

NORSUP CARTRIDGEFILTER TYPES

CF 230 / 330/ 430 / 530 / 680

INSTRUCTIONS FOR USE

FILTERPATRONE MIT MEHREREN ELEMENTEN

CF 230 / 330/ 430 / 530 / 680

INSTRUCTIONS FOR USE

FILTRE À CARTOUCHE MULTIÉLÉMENTS

CF 230 / 330/ 430 / 530 / 680

INSTRUCTIONS FOR USE

PATROONFILTER MET MEERDERE ELEMENTEN

CF 230 / 330/ 430 / 530 / 680

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FILTER TIL FLERELEMENTPATRONER

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FILTER FILTER FÖR FLERELEMENTSKASSETT

CF 230 / 330/ 430 / 530 / 680

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IMPORTANT SAFETY INSTRUCTIONS



These operating instructions contain important information on the safe, proper and economical operation of this swimming pool appliance. Strict observation of the operating instructions will help to avoid dangers, reduce repair costs, shutdown times and increase the reliability and working life of the product.

Failure to follow the instructions in this manual may result in serious adverse health effects, or even serious or fatal injury. Failure to follow the instructions in this manual will in all cases invalidate all guarantees and liability on the part of the manufacturer.

Consumer Information and Safety

This Cartridge Filters are designed and manufactured to provide years of safe and reliable operation. Operated and maintained according to the information in this manual and the installation codes referred to in later sections.

THIS FILTER OPERATES UNDER HIGH PRESSUR



When any part of the circulating system, (e.g., closure, pump, filter, valve(s), etc.), is serviced, air can enter the system and become pressurized. Pressurized air can cause the top closure to separate which can result in severe injury, death, or property damage. To avoid this potential hazard, follow these instructions:

1. If you are not familiar with your pool filtering system:
 - (1) Do NOT attempt to adjust or service without consulting your dealer, or a qualified pool technician.
 - (2) Read the entire Installation & Operation Manual before attempting to use, service or adjust the pool filtering system.
2. Before repositioning valve(s) and before beginning the assembly, disassembly, or any other service of the circulating system:
 - (1) Turn the pump OFF and shut OFF any automatic controls to ensure the system is NOT inadvertently started during the servicing.
 - (2) open the manual air release valve.
 - (3) Wait until all pressure is relieved.
3. Whenever installing the filter closure follow the filter closure warnings exactly.
4. Once service on the circulating system is complete follow initial start-up instructions exactly.

5. Maintain circulation system properly. Replace worn or damaged parts immediately, (e.g., closure, pressure gauge, valve(s), O-rings, etc.).
6. Be sure that the filter is properly mounted and positioned according to instructions provided.

WARNING



This filter must be installed by a licensed or certified electrician or a qualified pool service man in accordance with the Local Code and all applicable local codes and ordinances. Improper installation could result in death or serious injury to pool users, installers, or others and may also cause damage to property. Always disconnect power to the pool circulating system at the circuit breaker before servicing the filter. Ensure that the disconnected circuit is locked out or properly tagged so that it cannot be switched on while you are working on the filter. Failure to do so could result in serious injury or death to service man, pool users or others due to electric shock.

WARNING

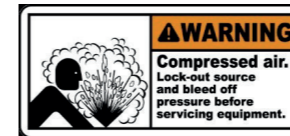


Do not operate the filter until you have read and understand clearly all the operating instructions and warning messages for all equipment that is a part of the pool circulating system. The following instructions are intended as a guide for initially operating the filter in a general pool installation. Failure to follow all operating instructions and warning messages can result in property damage or severe personal injury or death.

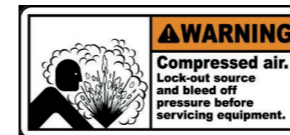
WARNING

To reduce the risk of injury, do not permit children to use this product unless they are always closely supervised.

NORSUP CARTRIDGEFILTER



Due to the potential risk that can be involved it is recommended that the pressure test be kept to the minimum time required by the local code. Do not allow people to work around the system when the circulation system is under pressure test. Post appropriate warning signs and establish a barrier around the pressurized equipment. If the equipment is in an equipment room, lock the door and post a warning sign.



Never attempt to adjust any closures or lids or attempt to remove or tighten bolts when the system is pressurized. These actions can cause the closure to separate and could cause severe personal injury or death if they were to strike a person.

Never exceed the maximum operating pressure of the system components. Exceeding these limits could result in a component failing under pressure. This instantaneous release of energy can cause the closure to separate and could cause severe personal injury or death if they were to strike a person.

HYPERTHERMIA



SPA water temperature excess 38°C (104°F) may be injurious to health. Measure water temperature before entering SPA.

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6 °F (37 °C). The symptoms of hyperthermia include drowsiness, lethargy, and an increase in the internal temperature of the body.

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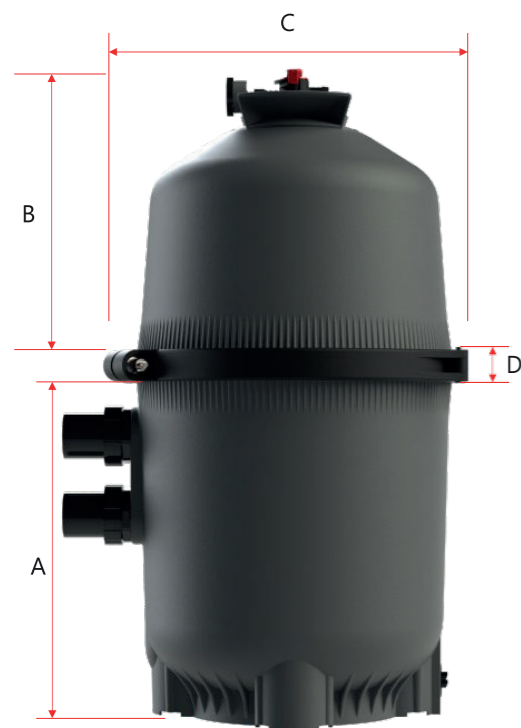
NORSUP CARTRIDGEFILTER

1.1 PRODUCT INFORMATION

MODEL	EFFECTIVE FITRATION		DESIGN FLOW RATE	
	AREA		RESIDENTIAL	COMMERCIAL
	FT ²	M ²	M3/H	LPM
CF 230	230	21.37	19.6	327
CF 330	330	30.73	28.1	468
CF 430	430	39.97	34.5	575
CF 530	530	49.19	34.5	575
CF 680	680	63.13	34.5	575

1.2 DIMENSIONS

MODEL	A		B		C		D	
	IN	CM	IN	CM	IN	CM	IN	CM
CF 230	20.9	53	9.8	25	23.7	60.2	1.91	4.85
CF 330	20.9	53	12.2	30.8	23.7	60.2	1.91	4.85
CF 430	20.9	53	18	45.6	23.7	60.2	1.91	4.85
CF 530	20.9	53	25.4	64.4	23.7	60.2	1.91	4.85
CF 680	20.9	53	31	78.4	23.7	60.2	1.91	4.85

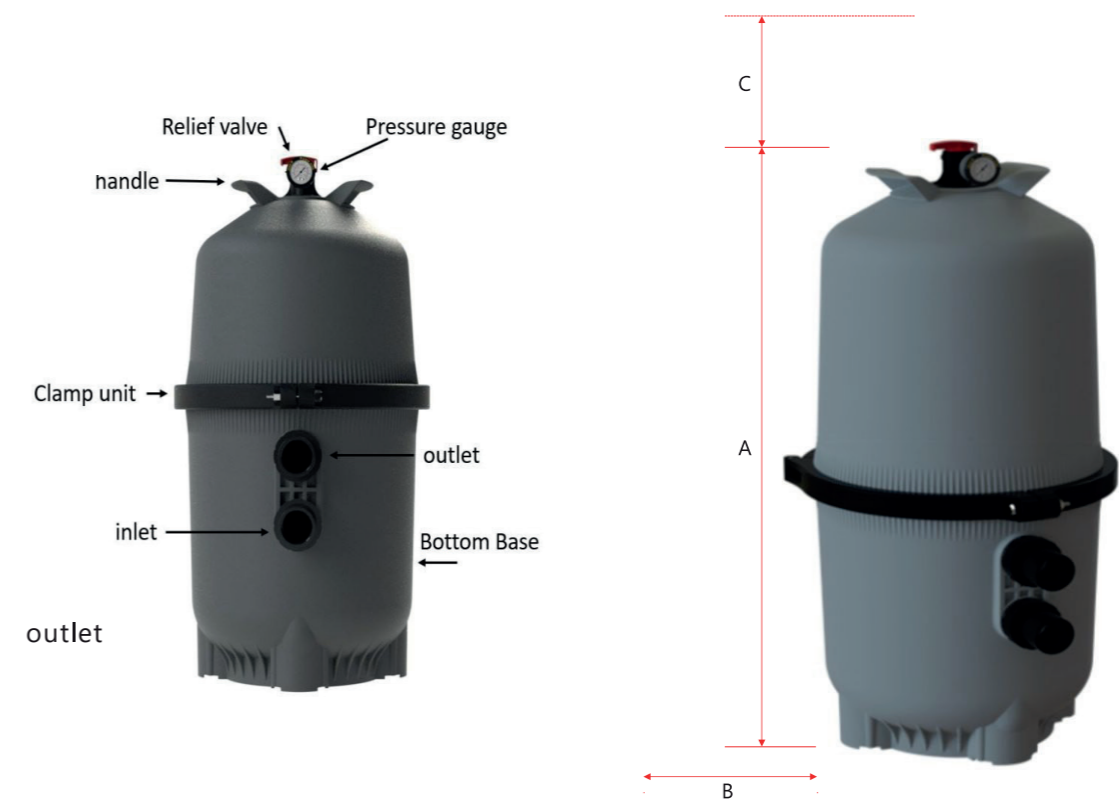


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2. INSTALLATION

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

1. The filter system should be installed on a level concrete slab or another rigid base. Select a well-drained and vented area, one that does not flood when it rains. Position the filter so that the piping connections and winter drain are convenient and accessible for operation, service, maintenance, and winterizing.
2. Position filter body such that all operation and safety labels are visible.
3. Position filter so the filter will drain by gravity.
4. If practical, place the pump and filter in the shade to shield it from continuous, direct heat from the sun.
5. Connect the pool suction plumbing between the skimmer, pool outlet (from the pool), and the pump.
6. Install the plumbing from the filter to the pool (return to the pool)
7. Do not locate pump controls over or near the filter.
8. Verify water discharge from the manual air Relief valve is directed away from electrical devices.



MODEL	REQUIRED CLEARANCE					
	A		"B" SIDE		"C" ABOVE	
	IN	CM	IN	CM	IN	CM
CF 230	32.6	82.9	18.1	46	11.02	28
CF 330	34.88	88.6	18.1	46	13.39	34
CF 430	40.7	103.5	18.1	46	18.89	48
CF 530	48.15	122.3	18.1	46	26.38	67
CF 680	53.6	136.2	18.1	46	31.89	81

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3. STARTING THE PUMP AND FILTER SYSTEM

3.1 BEFORE STARTING THE PUMP

1. Use ONLY CF system components, Locking Ring unit doing assembly, metal-reinforced seal. Non-tighten locking ring components may fail in use and cause explosive component separation. Verify that upper and lower filter bodies are properly secured with the filter body locking ring unit. Make sure hand tightening enough the locking Ring enough to the filter upper and bottom body. Verify that the filter manual air release valve is in the LOCK position, and no filter components are missing, damaged, or not genuine ICF filter components.

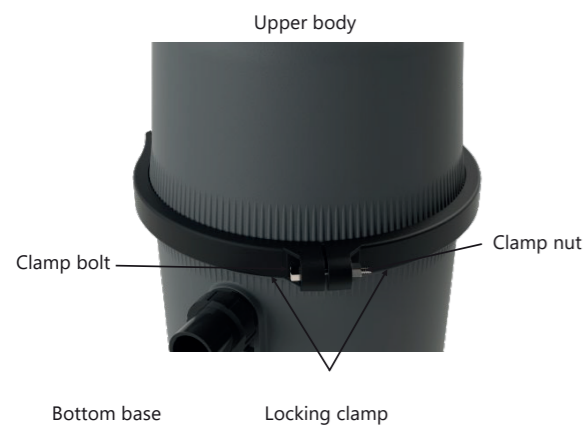


Figure 1

2. Close filter drain. Note: Filter plug requires an O ring seal.

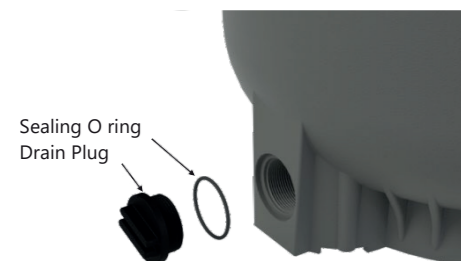


Figure 2

3. Open all system valves to allow water from the pool to the filtration system and from the filter to return to the pool.

4. Place the manual air release valve in an OPEN position.

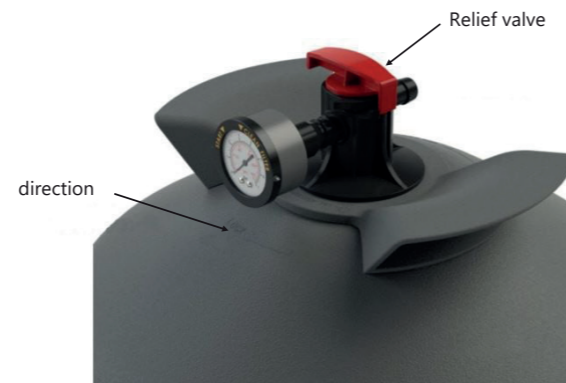
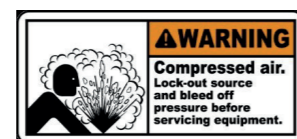


Figure 3

3.2 STARTING PUMP

Stand clear of pump during start-up



Pool and spa circulation systems operate under high pressure. When any part of the circulating system (i.e., lock ring, pump, filter, valves, etc.) is serviced, air can enter the system and become pressurized. Filter tank Lid and pre-filter cover must be properly secured to prevent violent separation. Place pre-filter / filter air relief valve in the open position and wait for all pressure in the system to be relieved before remove the lid to access the basket for cleaning.

1. When starting the system pump, do not stand over or near the filter. If water leakage appears at the filter tank clamp, immediately turn off all system circulation pumps and all electrical power. Do not return to the filter until all water leakage has stopped. Reassemble the clamp system per the instructions of the previous page in this owner's manual to stop the leak.

2. Return to the filter and only CLOSE the manual air relief valve if a steady stream of water escapes from the valve and not air or an air-water mix.

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3.3 OPERATION

Filtration starts as soon as the flow is steady through the filter. As the filter removes dirt from the pool water, the accumulated dirt causes a resistance to flow. As a result, the gauge pressure will rise, and the flow will decrease. When the pressure rises to 30 psi (200 kPa) above the starting pressure, or when the flow decreases below the desired rate, clean or replace the filter cartridge elements.

Once your filter is running and there is a pressure reading, turn the outer dial "START" arrow marker to the pressure gauge pointer position. When the pressure rises to or above the "CLEAN FILTER" marker, it is time to clean or replace your filter cartridge elements.

By recording the initial starting pressure (with clean filter elements) a determination can be made when the filter cartridge elements should be replaced rather than cleaned. After the filter elements have been cleaned and reinstalled if the starting pressure is higher than 25 PSI above the starting pressure with the new filter cartridge elements, the filter cartridge elements should be replaced the next time the gauge arrow reaches the red zone.



Figure 4

4. MAINTAINING YOUR FILTER

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

4.1 FILTER DISASSEMBLY INSTRUCTION

1. Turn off all system circulation pumps and all-electric power on the equipment pad.
2. Set all system valves in a position to prevent water flow to the filter.
3. The manual air release valve must be placed in the OPEN position.
4. Remove the filter drain plug and drain water from the filter.
5. Holding locking Ring Unit of the filter clamp carefully as, lifting through top filter body. Do not drop the locking ring unit during removal, because the locking ring unit could be damaged. Do not strike the locking

Ring unit with metal tools as they can damage the clamp.

6. Lift off upper filter body. Do not use the pressure gauge to lift the upper filter body.

4.2 REMOVING CARTRIDGES

1. Remove the filter cartridge elements by using a slight rocking motion and lifting.
2. Clean filter cartridge elements.

4.3 CLEANING CARTRIDGES

The Cartridge filter element can be cleaned by washing inside and outside with a garden hose. After hosing the cartridge, for best results, carefully brush the pleated surface to remove fine particles. Do not pressure wash as it can damage the filter element. You may find some debris on the cartridge pleats, which may not have been removed with hosing

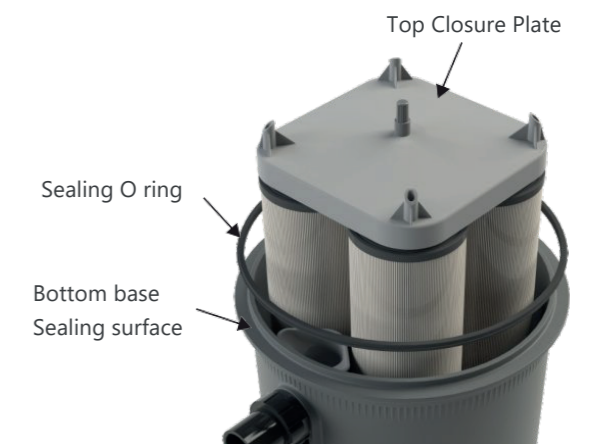


Figure 5

4.4 FILTER REASSEMBLY INSTRUCTION

4.4.1 RE-INSTALLATION CARTRIDGES

1. Flush and drain any dirt or debris from the bottom of the lower filter body.
2. Flush any dirt or debris from the upper filter body and from around the manual air release area.
3. Carefully replace the cartridges over the hubs on the bottom manifold.
4. Place top filter body securely on top of cartridges.

4.4.2 CLEAN SEAL RING AND SEAL SURFACE

1. Remove filter tank sealing O Ring.
2. With a clean cloth, wipe the lower filter body seal surface and clean seal of all dirt and debris. Do not use a solvent.
3. With a clean cloth wipe the upper filter body seal surface.

NOTICE



Do not use any petroleum solvents to clean filter components Do not lubricate sealing O ring. If the O ring is damaged, it must be replaced

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4.4.3 BODY AND LOCKING RING REASSEMBLY

1. Place the Sealing O Ring on the lower filter body.
2. Place the upper filter body on Sealing O Ring and lower filter base in a position that allows all operation and safety labels to be visible and the upper filter body to be centered on the lower filter base. Press down firmly and evenly on the upper filter body to seat the seal.

NOTE

If the O-ring is damaged it must be replaced

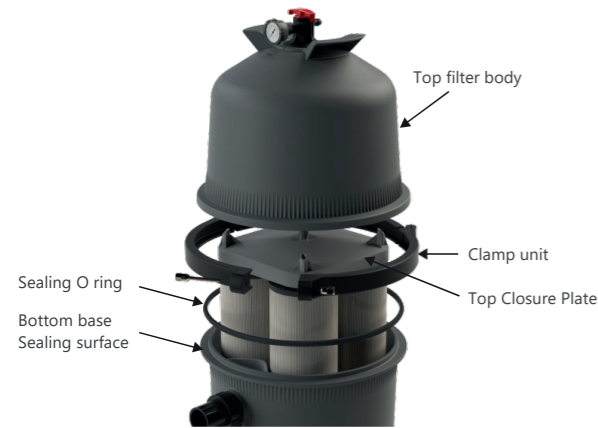


Figure 6

3. Replace the filter clamp around the upper and lower filter bodies. Hold the clamp ends in position while reinstalling the bolt and nut. Tighten the nut and bolt with a torque wrench.



Figure 7

DO NOT HIT OR STRIKE CLAMP WITH HAMMER OR METAL TOOLS.

4. Follow Operation Instructions for "Starting the Pump and Filter System".

4.4.4 VACUUMING POOL

Vacuuming can be performed directly into the filter whenever needed. Clean cartridges after vacuuming, if required.

4.5 REMOVING THE MANUAL AIR RELEASES VALVE

The filter comes with a preinstalled manual air relief valve. Servicing the Manual Air Release Valve (MAR) should be carried out by pool professionals only by carefully following the instructions:

1. Turn off all system circulation pumps and all-electric power on the equipment pad.
2. Set all system valves in a position to prevent water from flowing to the filter.
3. The manual air release valve must be placed in the OPEN position.
4. Wait until all water leakage has stopped.
5. Grasp the handle at the top of the upper filter body, turn counterclockwise until the Relief valve unit is aligned with the "UNLOCK" position on the upper filter body and make sure the unit is completely loosened and lift out.
6. Pull straight up to remove the relief valve and handle.

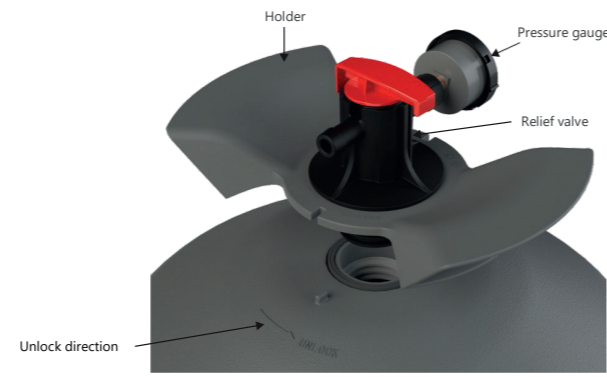
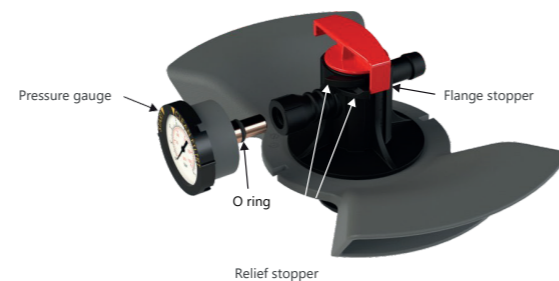


Figure 8

4.5.1 RE-INSTALLATION OF THE MANUAL AIR RELEASE VALVE.

1. Check the condition of the O-ring, replace as necessary.
2. With a clean cloth, wipe the upper filter body and O-ring groove. Remove all dirt and debris.
3. Turn the stopper of the Flange in the position.
4. Making sure the stopper of the flange is in the open position.
5. Verify the MAR discharge points away from all electrical connections.



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5. WINTERIZING FILTER

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

1. The filter should be disassembled, and the filter cartridges elements cleaned or replaced.
2. Follow directions under FILTER DISASSEMBLY INSTRUCTIONS.
3. Then follow REMOVING CARTRIDGES per instructions.
4. Reassemble per FILTER RE-ASSEMBLY INSTRUCTIONS.
5. Be sure to leave the drain plug unattached during the winter season to avoid cracking the filter body.

6. TROUBLE SHOOTING

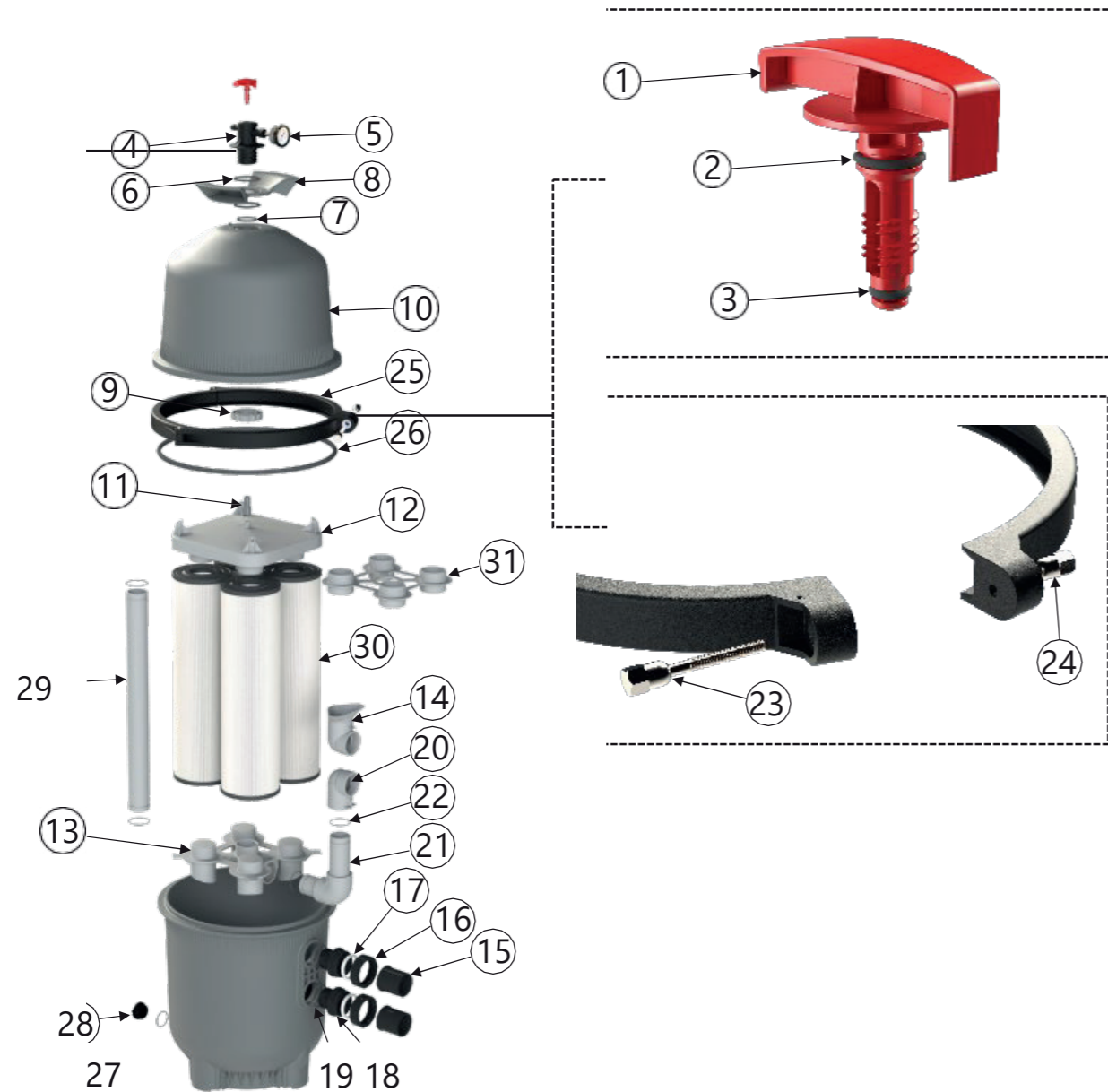
	LOW WATER FLOW	SHORT FILTER CYCLES	POOL WATER REMAINS CLOUDY
REMEDY	<ol style="list-style-type: none"> 1. Check skimmer and pump strainer baskets for debris. 2. Check for restrictions in intake and discharge lines. 3. Check for air leak in intake line indicated by bubbles returning to pool). 4. Clean Filter Cartridges 	<ol style="list-style-type: none"> 1. Check for algae in the pool and super-chlorinate as required. 2. Be sure chlorine and pH levels are in a proper range (adjust as required). 	<ol style="list-style-type: none"> 1. Check chlorine, pH, and total alkalinity levels and adjust as required. 2. Be sure the flow rate through the filter is sufficient. 3. Operate filter for longer periods.

6.1 WATER CHEMISTRY

SUGGESTED POOL CHEMISTRY LEVELS	
pH LEVEL	7.2 to 7.8
TOTAL ALKALINITY	80 to 120 ppm
CALCIUM HARDNESS	200 to 400 ppm
COMBINED CHLORINE	0.2 ppm Maximum
CHLORINE (STABILIZED)	1.0 to 3.0 ppm
CHLORINE STABILIZER (Cyanuric Acid)	60 to 80 ppm

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7. SPARE PART LIST



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KEY NO.	PART NO.	DESCRIPTION	QTY
1	550178232	Handle Air release valve	1
2	111040077	O-ring d14.3x2.5	1
3	111040078	O-ring d5.5x3	1
4	550178233	Air Release valve	1
5	117038519	Pressure gauge 60psi , plastic casing	1
6	111040079	O-ring d50x5	1
7	111000048	O-ring D76 x d65.6 x 5	2
8	430138225	Handle upper body	1
9	550058225	Nut for Handle	1
10	550188172	ICF230 upper body	1
	550188173	ICF330 upper body	1
	10	ICF430 upper body	1
	550188175	ICF530 upper body	1
	550188176	ICF680 upper body	1
11	4109000749	Air release vent	1
12	E140402	Element holder upper	1
13	550008229	Element holder lower	1
14	550128230	Inlet adaptor	1
15	430308158	Union 2inch/2.5inch ANSI	2
16	430178159	Union Nut 2" 90	2
17	111040071	O-ring D77Xd62X8	2
18	430248177	Outer thread connector	2
19	111040081	O-ring d63.8x5	2
20	550128231	Outlet adaptor	1
21	E140403	Elbows assemble	1
22	111040080	O-ring d56.2x2.5	4
23	112000083	Screw 3/8in	1
24	112030022	Nut 3/8in	1
25	E140404	Ring clamps assemble	1
26	111000043	Rubber washer D526.3xd503.2x13	1
27	550228177	Bottom Body	1
28	E160553	End cap with O-ring	1
29	107048527	PVC Pipe 452mm for ICF230	1
	107048528	PVC Pipe 508mm for ICF330	1
	107048529	PVC Pipe 658mm for ICF430	1
	107048530	PVC Pipe 845mm for ICF530	1
	107048531	PVC Pipe 986mm for ICF680	1
30	914100007	Element ICF230	4
	914100008	Element ICF330	4
	914100009	Element ICF430	4
	914100010	Element ICF530	4
	914100011	Element ICF680	8
31	550028176	Element adaptor for ICF680 Only	1