



C.P.A. s.r.l.

QUARTZ SAND FILTER WITH 6-WAY VALVE

User Manual

**READ THIS MANUAL CAREFULLY AND KEEP
IT FOR FUTURE USE**



C.P.A. srl

Via Don Demetrio Castelli, 71 - 12060 RODDI (CN)
Tel. 0173.615693 - Fax 0173.620922

www.cpa-piscine.it

cpa@cpa-piscine.it

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WARNING:

Always read the instructions before using the equipment and before proceeding with installation and assembly and disassembly operations.

Retain the instructions.

This equipment is not intended for use by persons (children under the age of 8 inclusive) with impaired physical, mental and sensory abilities or lack of adequate experience and knowledge, unless they are supervised and instructed in safe use of the appliance and whether the associated risks have been understood. Children should always be supervised to prevent them from playing with the product.

Cleaning and maintenance should not be performed by children without adult supervision.

This equipment is not designed to be used by people (including children) with reduced physical, sensory or mental functionality or by inexperienced people, unless they are checked or a person responsible for their safety has explained the operation of the equipment to them. .

Children should be supervised to prevent them from playing with the appliance.

INSTALLATION

The filter should be installed as close as possible to the pool and preferably at a level of at least 0.50 m below the level of the pool water. Provide for the creation of a drain in the room where the filter is located.

warning:

Do not use iron and hemp pipes for the assembly of the selector valve, it is essential to use plastic accessories and Teflon tape.

Leave enough space around the filter to carry out the necessary inspections and maintenance operations during its useful life, at least 20 cm. Leave a space of 20 cm around the filter to allow its movement when it is in operation, any obstruction could cause it to break. Do not put greases, oils or solvents on the plastic components, they could damage them.

Handle the sand filter with care.

Keep the sand filter away from sharp objects, fuel oil, moving parts or heat sources.

1 1/2 "and 2" threaded fittings and rubber sealing gaskets are available for this assembly, ask your supplier. .

MOUNTING

Carefully remove all components from the package and check that nothing is damaged. If the device is damaged, immediately contact the retailer from whom the purchase was made.

The sand filter must be placed on a flat, even and clean surface, preferably made of concrete. Position the sand filter in such a way as to make it possible to operate, maintain and check the parts and the multi-way control valve.

If the filter is equipped with a lateral control valve, it will be necessary to install it on the filter body, paying attention to the junction between this and the appropriate joints on the filter.

Connect the three outputs of the selector control valves to the pool pipes: flow from the valve to the tank, return from the circulation pump to the valve and from the valve to the drain. The 3 outputs and their functions are indicated on the valve. The connection (where foreseen) must be made by gluing the pipe to the valve, taking care to clean the pipe with some pickling fluid suitable for plastic components for swimming pools.

Assemble (if equipped) the pressure gauge and the cap for venting the air: it is not necessary to use Teflon as the joint is equipped with a gasket.

NOTE:

When positioning the sand filter, always ensure that there is adequate ventilation, as well as drainage and access for maintenance.

Never place the sand filter in areas that favor the accumulation of water or in transit points.

Atmospheric conditions can affect the performance and life of the sand filter, so try to protect the sand filter from excessive cold, heat or exposure to the sun which can cause deterioration of the product.

Check the presence of all the components of the sand filter before use.

It is important and necessary to replace all deteriorated parts as soon as possible: only use components approved by the person responsible for placing the product on the market. Do not allow children and adults to lean or sit on the device.

Do not add chemicals to the sand filter.

It is mandatory to make sure that the suction openings are not blocked.

It is mandatory to interrupt the filtering during maintenance operations on the filtering system. Regularly monitor the clogging level of the filter.

A weekly check for backwashing or cleaning is recommended. Pay attention to the safety requirements and recommendations described in the manual. Read the instruction manual carefully and keep it for future reference.

LOADING THE SAND

Caricare il mezzo filtrante all'interno del filtro – SABBIA NON INCLUSA.

To obtain the maximum performance of this, it must be filled with quartz or silica sand with a particle size of 0.4 at 0.8 mm, with the amount indicated on the filter label and proceed as follows:

- Remove the cover by loosening (if present) the sealing screws and the gasket.
- To avoid damaging the return manifold with arms when adding sand, pour water into the tank in so as to completely submerge the manifold and the arms: approximately halfway up the filter body.
- Fill the filter with the necessary amount of sand.
- Clean the seat of the cover gasket.
- Replace the gasket and the cover and (if present) tighten with the screws.

NOTE:

Use only quartz or silica sand for filters suitable for swimming pools, free of limestone or clay. The use of unsuitable sand can compromise the result of the filtering operation and damage the sand filter, voiding the warranty.

OVERVIEW OF THE MULTIVIE CONTROL VALVE

ATTENTION:

TO AVOID DAMAGE TO THE FILTER OR POSSIBLE INJURY, ALWAYS TURN OFF THE CIRCULATION PUMP BEFORE CHANGING THE FUNCTION / POSITION OF THE CONTROL VALVE.

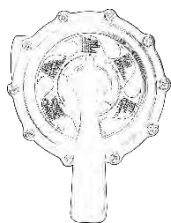
Changing the positions of the control valve while the pump is in use can cause injury to persons or damage to the product.

HOW TO USE THE MULTIVIE CONTROL VALVE

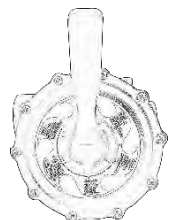
Push down on the control valve handle and turn to the desired function.

FUNCTIONS OF THE MULTIVIE CONTROL VALVE

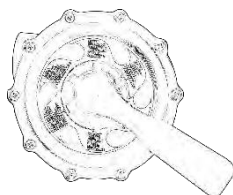
The control valve is used to select the 6 different filter functions: filtration, rinse, circulation, backwash, shut-off and drain.



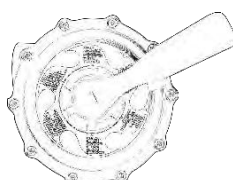
Filtering: This function is used for filtering the pool water: it is the most used position. The water is pumped through the sand filter, where is cleaned and sent back to the pool.



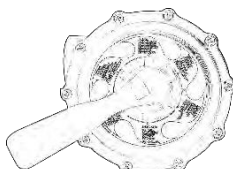
Counter-current washing: This function is used to clean the sand bed: the water is pumped down through the intake manifold, pushed upwards through the sand bed and, finally, expelled outside the door D.



Flushing: This function is used for the initial start-up, cleaning and leveling of the sand bed after counter-current washing: the water is pumped down through the sand bed, pushed upwards through the intake manifold and expelled outside the valve discharge port.

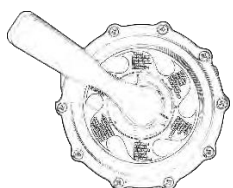


Circulation: This function allows the pool water to circulate without the use of the sand filter: it can be used when the filter is broken or for pool water treatments with specific chemicals for pool water treatment.



Discharge: This function allows the water to flow out of the pool without the use of the filter: the water is in fact pumped outside the drain door rather than sent back to the pool. For the pump to suck it is necessary to keep the basket and all the bottom drain piping full of water.

NOTE: before starting the drain, make sure that the valves of the skimmers and the sludge suction vents are closed



Closure: This function stops the flow of water between the sand filter and the pool.

NOTE:

Make sure that all ways of disposing of waste water meet local, regional or state regulations. Do not drain water where it can cause flooding or damage.

When the control valve is set to the backwash, rinse or drain positions, the water is discharged from port D on the valve itself.

Never set the control valve between two functions as leakage may occur.

Do not connect or operate the sand filter when the control valve is set to the shut off function or the pump will be irreparably damaged

OPERATION OF THE SAND FILTER: FILTRATION

ATTENTION: DO NOT USE THE SAND FILTER WITHOUT WATER

The sand filter is now ready for use. With the circulation pump off, set the control valve to the filter function. Activated by the circulation pump (not supplied): at this point the sand filter begins its filtering cycle. Check that the water returns to the pool and take note of the filter pressure indicated on the supplied pressure gauge. Generally the recommended sand filter pressure is approximately 0.8 bar (11.4 PSI) during operation. During operation it is advisable to periodically check the pressure gauge. This will allow you to control the degree of saturation of the filter. When the pressure reaches 1.3 bar (18.5 PSI), this indicates that the filter bed cannot withstand any more dirt, so a backwash will be carried out: with this maneuver all the dirt that blocked the filter will be discharged into the sewer. .



0.8 bar - 11.4 psi: typical pressure with the filter in filtration



1.3 bar - 18.5 psi: this pressure indicates that it is necessary to wash the filter

NOTE:

To ensure the cleanliness of the pool water, a minimum daily operating time of the filtering system of 8 hours or more is recommended.

At least one weekly check is recommended for backwashing.

BACKWASHING AND RINSE

Backwashing and rinsing are operations to be performed to prepare the pump for first use and to periodically wash the sand contained in the filter.

With the circulation pump off, set the control valve to the flush function.

Activate the circulation pump for a period of between a minimum of 3 and a maximum of 5 minutes, or, until the water that passes through the inspection glass (if present) is completely transparent and clear. Turn off the circulation pump and set the control valve to the rinse function. Then run the pump for one minute. In this way the water circulates backwards through the sand filter and is made to flow into the drain to level the sand again and eliminate any residues present in the internal distribution pipes.

IMPORTANT:

This procedure eliminates water from the pool which must be renewed immediately.

PUT IN USE

Load the filter with sand and close the filter correctly:

- place the selector valve in the washing position
- open the valves that control the suction pipes from the pool and the delivery pipes to it.
- activate the circulation pump for 4 minutes
- disconnect the pump and place the selector valve in the filtering position. The filter is now ready to perform the filtration cycles envisaged for the pool.

CLEANING AND MAINTENANCE OF THE SAND FILTER

ATTENTION:

Make sure that the sand filter is switched off and the circulation pump disconnected before carrying out any maintenance operations. This avoids the risk of injury or death.

When dirt builds up in the sand filter, the pressure indicated on the pressure gauge increases. When the pressure gauge indicates 1.3 Bar (18.5 PSI) or higher or the water flow to the pool is too slow, it is necessary to clean the sand. To clean the sand bed, follow the instructions above in the backwash and rinse section.

NOTE:

the pressure gauge is for maintenance purposes only and the indicated value is for reference only, therefore the pressure gauge cannot be used as a precision instrument.

It is recommended to clean the sand bed once a month or less often depending on how much the pool is used. Do not clean the sand too often.

Do not clean the filter and its parts with solvents or aggressive products as this can ruin and damage it. For a better yield it is recommended to clean the sand annually with the specific product ACQUAFILTRE. It is recommended to change the sand at least every 3 years.

STORAGE IN WINTER MONTHS

In areas with winter temperatures below freezing, this swimming pool equipment must be stored properly to avoid any damage. The freezing of the water will damage the sand filter, damage not covered by the warranty.

- Backwash the sand filter as described above.
- Drain the water from the pool following the instructions in the user manual.
- Open the drain plug on the bottom of the tank and let the residual water flow out.
- Disconnect the two hoses from the pool and the sand filter.
- Completely empty the sand from the tank and dry all components.
- Store the sand filter in a dry place out of the reach of children.

SOLUTIONS TO THE MOST USUAL PROBLEMS

EFFECT	CAUSE	SOLUTION
Little flow from the filter to the pool. Poor suction from the line sucks mud.	Pump motor running in reverse direction (only for three-phase pumps)	Check the direction of rotation of the pump by observing the motion of the fan: if it turns in the opposite direction with respect to the arrow present on the pump, reverse the power supply phases
	Clogged hair filter	Clean the filter by removing the obstruction
	Suction and delivery pipes blocked	Proceed to cleaning
	Calcified sand	Replace the filter sand
The pressure rises quickly during the filtration cycle	high water pH (cloudy water)	Decrease the pH value with product special with Red Minus by C.P.A. srl
	Lack of chlorine / disinfectant (green water)	Add chlorine / disinfectant
Pressure gauge needle oscillating with some violence	The pump sucks in air	Clean the basket of the pump prefilter ed possibly the pool suction elements (skimmer basket)
	Semi-closed suction	Check that the intake valves are totally open

REPLACING THE FILTER BED

To replace the filter bed proceed as follows:

- remove the top cover
- empty the water and the filter medium through the lower drain hole and the manhole opening (if present)
- at the end of the operation, check that the drain openings are clean and well sealed in order to avoid leaks when putting the filter back into service
- remove the filter cover to keep it ventilated during the period of inactivity. To start it up, follow the instructions given in the relevant paragraph.

ATTENTION:

during the operation of replacing the filter bed, small spills of water on the floor are possible, yes suggests paying the utmost attention to avoid possible falls.

SUGGESTIONS

If the filter is not used for a long time, it is advisable to empty the water from the filter.

If the filter is exposed to atmospheric agents, it is recommended to repaint the filter body at least every two years with suitable paint.

Please contact your dealer if you have any doubts regarding the use of the filter.

When necessary, the joints and deteriorated pieces must be replaced.

Carry out the necessary washes and rinses according to the operating instructions.

Water treatment with ozone is not compatible with C.P.A. filters srl, therefore the use of this type is not recommended treatment in combination with the filters in this document.

SAFETY WARNINGS

Do not run the system without water. When handling the filter or valve, disconnect the circulation pump.

Do not allow children or adults to sit on the filter and on the water supply and withdrawal pipes.

The filter must not be connected directly to the drinking water network (aqueduct), since the pressure of the same can be very high and exceed the maximum working pressure of the filter.

WARNING

Do not use solvents or corroded products to clean the filter and its components.

The lid should not be cleaned with solvent-based products, as it could lose its properties (brilliance, transparency, ...)

Since all joints are made with gaskets, it is not necessary to overtighten the fixing bolts, to avoid breaking the various pieces of plastic.

It is necessary and mandatory to switch off the circulation devices (pumps, etc.) when acting on the position of the backwash coil valves.

In order to prevent damage and for correct operation of the system, it is recommended to regularly clean the roughing baskets of the skimmers and the prefilters of the circulation pumps.

Do not use the filtering circuit for filling and regulating the pool water level.

MAINTENANCE WARNING

It is essential to replace any damaged element or series of elements as soon as possible. Use parts only approved by the manufacturer.

What happens to the pool water?

Key concepts for proper management of water in the tub

This is the first question that the owner of a swimming pool should ask himself when starting his system: bacterial proliferation and the onset of molds and contamination with microorganisms are the causes of the deterioration of swimming pool water when it is exposed to sun and summer air. associated with the lack of filtration and treatment of the same To avoid the occurrence of these problems it is necessary to equip the pool with:

Logically this is the first question we must ask ourselves. In the past, most pools did not have the installation of a purifier and worked simply by filling with clear water and, after a certain number of days when the water had an unpleasant appearance, they emptied, cleaned and refilled. This solution undoubtedly has various drawbacks: water costs, unhealthy swimming pools and an unpleasant bath due to insufficient clarity of the water. Today's society demands: economy, hygiene and comfort, for these reasons we must equip the swimming pools with the necessary installations and treatments.

When filling the pool with drinking water in summer, it must generally be observed that it is clear, but remaining exposed to the sun and two common phenomena occur in the air:

1. The water becomes contaminated by microorganisms that exist in the atmosphere plus those that introduce bathers and, not having oxygenation, it stagnates, reproducing parasites in the pool, forming algae. This life formation is favored due to the high ambient temperature, taking the water a green color.
2. The air and rain introduce quantities of dust, earth and leaves into the water that cloud it.

These two factors that affect the pool wear out in a few hours or days with the following result: a totally unsanitary pool and nothing pleasant for bathing.

The way to combat these two problems are:

1. "CHEMICAL" TREATMENT A sufficient quantity of disinfectant (chlorine, bromine, oxygen ...) will be kept in the water so that the bacteria and microorganisms that enter it can be destroyed at the moment.

We indicate chlorine because it is the most usual method for this purpose.

2. "PHYSICAL" TREATMENT By equipping the swimming pool with a filter which, by means of a pump, retains all the suspended matter in the water inside.

IL pH

The pH is the degree of acidity of the water. The pH values are included between 0 and 14, corresponding to the value 7 neutral degrees, the values between 0 and 7 the acid degrees and between 7 and 14 are alkaline. The usual values in a swimming pool are between 6.8 and 8.4.

Why pH is important?

"THE IDEAL VALUE OF THE PH IN THE POOL MUST BE SITUATED WITHIN 7.2 AND 7.6 ". Previously it is indicated that for the destruction of the bacterium, we must keep in the water a quantity of residual chlorine sufficient for it; however this chlorine will be effective as bactericidal when the value of the water will have the pH between 7.2 and 7.6 To destroy the bacterium, the values mentioned must be maintained.

There are other factors that force you to maintain the perfect pH. If it is higher than 7.6, the calcium dissolved in the water will precipitate in a visible form, clouding the water, giving it a milky appearance, rapidly obstructing the filter, precipitating to the bottom and damaging the pool accessories. When the pH value is lower than 7.2, the water will be corrosive, causing irritation to the eyes and nasal mucous membranes, which can destroy the metal parts that can make up the pool.

From what has been said, it can be deduced that the quality of the pool water depends on the pH value it has.

Chlorine

Legal rules

The concentration of free chlorine to be maintained in the pool water varies from country to country: please refer to current legislation in the country where the pool is installed.

What is meant by free or residual chlorine?

In water, even after it has been filtered, there are a series of invisible enemies that it is right to destroy: bacteria, organic matter, etc. I'm introduced into the water by bathers and by atmospheric agents (wind, rain, etc.).

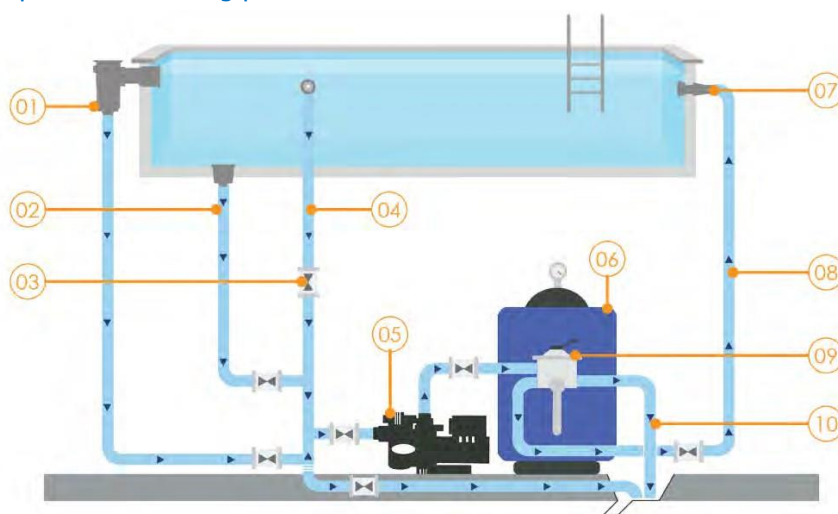
For this action, a certain amount of chlorine must be present in the water, usually in the form of hypochlorous acid.

The chlorine that remains in the water in the form of hypochlorous acid is called FREE or RESIDUAL CHLORINE.

Filtration

Filtration is only part of the work to be done to keep a swimming pool clear in addition to the chemical treatment. Both one and the other alone cannot achieve a good result.

Operating principle of a swimming pool



The water is sucked from the bottom of the pool through the drain (2) and from the surface through the skimmers (1), arriving at the filter (6) with separate pipes equipped with valves (3) and returning to the pool through the outlets (7). The inlet vents are normally installed on the side opposite the drain and the skimmers. The water reached the filter passes through the filter medium, the quartz or silica sand, circulating from top to bottom, so that it retains the suspended materials present in the water to be filtered. Once the filtration cycle has begun, after a certain time, it will be necessary to wash the filter, to remove the dirt that has come to deposit from the sand, thus restoring the passage of water that had come to clog. When the pressure in the filter is higher than 1.3 kg / cm² (bar), it is necessary to wash the filter. With counter-current washing reverses the circulation of water in the filter and thereby expels the waste material retained by the filter. Keeping in mind these important concepts, the treatment instructions and some details, there will be no difficulty in having efficiency in the whole pool system.

Note

- The information contained in this document may vary at the discretion of the editor, without prior notice, together with the changes to the product in question in this document: it will be the customer's responsibility when placing the order to verify the persistent correspondence of the product to the information sheet.
- Any technical diagrams reproduced in this document have a purely informative value and are not valid for regulatory purposes
- All operations must be performed in a workmanlike manner and exclusively by qualified personnel in possession of the requisites required by current regulations.
- It is essential that the installation is carried out by competent and qualified personnel, in possession of the technical requirements required by the specific regulations on the subject. By qualified personnel we mean those people who have been authorized by the plant safety manager to carry out any necessary activity and in this being able to know and avoid any danger.
- This document does not in any way replace the technical documentation relating to the products indicated provided by the manufacturer of the same, to which the installer must contact in order to obtain all the technical information not present in the aforementioned document.
- The C.P.A. s.r.l. assumes no responsibility for any problems deriving from erroneous interpretation of the text.
- This document may be modified in its entirety without prior notice by the writer.
- The C.P.A. s.r.l. furthermore declines all responsibility for possible inaccuracies contained in this manual, if due to printing or transcription error.

C.P.A. srl LIMITED WARRANTY

The purchased product is covered by a limited C.P.A. srl guarantees that the product is free from manufacturing defects that can cause losses: in the event of defects, the product will be replaced or repaired based on the defect detected. The following provision is valid only within the Member States of the European Union: the limited warranty C.P.A. srl will have no effect on the legal provisions of Directive 1999/44 / EC.

The limited warranty is valid: 2 years for the sand filter from the date of purchase.

To use the warranty, fill out this form and send it together with a copy of the purchase receipt to the C.P.A. srl local. Before sending the documents, contact the retailer to receive detailed instructions on the items to be supplied for the application of the warranty. C.P.A. srl does not replace or repair the products if it believes that they have been used incorrectly or not in accordance with the instructions given in the user manual.

The C.P.A. srl covers any manufacturing defects detected during the unpacking of the product or during use in accordance with the instructions provided in the User Manual. The warranty is valid only if the product has not been modified or tampered with. Store and use the product according to the technical recommendations. The warranty does not cover damage caused by misuse / misuse or neglect, including, for example, shock, fire, incorrect voltage, exposure to excessive heat, improper installation, wiring or control errors, and improper storage.

Repairs and replacements do not imply an extension of the duration of the guarantee. The limited warranty is valid for the period indicated above and the starting date is the one shown on the original invoice or purchase receipt. Copy the serial number indicated on the sand filter.

Serial Number		Purchase receipt date	
Dealer:		Date	Client Code

Please provide your full address. Note. if you provide an incomplete address, the shipment may be delayed. C.P.A. srl reserves the right to charge the costs of returning undeliverable goods for reasons attributable to the recipient.

ESSENTIAL INFORMATION

Name		Address	
Country		City	CAP
Telephone Number		email	
Dealer			
Code/Goods name			
Problem description			
	Water Leak		
	Component Failure		
	Incomplete Product		
	Other		

IMPORTANT: ONLY DAMAGED COMPONENTS WILL BE REPLACED, NOT ALL PRODUCT.

C.P.A. srl reserves the right to request photographic evidence or the dispatch of defective components for further verification. To get the best possible assistance, you need to provide all the information.

TO CONSULT FREQUENTLY ASKED QUESTIONS, DOWNLOAD MANUALS, VIEW VIDEOS OR FIND SPARE PARTS, VISIT OUR WEBSITE
WEB www-cpa-pscine.it.



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Tel. 0173.615693 - Fax 0173.620922

www.cpa-piscine.it
cpa@cpa-piscine.it