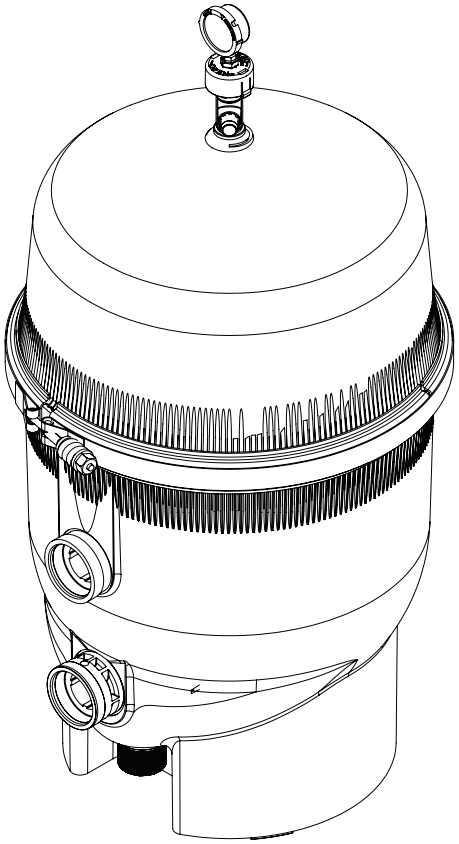
PENTAIR POOL

QUAD D.E.®

CARTRIDGE STYLE D.E. FILTER

INSTALLATION AND USER'S GUIDE



IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

Digital copies of all Quad D.E. manuals can be found at www.pentair.com, or by scanning the provided QR code.

Se pueden encontrar copias digitales de todos los manuales de Quad D.E. en www.pentair.com, o escaneando el código QR proporcionado.

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CUSTOMER SERVICE / TECHNICAL SUPPORT

Hours: 9:00AM to 7:00PM EST (6:00AM - 4:00PM PST)

Call: (800) 831-7133

Visit: www.pentair.com

Fax: (800) 284-4151

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IMPORTANT SAFETY INSTRUCTIONS

This guide provides important installation, operation and maintenance instructions related to this equipment. Consult Pentair or a qualified pool professional with any questions.

Attention Installer: This guide contains important information that helps ensure proper and safe installation, operation and maintenance of this equipment. Ensure this guide is given to the pool owner and/or operator of this equipment after installation.

Attention User: This guide contains important information that helps ensure proper and safe operation and maintenance of this equipment. Retain this guide for future reference.

Call (800) 831-7133 for additional free copies of these instructions or product labels. Refer to www.pentair.com for more information.

READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

This is the safety alert symbol. When you see this symbol in this guide or on the product itself, look for one of the following signal words and be aware of the potential for personal injury.

⚠ DANGER Warns of hazards, that if ignored, will result in death or serious injury.

⚠ WARNING Warns of hazards, that if ignored, can result in death or serious injury.

⚠ CAUTION Warns of hazards, that if ignored, can result in minor or moderate injury, or property damage.

Carefully read and follow all instructions in this guide or displayed on the equipment. Ensure all product labels are kept in good condition and replace missing or damaged labels immediately.

⚠ WARNING FAILURE TO FOLLOW ALL INSTRUCTIONS AND WARNINGS CAN RESULT IN SERIOUS BODILY INJURY OR DEATH. **INSTALLERS AND POOL OPERATORS MUST READ ALL WARNINGS AND INSTRUCTIONS BEFORE USING THIS EQUIPMENT. THIS DOCUMENT MUST BE LEFT WITH THE POOL OWNER.**

⚠ WARNING This filter must be installed by a qualified professional in accordance with 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.

⚠ WARNING Do not operate this filter unless you have read and understand all operating and safety instructions for each component of the filtration system. The following instructions are intended as a guide for operating the filter in a general pool installation, however each installation may have unique conditions where the starting procedure could be different.

⚠ WARNING This filter is intended for use in swimming pool applications. 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 **FILTER OPERATES AT HIGH PRESSURE!**

When any part of the filtration system is serviced, air can enter the system and become pressurized. Pressurized air can cause the filter lid to violently separate from the filter base, which can result in severe injury, death, or property damage. **To avoid this potential hazard:**

1. Before servicing or adjusting the filter or any other component of the filtration system: (A) Shut off power to the pump and any automatic controls at the circuit breaker; (B) open the air relief valve on top of the filter; (C) stand clear of the filter; (D) wait until all pressure is relieved.
2. When installing the filter clamp FOLLOW CLAMP INSTALLATION INSTRUCTIONS EXACTLY.
3. Once service is complete FOLLOW SYSTEM RESTART INSTRUCTIONS EXACTLY.
4. Maintain filtration system properly. Replace worn or damaged parts immediately.
5. Ensure filter is properly mounted and positioned according to instructions provided.

⚠ WARNING Never exceed the maximum operating pressure of system components. Exceeding these limits could result in a component failing under pressure. This instantaneous release of energy could cause severe injury or death.

It is recommended that pressure tests be kept to the minimum time required by the local codes. Stand clear of the filter during pressure testing. Post appropriate warning signs and establish a barrier around the pressurized equipment. If the equipment is located in an equipment room, lock the door and post a warning notice.

Never adjust any system component or attempt to remove or tighten bolts when the system is pressurized. This can cause a separation or failure of system components and can result in severe injury or death.

⚠ WARNING Do not permit children to use this equipment.

⚠ CAUTION Use only PTFE or silicone based lubricant when lubricating O-rings and seals. Use of petroleum based products will damage the equipment.

IMPORTANT SAFETY INSTRUCTIONS

⚠WARNING **RISK OF ELECTRICAL SHOCK OR ELECTROCUTION!** This filter must be installed by a qualified professional in accordance with the National Electrical Code and all applicable local codes and ordinances.

Always disconnect power to the equipment at the circuit breaker before servicing any of the equipment. Ensure that the disconnected circuit is locked out or properly tagged so that it cannot be switched on while you are working on the pool equipment. Failure to do so could result in serious injury or death to serviceman, pool users or others due to electric shock.

Position the filter and air relief valve so that purged water is directed safely. Water discharged from an improperly positioned filter or valve can create an electrical hazard that can cause severe injury or property damage.

⚠CAUTION **FOR INSTALLATION OF SYSTEM CONTROLS AT EQUIPMENT PAD (ON/OFF SWITCHES, TIMERS, AUTOMATION CONTROLLERS, VALVES, ETC.):** Install all system controls at equipment pad in a way that allows the user to service or operate the system without placing any portion of their body over or near the pump strainer lid, filter lid or valve closures. This installation should allow the user enough space to stand clear of the filter and filter pump during system start-up, shut down or servicing.

General Installation Information

- Have a trained pool professional perform all pressure tests.
- Do not connect the system to a high pressure or city water system.
- Trapped air in the system can create a hazardous condition. ALWAYS purge all air from the system before operating or testing equipment.
- DO NOT pressure test with compressed air.
- Plumbing must conform to local/state plumbing and sanitary codes.
- Support piping independently to prevent strains on filter or valve.
- Fittings restrict flow; for best efficiency, use the fewest possible fittings.
- A check valve installed ahead of the filter inlet will prevent contaminants from draining back into the pool.
- A check valve installed between the filter and heater will prevent hot water from backing up into the filter and deforming the internal components.
- All wiring, grounding and bonding of associated equipment must meet local and/or National Electrical Code standards.

IMPORTANT: Keep all warning labels in good condition. If any warnings labels are damaged, missing, or become illegible call Pentair Customer Service at 1-800-831-7133 and request replacement labeling.

SAVE THESE INSTRUCTIONS

FILTER OVERVIEW

The Quad D.E.® Cartridge Style D.E. Filter features four easily accessible and removable cartridges. When water passes through these cartridges, microscopic impurities like dirt, algae, and some forms of bacteria are filtered out.

The four-cartridge design greatly increases cleaning capacity per cycle without an increase in canister size.

The combination of diatomaceous earth (D.E.) in a convenient cartridge design means better performance and longer periods between cleanings.

- Four easily removable, large-capacity cartridges provide greater filtering capacity and longer periods between cleanings.
- Chemical resistant, fiberglass reinforced polypropylene tank.
- 2-inch plumbing connections.
- Air Relief Valve and Pressure Gauge provided.
- Durable polypropylene cartridge media has especially slick surfaces, making them easier to clean than conventional cartridge filters.

PRESSURE TESTS

Filtration system pressure tests should only be performed by a qualified professional.

⚠WARNING

Never exceed the maximum operating pressure system components. Exceeding these limits could result in a component failing under pressure. This instantaneous release of energy could cause severe injury or death.

When performing pressure tests or testing for leaks, ensure the maximum pressure the system in subjected to DOES NOT EXCEED THE MAXIMUM PRESSURE RATING OF ANY COMPONENT WITHIN THE SYSTEM.

In most cases, the maximum pressure will be stated on each piece of equipment. If doubt exists as to the pressure to which the system will be subjected, install an approved automatic pressure relief or regulator in the system set it to the lowest rated pressure of any component in the system.

GENERAL OPERATION

Read and follow all instructions and warnings before installing or servicing your filter. Proper installation and operation can prevent unnecessary repairs and maintenance.

⚠WARNING

FILTER OPERATES AT HIGH PRESSURE!
Do not tamper with, attempt to disassemble, or otherwise adjust the filter while the system is pressurized. Improperly handling this equipment can cause serious injury or death.

1. The filter operates in a safe manner if clamped properly and without air in the circulating system.
2. The maximum working pressure of this filter is 50 psi. Never subject this filter to pressure in excess of 50 PSI.
3. Ensure the maximum pressure of the filter never exceeds the maximum pressure of any components within the system. Consult the maximum pressure stated on each component of the system.
4. The pressure gauge is the primary indicator of how the filter is operating. Maintain your pressure gauge in good working order. Refer to *Maintaining the Pressure Gauge, page 7* for instructions.
5. Never operate the filter more than 3 minutes without use of diatomaceous earth. Operating without diatomaceous earth will damage filter cartridges and shorten filtering cycles.
6. **Clean your filter when pressure reads approximately 10 psi higher than the “Original Starting Pressure," or when significant reduction in flow is noticed**.

   Note: When using a variable speed pump the “Original Starting Pressure” will be dependent on the pump speed (RPM) when recording the original operating pressure. Record the “Original Pump RPM” in **TABLE 2, page 6**.

INSTALLATION

⚠WARNING This filter must be installed by a qualified professional in accordance with 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.

⚠CAUTION **FOR INSTALLATION OF SYSTEM CONTROLS AT EQUIPMENT PAD (ON/OFF SWITCHES, TIMERS, AUTOMATION CONTROLLERS, VALVES, ETC.):** Install all system controls at equipment pad in a way that allows the user to service or operate the system without placing any portion of their body over or near the pump strainer lid, filter lid or valve closures. This installation should allow the user enough space to stand clear of the filter and filter pump during system start-up, shut down or servicing.

LOCATION

1. Mounted the filter on a level concrete slab.
2. Position the filter so the safety labels and pressure gauge are visible and easy to reference.
3. Position the filter so that plumbing connections, control valve, and drain port are easily accessible for servicing and winterizing.
4. Install electrical controls a minimum of 5 ft. [1.5 m] from the filter. This will allow enough room to stand clear of the filter during system startup.
5. Allow sufficient clearance around the filter to allow regular inspection of the filter clamp for proper tension and positioning. Refer to **FIGURE 1**.
6. Allow sufficient clearance above the filter to remove the filter lid during cleaning and servicing. Refer to **TABLE 1** for the specific vertical clearances.
7. Position the filter and air relief valve so that purged air and water is directed safely away from electrical components.

⚠WARNING **RISK OF ELECTRICAL SHOCK OR ELECTROCUTION**! Water discharged from an improperly positioned filter or valve can create an electrical hazard that can cause severe injury or property damage.

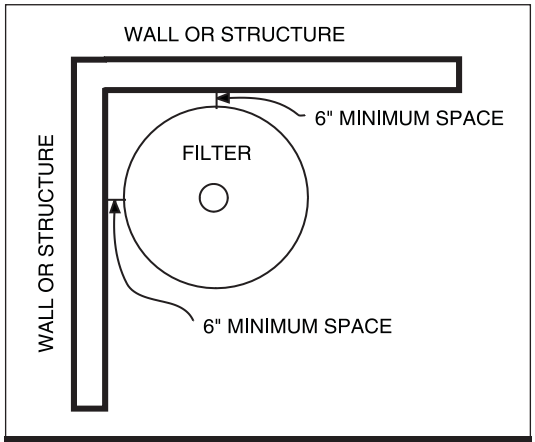


FIGURE 1

PLUMBING

1. Make all plumbing connections in accordance with all applicable local codes and ordinances.
2. Refer to local codes and ordinances for backwash, separation tank and D.E. disposal requirements.
3. Use only silicone-based lubricant on O-rings and seals. Do not use pipe joint compound, glue, or solvent.
4. The filter requires one of the following valve kits which must be purchased separately.
   a. P/N 261055 - 2” Multi-port Valve
   b. P/N 261173 - 1-1/2” Multi-port Valve
   c. P/N 261050 - 2” Hi-Flow Valve
   d. P/N 263064 - 2” PVC Slide Valve

⚠CAUTION The filter has a different water flow pattern than other Pentair D.E. filters. When plumbing a backwash valve to the filter, one of the following valves, listed below, must be used. Failure to use the correct backwash valve could damage the filter cartridges.

MODEL	FILTER AREA	REQUIRED VERTICAL CLEARANCE
QUAD 60	60 ft² [5.6 m²]	62 in. [157.5 cm]
QUAD 80	80 ft² [7.4 m²]	68 in. [172.7 cm]
QUAD 100	100 ft² [9.3 m²]	74 in. [188 cm]

TABLE 1

INSTALLING THE AIR RELIEF VALVE

⚠WARNING **RISK OF ELECTRICAL SHOCK OR ELECTROCUTION**! Water discharged from an improperly positioned filter or valve can create an electrical hazard that can cause severe injury or property damage.

⚠WARNING The manual air relief valve and pressure gauge are included with this filter to help ensure safe operation of the equipment. Always maintain these components in good working condition.

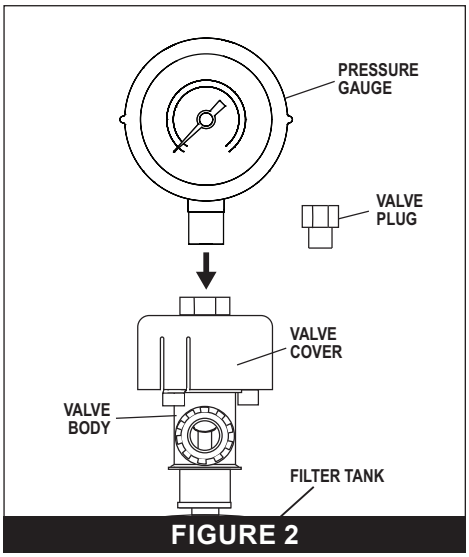


FIGURE 2

1. Remove the Air Relief Valve and Pressure Gauge from the accessories pack included with the filter.
2. Verify the valve O-ring is installed onto the bottom of the air relief valve and thread the valve into the top of the filter hand tight.
3. Verify the valve is positioned so that it will direct purged air and water away from electrical equipment or anything that might be damaged.
4. Using a 9/16” wrench, remove the plug from the top of the air relief valve.
5. Wrap the threads of the pressure gauge with thread seal tape (two full wraps of tape will be enough).
6. Thread the pressure gauge into the top of the air relief valve hand tight.
7. Follow *Startup Instructions, page 6* exactly.

OPENING, CLOSING, AND STARTUP

OPENING THE FILTER

⚠WARNING **FILTER OPERATES AT HIGH PRESSURE!** When any part of the filtration system is serviced, air can enter the system and become pressurized. Pressurized air can cause the filter lid to violently separate from the filter base, which can result in severe injury, death, or property damage. **To avoid this potential hazard:**

1. Before servicing or adjusting the filter or any other component of the filtration system: (A) Shut off power to the pump and any automatic controls at the circuit breaker; (B) open the air relief valve on top of the filter; (C) stand clear of the filter; (D) wait until all pressure is relieved.
2. When installing the filter clamp FOLLOW CLAMP INSTALLATION INSTRUCTIONS EXACTLY.
3. Once service is complete FOLLOW SYSTEM RESTART INSTRUCTIONS EXACTLY.
4. Maintain filtration system properly. Replace worn or damaged parts immediately.
5. Ensure filter is properly mounted and positioned according to instructions provided.

1. **Shut off pump and relieve all pressure from the filtration system.**
   a. Shut off power to the pump and any automatic controls at the circuit breaker.
   b. Open the air relief valve at the top of the filter by turning the top of the valve 1/4 turn counterclockwise until it snaps into the full open position.
   c. Stand clear of the filter and wait until all pressure is relieved. **Pressure gauge must read zero (0) psi**.
2. Open the drain plug at the bottom of the filter and allow all water to drain from the filter.
3. Using a 7/8-inch wrench, loosen the clamp barrel nut, allowing the spring coils to decompress. See **FIGURE 4**.
4. Remove the barrel nut, spring and two washers from the T-bolt and place them aside.
5. Remove the clamp ring from the filter and place it aside.
6. Carefully lift the filter lid away from the tank bottom.

⚠CAUTION DO NOT lift the lid by the air relief valve. This can damage the valve.

Note: If the lid is tightly sealed to the filter base gently shift the filter lid side to side to separate the tank halves. **DO NOT use a screwdriver or pry-bar to lift the lid. This can damage the O-ring.**

7. Place the tank lid and O-ring in a safe place where it will not be damaged while performing maintenance.

***Note*:** Minimize the amount of debris that comes in contact with the tank O-ring while it is exposed.

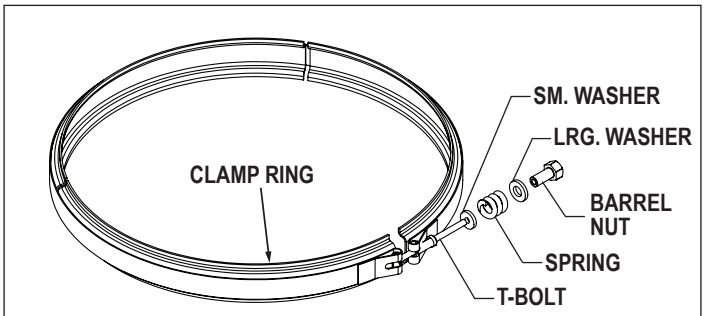


FIGURE 3

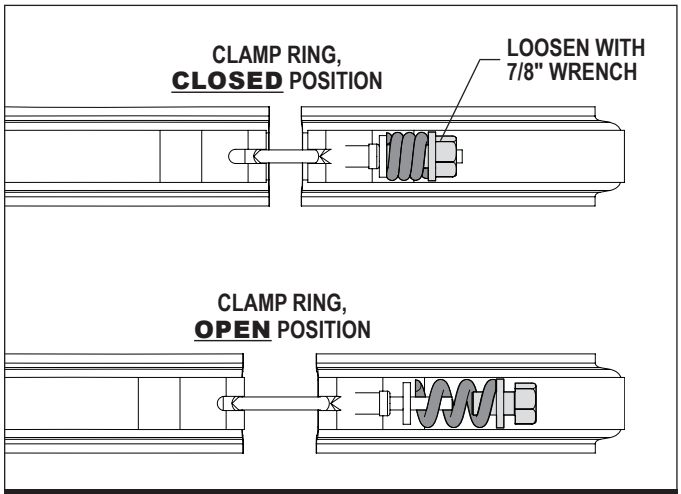


FIGURE 4

INSTALLING THE FILTER LID AND CLAMP RING

⚠WARNING

FILTER OPERATES AT HIGH PRESSURE! When any part of the filtration system is serviced, air can enter the system and become pressurized. Pressurized air can cause the filter lid to violently separate from the filter base. Follow these instructions exactly to prevent the lid from separating from the filter body during system startup or operation.

Follow these instructions exactly to prevent the lid from separating during system start-up or operation.

1. Ensure the tank O-ring is clean and properly seated on the tank bottom.
2. Seat the filter lid onto the filter base and ensure the O-ring fits in between the tank halves.
3. Position the clamp ring over both the upper and lower tank flanges, then bring the ends of the clamp together.
4. Insert the T-bolt through the other side of the clamp.
5. Place the clamp hardware onto the T-bolt in the following order: *Small Washer* > *Spring* > *Large Washer* > *Barrel Nut*
6. Ensure the clamp ring is positioned over both tank flanges and install the barrel nut hand tight.
7. After barrel nut is hand tight:
   a. Use a 7/8-inch socket wrench to tighten the barrel nut further.
   b. Using a rubber mallet (or similar tool), tap around the outside of the entire clamp ring.
   c. Continue to tighten the barrel nut until the spring coils touch.
   d. Tap around the entire clamp again and verify the spring coils remain touching.
   If spring coils are not touching, then continue this process until they do.

   Note: The clamp is installed correctly ONLY when the spring coils remain touching after tapping the clamp, as shown in **FIGURE 5**.
8. Close the drain plug at the bottom of the filter.
9. Follow *Startup Instructions, page 6* exactly.

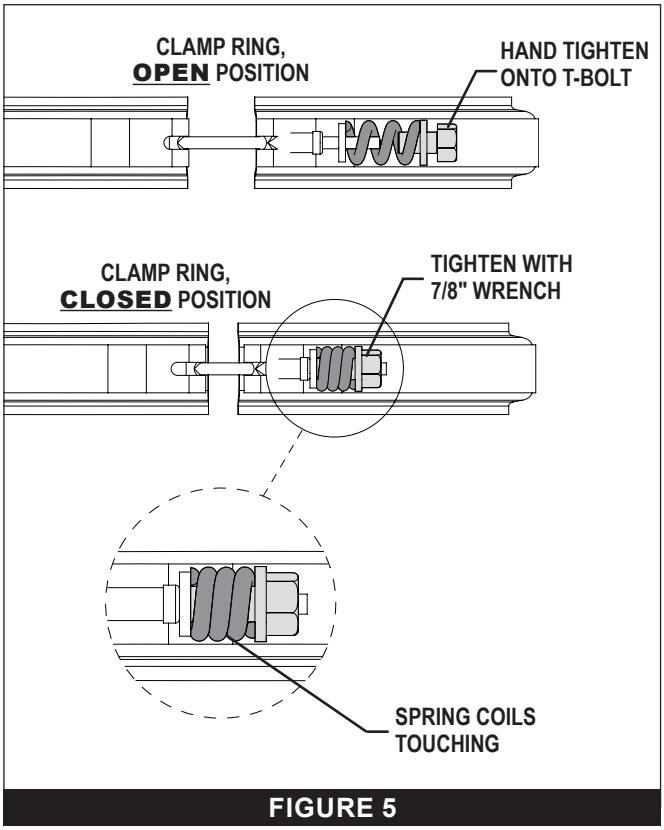


FIGURE 5

IMPORTANT! Inspect spring coils at least once a month to ensure proper tension. If spring coils are no longer touching as shown in **FIGURE 5,** then shut off pump, relieve all pressure and tighten the filter clamp.

Note: Spring clamps and kits are only compatible with filters manufactured before August 2025.

STARTUP INSTRUCTIONS

1. Ensure the **spring on the clamp ring is fully compressed, with coils touching.**
2. Open the air relief valve at the top of the filter by turning the top of the valve 1/4 turn counterclockwise until it snaps into the full open position. See **FIGURE 6**.
3. Stand clear of the filter, then start the pump.
4. Observe for proper operation. The system is not working properly if:
   a. The pressure gauge indicates pressure before water flows from the valve.
   b. A solid stream of water does not appear within 30 seconds of the pump strainer pot filling with water.
   c. Water leaks from under the clamp.

   If any of these conditions exist, **shut off the pump immediately**. Open the air relief valve to relieve pressure and clean the valve (see *Cleaning the Air Relief Valve, page 7*). If the problem persists, call Pentair Technical Service at (800) 831-7133 for assistance.
5. After a steady stream of water appears, close the filter air relief valve by turning the valve cover assembly 1/4 turn clockwise.
6. The first time the system is started up, record the following information in **TABLE 2**:
   a. Original Starting Pressure
   b. Pressure at which the filter should be cleaned/ serviced. This is approximately 10 psi higher than the "Original Starting Pressure".
   c. If the system includes a variable speed pump, record Original Pump RPM at startup.

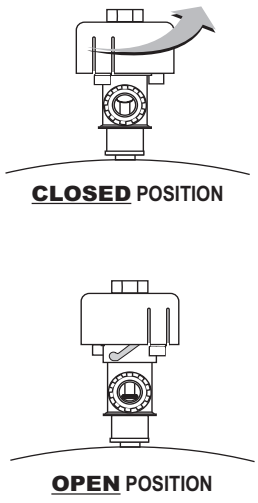


FIGURE 6

ORIGINAL STARTING PRESSURE IS: _____ psi.
(pounds per square inch)

SERVICE THE CARTRIDGES AT: _____ psi.

ORIGINAL PUMP RPM: _____ RPM.
(for Variable Speed Pumps Only)

TABLE 2

COATING THE FILTER CARTRIDGES WITH DIATOMACEOUS EARTH (D.E.)

The filter cartridges must be precoated with diatomaceous earth (D.E. or diatomite) for ensure proper filtration and operation. This coating also protects the cartridges and provides the most efficient filtering. Use D.E. which is sold and labeled for use with swimming pools and spas.

1. Refer to **TABLE 3** to determine the required amount of D.E. for your filter. A 1-lb. coffee can be filled level with roughly a half pound of D.E. **Do not pack or compress D.E. into the coffee can.**
2. Mix the required amount of D.E. with sufficient water in a bucket to make a thin, milky mixture.
3. **If Using a Slide Valve:** Twist to unlock plunger, then raise the handle as far as it will go. Turn handle clockwise to lock lower pin in underside of cap.

   If Using Multiport Valve: Position valve to FILTER or VACUUM TO POOL. This is your normal flow from the pump through the filter to the pool. Open the air relief valve on the filter.
4. Follow *Startup Instructions, page 6* exactly.
5. With the pump running and the pool skimmer valve open, pour the prepared D.E. directly into the skimmer.
6. Your filter is now operational. Note the original starting pressure on the gauge and record it in **TABLE 2**.

   Note: When using a variable speed pump the “Original Starting Pressure” will be dependent on the pump speed (RPM). When recording the original operating pressure, also record the “Original Pump RPM” in **TABLE 2**.

MODEL	REQUIRED D.E.	1 LB. COFFEE CANS
QUAD 60	6 lbs. [2.7 kg]	12
QUAD 80	8 lbs. [3.6 kg]	16
QUAD 100	10 lbs. [4.5 kg]	20

TABLE 3

MAINTENANCE

⚠WARNING **FILTER OPERATES AT HIGH PRESSURE!** When any part of the filtration system is serviced, air can enter the system and become pressurized. Pressurized air can cause the filter lid to violently separate from the filter base, which can result in severe injury, death, or property damage. **To avoid this potential hazard:**

1. Before servicing or adjusting the filter or any other component of the filtration system: (A) Shut off power to the pump and any automatic controls at the circuit breaker; (B) open the air relief valve on top of the filter; (C) stand clear of the filter; (D) wait until all pressure is relieved.
2. When installing the filter clamp FOLLOW CLAMP INSTALLATION INSTRUCTIONS EXACTLY.
3. Once service is complete FOLLOW STARTUP INSTRUCTIONS EXACTLY.
4. Maintain filtration system properly. Replace worn or damaged parts immediately.
5. Ensure filter is properly mounted and positioned according to instructions provided.

MAINTAINING THE PRESSURE GAUGE

The pressure gauge is the primary indicator of how the system operates. It is critical to keep the pressure gauge in good condition.

Replace pressure gauge if any of the requirements below are not met:

1. Pressure gauge at zero (0) when pressure is relieved and system is turned off.
2. Pressure gauge reads correctly while system is in operation.
3. The pressure gauge is readable and not damaged in any way.

CLEANING THE AIR RELIEF VALVE

1. **Shut off pump and relieve all pressure from the filtration system.**
   a. Shut off power to the pump and any automatic controls at the circuit breaker.
   b. Open the air relief valve at the top of the filter by turning the top of the valve 1/4 turn counterclockwise until it snaps into the full open position.
   c. Stand clear of the filter and wait until all pressure is relieved. **Pressure gauge must read zero (0) psi**.
2. With the air relief valve installed, pull out the locking tabs and unlock the valve stem and cover assembly from the valve body counter-clockwise (**FIGURE 7**).
3. Pull the valve stem and cover assembly away from the valve body.
4. Clean and check the valve stem and body:
   a. Remove any debris.
   b. Ensure the air passage is open by inserting a 5/16-inch drill bit through the valve body.
   c. Ensure the valve stem O-rings are in good condition, properly positioned, and lubricated with a silicone-based lubricant.

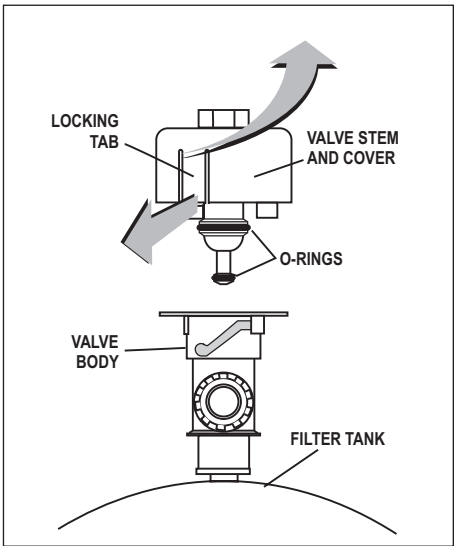


FIGURE 7

⚠CAUTION If needed, use only a PTFE or silicone-base lubricant on the O-rings. Use of petroleum based products on O-rings will damage the equipment.

5. Reinstall the valve stem and cover assembly by pressing downwards and turning clockwise until it snaps into position on the valve body.

BACKWASHING THE FILTER (WITHOUT SEPARATION TANK)

Use the pressure gauge to determine when to clean your filter. Backwash your filter when pressure reads approximately 10 psi higher than the “Original Starting Pressure,” or when significant reduction in flow is noticed.

1. **Shut off pump and relieve all pressure from the filtration system.**
    a. Shut off power to the pump and any automatic controls at the circuit breaker.
    b. Open the air relief valve at the top of the filter by turning the top of the valve 1/4 turn counterclockwise until it snaps into the full open position.
    c. Stand clear of the filter and wait until all pressure is relieved. **Pressure gauge must read zero (0) psi**.
2. Turn skimmer to full skim position and close main drain line.
3. Remove filter pump lid and cleaner the strainer basket.
4. Reinstall strainer basket and reinstall the pump lid.
5. **IF SLIDE VALVE IS INSTALLED:**
    a. Push the slide valve handle down as far as it will go and lock upper pin in cap.
    b. Open filter air relief valve.
    c. Stand clear of the filter, then start the pump.
    d. After a steady stream of water appears, close the filter air relief valve.
    e. When water from discharge/waste line flows clear, shut off pump.
    f. Place the slide valve in the FILTER position.
    g. Proceed to Step 6.

    IF MULTIPORT VALVE IS INSTALLED:
    a. Place the multiport valve in the BACKWASH position.
    h. Open filter air relief valve.
    a. Stand clear of the filter tank, then start the pump.
    b. After a steady stream of water appears, close the filter air relief valve.
    c. When water from the discharge/waste line flows clear, shut off pump.
    d. Place the multiport valve in the CLOSED position.
    e. Proceed to Step 6.
6. Follow *System Restart Instructions, page 5* exactly.
7. Introduce the recommended amount of D.E. according to *Coating the Filter Cartridges with Diatomaceous Earth, page 6*. Your filter is now in operation.

BACKWASHING THE FILTER (WITH SEPARATION TANK)

Use the pressure gauge to determine when to clean your filter. Backwash your filter when pressure reads approximately 10 psi higher than the “Original Starting Pressure,” or when significant reduction in flow is noticed.

1. **Shut off pump and relieve all pressure from the filtration system.**
    a. Shut off power to the pump and any automatic controls at the circuit breaker.
    b. Open the air relief valve at the top of the filter by turning the top of the valve 1/4 turn counterclockwise until it snaps into the full open position.
    c. Stand clear of the filter and wait until all pressure is relieved. **Pressure gauge must read zero (0) psi**.
2. Turn skimmer to full skim position and close main drain line.
3. Remove filter pump lid and cleaner the strainer basket.
4. Reinstall strainer basket and reinstall the pump lid.
5. **IF SLIDE VALVE IS INSTALLED:**
    a. Push the valve handle down as far as it will go. Lock upper pin in cap.
    b. Open both the filter and separation tank air relief valves.
    c. Stand clear of the filter, then start the pump.
    d. After a steady stream of water appears, close both the filter and separation tank air relief valves.
    e. When water from discharge/waste line flows clear, shut off pump.
    f. Open separation tank air relief valve and wait for water to stop draining from the valve.
    g. Open the separation tank according to the instructions given in the separation tank manual.
    h. Empty the separation bag and dispose of spent D.E. according to local codes and ordinances.
        Note: DO NOT LEAVE THE SEPARATION TANK BAG EXPOSED IN THE SUN.
    i. Reinstall the separation bag, tank lid and clamp according to the instructions given in the separation tank manual.
    j. Place the Slide Valve in the FILTER position.
    k. Proceed to Step 6.

    IF MULTIPORT VALVE IS INSTALLED:
    a. Place the multiport valve in the BACKWASH position.
    b. Open the separation tank air relief valve.
    c. Stand clear of the filter tank, then start the pump.
    d. After a steady stream of water appears, close both the filter and separation tank air relief valves.
    e. When water from discharge/waste line flows clear, shut off pump.
    f. Open separation tank air relief valve and wait for water to stop draining from the valve.
    g. Open the separation tank according to the instructions given in the separation tank manual.
    h. Empty the separation bag and dispose of spent D.E. according to local codes and ordinances.
        Note: DO NOT LEAVE THE SEPARATION TANK BAG EXPOSED IN THE SUN.
    i. Reinstall the separation bag, tank lid and clamp according to the instructions given in the separation tank manual.
    j. Place the multiport valve in the CLOSED position.
    k. Proceed to Step 6.
6. Follow *System Restart Instructions, page 5* exactly.
7. Introduce the recommended amount of D.E. according to *Coating the Filter Cartridges with Diatomaceous Earth, page 6*. Your filter is now in operation.

MANUALLY CLEANING CARTRIDGES

Filter cartridges may require manual cleaning when pressure remains high after backwashing, or when winterizing your filter.

⚠WARNING **FILTER OPERATES AT HIGH PRESSURE!** When any part of the filtration system is serviced, air can enter the system and become pressurized. Pressurized air can cause the filter lid to violently separate from the filter base, which can result in severe injury, death, or property damage. **To avoid this potential hazard:**

1. Before servicing or adjusting the filter or any other component of the filtration system: (A) Shut off power to the pump and any automatic controls at the circuit breaker; (B) open the air relief valve on top of the filter; (C) stand clear of the filter; (D) wait until all pressure is relieved.
2. When installing the filter clamp FOLLOW CLAMP INSTALLATION INSTRUCTIONS EXACTLY.
3. Once service is complete FOLLOW SYSTEM RESTART INSTRUCTIONS EXACTLY.
4. Maintain filtration system properly. Replace worn or damaged parts immediately.
5. Ensure filter is properly mounted and positioned according to instructions provided.

TO MANUALLY CLEAN THE FILTER CARTRIDGES:

1. Follow *Opening the Filter, page 4* exactly.
2. Remove the pump strainer pot lid and clean the pump strainer basket. Reinstall the strainer basket and lid.
3. Remove the Compression Spring and Adapter from the Top Manifold.
4. Remove the Top Manifold from the filter cartridges and lay the manifold aside. See **FIGURE 8**.
5. Carefully remove each cartridge separately.
6. Using a garden hose with a straight flow nozzle, hold the nozzle at a 45-degree angle to the cartridge and wash the entire cartridge from top to bottom. See **FIGURE 9**.

   Note: Pay special attention to the area between pleats.
7. Wash out the inside of the filter tank and bottom manifold. Water and debris will drain out through the open drain plug.
8. Inspect the gasket around the outer lip of the bottom plate. The gasket must be firmly and evenly seated around the entirety of the outer lip.
9. Place the bottom manifold, cartridges and top manifold into the tank, ensuring the spring and standpipe assembly are retained on the top manifold.
10. Ensure the O-ring is clean and seat it onto the tank bottom.
11. Follow *Installing the Filter Lid and Clamp Ring, page 5* exactly.

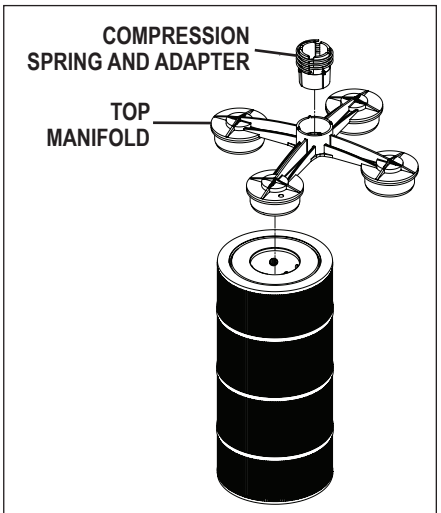


FIGURE 8

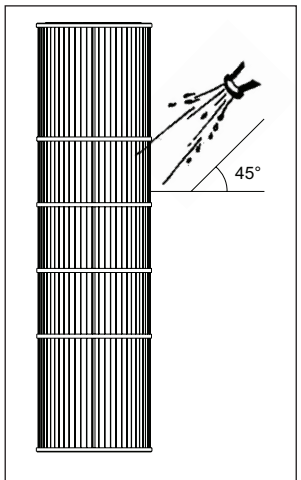


FIGURE 9

TROUBLESHOOTING

⚠WARNING

FILTER OPERATES AT HIGH PRESSURE! When any part of the filtration system is serviced, air can enter the system and become pressurized. Pressurized air can cause the filter lid to violently separate from the filter base, which can result in severe injury, death, or property damage. **To avoid this potential hazard:**

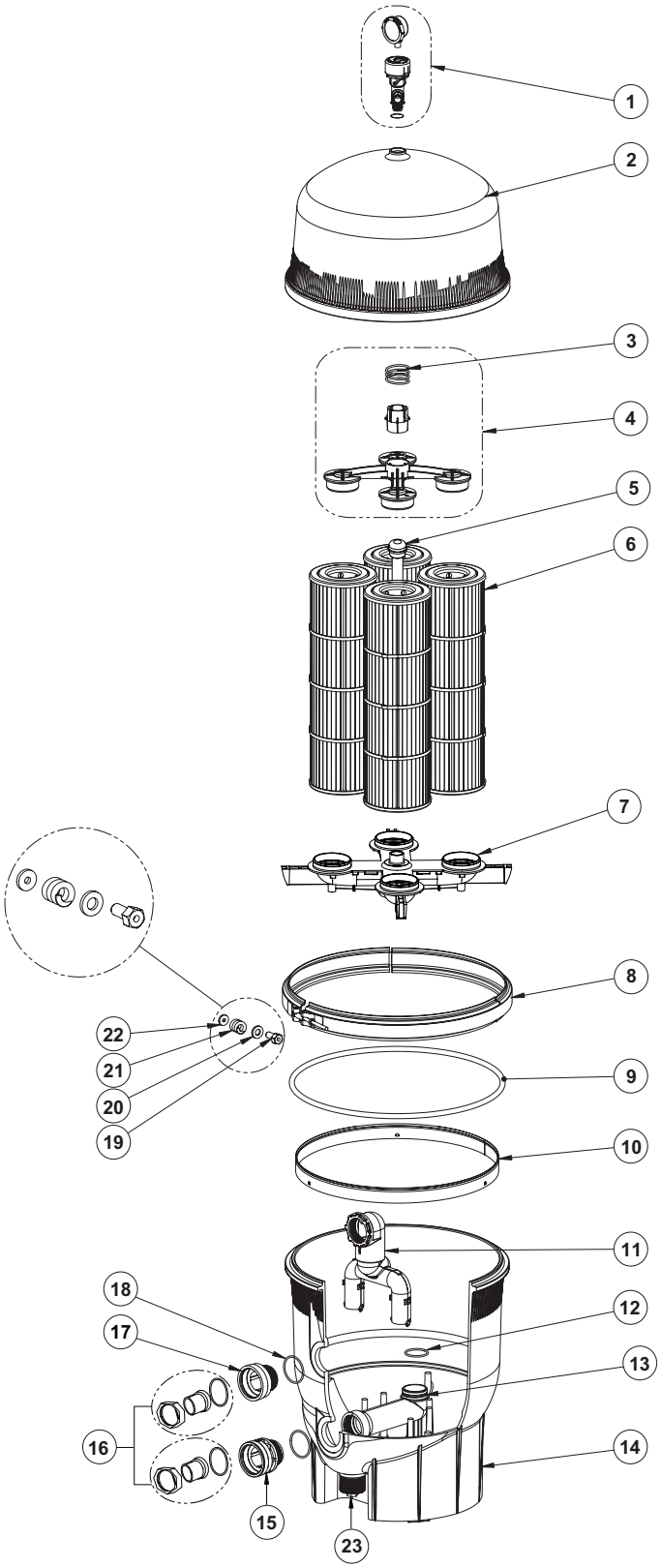
1. Before servicing or adjusting the filter or any other component of the filtration system: (A) Shut off power to the pump and any automatic controls at the circuit breaker; (B) open the air relief valve on top of the filter; (C) stand clear of the filter; (D) wait until all pressure is relieved.
2. When installing the filter clamp FOLLOW CLAMP INSTALLATION INSTRUCTIONS EXACTLY.
3. Once service is complete FOLLOW SYSTEM RESTART INSTRUCTIONS EXACTLY.
4. Maintain filtration system properly. Replace worn or damaged parts immediately.
5. Ensure filter is properly mounted and positioned according to instructions provided.

PROBLEM	CORRECTIVE ACTIONS
Air Entering the Filter	Clean pool skimmer baskets. Ensure water level is sufficient and that air is not being pulled into the suction lines. Inspect suction lines and system equipment for damage or leaks.
Short Filter Cycles Between Cleanings	Ensure the cartridges have been coated with the proper amount of D.E. Refer to *Coating the Filter Cartridges with Diatomaceous Earth (D.E.), page 6* for recommended amounts.
Pressure Drops at Gauge	Shut off power to pump and any automatic controls, then attempt to manually turn the pump motor shaft. a. If motor shaft turns freely, disassemble the pump according to instructions in the pump manual and inspect the impeller. b. If the motor shaft does not turn freely, there is likely an obstruction in the suction line.
Pressure Remains High After Backwash	Backwash filter again and verify pressure. If pressure remains high after repeated backwashing, manually clean the cartridges according to *Manually Cleaning Cartridges, page 10*.
DE Continuously Enters Pool	Inspect the cartridges for any tears or holes. Inspect the internal air bleed screen cap for tears and proper installation. Inspect the cartridges and make sure the cartridges are positioned vertically and properly seated between the upper manifold and lower manifold.

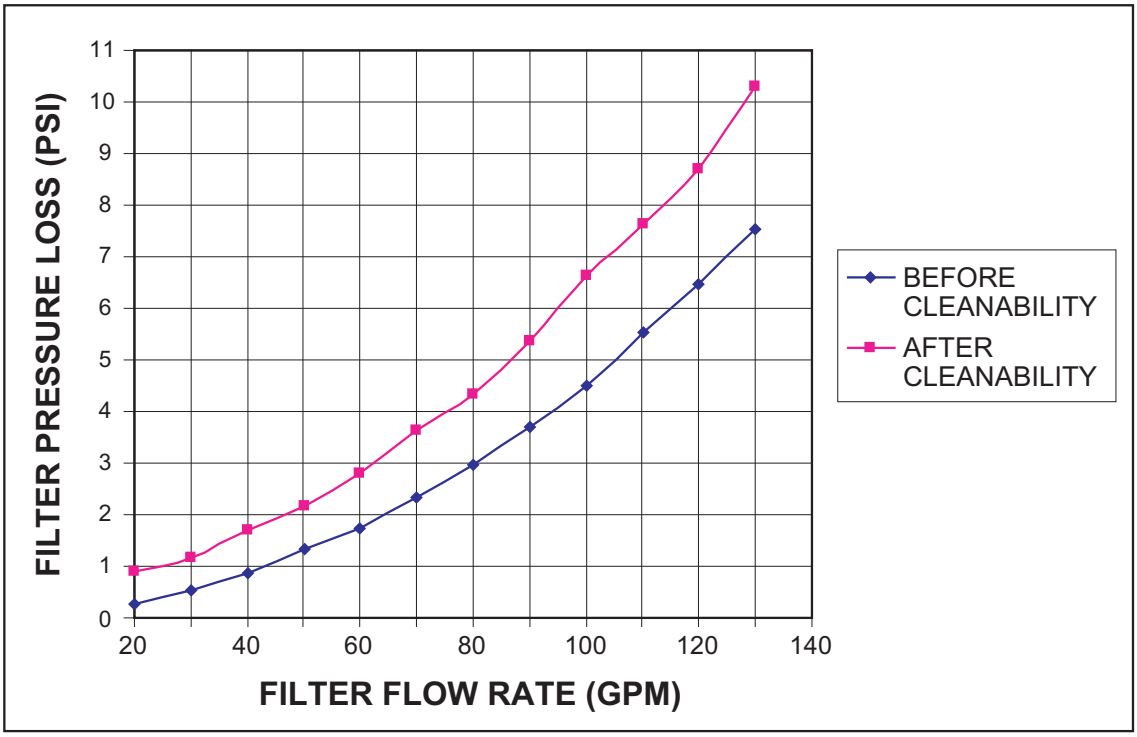
REPLACEMENT PARTS

ITEM	P/N	DESCRIPTION
1	98220100	Air Relief Valve
2	170024	Tank Lid, QUAD 60
	178581	Tank Lid, QUAD 80
	178582	Tank Lid, QUAD 100
3	178616	Compression Spring
4	170026	Top Manifold Assembly
5	170029	Air Bleed Assembly, QUAD 60
	170028	Air Bleed Assembly, QUAD 80
	178583	Air Bleed Assembly, QUAD 100
6	178654	Cartridge, Single, QUAD 60
	178655	Cartridge, Single, QUAD 80
	178656	Cartridge, Single, QUAD 100
7	170040	Bottom Manifold
8	190003	Clamp Ring Assembly
9	39010200	O-ring, Tank
10	195339	Backup Ring
11	196024s	Diverter Assembly
12	354571	O-ring, Outlet Pipe
13	170036	Outlet Pipe
14	195999	Tank Bottom
15	178575	Bottom Bulkhead
16	271096	Bulkhead Adapter Kit, 2” OD, White
	270004	Bulkhead Adapter Kit, 2” OD, Black
	270100	Bulkhead Adapter Kit, 2” ID, Black
	274426	Bulkhead Union Kit, 2-1/2” ID, White
17	194801	Top Bulkhead
18	86006900	O-ring, Bulkhead
19	194997	Nut, Clamp Ring
20	195611	Large Washer, Clamp Ring
21	195612	Spring, Clamp Ring
22	195610	Small Washer, Clamp Ring
23	190030	Drain Plug Assembly

Note: Spring clamps and kits are only compatible with filters manufactured before August 2025.



HEAD LOSS CURVES



FLOW RATES

Model	Filter Area (Sq. Ft.)	Maximum Flow Rate (GPM)		Turnover Rate (Gallons)		
		Residential	Commercial	6 hours	8 hours	12 hours
Quad 60	60	120	150	43,200	57,600	86,400
Quad 80	80	160	150	57,600	76,800	115,200
Quad 100	100	160	150	57,600	76,800	115,200

NOTE: Actual system flow will vary based on plumbing size and other system components.

NOTES

NOTES

PENTAIR POOL

1620 HAWKINS AVE., SANFORD, NC 27330 • (919) 566-8000
10951 WEST LOS ANGELES AVE., MOORPARK, CA 93021 • (805) 553-5000

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