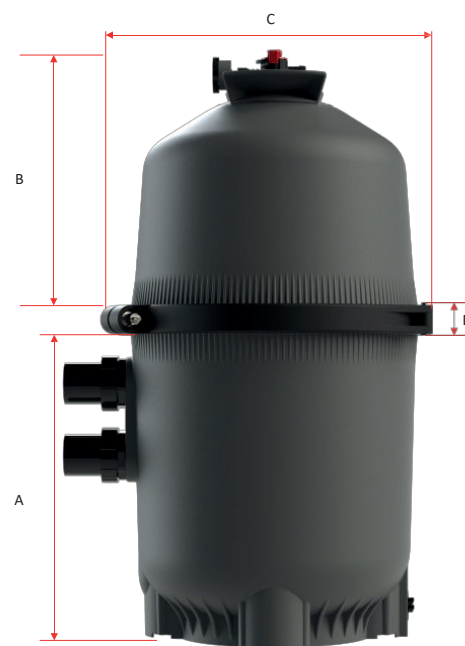


Installation

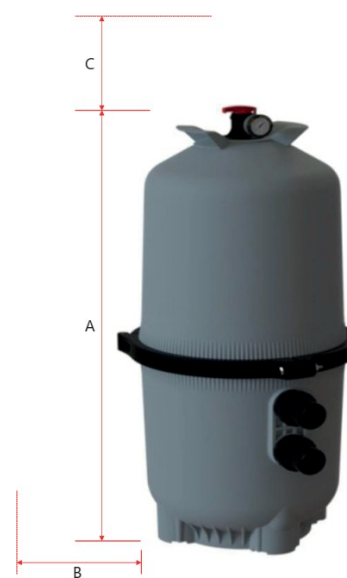
This product should only be installed and maintained by a qualified swimming pool professional.

1. The filtration system should be installed on a flat concrete slab or other rigid base. Choose a well-drained and ventilated location that will not flood in the event of rain. Position the filter so that pipe connections and the winter drain are convenient and accessible for operation, servicing, maintenance and wintering.
2. Position the filter body so that all the operating and safety labels are visible.
3. Position the filter so that it drains by gravity.
4. If possible, place the pump and filter in the shade to protect them from direct sunlight.
5. Connect the pool suction plumbing between the skimmer, the pool outlet (from the pool) and the pump.
6. Install the plumbing from the filter to the pool (back to the pool).
7. Do not place the pump controls above or near the filter.
8. Check that the water discharge from the high-flow drain valve is directed away from the appliances electric.

MODEL	A (cm)	B (cm)	C (cm)	D (cm)
PF-TCR330	53	30,8	60,2	4,85
PF-TCR430	53	45,6	60,2	4,85
PF-TCR530	53	64,4	60,2	4,85
PF-TCR680	53	78,4	60,2	4,85



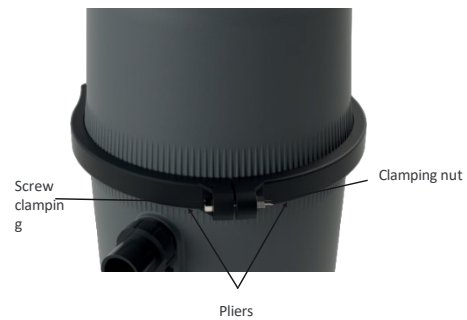
MODEL	A (cm)	FREE SPACE REQUIRED	
		B Side (cm)	C Height (cm)
PF-TCR330	88,60	46,00	34,00
PF-TCR430	103,50	46,00	48,00
PF-TCR530	122,30	46,00	67,00
PF-TCR680	136,20	46,00	81,00



Commissioning

Before starting the pump :

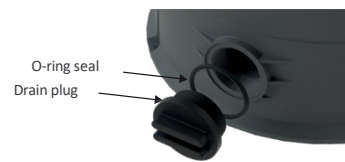
1. ONLY use components from the Thin-Clear system, including the assembly clamping unit and the reinforced gasket. Incorrectly tightened clamp components may break during use, leading to explosive separation of the parts. Make sure that the filter cover and tank are correctly secured with the clamping unit. Check that the filter bleed plug (manual) is in the LOCKED position and that no filter components are missing, damaged or not original to ThinClear.



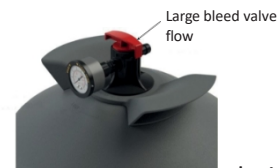
2. Close the filter drain plug.

Note: the drain plug requires an O-ring.

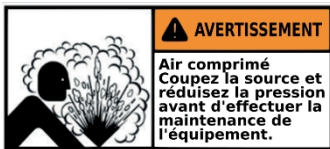
3. Open all the valves in the system to allow the pool water to go to the filtration system, enter the filter and return to the discharge circuit.



4. Open the high-flow drain valve to help evacuate air from the filter when the pump starts up.



Starting the pump



Do not approach the pump during start-up. Pool and spa circulation systems operate under high pressure. When any part of the circulation system (i.e. shut-off ring, pump, filter, valves, etc.) is serviced, air can enter the system and become pressurised.

It is essential to secure the filter cover and the pre-filter cover to prevent any violent release of pressure. In addition, ensure that the high-flow drain valve on the filter is open and wait until all system pressure has been released before removing the cover to access the basket and carry out cleaning. This safety procedure is essential to avoid any risk of injury when servicing the pool or spa circulation system.

1. When starting the filtration pump, do not stand above or near the filter. If a water leak appears at the clamp, stop all the pumps in the system and cut off all the electrical supply. Do not return to the filter until the water leak has stopped. Reassemble the clamping system following the instructions on the previous page of this user m a n u a l .

2. Return to the filter and DO NOT close the high-flow drain valve unless a steady stream of water is coming out of it, not air or an air-water mixture.

How it works

Filtration starts as soon as there is a regular flow through the filter. As the filter removes impurities from the pool water, these impurities build up and create resistance to the flow. As a result, the pressure increases and the flow rate decreases.

1. Record the initial starting pressure, which corresponds to the pressure reading when a new filter element is in service under filtration conditions.
2. Each time you install a "new filter element" or clean a "filter cartridge element", make sure the system is in filtration mode, then turn the arrow on "START" to the position indicated by the needle on the pressure gauge to record the start-up pressure. Monitor the pressure from time to time. When the pressure reading exceeds the "CLEAN FILTER" mark, follow the instructions given in the "cartridge removal" section to clean the filter cartridge elements.

Filter removal instructions

1. Switch off all the system's circulating pumps and all the electrical power. power supply on the block block.
2. Place all the valves in the system in a position that prevents water from flowing towards the filter.
3. Open the high-flow drain valve.
4. Remove the drain plug and allow the water to drain from the filter.
5. Unscrew the locking ring (anticlockwise).
6. Lift the filter cover with the clamp attached. Do not hold the pressure gauge to lift the cover.
7. Remove the element from the cartridge.



Removing cartridges

1. Remove the filter cartridge element by tilting it slightly and lifting it out.
2. Clean the filter cartridge element.

Cleaning cartridges

The cartridge filter element can be washed inside and out with a garden hose. For best results, after washing the cartridge with a hose, brush the pleated surface carefully to remove any fine particles. Do not use high-pressure water for washing as this could damage the filter element. You may find debris on the pleats of the cartridge, which may not have been removed by jet washing.



Instructions for reassembling the filter

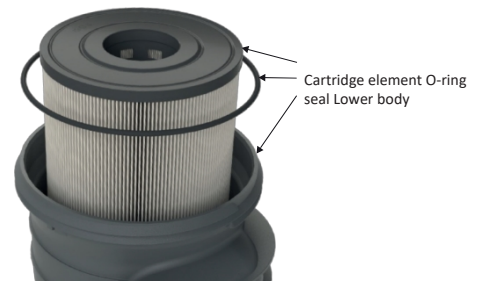
Cartridge reinstallation

1. Rinse and remove impurities and debris from the bottom of the lower filter housing.
2. Rinse any impurities and debris from the upper filter housing and around the air outlet area.
3. Carefully replace the cartridges on the lower manifold hubs.
4. Place the cover firmly on top of the cartridges.

Instructions for reassembling the

Clean sealing ring and sealing surface

1. Remove the O-ring seal from the filter tank.
2. Using a clean cloth, wipe the surface of the bottom seal of the filter body and clean the seal of any dirt and debris. Do not use solvents.
3. Using a clean cloth, wipe the upper sealing surface of the filter body.



Reassembling the body and clamp

1. Place the O-ring seal on the seal holder at the top of the tank.
 2. Place the tank cover over the O-ring seal and on the tank in a position that allows all the operating and safety labels to be visible, and ensure that the cover is centred on the tank.
- Exercise

Apply firm, even pressure to the cover to press in the seal.



NOTE: If the O-ring is damaged, it must be replaced.

3. Replace the filter clamp around the upper and lower filter bodies. Hold the ends of the clamp in position while reinstalling the bolt and nut.
4. Tighten the nut and bolt using a torque spanner.

**DO NOT HIT OR KNOCK THE COLLAR WITH A HAMMER OR OTHER OBJECT.
METAL TOOLS.**



5. Follow the instructions in the "Starting the pump and filtration system" section.

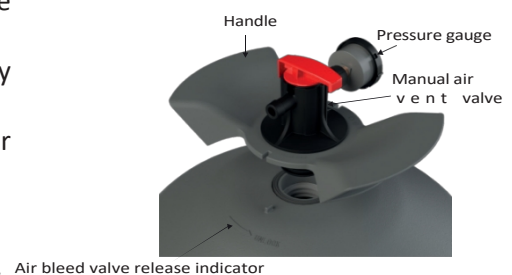
Vacuuming and cleaning the pool

Suction can be carried out directly into the filter (if necessary). Clean the cartridge after vacuuming (if necessary).

Removing the manual air vent valve

The filter is supplied with a manual air bleed valve pre-installed. This should only be serviced by swimming pool professionals and the instructions should be followed carefully:

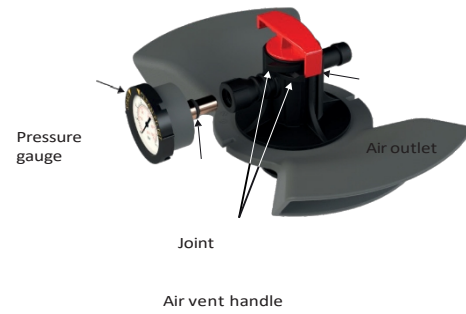
1. Switch off all the system's filtration pumps and the power supply to the equipment block.
2. Place all the valves in the system in a position that prevents water from flowing towards the filter.
3. The manual air vent valve must be in the OPEN position.
4. Wait until all the water leaks have stopped.
5. Grasp the handle at the top of the upper filter body, turn it anti-clockwise until the drain valve is aligned with the "UNLOCK" position on the filter cover and ensure that the unit is fully unclamped and lift off.
6. Pull straight up to remove the drain valve and its handle.



Instructions for reassembling the filter

Reinstalling the manual air vent valve

1. Check the condition of the O-ring and replace if necessary.
2. Using a clean cloth, wipe down the filter cover and its O-ring groove. Remove all dirt and debris.
3. Turn the air bleed plug until it is tight on the filter cover.



Wintering

In areas where temperatures below freezing can be expected, the filter should be drained to protect it from damage.

1. Follow the steps in the "Filter removal instructions" section to remove and clean the cartridge.
2. Reinstall the cartridge in the filter.
3. Tighten the locking ring securely during storage.
4. Refit the filter in accordance with the filter refitting instructions.
5. Be sure to leave the drain plug loose during the winter to avoid cracking the body.

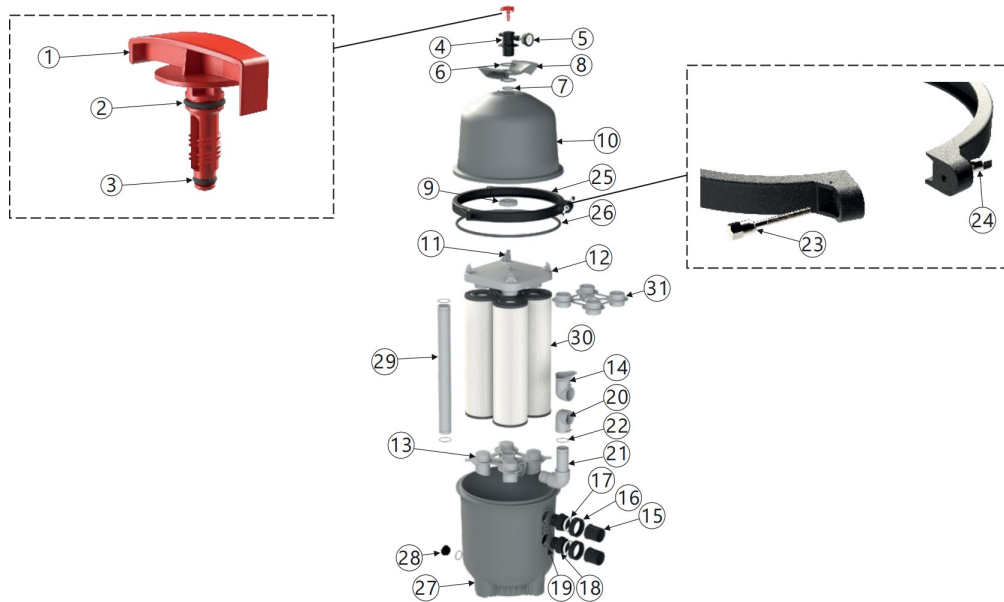
Troubleshooting

	Low water flow	Filtration cycles	Pool water remains cloudy
SOLUTION	<ol style="list-style-type: none"> 1. Check that the skimmer and pump baskets are free of debris. 2. Check that there are no restrictions in the suction and discharge pipes. 3. Check that there are no air leaks in the suction pipe (bubbles go into the pool). 4. Do not remove the filter cartridges. 	<ol style="list-style-type: none"> 1. Check the pool for algae and super-chlorinate if necessary. 2. Make sure chlorine and pH levels are within an appropriate range (re-justify if necessary). 	<ol style="list-style-type: none"> 1. Check the chlorine, pH and total alkalinity levels and readjust if necessary. 2. Ensure that the filter has sufficient flow time. 3. Run the filter for longer periods.

Chemical parameters of water

SUGGESTED CHEMICAL LEVELS FOR SWIMMING POOLS	
pH LEVEL	6.8 à 7.6
TOTAL ALKALINITY	80 to 120 ppm
CALCIUM HARDNESS	200 to 400 ppm
COMBINED CHLORINE	0.2 ppm maximum
CHLORINE (STABILISED)	1.0 to 3.0 ppm
CHLORINE STABILISER (Cyanuric acid)	30 to 80 ppm

Exploded view and filter parts



N O.	Code	Description	Qty
1	550178232	Purge handle	1
2	111040077	O-ring d14.3x2.5	1
3	111040078	O-ring d6x3.5	1
4	550178233	Manual air vent valve	1
5	117038519	60psi pressure gauge, plastic case	1
6	111040079	O-ring d50x5	1
7	111000048	O-ring D76 x d65.6 x 5	2
8	430138225	Handle for lid	1
9	550058225	Handle nut	1
10	550188173	Cover for PF-TCR330	1
10	550188174	Cover for PF-TCR430	1
10	550188175	Cover for PF-TCR530	1
10	550188176	Cover for PF-TCR680	1
11	4,109E+09	Air exhaust port	1
12	E140402	Manifold top plate	1
13	550008229	Lower sealing plate	1
14	550128230	Input adaptor	1
15	430308158	Union 2" - 2"1/2 ANSI	2
15	430309780	1"1/2 - 2" union	2
15	430309779	Union D.50mm	2
15	430309059	Union D.63mm	2
16	430178159	2" 90° union nut	2

N O.	Code	Description	Qty
17	111040071	O-ring D77Xd62X8	2
18	430248177	External thread connector	2
19	111040081	O-ring d63.8x5	2
20	550128231	Output adapter	1
21	E140403	Elbow assembly	1
22	111040080	O-ring d50.5x2.5	4
23	112000083	3/8" screw	1
24	112030022	3/8" nut	1
25	E140404	Necklace	1
26	111000043	O-ring seal D526xd502x14	1
27	550228177	Lower body	1
28	E160553	Drain plug with O-ring	1
29	107048528	508mm PVC hose for PF-TCR330	1
29	107048529	658mm PVC hose for PF-TCR430	1
29	107048530	PVC hose 845mm for PF-TCR530	1
29	107048531	986mm PVC hose for PF-TCR680	1
30	914100022	PF-TCR330 cartridge element	1 pack (4 pcs)
30	914100023	PF-TCR430 cartridge element	1 pack (4 pcs)
30	914100024	PF-TCR530 cartridge element	1 pack (4 pcs)
30	914100025	PF-TCR680 cartridge element	1 pack (8 pcs)
31	550028176	Element adaptor for PF-TCR680 only	1
32	E140406	Valve complete with handle and O-rings	1

Garantie

Poolstar garantit le propriétaire original contre les défauts matériels et de fabrication dans le Poolstar Thinclear filtre à sable pour une période de **ten (10) ans** pour le filtre et **trois (3) ans** pour les autres parties **à l'exception des pièces d'usure (joints, bouchon de drainage, cartouches)**.

La garantie prend effet à la date de la première facture et sur présentation de la facture d'achat.

La garantie ne s'applique pas dans les cas suivants :

- Défaillance ou dommage résultant de l'installation, de l'utilisation ou de la réparation qui ne respecte pas les instructions de sécurité.
- Défaillance ou dommage causé par un environnement chimique inapproprié dans la piscine.
- Défaillances ou dommages résultant de conditions qui sont inappropriées pour l'utilisation prévue de l'appareil.
- Dommages causés par négligence, accident ou force majeure.
- Défaillances ou dommages causés par l'utilisation de pièces non autorisées.

Les réparations effectuées pendant la période de garantie doivent être approuvées avant d'être effectuées et confiées à un technicien agréé. La garantie sera nulle si l'appareil est réparé par une personne non autorisée par Poolstar.

Les pièces de garantie seront remplacées ou réparées à la discrétion de Poolstar. Les pièces défectueuses doivent être retournées à notre usine dans la période de garantie pour être couvertes. La garantie ne couvre pas les coûts de main d'œuvre ou de remplacement non autorisés. Le retour de la pièce défectueuse n'est pas couvert par la garantie.

Madame, Monsieur,

Une question ? Un problème ? Ou simplement enregistrer votre garantie, retrouvez-nous sur notre site internet :

<https://assistance.poolstar.fr/>

Nous vous remercions de votre confiance
et vous souhaitons une excellente baignade.

Vos coordonnées pourront être traitées conformément à la Loi Informatique et Liberté
du 6 janvier 1978 et ne seront divulguées à quiconque.

contact@poolstar.fr

