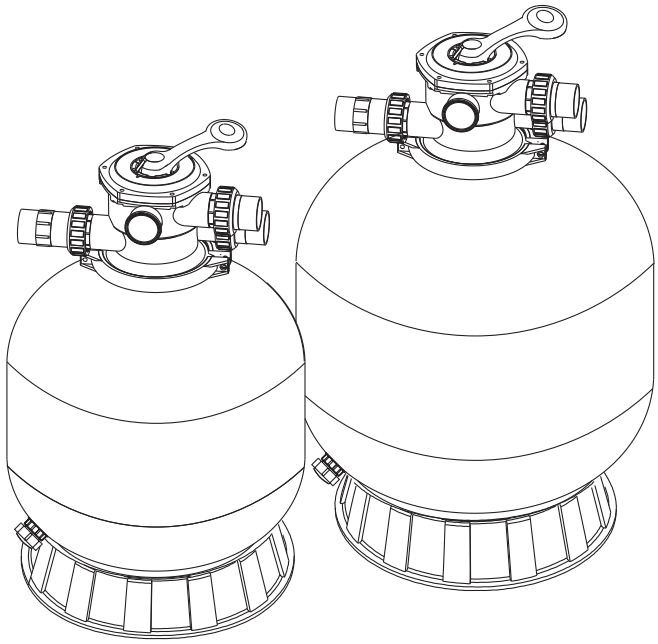
INSTALLATION AND OPERATION MANUAL

SAND FILTER



Models
RPSF14, RPSF16, RPSF18, RPSF21, RPSF25, RPSF28

IMPORTANT SAFETY INSTRUCTIONS. READ AND FOLLOW ALL INSTRUCTION. SAVE THESE INSTRUCTIONS.

NOTE: The instructions in this manual are for the use of qualified individuals specially trained and experienced in the installation and maintenance of this type of equipment and related system components. Installation and service personnel are required by some states to be licensed. Persons not qualified shall not attempt to install, service, or maintain this equipment.

This manual should be maintained in legible condition and kept adjacent to the sand filter or in a safe place for future use.

Raypak® A Rheem® Company

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P/N 241829 Rev 4

Revision 4 reflects the following changes:

Table A modified on page 7. Table A footer modified on page 7. Point 2 in Start-up modified on page 8. Illustration modified on page 12. Parts list descriptions updated on page 13. Warranty language revised on page 14.

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1. WARNINGS

Pay Attention to these Terms

⚠DANGER	Indicates the presence of immediate hazards which will cause severe personal injury, death or substantial property damage if ignored.
⚠WARNING	Indicates the presence of hazards or unsafe practices which could cause severe personal injury, death or substantial property damage if ignored.
⚠CAUTION	Indicates the presence of hazards or unsafe practices which could cause minor personal injury or product or property damage if ignored.
CAUTION	CAUTION used without the warning alert symbol indicates a potentially hazardous condition which could cause minor personal injury or product or property damage if ignored.
NOTE	Indicates special instructions on installation, operation, or maintenance which are important but not related to personal injury hazards.

⚠WARNING: Before installing this product, read and follow all warnings notices and instructions in this manual. Failure to follow warnings and instructions can result in severe injury, death, or property damage. Please call 1-(877)-213-3726 or refer to www.raypak.com for more information related to this product.

⚠WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life.

⚠WARNING: Installers, pool operators and pool owners must read these warnings and all instructions before using the sand filter.

⚠DANGER: Serious bodily harm or death can result if this sand filter is not installed and used correctly.

⚠DANGER: High-pressure release from the sand filter can cause severe injury or major property damage due to parts flying open or apart. Release all pressure in the sand filter before doing any work on it. For example, avoid adjusting the filter clamp under pressure as that can cause it to separate and cause serious injury or property damage.

⚠WARNING: BEFORE WORKING ON FILTER:
(1) Stop pump.
(2) Open air release valve.
(3) Release all pressure from system.

⚠WARNING: Risk of electrical shock. More than one disconnect switch may be required to de-energize the equipment before servicing.

⚠WARNING: This sand filter is intended for use in swimming pool applications.

⚠WARNING: Most states and local codes regulate the construction, installation, and operation of public pools and spas, and the construction of residential pools and spas. It is important to comply with these codes, many of which directly regulate the installation and use of this product. Consult your local building and health codes for more information.

⚠WARNING: Do not permit children to use or operate this sand filter.

⚠WARNING: When setting up pool water turnovers or flow rates, the operator must consider local codes governing turnover as well as disinfectant feed ratios.

⚠WARNING: DO NOT increase pump size; this will increase the flow rate through the system and exceed the maximum flow rate stated on the drain cover.

⚠WARNING: For filters intended for use in other than single-family dwellings, a clearly-labeled emergency switch shall be provided as part of the installation. The switch shall be readily accessible to the occupants and shall be installed at least 5 ft (1.52 m) away, adjacent to, or within sight of the filter.

NOTE: Always turn off all power to the pool pump before installing the cover or working on any suction outlet.

⚠CAUTION: **Elevated water temperature can be hazardous. The U.S. Consumer Product Safety Commission has these guidelines:**

1. **Spa water temperatures should never exceed 104°F (40°C). A temperature of 100°F (38°C) is considered safe for a healthy adult. Special caution is suggested for young children.**
2. **Drinking of alcoholic beverages before or during spa or hot tub use can cause drowsiness which could lead to unconsciousness and subsequently result in drowning.**
3. **Pregnant Women Beware! Soaking in water over 102°F (39°C) can cause fetal damage during the first three months of pregnancy resulting in the birth of a brain-damaged or deformed child.**
4. **Before entering the spa or hot tub, users should check the water temperature with an accurate thermometer; spa or hot tub thermostats may err in regulating water temperatures by as much as 4°F (2.2°C).**
5. **Persons with a medical history of heart disease, circulatory problems, diabetes, or blood pressure problems should obtain a physician's advice before using pools or hot tubs.**
6. **Persons taking medications which induce drowsiness, such as tranquilizers, antihistamines, or anticoagulants, should not use spas or hot tubs.**

2. FILTER OVERVIEW

⚠WARNING: This filter operates under high pressure. When any part of the circulating system (e.g., clamp, filter, valves, etc.) is serviced, air can enter the system and become pressurized. Pressurized air can cause the lid or control valve to separate which may result in serious injury, death, or property damage. To avoid this potential hazard, follow these instructions.

Before any service to the circulating system (repositioning the valves, beginning the assembly, disassembly, clamp adjustment, etc.) do the following:

- **a. Turn off electricity going both to the pump and to any automatic controls to avoid accidental system start-up during servicing.**
- **b. Open the manual air relief valve.**
- **c. Wait until the pressure gauge reads zero (0) to ensure all pressure is gone.**

1. **When, or if, the filter clamp is installed, follow the filter valve and clamp installation instructions exactly.**
2. **Follow the system restart instructions exactly after any service on the circulation system is completed.**
3. **Maintain circulation system proactively. Damaged and worn parts must be replaced immediately (e.g., clamp, pressure gauge, relief valve, O-rings, etc.).**
4. **Mount the filter properly and position it according to all provided instructions.**

⚠WARNING: Failure to operate your filter system or inadequate filtration can cause poor water clarity thus obstructing visibility in your pool. Poor water clarity may obscure objects while swimming which, while swimming and diving, could cause serious personal injury or death. Never swim in a pool with poor water clarity.

The sand filter is designed to last for years of use when maintained properly. Its purpose is to extract suspended particles (dirt) from the pool water, thereby keeping the water clear. A special filter sand is used to trap and collect the particles. The filtering action occurs as the water flows through the unit and the particles are trapped in the sand bed which forms the filter.

Water enters through a valve on the top of the filter and then passes evenly though the filter. The filtered water then flows through the bottom side of the filter, up through the stand pipe, through a valve on the top, and then back into the pool though piping or hoses.

In terms of capacity, please ensure that the volume of water cleaned in every 24-hour cycle is at least double the total volume in the pool so proper cleaning can occur.

Over time, enough particles will collect in the filter sand to impede the easy flow of water though it and this resistance will cause the filter pressure to build to such a point that the filter needs cleaning (purging). That process is called backwash.

The backwash procedure reverses the flow of water through the filter to flush out the captured particles and discharge them, not back into the pool, but into a waste line. A valve on the unit top is set to BACKWASH. This is a manual procedure. After running the BACKWASH cycle, reset the value to FILTER manually to resume normal filtration.

The sand filter, while designed to remove particles and/or other debris suspended in the water, does not adjust the pH level or the bacterial count.

Sanitation and pH balancing are specialized and important areas that are covered with other tools, equipment and knowledge and as such are beyond the scope of this manual. Roughly speaking, pH level should be in the range of 7.2~7.6, and chlorine about 1~2 ppm, but pool chemistry involves much more than this. Check the local codes and with pool service specialists for required instruction.

3. INSTALLATION

⚠WARNING: Blockage of suction fittings can cause serious or fatal injury due to drowning. To reduce the risk of injury, do not permit children to use this product.

⚠WARNING: Never work on the pump while it is running or the power is still connected. High voltage can cause serious or fatal injury. A suitable ground fault interrupter (GFCI) should always be installed at the power supply source of this unit. Article 681-31 of the NEC requires that a GFCI be used if this pump is used with a storage pool. Be sure to ground the motor before connecting to an electrical AC power source. Failure to ground the motor can cause serious or fatal electrical shock hazard. DO NOT ground to a gas supply pipe line.

⚠DANGER: High-pressure release from the sand filter can cause severe injury or major property damage due to parts flying open or apart. Release all pressure in the sand filter before doing any work on it. For example, avoid adjusting the filter clamp under pressure as that can cause it to separate resulting in serious injury or property damage.

⚠WARNING: The system's centrifugal pump operates with electrical voltage and can generate both vacuum and pressure in the water system. When properly wired and plumbed, this pump will operate in a safe manner.

⚠WARNING: Chemical fumes and/or spills can cause serious corrosion to the filter and pump structural components. Structurally-weakened components can cause filter, pump, or valve attachments, to separate and could cause serious bodily injury or property damage.

Pouring Sand Filter Sand Media

Common tools such as screwdrivers, wrenches, and consumables like pipe sealant for plastic adapters are required for the installation and service of the sand filter. See the schematic for layout information. See **Figure 4.**

1. The filter should be placed on a level concrete slab, very firm ground, or equivalent. Orient the filter so that the piping connections and control valve are convenient and accessible for operation and service.
2. Filter sand media is loaded through the top opening of the filter as follows:
   a. Loosen the flange clamp and remove the filter control valve (if previously installed).
   b. Cap the internal pipe with a plastic cap to prevent sand from entering it.
   c. We recommend filling the tank approximately 1/2 full with water to provide a cushioning effect when the filter sand is poured in. This helps protect the under-drain laterals from excessive shock.
   d. Carefully pour in the correct amount and grade of filter sand while making sure the center pipe remains centered in the opening. When done, the sand surface should be leveled and should rise up to about the middle of the filter tank. Next remove the plastic cap from the internal pipe.

Packaging

A hose barb kit and union kit are included and needed to make the connections.

UNION KIT HOSE BARB KIT

Figure 1. Connection Kits

Filter Control Valve Assembly

1. Assemble the filter control valve into the filter tank.
   a. Insert the filter control valve, with O-ring in place, into the tank neck, taking care that the center pipe slips into the hole at the bottom of the valve.
   b. Place two plastic clamps around the valve flange and tank flange and tighten just enough so the valve may be rotated on the tank for alignment purposes.
   c. Carefully screw the pressure gauge, with O-ring in place, into the tapped hole on the valve body. Do not over-tighten.
   d. Connect the pump to the control valve opening marked PUMP. After connections are made, tighten the valve flange clamps with the screwdriver, tapping around the clamp with the screwdriver handle to help seat the valve flange clamp.
2. Make the connection from the pool pipe to the control valve opening, marked RETURN, and complete the other necessary plumbing connections such as the suction lines to the pump, waste line, etc.
3. Make the electrical connections to the pump per pump instructions.
4. To prevent water leakage, make sure all pipe connections are tight.

Valve Key Assembly

1. Place the valve key so that wedge opening is at TOP port. See handle in **Figure 4**. The flat edge of the cover screw lug should align with the flat edge of the body screw lug.
2. Position the cover O-rings.
3. Secure the assembly to the body with the cover screws. Tighten the cover screws evenly and alternately. Do not over-tighten.

Model	Height in. (mm) A	Diameter in. (mm) B	Valve Port Size Inch	Silica Height in. (mm) C	Silica 16/30* Weight lb. (kg)	Max Operating Pressure psi (bar)
RPSF14	28.6 (726)	13.8 (351)	1.5"	6.3 (160)	44 (20)	28 (2)
RPSF16	29.8 (757)	15.7 (399)		6.9 (175)	77 (35)	
RPSF18	32.0 (813)	17.7 (450)		8.3 (211)	99 (45)	
RPSF21	33.3 (846)	20.7 (526)		9.3 (236)	209 (95)	
RPSF25	37.4 (950)	24.7 (627)		11.8 (300)	319 (145)	
RPSF28	40.2 (1021)	27.7 (704)		13.0 (330)	462 (210)	

Recommended Filter Media: 16/30 Mesh Silica Sand / Silica #20 (0.5 - 0.8mm diameter)

*Suggested Silica Weight is for reference only and based on recommended filter media. Weight will vary based on type and size of media used.

Table A. Dimensions

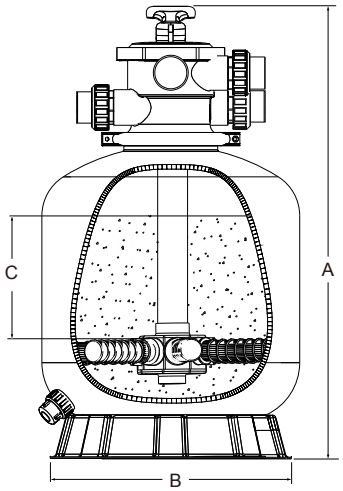

Figure 2. Dimensions

4. START-UP

NOTE: During initial clean-up of the pool water it may be necessary to backwash more frequently due to a possibly unusually-heavy initial dirt load in the water.

⚠WARNING: Always turn the pump off before changing valve positions. Changing valve positions while the pump is running can damage the control valve, which may cause serious injury or property damage.

1. Make sure the correct amount of filter media (specified sand) is put into the tank and that all connections have been connected and secured.
2. Depress the multiport valve handle and rotate it CLOCKWISE (right) to the BACKWASH position. Always depress the valve handle before turning it to prevent damage to the multiport valve seal.
3. Prime and start the pump according to the pump instructions. Always depress the valve handle before turning it to prevent damage to the multiport valve seal. Once water is flowing out of the waste line, run the pump for at least 1 minute. An initial backwash of the filter is recommended to remove any impurities or fine sand particles in the sand media.
4. Turn the pump off and set the multiport valve to RINSE position. Start the pump and operate it until water in the view glass is clear, about 1/2 to 1 minute. Turn the pump off and set the valve to FILTER position and restart the pump. The filter is now operating in the normal filter mode filtering dirt particles from the pool water.
5. Adjust pool suction and return valves to achieve desired flow. Check system and filter for water leaks and tighten connections, bolts and nuts, as required.
6. Note the initial pressure gauge reading when the filter is clean. It will vary from pool to pool depending upon the pump and general piping system. Over time, as the filter removes dirt and impurities from the pool water, the accumulation of dirt in the filter will cause the pressure to rise and diminish the water flow. When the pressure gauge reading is 8-10 PSI higher than the initial "clean" pressure it started with, it is time to backwash the filter (see Filter Backwash Procedure).

5. GENERAL MAINTENANCE

NOTE: It is essential to set up a regular schedule to clean the sand filter by BACKWASHING and RINSING to provide clean, safe, and healthy swimming water. The time between cleans and the length of cleaning time will depend on size of pool, usage, and other environmental conditions. Consult your local pool professional to work out a program that best suits your pool.

It is important to maintain a regular service schedule program with pool equipment to ensure the best operation and longest lasting results. Regular maintenance can identify any potential issue early and save on expensive maintenance at a later date. See **Table B**.

Filter and Control Valve Functions

Information is provided in **Figure 3** and **Table C** for using the control valve to regulate all the filter functions.

Cleaning

⚠WARNING: Failure to operate your filter system or inadequate filtration can cause poor water clarity obstructing visibility in your pool. Poor water clarity may obscure objects in the water which, while swimming and diving, could cause serious injury or death. Never swim in a pool with poor water clarity.

Cleaning your filter will give you better quality water that is clean, clear, and safe for swimming. It is highly recommended to clean the filter on a regular basis. Monitor the pressure gauge and to switch on BACKWASH when an increase of 8-10 PSI is noted compared to the pressure gauge reading when the filter is clean.

Filter Backwash Procedure

⚠WARNING: To prevent equipment damage and possible injury, always turn pump off before changing valve position.

Perform the backwash operation as follows:

1. Turn off the pump.
2. Change the position of the multiport valve handle from FILTER to BACKWASH.

3. Power up the pump again. The water flow is automatically reversed through the filter so the water is directed from the bottom of the tank, then up through the sand. This flushes the trapped dirt and debris out of the waste line.
4. Check through the visual sight glass on the multi-function valve outlet. The duration of the backwash operation will depend on how dirty your filter is. Continuously check the sight glass until the water becomes clear, after which the pump is turned off.
5. Change the position of the multiport valve handle from BACKWASH to RINSE.
6. Turn the pump back on. The water flow will now be directed through the sand bed and then out through the waste line. This will settle the sand bed properly for normal operation.
7. Continue checking the sight glass until the water is clear which usually is about half the time of the backwash cycle.
8. Turn the pump off.
9. Change the position of the multiport valve handle from RINSE to FILTER.
10. Turn the pump on.

Chemical Cleaning

Algae load, calcification, sanitation and other poor water conditions will affect the proper function and efficiency of the filter. Follow local guidelines and pool professional advice to optimize these other key facets of water quality that the filter does not control, but is impacted by.

Winterizing the System

⚠CAUTION: Allowing water to freeze in the system will damage the system and cause potential water damage/ flooding and potential property damage.

⚠CAUTION: The Multiport Valve should be left in the "Winterize" position during the shutdown season so the rubber seal of the valve diverter has no pressure on it. Failure to do so can damage the valve diverter seal which can cause property damage from leaking water.

CAUTION: Only use Propylene Glycol as an anti-freeze, as other anti-freeze solutions are highly toxic and will damage the pump.

Winterizing is a process for protecting your sand filter during freezing conditions that can damage all pool filtration equipment. Damage results from ice expansion (water expands as it freezes) cracking the parts. It is highly recommended to take the following steps when preparing your filter for winter conditions:

1. Backwash the filter for at least 30 minutes before closing down the pool for winter. This will clean the filter bed thoroughly and remove any debris from the system.
2. Drain the filter tank by removing the drain cap at the bottom of the filter tank. Also leave the cap off during winter.
3. Set the control valve handle between the RINSE and FILTER. This will lift the handle and help with the draining process by allowing air to enter into the tank.
4. Unscrew the pressure gauge from the control valve and store the pressure gauge indoors.
5. Drain and winterize the pump according to the pump instructions.

This is an ideal time for any repairs that may be required during the off-season. Most pool professionals have recommendations of what will be needed before the next pool season.

Period	Check Point	Related Problems
Weekly	Check pressure gauge	If pressure increases by 8-10 PSI, then backwash and rinse the filter as per instructions.
Quarterly	Check all gaskets and pressure gauge.	Isolate and turn off the pump. Remove all gaskets and turn over. You can also apply a silicone-based grease to extend gasket life. If dry, then contact your local pool professional for replacement.
	Check around the unit for leaves, debris or signs of flooding.	Replace any debris that is restricting air circulation around the filter. If in a flood prone location, rectify.
	Check for any insects, ants, etc.	It is a good practice to use a good quality surface spray around your equipment. Make sure all units are turned off and then spray around all units to eliminate any insects, ants, etc.
	Check for any leaks	If you notice any water leaking from the filter or other equipment, check the gaskets first and reseal. If leaks continue, contact your local pool professional to assess and rectify.

Table B. Maintenance Service Schedule

General

A boss with pipe tap is provided for installing the optional influent pressure gauge.

Valve Service

Stop the pump and close the gate valves on both the suction and discharge sides before proceeding.

1. Set handle in the filter position.
2. Remove the cover screws.
3. Lift the cover and key assembly out.

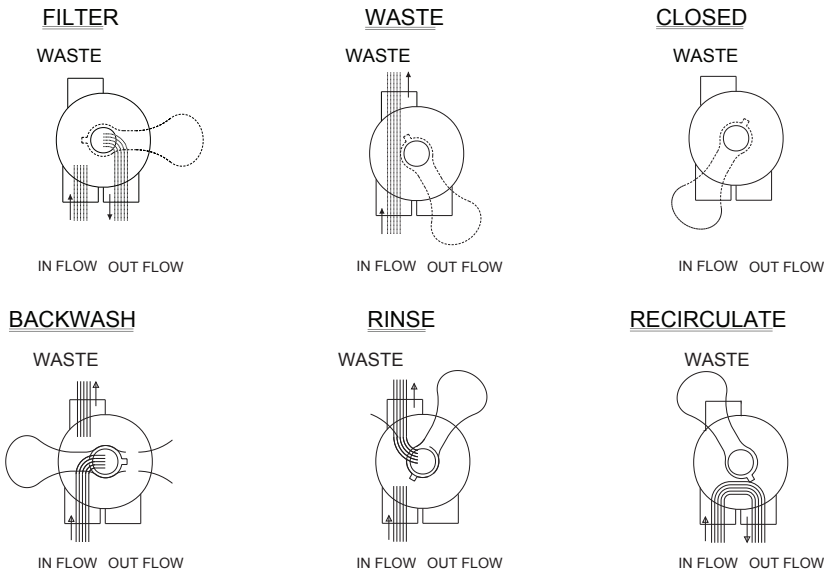

Figure 3. Multiport Valve Position Functions

Valve Position	Function
FILTER	This is the standard normal operation position of your filtration system. The water flows in from your pool and is distributed across the top of the sand bed in the filter. Through pressure, this water then flows down through the sand allowing debris to be removed from the water and collected in the sand bed. Water is then routed up through the laterals and the center stem pipe and is returned to the pool, usually via some form of sanitation and/or heating. The FILTER position can also be used for manual vacuuming and cleaning.
BACKWASH	This position is used when your sand filter's sand bed needs cleaning. Use the pressure gauge to monitor when this is required, usually 8-10 PSI above the operation of a clean filter. When BACKWASH is selected, the water flow is reversed and goes down the stem pipe and out through the laterals. This lifts the sand bed and allows debris to be taken out of the filter and through the waste pipe. The sight glass will show the quality of the water. Continue BACKWASH until the water visually clears.
RINSE	This setting is used after completing the BACKWASH cycle. In the RINSE setting, water is taken from the pool and distributed on the sand bed. This downward flow settles the sand bed, disturbed from backwashing, and carries any remaining loose dirt through the waste line. By using RINSE after backwashing, you will eliminate any debris from returning to the pool water. Rinse until you see clear water through the transparent sight glass. Time needed is about half the time of a BACKWASH cycle.
WASTE	The WASTE position allows you to pump excess water from the pool directly down through the waste pipe. This position is useful after heavy rains when the water level is too high. Water is directed straight through the multiport control valve and bypasses the filter, going directly to waste. You can also use this position to vacuum heavy concentration of debris from the pool.
RECIRCULATE	Similar to the WASTE setting, RECIRCULATE allows the water to bypass the filter but go straight back to the pool. This is a useful setting if you have applied some chemicals that need to be circulated, but not removed by the filter. In addition, if a leak develops in the filter, use recirculate to continue circulating water until leaks are located for fixing.
CLOSED	The CLOSED setting acts like a valve and prevents the flow of water through the tank, and is particularly useful when doing any maintenance on the filtration system.

Table C. Multiport Valve Position Functions

6. TROUBLESHOOTING

The table below identifies some of the main issues that may be encountered with your sand filter. This should assist in solving most of the major problems. It is highly recommended that regular maintenance of your swimming pool equipment, including the sand filter, be performed by a qualified pool professional. This will extend the life of your equipment and give better performance.

Problem	Cause	Action
Sand entering the pool	Sand size is too small and getting through laterals	Change sand
	Flow rate on the pump is too high and pushing sand through laterals	Adjust flow rate
	Sand bed calcified due to poor water chemistry	Adjust chemistry (pH balance)
	Broken lateral	Repair
	Loose center-pipe	Re-tighten
	Too much sand in the tank	Reduce sand level
	Multiport valve not correctly positioned in the filter	Remove and reattach correctly
	Too much air in the filter	Purge air
Sand coming out of waste line	Flow rate on the pump is too high and lifting sand too high during backwash	Adjust flow rate, change the pump as needed
Pool water is cloudy due to poor filtering	Sand bed is dirty and requires backwashing	Backwash to remove dirt
	Incorrect sand has been installed	Replace with correct specification
	Algae build-up in the filter due to poor water chemistry	Adjust chemistry (chlorine)
	Calcified sand bed due to poor water chemistry	Adjust chemistry (pH balance)
	Heavy swimmer usage	Backwash more frequently
	Flow rate on the pump is incorrect for filter size and pool size	Adjust flow rate, change the pump as needed
	Backwashing cycle is too short	Increase backwash cycle length
	Backwash line is too small restricting water flow	Increase pipe size
Filter leaking water	Tank cracked	Replace
	Drain plug not tight	Re-tighten
	Valve to tank O-ring damaged	Replace
Multiport control valve leaks	Handle is not properly located in selected setting	Re-assemble correctly
	Valve to tank O-ring damaged	Replace
	Valve cover O-ring damaged	Replace
	Pressure gauge O-ring damaged	Replace
Abnormal loss of pool water	Leak inside control valve	Re-tighten or replace as needed
	Leak from pool or PVC piping	Inspect, repair, replace
High pressure filter	Filter requires backwashing	Backwash
	Calcified sand bed due to poor water chemistry	Adjust chemistry (pH balance)
	Return lines too small for pump flow rate	Increase pipe size
Low pressure in filter	Multiport control valve incorrectly set	Re-assemble correctly
	Pump flow rate is too slow	Check speed and control valves
	Air leak in pump suction	Check seals and tighten as needed

Table D. Troubleshooting

7. ILLUSTRATED PARTS LIST

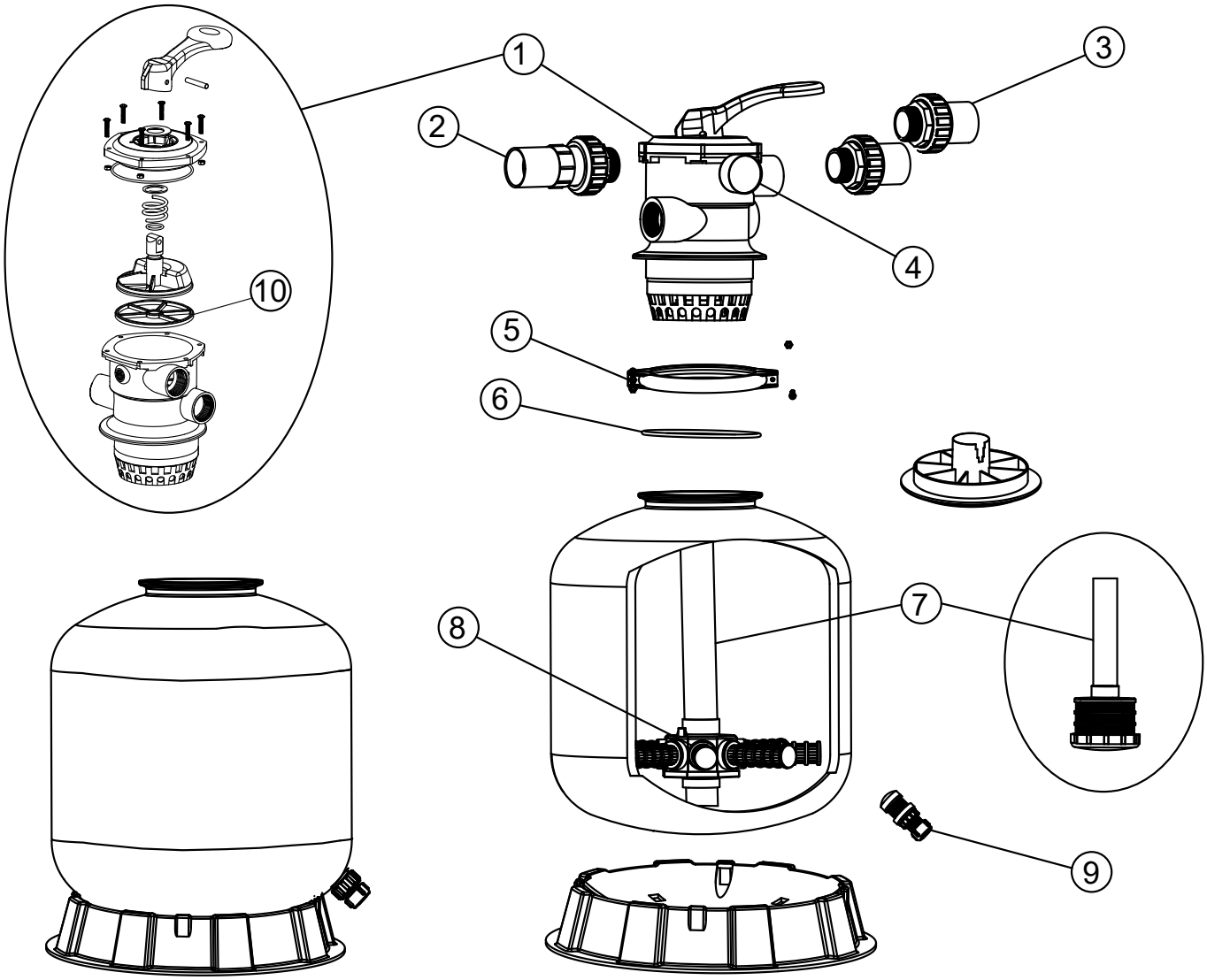

Figure 4. Sand Filter Components – Exploded View

Item	Description	Raypak Order No.
1	Kit - 6-Way Valve 1-1/2"	018214F
2 3 4	Kit - Union and Pressure Gauge	018252F
5 6	Kit - Locking Clamp	018215F
7	Kit - Lateral Assy with Center Pipe RPSF14	018216F
	Kit - Lateral Assy with Center Pipe RPSF16	018217F
	Kit - Lateral Assy with Center Pipe RPSF18	018218F
	Kit - Lateral Assy with Center Pipe RPSF21	018219F
	Kit - Lateral Assy with Center Pipe RPSF25	018220F
	Kit - Lateral Assy with Center Pipe RPSF28	018221F
8	Kit - Lateral Assy 115mm	018222F
	Kit - Lateral Assy 126mm	018223F
9	Kit - Water Drain PVC	018224F
10	Spider Gasket for 6-Way Valve.	018767F

8. WARRANTY

LIMITED WARRANTY
ABOVE GROUND SWIMMING POOL FILTERS
Models: RPSF14, RPSF16, RPSF18, RPSF21, RPSF25, RPSF28

SCOPE OF WARRANTY
Raypak, Inc. ("Raypak") warrants to the original owner that the above ground swimming pool filter models listed above and sold with this Limited Warranty certificate (the "Filter"), when installed in the United States of America with a pool, will be free from defects in materials and workmanship under normal use and service for the Applicable Warranty Period defined herein. In accordance with the terms of this Limited Warranty, Raypak will, at its option, repair or furnish a replacement for the FILTER or any defective part of the FILTER that fails in the normal use and service during the Applicable Warranty Period. The repair or replacement will be warranted for only the unexpired portion of the original Applicable Warranty Period, or the Extended Warranty Period, as the case may be.

EFFECTIVE DATE
The Effective Date of this Limited Warranty is the date of original installation if properly documented. If you are not able to provide documentary proof of the date of original installation, the Effective Date will be thirty (30) days after date of purchase, not to exceed one (1) year after date of manufacture. All Applicable Warranty Periods specified in this Limited Warranty are measured from the Effective Date.

APPLICABLE WARRANTY PERIOD – UNREGISTERED
If the FILTER is installed with a pool, the Applicable Warranty Period is ninety (90) days from the Effective Date, parts only, for the FILTER and component parts.

EXTENDED WARRANTY PERIOD – REGISTERED
If, within 90 days of the Effective Date, the FILTER is installed in a pool at a single family residential dwelling and registered with Raypak (www.raypak.com/warranty), then the Applicable Warranty Period is one (1) year from the Effective Date for the FILTER and component parts.

LABOR AND SHIPPING COSTS
This Limited Warranty does **NOT** cover any travel time or any labor costs. Furthermore, unless applicable state law provides otherwise, this Limited Warranty does **NOT** cover any shipping costs to and from Raypak's designated service provider or to or from the installation site. All of the foregoing costs and expenses are your responsibility, unless applicable state law provides otherwise.

WARRANTY EXCLUSIONS
This Limited Warranty does **NOT** apply:
1. if the FILTER has been moved from its original place of installation, or if the original owner no longer owns the property where the original installation was made;
2. if the FILTER is not properly installed in a pool in accordance with applicable local codes and ordinances, good trade practices and the manufacturer's installation instructions;
3. if the rating plate(s) or serial number(s) are altered or removed;
4. if the FILTER is modified in any way, or if non-factory authorized accessories or other components are used in conjunction with the FILTER;
5. to damage, malfunctions or failures resulting from failure to properly install, operate or maintain the FILTER in accordance with the manufacturer's instructions;
6. to damage, malfunctions or failures resulting from abuse, act of nature, accident, fire, flood, freeze, lightning or the like;
7. to damage, malfunctions or failures resulting from connected system control devices;
8. to performance problems caused by improper sizing of the FILTER or electric service voltage, wiring or fusing;
9. to damage, malfunctions or failures resulting from any alteration, including the use of any attachment, including without limitation, any energy saving device not authorized by the manufacturer;

10. to damage, malfunctions or failures resulting from misuse or neglect, including but not limited to, freeze-ups.

HOW TO MAKE A WARRANTY CLAIM
You should immediately notify your dealer and provide proof of purchase model number serial number and date of installation. If the dealer is not available, please contact Raypak customer service at 805-278-5300. **Proper authorization MUST be obtained PRIOR to any repairs for the Limited Warranty to apply. This Limited Warranty is VOID if the product is repaired or altered in any way by ANY persons or agencies other than those authorized by Raypak.**

When requesting support please be ready to supply the model number, serial number, date of original installation and a description of the problem. Raypak reserves the right at all times to inspect, or require the return of, the defective FILTER or component part and to verify warranty coverage at its factory.

Warranty service CANNOT be initiated until the status of the warranty coverage has been established.

EXCLUSIVE WARRANTY-LIMITATION OF LIABILITY

THE LIMITED WARRANTY IS THE ONLY WARRANTY PROVIDED BY RAYPAK IN CONNECTION WITH THE FILTER AND ITS COMPONENT PARTS. NO ONE IS AUTHORIZED TO MAKE ANY OTHER WARRANTIES ON RAYPAK'S BEHALF. ANY IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIOD SPECIFIED IN THIS LIMITED WARRANTY. RAYPAK'S SOLE LIABILITY WITH RESPECT TO ANY DEFECT SHALL BE AS SET FORTH IN THIS LIMITED WARRANTY. IT IS AGREED THAT RAYPAK SHALL HAVE NO LIABILITY WHETHER UNDER THIS LIMITED WARRANTY OR IN CONTRACT, TORT OR NEGLIGENCE OR OTHERWISE FOR CLAIMS FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING NO LIABILITY FOR DAMAGE FROM WATER LEAKAGE), ALL OF WHICH ARE EXPRESSLY EXCLUDED, NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, OR FOR THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

We suggest you immediately record the model, serial number, date of original installation and receipt of purchase and retain this Limited Warranty Certificate in the event warranty service is needed.

DO NOT RETURN THIS DOCUMENT TO RAYPAK. KEEP IT WITH YOUR POOL FILTER OR BUSINESS RECORDS.

Register your product online at www.raypak.com/warranty

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