TEKLEEN®
AUTOMATIC SELF-CLEANING
WATER FILTERS

INSTALLATION
& OPERATION MANUAL

LOW PRESSURE FILTER SERIES (LPF)

NSF
Certified to NSF/ANSI 61

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About The Installation & Operation Manual

Purpose of the Manual

Welcome to worry-free water filtration with your new Tekleen LPF Automatic Filter!

This guide is your go-to resource for keeping your filtration system running smoothly for years to come. Let's get started and ensure peak performance right from the beginning.

Scan the QR code to access the digital version of this manual at www.tekleen.com.

LOW PRESSURE FILTER SERIES (LPF)

PUBLISHED DATE: OCTOBER, 2025

Checklist for Optimal Filter Performance

To ensure your LPF filter operates at peak efficiency, please verify the following:

Flush Line:
- Ensure there is no back pressure on the flush line.
- The flush line needs to be at least one inch larger than the flush valve (i.e.: a 2" waste line for a 1" valve, and a 3" waste line for a 2" valve). The filter requires the least amount of backpressure on the flush line for a 1 1/2" or 2" valve.
- Do not use rubber hosing or flexible tubing for the waste line; use rigid piping.

Differential Pressure (DP) Gauge
- Mount the DP gauge within 3 feet of your filter. Keeping the tubing short prevents inaccurate readings.
- Apply a non-conductive silicone sealant over the two screw terminals on the back of the gauge. This protects them from water. If silicone isn't available, mount the gauge upside down. This way, if water drips from the tubing, it won't short out the gauge.

Piston Water Supply
- Connect the water supply line to the piston from port (3) below the flush valve
- Install a 1/4" mini-filter in this line.

Piston Venting
- The fitting on the side of all pistons is for venting only.
- Ensure it is open to atmospheric pressure and pointing downwards.

Outlet Valve (for Open Discharge)
- If the filter outlet discharges to a tank or open atmosphere, install a valve at the filter outlet.
- This valve is necessary to maintain a minimum working pressure of 15 PSI during the cleaning cycle.

Flush Valve Wiring
- If the flush valve fails to open or close, verify that its connections to the controller are wired correctly (Refer to the wiring diagram on page 21).

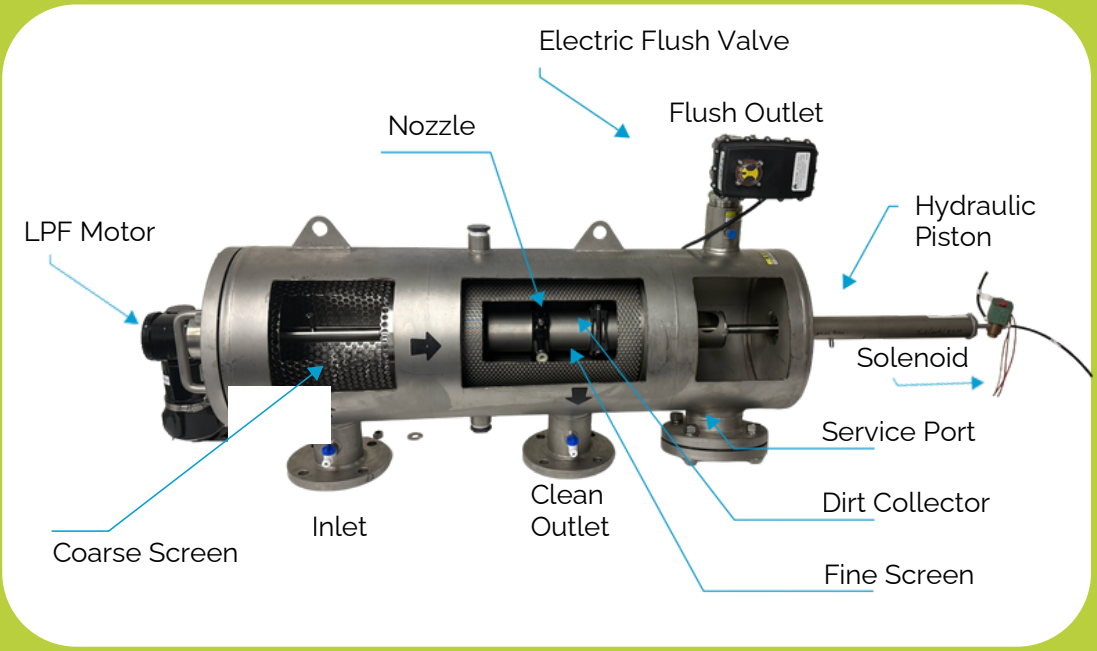
Surge Protection
- It is recommended that a surge protector be installed on the power line that feeds the electronic controller.

Inlet Pressure Gauge
- It is recommended to install the factory supplied pressure gauge on the inlet of the filter.

Filter Orientation
- Orient the filter so that the unfiltered water source is directed to the inlet (N1) manifold (the manifold closest to the cover).
- The outlet manifold (N2) closest to the flush line should direct the filtered water.

For assistance with proper installation, please email digital photos and your contact information to info@tekleen.com prior to startup. For future reference, video tutorials are available at www.tekleen.com

SECTION I: GETTING TO KNOW YOUR LPF series WATER FILTER



SECTION I

1.1 Introducing the LPF Series

Welcome to the future of water filtration! The LPF series is designed to provide you with advanced, automatic self-cleaning water filtration, ensuring a continuous supply of clean water with minimal effort and cost. This system combines a robust filter body with a dual-stage filtration process, an efficient flushing valve, and an intelligent electronic controller.

1.2 Here's a breakdown of how the LPF filter works:

1. **Initial Filtration:** Water enters the filter and passes through a durable stainless steel coarse screen (3/8" perforations for most models, 1/4" for smaller ones). This first stage removes large debris, protecting the finer filtration stages. This screen is to protect any larger particles from entering the fine screen which can cause damage. (For filters with screen size under 50µ, there is NO coarse screen).
2. F**ine Filtration:** The pre-filtered water then flows through a fine sintered mesh stainless steel screen, capturing smaller contaminants down to the specified micron size. The result is Clean, filtered water exiting the filter.
3. **Automatic Cleaning:** As the fine screen collects dirt, the filter's intelligent controller senses a pressure difference. This automatically triggers a powerful backwash, where clean water reverses flow across the screen, effectively dislodging and flushing away the trapped particles.

4. **Efficient Debris Removal:** A rotating dirt collector, powered by an electric motor, systematically vacuums the entire screen surface. The dirty water is then expelled through the flush valve.
5. **Uninterrupted Flow:** The entire cleaning cycle takes only 8 -10 seconds, and importantly, the filtration process continues uninterrupted, ensuring a consistent water supply.

1.3 Ideal Applications

LPF water filters are versatile and suitable for a wide range of applications, including:

1. Irrigation systems
2. Industrial processes
3. Commercial applications
4. Municipal water treatment
5. Removal of silt, scale, sand, rust, and organic materials (algae, zebra mussels, clams, etc.) from various water sources.

1.4 Key Features and Benefits

The LPF series offers several advantages:

1. **Clean Water Guarantee:** Unlike traditional sand media filters, the LPF system ensures only clean water enters your system, eliminating the risk of reintroducing contaminants.
2. **Effective Organic Removal:** LPF filters excel at removing organic matter such as algae and other suspended particles.
3. **Easy Maintenance:** All internal components can be easily removed and disassembled without disrupting your plumbing.
4. **Water-Saving Tekrinse Technology:** Our innovative Tekrinse backwash cycle uses significantly less rinse water compared to conventional filters, promoting water conservation.
5. **Customization:** For specialized installations or applications, please refer to Appendix I (page 18).

SECTION II: SETTING UP YOUR LPF WATER FILTER

SECTION II

2.1 Positioning and Orientation

Before you begin, carefully select a location for your LPF water filter. Consider the following:

1. **Wastewater Disposal:** Ensure easy access for wastewater discharge.
2. **Maintenance Access:** Allow sufficient space for filter element removal and servicing.
3. **Mounting Options:** The LPF filter can rest on its inlet and outlet flanges or be mounted on a stand.
4. **Orientation:** While the filter can function in various positions, Horizontal installation is generally recommended for optimal performance. If alternative orientations are necessary, please contact our support team for guidance.
5. **Controller Placement:** Mount the electronic controller in a location close to the filter housing for convenient access.

2.2 Plumbing Connections

1. **Wastewater Discharge:** The waste discharge pipe **must be at least one inch larger in diameter than the flush valve** (e.g., 2" pipe for a 1" valve, 3" pipe for a 2"). Keep the waste pipe as short as possible and minimize the use of elbows to prevent back pressure.
2. **Flush Lines:** Flush lines should not be elevated. If uphill runs are unavoidable, contact our technical support at **+1.310.839.2828** or **info@tekleen.com** for specific recommendations.
3. **Pipe Material:** Use rigid pipe for flush lines. Flexible tubing or rubber hoses are not suitable as they can restrict flow and impair cleaning efficiency.
4. **Isolation Valves:** Install an isolation valve at the filter inlet and outlet. During initial start-up, partially open the inlet valve while the outlet valve is closed, once the filter is pressurized do a backwash to relive any trapped air then slowly open the outlet valve.

2.3 Piston, Electric Ball Valve (EBV) Setup and Solenoid Valve Installation

1.Piston Installation

1. Attach the provided hardware and gasket to the rear of the filter.
2. Apply lubricant to the O-ring to prevent damage during installation.
3. Remove the clear PVC cover from the piston.
4. Carefully align and secure the piston head to the filter using the installed studs, ensuring the piston indicator pin points downwards.
5. Reattaching the PVC cover is recommended for protection. If omitted, ensure the piston area is shielded from potential damage.

2. Electric Ball Valve (EBV) Installation:

1. Apply PTFE (Teflon) thread sealant to all threads before installation.
    - Caution: *Do not over tighten* the ball valve by gripping the plastic housing, as this can damage the electrical components.

3. Solenoid Valve Installation:

- Install the provided fittings onto Port 2 and Port 3. Port 2 will be connected to your city's water supply. Port 3 will be the vent for the spent water; this fitting is provided to redirect the water via tubing to a more convenient location.
- Connect Port 1 directly to the pre-installed 1/8" SST Nipple on the piston end.

2.4 Connecting the GB6 Controller, DP Gauge, and EBV (Electric Ball Valve)

1. **Wiring:** Before powering on the controller, connect the DP gauge, EBV, and solenoid valve as shown in the wiring diagram on page 21.
2. **EBV Testing:** Apply power to the controller. Ensure the power supply matches the transformer's specified voltage (either 120 VAC or 220 VAC). Activate the manual start switch on the GB6 controller and visually confirm that the EBV opens and closes correctly.
3. **Flushing Time Adjustment:** The default flush time is 10 seconds. Adjust this setting so the piston indicator pin reaches the end of its slot during a backwash cycle. Note: Excessive flush time does not improve cleaning and can cause premature wear.
4. **Pressure Differential Adjustment:** The differential switch is preset to 7 PSI. Adjust

1/4 Inch Tubing Connections

1. **Low Pressure Connection:** Attach tubing from the low-pressure fitting on the outlet flange (K2) to the "low" pressure fitting on the DP switch.
2. **High Pressure Connection:** Attach tubing from the high-pressure fitting on the inlet flange (K1) to the "high" pressure fitting on the DP switch.
    - **Warning:** Keep tubing length under 3 feet (2 feet recommended). Longer tubing can cause pressure drops, leading to controller malfunction.

SECTION III

3.1 Initial Start-Up

Follow these steps to ensure a smooth start-up of your LPF water filter:

1.**Partial Inlet Valve Opening:** During initial start-up, partially open the isolation valve at the filter inlet. This prevents a sudden surge of pressure when the pump is activated, which could damage the filter.

2. **Gradual Valve Opening:** Once the pump is running, slowly open the isolation valve fully.

3. **Pipeline Filling and Back Pressure:** When initially filling the main pipeline, there may not be sufficient back pressure downstream to allow the cleaning cycle to function correctly.

To address this:

- Install a valve (gate, ball, or butterfly) at the filter outlet.
- Partially close this outlet valve to maintain at least 40 PSI on the filter's inlet pressure gauge.
- Once the system is fully pressurized, you can adjust the outlet valve, but ensure the inlet pressure remains above 40 PSI during cleaning cycles.

4. **Flow Control (Optional):** In applications where the main flow is frequently interrupted and the pipeline drained, consider installing a flow control or pressure sustaining valve downstream. This will maintain back pressure for proper flushing during pipeline pressurization.

5. **Piston Movement Verification:** After the system is fully pressurized, manually activate the flush button on the electronic controller.

- Non-Metal Casting Pistons: Visually inspect the piston movement to ensure it completes a full stroke. Use a flashlight by shining the light at the piston casing and watch the shadow of the seal move up to the top of the piston housing
- Metal Pistons: Check the indicating pin located under the piston cover sleeve to confirm full stroke movement.

6. **Flush Valve Check:** During the manual flush, verify that the flush valve opens completely there is an indictor on top the EBV.

7. **Air Purging:** The initial cleaning cycle may expel air from the system. Repeat the cycle if necessary to ensure proper cleaning.

3.2 Understanding Cleaning-Cycle Requirements

To ensure effective cleaning of your LPF filter, it's crucial to understand the following:

1. **Minimum Working Pressure:** The filter requires a minimum differential pressure between the filter inlet and the flush outlet of 15 PSI during the cleaning cycle.
2. **Pump Capacity:** Maintaining the necessary minimum working pressure during the cleaning cycle requires a pump with sufficient capacity. Pump selection will depend on three key parameters: the required working pressure (15 PSI), the process flow of the system, and the flush flow of the filter.
3. **Process Flow:** This is the rate of water flowing through the filter during normal operation (when it's not in a cleaning cycle).
4. **Flush Flow:** This is the rate of water used during the cleaning cycle, which depends on the size of the flush valve.

FLUSH VALVE SIZE		FLUSH FLOW	
inch	mm	gpm	m^3/hr
1”	DN25	60-80	14-18
1.5”	DN40	120-160	27-36
2”	DN50	240-320	55-73

Calculating Total Flow:

To determine if your pump is adequate, use this simple formula:

Process Flow + Flush Flow = Total Flow

Example: If your process flow is 210 gallons per minute (GPM) and your flush flow is 90 GPM, the total flow is 225 GPM.

Pump Curve:

1. Consult your pump manufacturer's pump curve. This graph shows the relationship between flow rate and pressure.
2. Find the total flow on the graph.
3. Check the corresponding pressure. If it's 15 PSI or higher, your pump meets the requirements.

Example: If your total flow is 225 GPM, the pump curve should show a pressure of at least 40 PSI at that flow rate.

Important Note: If your total flow exceeds the pump's capacity to maintain 40 PSI, the filter's cleaning cycle will not be effective.

SECTION IV: KEEPING YOUR LPF FILTER RUNNING SMOOTHLY

Keeping your Tekleen LPF running smoothly is easy! This section outlines simple maintenance procedures to ensure optimal performance and extend the life of your filtration system.
Think of these steps as routine check-ups to keep your filter in top shape.

SECTION IV

4.1 Safe Shutdown Procedure

To safely shut down your LPF filter and prevent damage, follow these steps:

1. **Bypass the Filter:** Open the bypass valve to redirect water flow.
2. **Close Outlet Valve:** Completely close the filter's outlet valve.
3. **Close Inlet Valve:** Completely close the filter's inlet valve. The filter is now isolated.
4. **Release Internal Pressure:** Carefully release any remaining pressure inside the filter housing by first doing a manual flush by pressing the manual flush button on the controller then by detaching the 1/4" plastic tubing from its fitting.
5. **Drain the Filter:** Drain the remaining water from the filter body using one of the following methods:
    a. Unscrew the 1" NPT (National Pipe Thread) pressure release plug located on the top and bottom of the filter.
    b. Caution: Carefully loosen the cover nuts and slightly open the cover to allow water to drain. Be aware that pressurized water may still be present.

4.2 Cleaning the Filters

1. **Coarse Screen Cleaning:** The coarse screen is not part of the automatic self-cleaning system. Regularly inspect and clean the coarse screen to remove trapped debris.
2. **To clean:** Follow the shutdown procedure (steps 1-5 above) and then remove the filter cover.
3. **Fine Screen Inspection:** Inspect the fine screen while cleaning the coarse screen.
4. **For models with 2"-8" pipe connections:** Use the recommended screen installer/remover tool to remove the fine screen.

Need Help with Your Tekleen LPF Filter?

Scan the QR codes below for step-by-step video instructions!

Servicing Disassembly

Tekleen LPF Filter Servicing Disassembly

Servicing Reassembly

Tekleen LPF Filter Servicing Reassembly

4.3 Replacing the Dirt Collector

If the dirt collector needs replacement, follow these steps:

1. Perform the complete shutdown procedure (steps 1-5 in section 4.1).
2. Perform the filter cleaning procedure (Section 4.2).
3. Ensure that the dirt collector is being removed along with the fine screen by pulling on the dirt collector rod.
4. Remove the dirt collector from the bottom of the fine screen.

4.4 Replacing the Piston

If the piston needs replacement, follow these steps:

1. Perform the complete shutdown procedure (steps 1-5 in section 4.1).
2. Unscrew all connection nuts securing the piston.
3. Remove the piston by pulling it away from the filter housing.
4. Reassemble the unit in the reverse order, ensuring all connections are secure.

4.5 Motor Removal/Replacement

If the electric motor needs to be removed or replaced from the cover of the filter, follow the steps outlined as follows and refer to link below:

1. Perform the complete shutdown procedure (steps 1-5 in section 4.1).
2. Remove the LPF cover from the filter.
3. Remove the shaft bolt securing the motor drive shaft to the dirt collector extension shaft.
4. Remove the motor drive shaft from the motor. Use a mallet to push the protruding end of the shaft out of the motor.
5. Remove the eight (8) nuts from the mounting studs and separate the motor/bracket assembly from the cover.
6. Remove the four (4) screws underneath securing the motor to the motor bracket.
7. Re-assemble unit (reverse procedure) with the motor facing the same was as before.

4.5 Preventive Maintenance

To ensure optimal performance and longevity of your LPF filter, perform the following preventive maintenance tasks at the specified intervals:

6-Month Interval:

1. **Inspect and Clean Coarse Screen:** Follow the procedure in section 4.2 to inspect and clean the coarse screen. Remove any accumulated debris.
2. **Inspect Fine Screen:** Visually inspect the fine screen for any signs of damage, such as tears, holes, or excessive buildup. If any damage is found, replace the fine screen.
3. **Check for Leaks:** Inspect all connections, including pipes, fittings, and valves, for any signs of leaks. Tighten connections as needed.
4. **Verify System Pressure:** Ensure that the inlet pressure during normal operation and during the cleaning cycle is within the recommended range (refer to the filter specifications).
5. **Inspect and replace the following parts if needed:** (These parts are available as kit Item# Maint-XX)
    - Upper/lower O-ring x2
    - Cover seal
    - Piston repair kit

Same as in ABW

Twelve (12)Month Interval:

1. **Perform all tasks listed under the 6-Month Interval.**
2. **Inspect Cover Seal:** Check the filter cover seal for any signs of wear, cracking, or damage. Replace the seal if necessary.
3. **Inspect O-rings:** Inspect all accessible O-rings for signs of wear, flattening, or damage. Replace any damaged O-rings.
4. **Inspect Piston:** Inspect the piston for smooth operation and any signs of damage or wear.
5. **Inspect Dirt Collector Nozzles:** Check the dirt collector nozzles for any blockages or damage. Clean or replace as needed.
6. **Inspect Dirt Collector:** Inspect the dirt collector for any damage or wear. Ensure it rotates freely.
7. **Inspect Bearings:** Check the upper and lower bearings for smooth operation and any signs of wear or damage.
8. **Inspect Air/Water Connections:** Inspect all air and water connections for leaks or damage.
9. **Replace the following parts:** (These parts are available as kit Item# Spare-XX)

- Upper/lower O-ring x2
- Cover seal
- Piston repair kit
- DP Switch
- Packing rope (for DC motor shaft) Same as in ABW
- Piston Assembly
- Upper Bearing
- Lower Bearing
- Collector Fins (depends on filter family)

SECTION V: TROUBLESHOOTING MADE EASY

Encountering an issue with your Tekleen LPF Filter? Don't worry, our troubleshooting guide is here to help you quickly identify and resolve common problems, keeping your water flowing clean.
Here are some common scenarios and how to get things back on track:

SECTION V

5.1 Problem: High Pressure Drop Across the Filter (Without Flushing)

This indicates that the filter screen is likely becoming clogged, but the automatic cleaning cycle isn't kicking in. Let's investigate:

1. **Controller is not powered on:** Simply turn the power switch on. You should see the controller activate.
2. **Flush valve wiring is incorrect:** Double-check the wiring diagram (page 21) and ensure the flush valve is connected to the controller exactly as shown.
3. F**ilter is installed backward:** Verify the direction of water flow through the filter matches the markings on the unit. Incorrect installation will prevent proper filtration.
4. **DP switch might be faulty:** Check the set point on the Differential Pressure (DP) switch. Also, ensure the small 1/4" black tubing connected to it is less than 3 feet long and free from any kinks or obstructions. Finally, confirm that the DP switch tubing is connected to the correct inlet and outlet fittings on the filter.

5.2 Problem: Frequent or Continuous Flushing During Initial Pipeline Filling

1. **Insufficient downstream pressure for effective cleaning:** Partially close the downstream main line valve until the pressure gauge at the filter inlet reads at least 40 PSI. This creates the necessary back pressure for proper flushing during the filling process.
2. **High initial flow exceeding the DP switch's trigger point:** Partially closing the downstream valve (as in the solution above) will also help regulate the initial flow rate and prevent premature triggering of the cleaning cycle.
3. **Filter was shut down with a dirty screen, and contaminants to cake on:**
   - You'll need to perform a "super flush":
   - Close the outlet valve completely.
   - Manually initiate a cleaning cycle using the controller.
   - Open the outlet valve and check the pressure difference (differential) across the filter.

If it hasn't returned to zero, repeat this "super flush" process.

5.3 Problem: Frequent Flushing During Normal Operation

If your filter is cleaning itself more often than expected during regular use, here's what could be happening:

1. **The water source is very heavily contaminated:** The screen mesh might be too fine for the amount of particulate in your water. Contact Tekleen support at +1.310.839.2828 or info@tekleen.com for assistance.
2. **Insufficient inlet pressure for effective cleaning:** Verify that the inlet pressure to the filter remains at least 40 PSI during the cleaning cycle. If it drops below this, try partially closing the outlet valve to increase the inlet pressure.
3. **The screen might be partially clogged:** Perform a "super flush" as described in section 5.2 to try and dislodge any stubborn buildup on the screen.
4. **The dirt collector might be stuck:** Power down and open the filter (following the maintenance steps in Section 4). Manually check if the dirt collector rotates freely. If it's jammed, carefully try to remove any obstruction. If it's damaged, you'll need to replace it (see Section 4.3).

5.4 Problem: The Screen Isn't Cleaning Properly

If you notice debris still on the screen after a cleaning cycle, consider these possibilities:

1. **The flush cycle duration is too short:** Access the controller panel and increase the duration of the flush cycle. A slightly longer flush can often improve cleaning effectiveness.
2. **The filter was shut down dirty with caked-on debris:** Perform a "super flush" as described in section 5.2 to try and break down and remove the hardened contaminants from the screen. You might need to repeat this process a few times.
3. **Back pressure in the flush line:** Ensure that the flush line diameter is at least one inch larger than the flush valve outlet (refer back to Section 2.2 for proper plumbing guidelines). Restrictions or undersized piping can create back pressure, hindering proper flushing. Also, ensure the flush line is not running uphill without our consultation.
4. **The piston (if applicable) isn't working correctly:** Inspect the piston components for any damage or obstructions. Verify that the piston rod moves freely during a cleaning cycle. Also, double-check that the inlet pressure to the filter is at least 40 PSI during the flush. Insufficient pressure can prevent the piston from operating effectively. Refer to Section 4.4 for piston inspection and potential replacement procedures.
5. **DC motor not turning:** Inspect the control panel and ensure the 5 amp circuit breaker is in the "On" position. If it has tripped, reset it.

LPF Filter Servicing Troubleshooting

If you've tried these troubleshooting steps and are still experiencing issues, don't hesitate to reach out to our dedicated technical support team at +1.310.839.2828 or info@tekleen.com for assistance.
We're here to help you keep your Tekleen LPF performing at its best!

Innovation | Efficiency | Industry Focus | Reliability | Sustainability

EFFICIENT & RELIABLE:
Featuring standard stainless steel construction with alternative material options available. They are designed in full compliance with ASME Boiler and Pressure Vessel Code and Section VIII standards.

SUSTAINABLE:
Adapt to best-in-class green practices by reducing water waste with our highly water efficient, automatic filters..

OUTSTANDING SERVICE
Over 40 years of industry leading expertise, short delivery times and outstanding local service you can count on 24/7.

COST EFFECTIVE:
Automates the cleaning cycle to save you maintenance time and operating costs, and improve your bottom line.

High Quality Performance:
We continuously innovate to deliver high-performance filters with filtration ranges from 1,000 microns to 2 microns

Uninterrupted Flow During Backwash:
Uninterrupted flow during the backwash (6-10 seconds).

Tekleen Maintenance Plans

Genuine parts are in stock and ready to ship. Keep your filters running reliably and extend system life with a maintenance plan tailored to your operation.

6-Month Visual Inspection

Scheduled visual checks are essential for maintaining your filter's performance and extending its operational life. Conduct a thorough visual inspection of your system, checking for leaks around seals and connections, signs of corrosion or component wear, and proper differential pressure readings.

This simple measure helps identify potential issues early, reducing the risk of unexpected downtime and ensuring your Tekleen filter continues to deliver reliably clean water filtration for years to come.

12-Month Maintenance Kit

Complete annual maintenance solution:

- A 6-month visual Inspection
- DP Switch
- Piston Assembly
- Upper Bearing
- Lower Bearing
- Collector Fins (quantity varies by filter model)

SECTION VI: REPLACEMENT PARTS AND ACCESSORIES

SECTION VI

6.1 Recommended Spare Parts

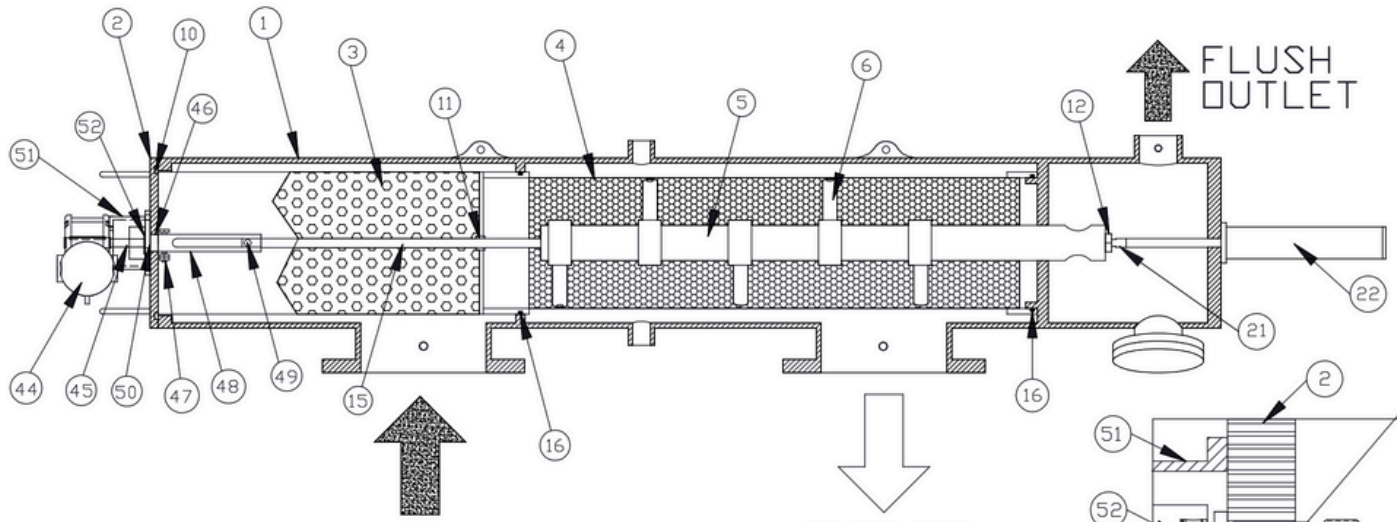
Part # & Name	Part Purpose
4 – Fine Screen	Replacement filter screen for removing fine particles.
16 – O-ring Set	Assorted O-rings for sealing various components.
10 – Cover Seal	Seal for the filter housing cover.
5 – Dirt Collector	Replacement dirt collector assembly.
11 – Upper Bearing	Bearing for the upper part of the dirt collector mechanism.
12 – Lower Bearing	Bearing for the lower part of the dirt collector mechanism.
34 – Differential Pressure (DP) Switch	Replacement switch that monitors the pressure difference across the filter.
1 – Controller Board	Replacement circuit board for the electronic controller.
29 – Piston Repair Kit	Components needed to repair the piston assembly.
6 – Dirt Collector Nozzles	Replacement nozzles for the dirt collector.
18 – Mini-Filter	Small filter for the piston line.

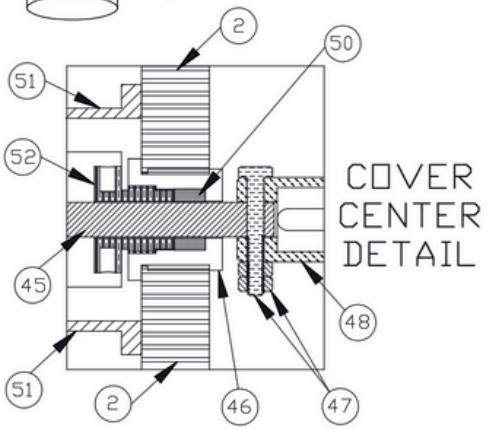
Tekleen LPF Filter – Spare Parts

Need Replacement Parts?

To keep your Tekleen LPF filter running at peak performance, we recommend keeping key spare parts on hand. From O-rings to controller boards, having replacements readily available helps minimize downtime and ensures smooth operation. View the full spare parts list or order directly by scanning the QR code or visiting the link.

REVISIONS				
REV.	ZONE	DESCRIPTION	DATE	INITIAL





PART#	DESCRIPTION	MATERIAL OF CONSTRUCTION
1	FILTER HOUSING	SST 304
2	COVER	SST 304
3	COARSE SCREEN	SST 316L
4	FINE SCREEN	SST 316L
5	DIRT COLLECTOR	SST 316L
6	DIRT COLLECTOR NOZZLE	POLYPROPYLENE
10	COVER SEAL	BUNA
11	UPPER BEARING	DUPLEX
12	LOWER BEARING	DUPLEX
15	DIRT COLLECTOR ROD	SST 316L
16	UPPER/LOWER O-RING	BUNA
21	MALE BUSHING	DUPLEX
22	PISTON	SST 316L
44	MOTOR	
45	MOTOR DRIVE SHAFT	SST 316L
46	COVER PACKING	SST 316L
47	DIRT COLLECTOR EXTENSION BOLT W/ 2 NUTS	SST 316L
48	DIRT COLLECTOR EXTENSION	SST 316L
49	DIRT COLLECTOR LEADING SCREW	SST 316L
50	PACKING ROPE	PTFE
51	MOTOR BRACKET	ALUMINUM
52	COVER ADJUSTING PLUG	SST 316L

NOTE: SHAPE AND SIZE VARIES UPON FILTER MODEL.

TOLERANCES (UNLESS OTHERWISE SPECIFIED)

FRAC. ±1/16
.X ±.1
.XX ±.05
.XXX ±.010
ANGLE ±1°

TEKLEEN® WATER FILTERS
9816 ARLEE AVE.
SANTA FE SPRINGS, CA 90670
MAIN: (310) 839-2828
FAX: (310) 839-6878

MATERIAL:	SEE ORDER
DRAWN BY:	R. KIROLOS
DATE:	09/04/25
SCALE:	1:2
SHEET:	1 OF 1

TITLE: MATERIAL OF CONSTRUCTION OF LPF MODEL CUTAWAY

DRAWING NUMBER: MOC-LPF-CUT-01

REV: 0

APPENDICES

Let's explore some advanced setup options and get a deeper understanding of specific Tekleen LPF features! This section provides insights into specialized installations, alternative flushing methods, considerations for atmospheric discharge, and details about the piston.

Appendix I: Special Installation Considerations

Automatic Bypass System

1. In situations where continuous water flow is crucial, even during filter maintenance, we recommend installing a bypass system.

Filter Bypass Configuration

1. Creating a bypass is straightforward, especially for online filter models. This involves installing isolation valves on both the inlet and outlet, along with a bypass line equipped with another isolation valve (see diagram).
2. For automated bypass operation, the bypass valves can be fitted with actuators and wired to the controller (refer to the controller manual for wiring instructions).

Appendix II: Alternative Flushing Methods

If your installation lacks sufficient pressure and/or flow for effective backwashing, several solutions are available:

1. **Pressure Sustaining Valve:** For low-flow installations with pressure exceeding 40 PSI, the simplest solution is to install an automatic pressure sustaining valve at the filter outlet. This valve will close during the filter's cleaning cycle, directing the full pump capacity to the backwash process.
2. **Expansion Tank:** An expansion tank installed directly upstream of the filter inlet can provide the necessary extra flow. The tank stores water at operating pressure, which is then used to supplement flow during the cleaning cycle.

Appendix III: System with Discharge to Atmosphere

For systems where the filter discharges freely to the atmosphere, we recommend installing a control valve at the filter outlet. This valve serves two purposes:

1. **Back Pressure:** It creates back pressure on the system by restricting flow across the filter.
2. **Pressure Regulation:** It can function as a pressure sustaining valve to ensure adequate pressure during backwash, especially when inlet pressure is insufficient.

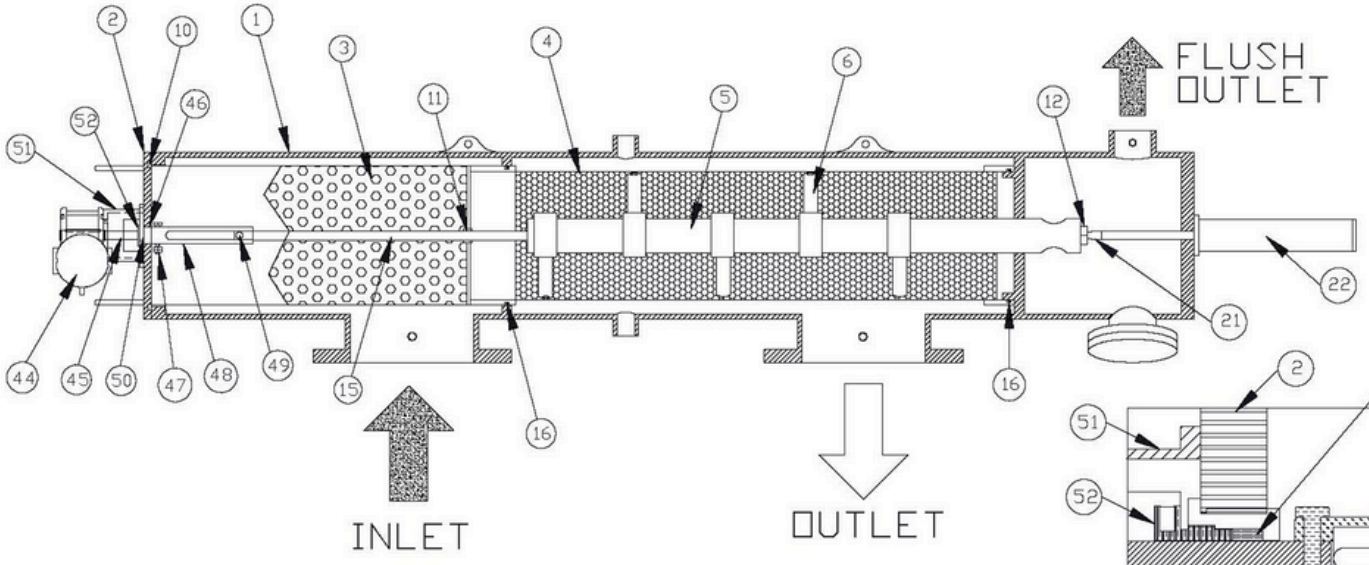
Appendix IV: Piston Operation

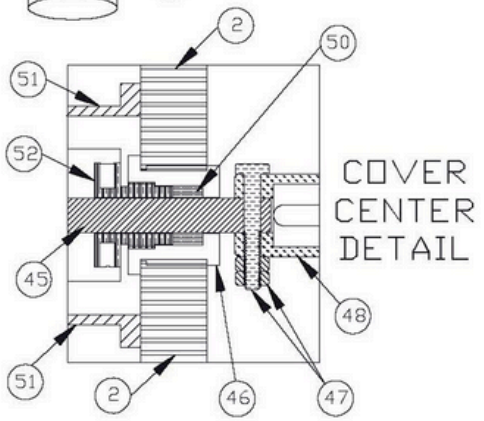
Larger filters use longer screens, necessitating a piston in the cleaning mechanism. The piston controls the linear movement of the dirt collector, enabling it to clean the entire screen surface in a spiral-downward motion.

At the end of the cleaning cycle, the flush valve closes, and normal filtration resumes. Simultaneously, the piston is pressurized, returning the dirt collector to its starting position for the next cleaning cycle.

Initial Operation Note:
During initial system startup, the seals within the piston may not be fully seated. This can result in water leakage from the piston, which is normal. The PVC cover sleeve serves to protect the piston and contain any leakage, directing it to a single drain point. Over time, as the system operates, the piston seals will set, and the leakage should decrease or cease entirely. The cover sleeve can also be retracted to access the bolt holes and piston indicating pin. The piston should be installed with the indicating pin facing downwards.

REVISIONS				
REV.	ZONE	DESCRIPTION	DATE	INITIAL





PART#	DESCRIPTION	MATERIAL OF CONSTRUCTION
1	FILTER HOUSING	SST 304
2	COVER	SST 304
3	COARSE SCREEN	SST 316L
4	FINE SCREEN	SST 316L
5	DIRT COLLECTOR	SST 316L
6	DIRT COLLECTOR NOZZLE	POLYPROPYLENE
10	COVER SEAL	BUNA
11	UPPER BEARING	DUPLEX
12	LOWER BEARING	DUPLEX
15	DIRT COLLECTOR ROD	SST 316L
16	UPPER/LOWER O-RING	BUNA
21	MALE BUSHING	DUPLEX
22	PISTON	SST 316L
44	MOTOR	
45	MOTOR DRIVE SHAFT	SST 316L
46	COVER PACKING	SST 316L
47	DIRT COLLECTOR EXTENSION BOLT W/ 2 NUTS	SST 316L
48	DIRT COLLECTOR EXTENSION	SST 316L
49	DIRT COLLECTOR LEADING SCREW	SST 316L
50	PACKING ROPE	PTFE
51	MOTOR BRACKET	ALUMINUM
52	COVER ADJUSTING PLUG	SST 316L

NOTE: SHAPE AND SIZE VARIES UPON FILTER MODEL.

TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
FRAC. ±1/16
.X ±.1
.XX ±.05
.XXX ±.010
ANGLE ±1°

MATERIAL: SEE ORDER

DRAWN BY: R. KIROLOS

DATE: 09/04/25

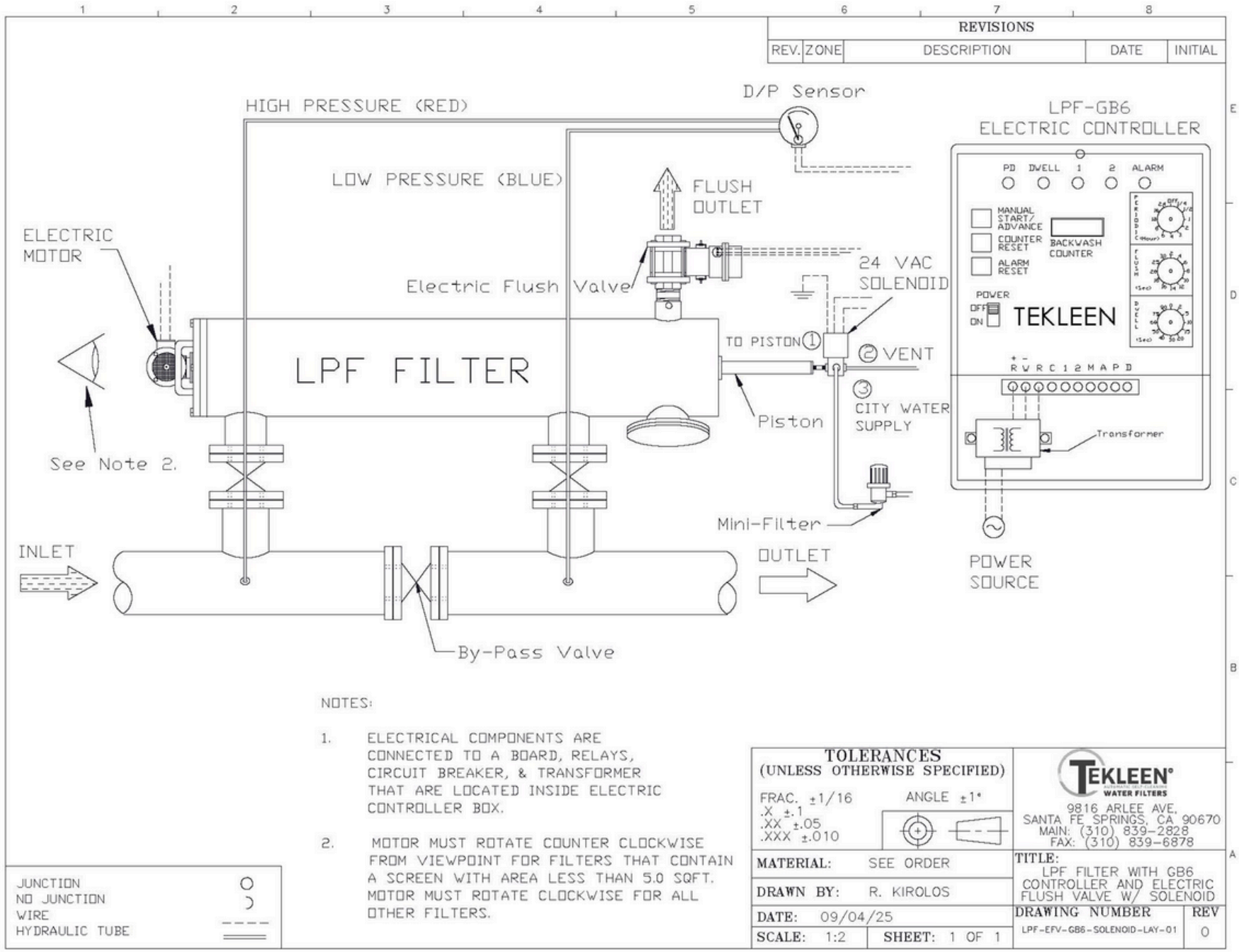
SCALE: 1:2 SHEET: 1 OF 1

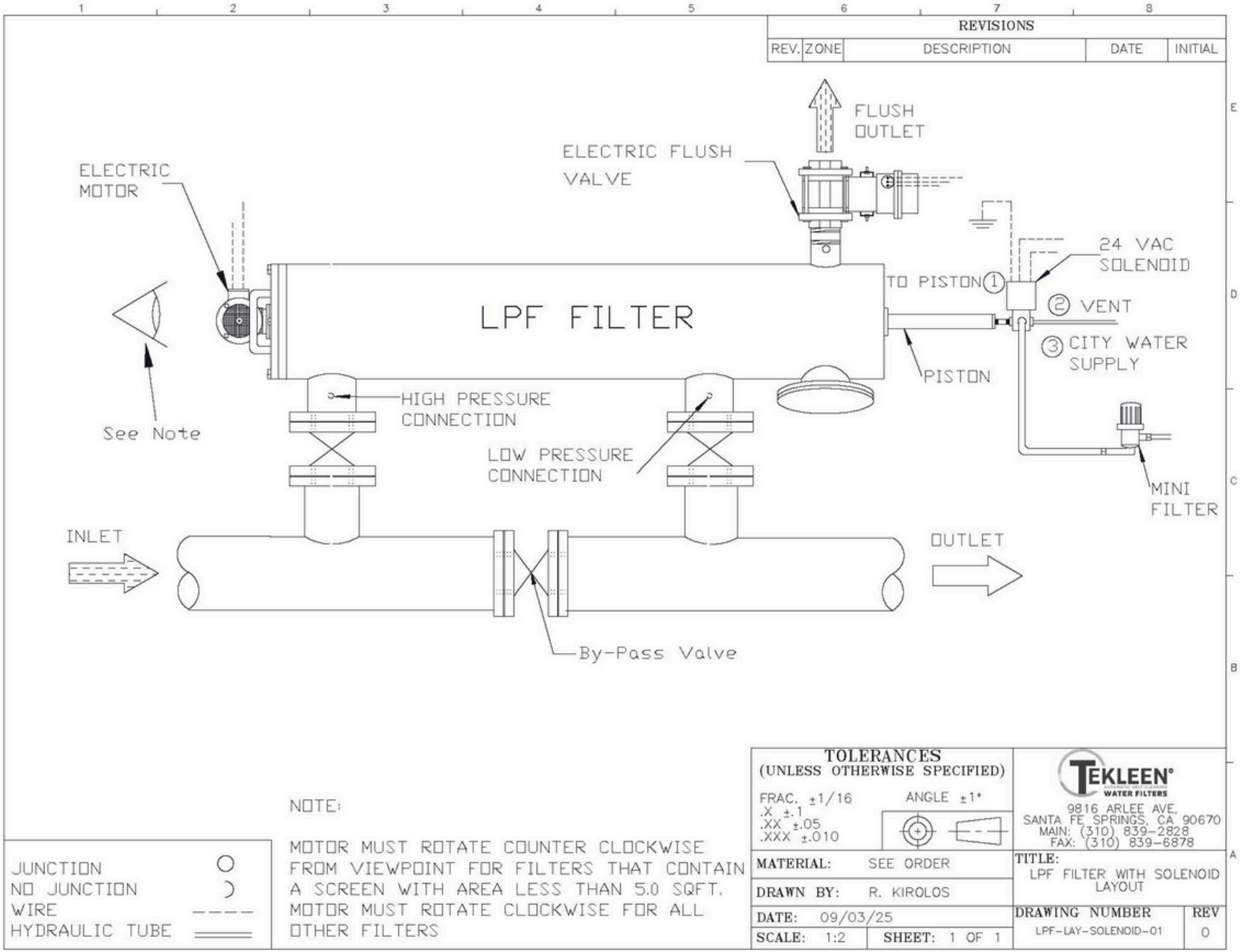
TEKLEEN® WATER FILTERS
9816 ARLEE AVE.
SANTA FE SPRINGS, CA 90670
MAIN: (310) 839-2828
FAX: (310) 839-6878

TITLE:
MATERIAL OF CONSTRUCTION OF LPF MODEL CUTAWAY

DRAWING NUMBER: MOC-LPF-CUT-01

REV: 0


REVISIONS
REV. ZONE DESCRIPTION DATE INITIAL
HIGH PRESSURE (RED)
D/P Sensor
LOW PRESSURE (BLUE)
FLUSH OUTLET
ELECTRIC MOTOR
Electric Flush Valve
24 VAC SOLENOID
TO PISTON 1
2 VENT
3 CITY WATER SUPPLY
LPF FILTER
Piston
See Note 2.
Mini-Filter
INLET
OUTLET
By-Pass Valve
LPF-GB6 ELECTRIC CONTROLLER
PD DWELL 1 2 ALARM
MANUAL START/ ADVANCE
COUNTER RESET
ALARM RESET
BACKWASH COUNTER
POWER OFF ON
TEKLEEN
R V R C 1 2 M A P D
Transformer
POWER SOURCE
NOTES:
1. ELECTRICAL COMPONENTS ARE CONNECTED TO A BOARD, RELAYS, CIRCUIT BREAKER, & TRANSFORMER THAT ARE LOCATED INSIDE ELECTRIC CONTROLLER BOX.
2. MOTOR MUST ROTATE COUNTER CLOCKWISE FROM VIEWPOINT FOR FILTERS THAT CONTAIN A SCREEN WITH AREA LESS THAN 5.0 SQFT. MOTOR MUST ROTATE CLOCKWISE FOR ALL OTHER FILTERS.
JUNCTION
NO JUNCTION
WIRE
HYDRAULIC TUBE
TOLERANCES (UNLESS OTHERWISE SPECIFIED)
FRAC. ±1/16
.X ±.1
.XX ±.05
.XXX ±.010
ANGLE ±1°
MATERIAL: SEE ORDER
DRAWN BY: R. KIROLOS
DATE: 09/04/25
SCALE: 1:2
SHEET: 1 OF 1
TEKLEEN WATER FILTERS
9816 ARLEE AVE.
SANTA FE SPRINGS, CA 90670
MAIN: (310) 839-2828
FAX: (310) 839-6878
TITLE:
LPF FILTER WITH GB6 CONTROLLER AND ELECTRIC FLUSH VALVE W/ SOLENOID
DRAWING NUMBER
LPF-EFV-GB6-SOLENOID-LAY-01
REV
0


REVISIONS
REV. ZONE DESCRIPTION DATE INITIAL
FLUSH OUTLET
ELECTRIC FLUSH VALVE
ELECTRIC MOTOR
24 VAC SOLENOID
TO PISTON 1
2 VENT
3 CITY WATER SUPPLY
LPF FILTER
PISTON
HIGH PRESSURE CONNECTION
See Note
LOW PRESSURE CONNECTION
MINI FILTER
INLET
OUTLET
By-Pass Valve
NOTE:
MOTOR MUST ROTATE COUNTER CLOCKWISE FROM VIEWPOINT FOR FILTERS THAT CONTAIN A SCREEN WITH AREA LESS THAN 5.0 SQFT. MOTOR MUST ROTATE CLOCKWISE FOR ALL OTHER FILTERS
JUNCTION
NO JUNCTION
WIRE
HYDRAULIC TUBE
TOLERANCES (UNLESS OTHERWISE SPECIFIED)
FRAC. ±1/16
.X ±.1
.XX ±.05
.XXX ±.010
ANGLE ±1°
MATERIAL: SEE ORDER
DRAWN BY: R. KIROLOS
DATE: 09/03/25
SCALE: 1:2
SHEET: 1 OF 1
TEKLEEN WATER FILTERS
9816 ARLEE AVE.
SANTA FE SPRINGS, CA 90670
MAIN: (310) 839-2828
FAX: (310) 839-6878
TITLE: LPF FILTER WITH SOLENOID LAYOUT
DRAWING NUMBER LPF-LAY-SOLENOID-01
REV 0

WARRANTY

Automatic Filters, LLC (Tekleen) warrants water filters and controllers to be free from defects in materials and workmanship for one year from purchase date.

What's Covered

1. Filter housing, screen, valves, fittings, and internal components
2. Electronic controller defects affecting operation

What's NOT Covered

1. Normal wear and tear
2. Improper installation, misuse, or neglect
3. Lack of maintenance
4. Chemical damage
5. Labor or shipping costs
6. Property damage or loss of use
7. Products not purchased from authorized dealers

Warranty Claims

1. Call +1.310.839.2828 or email info@tekleen.com
2. Provide proof of purchase
3. Describe the problem
4. Follow troubleshooting if required
5. Get RMA number if needed
6. Ship product at your expense
7. We repair/replace and ship back at our expense

This warranty replaces all other warranties. We reserve the right to repair or replace defective products at our discretion.

TEKLEEN®
AUTOMATIC SELF-CLEANING
WATER FILTERS

Automatic Filters, LLC
9816 Arlee Ave, Santa Fe Springs, CA 90670
T (310) 839 2828 • info@tekleen.com www.tekleen.com

Thank you for choosing Tekleen®
We appreciate your trust in our products and team.

We hope your automatic filter system runs smoothly and exceeds your expectations. If you have any questions or need support, don't hesitate to reach out, we're here to help.