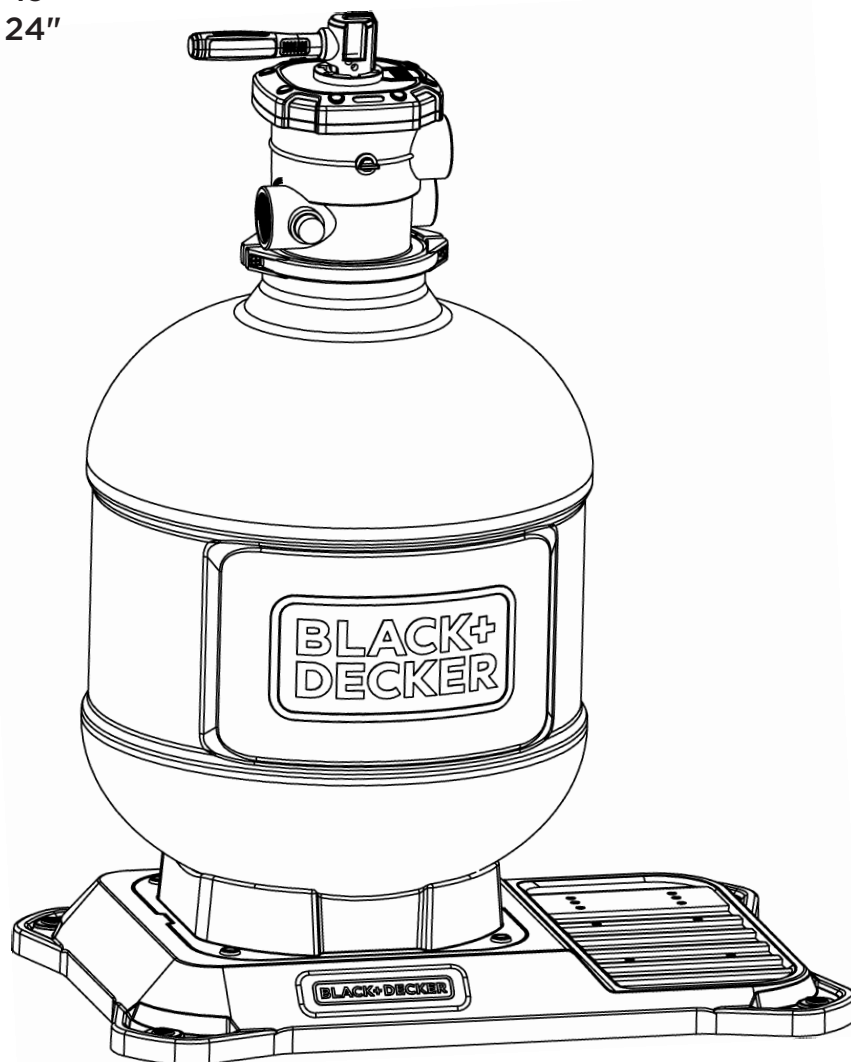


# BLACK+ DECKER®

**SAND FILTER  
ABOVE GROUND  
INSTRUCTION MANUAL**

**CATALOG  
BDXBT06165 — 19"  
BDXBT06181 — 24"**



**Please read before returning this product for any reason.**

### TABLE OF CONTENTS

1. Important Safety Instructions .....	3	3.5 Bonding .....	7
2. General Information .....	4	3.6 Electrical Wiring .....	8
2.1 Introduction .....	4	3.7 Assembly .....	9–10
2.2 Sand Filter Overview .....	4	4. Operating the Filter .....	10
2.3A Sand Filter Structure .....	5	4.1 Priming the Filter .....	10
2.3B Sand Filter Structure .....	6	4.2 Backwashing .....	10
3. Installation .....	7	4.3 Additional Handle Controls .....	10
3.1 Tool Requirements .....	7	5. Winterizing .....	11
3.2 Location .....	7	6. Troubleshooting .....	11
3.3 Piping .....	7	7. Limited Warranty .....	12
3.4 Electrical Requirements .....	7		

### EQUIPMENT INFORMATION RECORD

DATE OF INSTALLATION \_\_\_\_\_

INSTALLER INFORMATION \_\_\_\_\_

NOTES: \_\_\_\_\_

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## Definitions: Safety Alert Symbols and Words

This instruction manual uses the following safety alert symbols and words to alert you to hazardous situations and your risk of personal injury or property damage.

**⚠ DANGER:** Indicates an imminently hazardous situation which, if not avoided, **will** result in **death or serious injury**.

**⚠ WARNING:** Indicates a potentially hazardous situation which, if not avoided, **could** result in **death or serious injury**.

**⚠ CAUTION:** Indicates a potentially hazardous situation which, if not avoided, **may** result in **minor or moderate injury**.

**NOTICE:** Indicates a practice **not related to personal injury** which, if not avoided, **may** result in **property damage**.

## 1. Important Safety Instructions

When using electrical appliances, basic precautions should always be followed, including the following: READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE.

### **⚠ WARNING:**

- Read all safety warnings and all instructions. Failure to follow the warnings and instructions listed below may result in electric shock, fire, and/or serious injury.
- To reduce the risk of injury, do not permit children to use or climb on this product.
- Improper installation will create an electric hazard which could result in death or serious injury to pool users, installers, or others due to electrical shock, and may also cause damage to property.
- **Risk of electric shock.**
- Always disconnect ALL power to the sand filter at the circuit breaker before servicing the sand filter. Failure to do so could result in death or serious injury to serviceman, pool users, or others due to electric shock.
- All electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electric Code® (NEC®).
- In accordance with the National Electric Code® (NEC®), this unit must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI).
- To reduce the risk of electrical shock, replace any damaged cord immediately.

## 2. General Information

### 2.1 Introduction

This manual contains information for the proper installation and operation of the Black & Decker Sand Filter family. The instructions in this manual **MUST** be followed precisely.

### 2.2 Sand Filter Overview

The pool sand filter is a self-contained unit designed specifically for pool filtering. Each component has been selected with care to achieve a high-quality product in an effort to exceed all industry standards.

Filters are equipped with branched laterals. This innovative design improves filtration and backwashing hydraulic efficiency. The lateral assembly gives the filter complete coverage of the bed, utilizing more area of the filter media for filtering process.

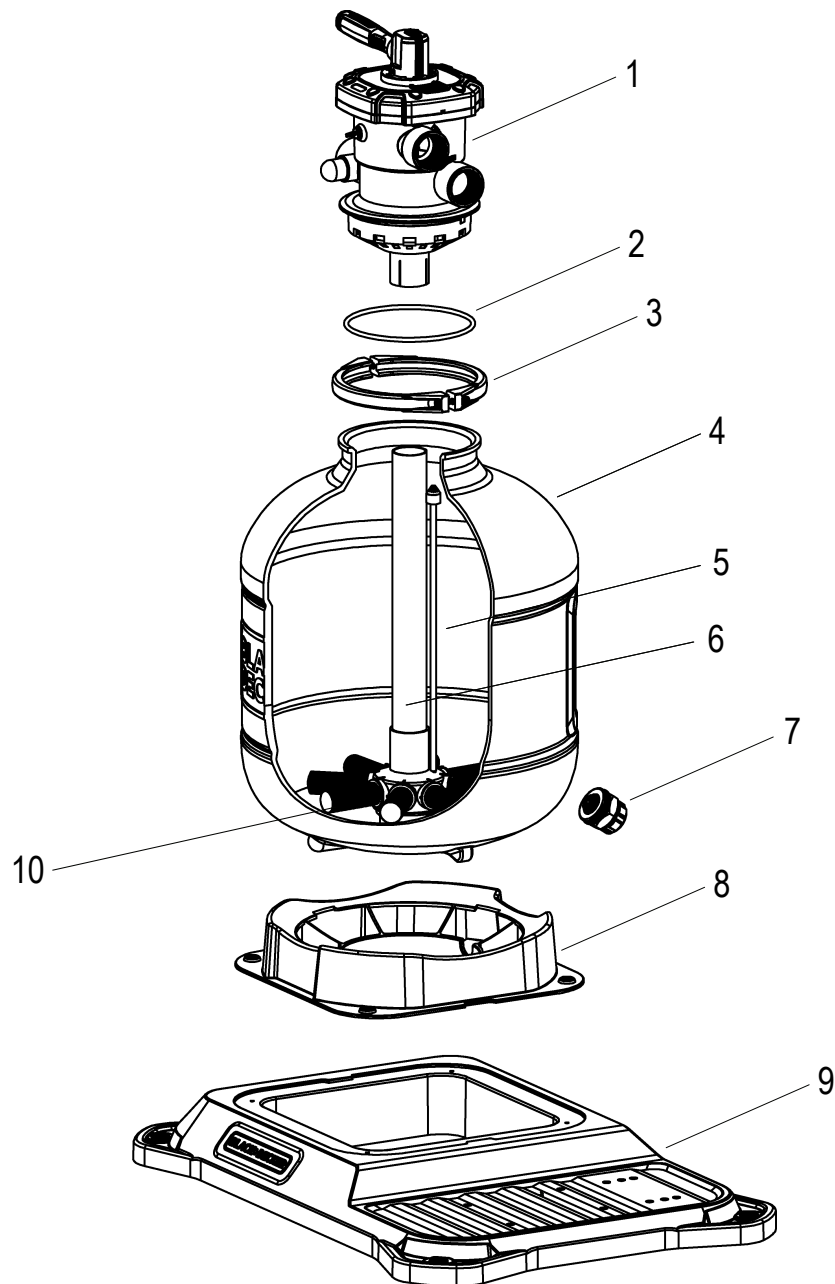
Your filter cannot be run if the water is not at the proper level in the pool. Running the filter without water can cause serious damage to your pump and filter. **NEVER** move selector handle while pump is on. Pump **MUST** be switched off to change the position of the valve. Failure to comply will cause damage to your valve and is not covered by warranty.

**NEVER** backwash for longer than one minute at a time. Backwashing longer than one minute will cause sandblasting of internal components and can lead to damage of standpipe and/or laterals and voids warranty.

#### General Features

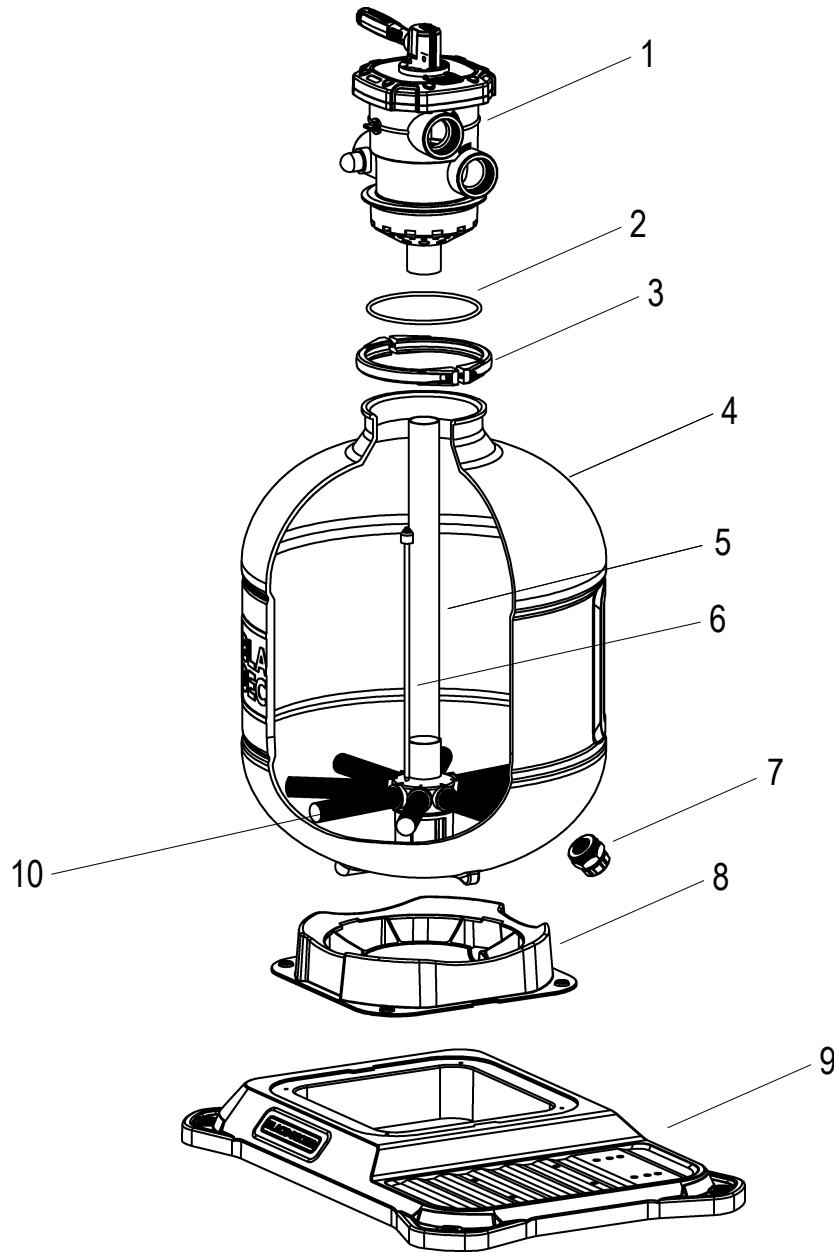
- Rugged filter tank constructed of durable polyethylene, corrosion-proof to withstand winter's worst.
- Top mount multiport provides for easy use and quick backwashing.

2.3A Sand Filter Structure —19"



Ref	Part Number	DESCRIPTION	Quantity
1	BD 45357	1.5" 6 way	1
2	BD 45411	Clamp O-Ring	1
3	BD 45543	Flange Clamp	1
4	BD 45853	19" Tank Only	1
5	BD 45888	Air Release	1
6	BD 46140	Standpipe	1
7	BD 46159	Drain Plug Assy	1
8	BD 46205	Support Base	1
9	BD 46248	Long Base	1
10	BD 46256	Lateral	8

2.3B Sand Filter Structure — 24"



Ref	Part Number	DESCRIPTION	Quantity
1	BD 45357	1.5" 6 way	1
2	BD 45411	Clamp O-Ring	1
3	BD 45543	Flange Clamp	1
4	BD 46264	24" Tank Only	1
5	BD 45888	Air Release	1
6	BD 46140	Standpipe	1
7	BD 46159	Drain Plug Assy	1
8	BD 46205	Support Base	1
9	BD 46248	Long Base	1
10	BD 46256	Lateral	8

## 3. Installation

### 3.1 Tool Requirements

To properly install this sand filter, you must have the following tools ready for use:

- Phillips head screwdriver
- Flat head screwdriver
- O-ring lube

### 3.2 Location

1. The placement of the sand filter is very important in keeping installation costs to a minimum while providing for maximum efficiency of operation, as well as allowing adequate access for service and maintenance.
2. The unit should be located as close as practical to the existing pool pump and filter to minimize water piping. The use of 90 degree bends and short radius elbows in the water piping should be kept to a minimum.
3. The pool filter should be installed on a level concrete slab not more than 6 feet above the pool water level. Position the pool sand filter so that the piping connections, multiport valve and drain are convenient and accessible for operation and maintenance.

### 3.3 Piping

1. The piping sequence is as follows: pool > pool pump > filter > heater > corrosion-resistant check valve > chemical feeder > pool. Use rigid PVC piping if possible.
2. All joints should be glued with PVC glue. When the piping installation is complete, operate the pool pump and check the system for leaks. Then, check the filter pressure gauge to verify that there isn't any indication of excessive pump head pressure.

### 3.4 Electrical Requirements

1. Install all equipment in accordance with the National Electrical code and all applicable local codes and ordinances.
2. The wiring of your pump should be performed by a qualified licensed electrician in accordance with local requirements. A properly-sized breaker and copper wire must be used. Check the pump data label for required maximum breaker size.
3. A means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

### 3.5 Bonding

1. Because all metals have different electrical potentials, all metal and electrical components of the pool system must be bonded together. This includes the metal framework of the pool, the light, the pump, the filter (if made out of metal), the heater, any automatic chlorine generator, and any other metal or electrical equipment. On some older pools, this substructure bond wire may not exist. In these cases, a 6 to 8 foot solid copper rod must be driven into the ground near the equipment.
2. All electric and metal components must then be bonded to each other, and then to the copper rod. Contact a licensed electrician.

**⚠ WARNING:** The pump must always be powered off before opening the filter.

**⚠ WARNING**

**RISK OF ELECTRICAL SHOCK OR ELECTROCUTION.** The Sand Filter must be installed by a licensed or certified electrician or a qualified service professional in accordance with the National Electrical Code and all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death or serious injury to users, installers, or others due to electrical shock, and may also cause damage to property.

**Always disconnect power to the sand filter at the circuit breaker before servicing the sand filter. Failure to do so could result in death or serious injury to service people, pool users, or others due to electric shock and/or property damage.**

Read all servicing instructions before working on the pump.

### 3.6 Electrical Wiring

All electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electric Code® (NEC®). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI. The unit must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push the reset button. Power should be restored. The GFCI is defective if the GFCI fails to operate in this way. If the GFCI interrupts power to the filter without the test button being pushed, a ground current is flowing, indicating the possibility of an electric shock. Stop using this filter. Disconnect the filter and ask a qualified professional to correct the problem before using.

The pump accepts 230V, 50, or 60Hz single phase input power. The terminal block connections are capable of handling up to 12AWG solid or stranded wire. There are also fast-on type quick connectors, however, check the local electrical codes for the desired connection method. The connections must be permanently made to the grounding terminal (see Figure 4) in the field wiring compartment according to the local electrical code.

The drive will operate on 2-phase Line-Line-Ground electrical systems as well as Line-Neutral-Ground systems. This pump must be permanently connected by a circuit breaker as specified in the local electrical code.

To connect the electricity, you must unscrew the two screws under the front panel, then slide the electric cable through the knock out located on the left or the right side of the base, and then insert it in the control box.

#### **⚠ WARNING: RISK OF ELECTRIC SHOCK.**

1. Be sure all electrical breakers and switches are turned off before wiring motor. Always wait five (5) minutes after disconnecting the power from the sand filter before opening or servicing the drive.

2. Choose a wire size for the sand filter in accordance with the current National Electrical Code and all applicable local codes and ordinances. When in doubt use a heavier gauge (larger diameter) wire. Be sure the wiring voltage is within the operating range. Be sure all electrical connections are clean and tight.
3. Cut wires to the appropriate length so they do not overlap or touch when connected to the terminal board.
4. Use the correct wire size and type specified by the current National Electrical Code.



### 3.7 Assembly

1. Using Phillips head screwdriver, remove the closure clamp (D) from the valve assembly. You only need to unscrew one side completely as it can be removed and reinstalled without unscrewing both screws. Remove the valve (C) from the tank and place it to the side until instructed to reattach it.
2. Inside the tank you will find the standpipe (E) and a plastic bag containing the laterals (F). Attach lateral to standpipe by pushing into opening and turning to the right. Repeat for remaining seven laterals.

**Note:** Filter is partially assembled; however, nothing has been properly tightened. DO NOT operate the filter system without completing assembly instructions.

**Note:** Install the laterals on the standpipe INSIDE the tank, as the standpipe will not fit back through the opening once laterals are attached.

3. The filter and pump should be attached to the base prior to filling the filter with sand as it will be difficult to maneuver after the tank is full.
4. In order to attach your pump to the base, determine which of the two pumps shown below is most like your pump and follow the corresponding instructions for installation to the base.
  - 5A. **Cradle-style Mounts:** Pumps with cradles located directly under the motor should be aligned with the holes on the base in the raised area where the six holes are close together. This type of mount will require the use of two to four mounting bolts from the hardware supplied with the base. Line the pump up with the set of holes which are the best fit for the pump and bolt in place.
  - 5B. **Plastic Pump Housing Mounts:** Pumps with plastic pump housing mounts should be attached by aligning the openings with a set of the OVAL shaped holes which are towards the center of the base. This type of mount will require the use of TWO mounting bolts from the hardware supplied with the base. Bolt the housing of the pump through the base and tighten.
6. Before filling tank with sand, cover standpipe with a plastic bag to prevent sand from entering standpipe. Secure in place with rubber band so it does not fall off. Once bag is secured, place standpipe in the bottom of the sand tank. Make sure pipe is centered in tank before pouring sand into tank because you will not be able to move it once sand is in.

**Note:** Sand should be filled no less than 1/2 way up the tank and no more than 3/4. Over-filling will result in permanent damage to your filter system.

7. The clear plastic tube attached to standpipe is an air relief. As you are adding the sand into the tank, try to hold the tube up against the standpipe. The white piece on the end of this tube should be ABOVE sand level when you are done adding sand to the filter.

**Note:** DO NOT pull too hard when holding up air relief tube, if you pull it off the bottom of the standpipe, sand will be able to enter your pool through the hole.

8. Add filter grade sand (sold separately) to filter tank around standpipe. The approximate amount of sand necessary will vary based on the size filter you purchased:

19" Tank .... 130 Lbs.      24" Tank .... 310 Lbs.

**Note:** Never fill sand tank more than 1/2 to 3/4 of the way.

9. Remove plastic bag and fill tank with water until tank is filled right below the opening of the standpipe.
10. Locate O-ring on bottom of 6-way valve. Lubricate with O-ring lube to ensure proper seal on tank. Push O-ring against the lip of the valve. It MUST sit flat against the lip to protect from leaking at the valve.
11. Clean off any sand or debris on top lip of filter and position valve over the opening of the standpipe. Valve will slide onto standpipe when positioned properly in tank. Push down firmly to make sure valve slides on all the way.

**Note:** Do not pull standpipe up to secure the valve. Pulling up can damage the laterals and cause sand to get sent back with water flow to pool.

12. Once valve is in place, hold clamp and position clamp around lip of filter and over edge of valve. The clamp should sit flat around the lip of the tank and valve. If it is not sitting flat, the clamp will leak. Make sure that the screws of the clamp are lined up with the seams of the tank. Tighten two screws on clamp, a little at a time and alternating from side to side so that both sides are tightened equally. Failure to follow these instructions will result in a leak at the clamp. Cover threads of pressure gauge with Teflon tape and thread into the open hole on the valve and hand tighten only.

### 3.7 Assembly, cont.

13. The valve ports are labeled "RETURN," "PUMP," and "WASTE," with raised letters next to the openings. Cover the threads of each straight fitting with Teflon tape and thread one fitting into each of the 1-1/2" threaded openings on the valve. Attach one 6' hose to the bottom of the thru-wall skimmer and to the front of the pump with 2 hose clamps. Clamp one end of 3' hose to the top of the pump and the other end to the threaded fitting on the "PUMP" port of the valve. Attach second 6' hose to the fitting on the "RETURN" port and secure the opposite end to the fitting on the pool's return with clamp. "WASTE" port will accept a standard fitting and a backwash hose (sold separately) which will be used during maintenance. Check drain plug at bottom of filter to ensure that it is screwed on tight.

## 4. Operating the Filter

### 4.1 Priming the Filter

**Note:** Your filter cannot be run if the water is not at the proper level in the pool. Running the filter without water can cause serious damage to your pump and filter.

1. Prime filter prior to starting up filter system. DO NOT turn motor on until system has been primed, or you can damage your pump.
2. Make sure water in pool is up to middle of skimmer(s) and that there is nothing blocking water flow from return(s) and skimmer(s) (i.e. plug, plate).
3. Push down selector handle on valve and turn to notch labeled BACKWASH. Let go of handle and the valve will now be in backwash position. Make sure backwash hose (sold separately) is attached to the waste port so water will not spray all over you once pump is started.
4. Remove lid of strainer basket on pump (if applicable) and fill with water. Skimmer and return lines should be filled with water as well (when water level is in proper place in pool this will happen naturally).
5. Place cover back on basket and plug in/switch on pump. When pump starts up, water will come out through the backwash hose. If the pump is properly primed, the water in the strainer basket will fill completely and air pockets will be eliminated.
6. Repeat above until all air is purged from the system then turn off the pump. If this does not get air out of system, double check all connections to make sure they are properly tightened and try again.
7. To use filter: with pump OFF, push down selector handle on valve and turn to notch labeled FILTER. Then, connect pump to power to start filter operation. Note pressure gauge reading at this time.

### 4.2 Backwashing

When pressure through return fades and pressure gauge reads 5 psi above starting pressure, you will need to backwash the filter system to remove debris.

1. Turn pump off before moving selector to BACKWASH position. Once in backwash, turn pump back on.
2. Water will come out through the waste port, so position backwash hose where you would like water to run out.
3. NEVER backwash for longer than ONE MINUTE at a time! Backwashing longer than one minute will cause sandblasting of internal components and can lead to damage of standpipe and/or laterals and VOIDS WARRANTY.
4. Turn pump off and move selector to RINSE position. Rinse will allow water to flow through to clear out the lines and prevent a puff of sand or debris back into the pool after backwashing.
5. Rinse for approximately 15 seconds and turn off pump again. Move selector back to filter and turn.

### 4.3 Additional Handle Controls

- The WASTE position does not allow water to pass through the filter. If there is a point where you would like to take water directly out of the pool, this is the option available to do so. You may also vacuum on waste to take serious debris straight out of the pool if/when necessary. Remember, this is taking water out of the pool so watch the water level to protect your pump and filter. If water drops below skimmer level, you MUST turn pump off.
- RECIRCULATE allows you to move water in the pool WITHOUT filtering the water. This is usually used when adding chemicals to the pool, during pool opening or regular maintenance.

**Note:** NEVER move selector handle while pump is on. Pump MUST be switched off to change the position of the valve. Failure to comply will cause damage to your valve and is not covered by WARRANTY.

## 5. Winterizing

**Note:** Failure to winterize your filter properly may result in damage to the tank, which is NOT covered under any warranty.

1. At the end of the season once you disconnect filter system, remove the valve from the tank. Valve selector handle should be positioned BETWEEN any of the notches to allow for air ventilation through the valve to protect from cracking.
2. Remove drain plug from bottom of sand tank to drain water out of the filter tank. Keep this plug off for the winter to allow any potential water build-up to escape from the tank.
3. Empty ALL sand from the filter system and dispose of as it is recommended to replace sand EACH season.
4. Rinse out inside of tank and air dry. You MAY remove laterals from standpipe and standpipe from tank.
5. Store tank in an area where it will be protected from the elements and keep valve and tank stored APART to protect from condensation forming and causing cracks in the tank or valve.
6. Run hose water through pump to rinse out and store in a warm, dry place for the winter.

## 6. Troubleshooting

Problem	Possible Cause	Corrective Action
<b>Low water flow.</b>	Debris is clogging pump.	1. Check skimmer and pump strainer baskets for debris. 2. Check for restrictions in intake and discharge lines.
	Pool circulation system has air leaks.	Check for air leak in intake line (indicated by bubbles returning to pool).
	Filter has excessive pressure.	Backwash filter.
	Too much sand in filter.	Bring sand level in filter down to 1/2 full.
<b>Short filter cycles.</b>	Pool water is excessively dirty.	1. Check for algae in pool and superchlorinate as required. 2. Be sure chlorine and pH levels are in proper range. Adjust as required.
	Filter sand is worn.	Check surface of filter sand for crusting or caking. Remove 1" of sand if necessary.
	Basket lid of pump is leaking.	Check hair and lint basket on pump for possible air leak, lubricate basket lid O-Ring as necessary.
<b>Pool water won't clear up.</b>	Pool water is chemically unbalanced.	Check chlorine, pH and total alkalinity levels and adjust as required.
	Low water flow.	Be sure flow rate through filter is sufficient.
	Insufficient operation duration. Value is wrongly set.	Operate filter for longer periods. Be sure valve is set on "Filter" position.
	Incorrect sand level in filter.	Be sure sand is between 1/2 and 3/4 full in tank.

## 7. Limited Warranty

### Service Information

The Pump Service Center is staffed with trained personnel to provide customers with efficient and reliable pool service. Whether you need technical advice, repair, or genuine factory replacement parts, contact the Pump Service Center. Call: (516) 796-2425 or visit [service@blackanddecker-pool.com](mailto:service@blackanddecker-pool.com) or [warranty@blackanddecker-pool.com](http://warranty@blackanddecker-pool.com).

### Blue Torrent Pool Products Limited Warranty

#### Limited Five-Year Warranty

Blue Torrent Pool products warrants this product to be free from defects in material or workmanship for a period of five (5) years following the date of purchase.

This limited warranty does not cover failures due to abuse, accidental damage, or when repairs have been made or attempted by anyone other than The Authorized Pump Service Centers.

A defective product meeting the guarantee conditions set forth herein will be replaced or repaired at no charge in either of two ways:

The first, which will result in exchanges only, is to return the product to the retailer from whom it was purchased (provided that the store is a participating retailer). Returns should be made within the time period of the retailer's policy for exchanges. Proof of purchase may be required.

Please check with the retailer for its specific return policy regarding time limits for returns or exchanges.

The second option is to take or send the product (prepaid) to the authorized Pump Service Center for repair or replacement at Blue Torrents Option option. Proof of purchase may be required.

Pump Service Center  
(516)796-2425  
1075 Hicksville Road  
Seaford, NY 11783 USA  
[service@blackanddecker-pool.com](mailto:service@blackanddecker-pool.com)  
[warranty@blackanddecker-pool.com](mailto:warranty@blackanddecker-pool.com)

This limited warranty constitutes the entire warranty. No other warranties apply, expressed or implied. This warranty gives you specific legal rights and you may have other rights which vary from state to state. Should you have any questions, contact the manager of the Pump Service Center.

**LATIN AMERICA:** This warranty does not apply to products sold in Latin America. For products sold in Latin America, check country specific warranty information contained in the packaging, call the local company, or see the website for such information.

**FREE WARNING LABEL REPLACEMENT:** If your warning labels become illegible or are missing, call (516) 796-2425 for a free replacement.

#### Manufactured by Blue Torrent Pool Products

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NEW YORK, NY 10028-5859

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