Titan
Pure Water System

Effective April, 2026

Pure Water
Window Cleaning System
Operation and Maintenance
Manual

Overview

Congratulations on your purchase.

Thank you for purchasing the Titan Pure Water System! With proper care, this unit will provide you with years of trouble-free service. This system was designed with professional window cleaners in mind. The Titan will help you clean faster, safer, and better than ever before, leaving spot-free results that you and your customers will love!

The following is provided to help you understand how your system purifies water. The Titan is a multi-stage water purification unit using carbon, reverse osmosis, and deionization to remove impurities from water before delivery to surfaces for cleaning. *General lifespan of the filters will vary depending on feed water TDS (Total Dissolved Solids).* Based on an average TDS of 100 ppm (parts per million) in your water, approximately 8,000 gallons of water can be passed through the Carbon/ Sediment and DI filters before replacement filters are needed. Lower TDS levels in the source water will allow for a longer lifespan, while higher TDS source levels will lead to a shorter lifespan. It is recommended that the Carbon and DI filters be replaced at the same time. The RO membrane is rated to process 100,000 gallons under ideal conditions. Failure to properly maintain the RO membrane will reduce the life of the membrane.

In The Box

Parts Check

- Titan System
- Handheld TDS Meter
- Shutoff Valve
- Black Bypass Line with Shutoff.
- 2 Brass Elbow Connection Hoses.

1. Unpacking/Inspecting The System

Your system is packaged to stay undamaged in transit. Please inspect all components to ensure no damage has occurred prior to continuing. Carefully remove the packaging material from around the system and discard. Your Titan comes with all filters installed. Inspect your Titan unit for any shipping damage. If damage has occurred, notify abc Window Cleaning Supply as soon as possible to begin a damage claim. Check all fittings to ensure that they are connected tightly, as they may loosen during shipping.

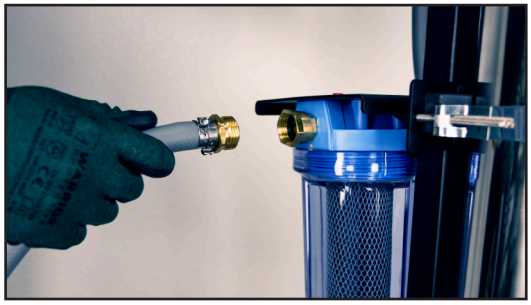
2. Initial Setup

Follow these steps to start up the Titan.

You can also watch the quickstart video at: www.abcWindowSupply.com/TitanQS

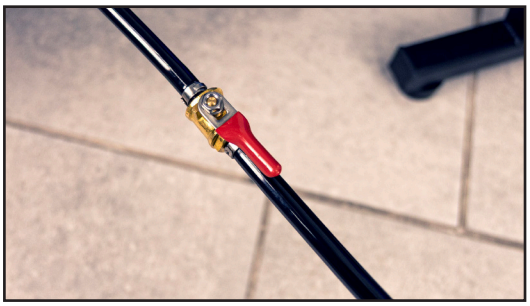
1. Attach the grey female elbows of the 20” connection hose from the male side of the Carbon filter to the top of the RO membrane housing. Screw on tight enough to engage the rubber gasket. **Do not overtighten**, or you could damage your brass fittings. You want to tighten the fitting to the point where the female side will no longer swivel.
2. Attach the other grey female elbows of the 20” connection hose to the bottom (middle port) of the RO membrane housing and the inlet of the DI Housing. Screw on tight enough to engage the rubber gasket. **Do not overtighten**, or you could damage your brass fittings. You want to tighten the fitting to the point where the female side will no longer swivel.
3. Attach the female brass fitting on the black bypass line to the bottom of the RO bypass (outer brass fitting). Screw on tight enough to engage the rubber gasket. Do not overtighten, or you could damage your brass fittings. You want to tighten the fitting to the point where the female side will no longer swivel.
4. Attach feed hose to Carbon housing inlet on system and to source water.
5. Run water through the carbon and RO for 10 minutes before making RO connection to the DI filter. After 10 minutes, turn off the source water.
6. Attached the other end of the 20” connection hose from the bottom of the RO membrane to inlet side of the DI housing.
7. Attach the shut-off valve to the outlet side of the DI housing.
8. Attach pole tubing to quick connect shut-off and turn to open position.
9. Turn on source water.
10. Open black bypass shut off valve and lay the system on its back and elevate the outlet side of the unit so that the bypass is facing upward until air has been purged from the RO housing through the bypass line. Failure to bleed the air out of the system can result in lower production and possible damage to the filter housings.
11. Once the air has been pushed out of the filters, close the bypass valve partially to begin producing pure water. DO NOT CLOSE OFF FLOW THROUGH THE BYPASS LINE WHILE USING THE SYSTEM (some bypass water should always be flowing out). See Bypass Valve Operation section below for more information.
12. Start cleaning windows.

3. Hooking Up To Water Source & Purging Air



Locate an external water source. Attach one end of the feed hose (sold separately, part number WF612010 or hose of your choice) to the water source. Open the faucet at the building and make sure all air is out of your source hose. Turn off water and attach to the inlet of Carbon Housing. A ½” garden hose is preferred. Attach the other end of the feed hose to the female connection on the Carbon housing. Open the bypass valve fully and turn on source water. Elevate the outlet side of the unit so the bypass is facing upward until air has been purged from the RO housing through the bypass line. Once the air in the filters has left the bypass line, adjust the valve to desired flow rate. Open the shut-off valve between the hose and the pole to allow water to flow through the pole and wash windows. **Do not drink pure water made from your system.** If using a pump, wait for water to flow from the brush before turning the pump on. **Do not exceed 100 PSI.**

4. Bypass Valve Operation



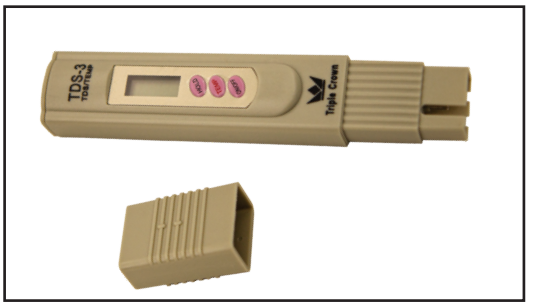
The system comes with a bypass tube and valve that control the amount of water leaving the RO membrane. This is the black tubing with a valve located on the bottom of your system. The RO membrane uses the bypass flow to remove concentrated dissolved solids from the filter. **There should always be water flowing out of the bypass tube.** Inadequate bypass flow will result in fouling and possibly damage the RO membrane.

The water coming out of the bypass tube may initially appear milky. This milky appearance is actually small air bubbles being pushed out of the filter housing through the bypass line.

The bypass valve is also the primary way you can control the pressure of your system. Opening the bypass valve more will reduce the amount of pressure that is used to produce pure water resulting in lower flow rates at the brush. Slightly closing the bypass valve will increase the amount of pressure which will lead to higher flow rates at the brush. Slightly closing your valve so that the flow of the bypass is roughly equal to the flow of pure water exiting the system is a good place to start. This will restrict flow for elevated system pressure, but also allows waste water to exit your membranes. When using a pump, open the bypass valve fully to start then reduce flow for optimal pressure. **Do not exceed 100 PSI on your filters.**

Flushing water through the RO membrane after use will remove excess minerals from the membrane. **It is recommended that you run your system with the bypass valve fully open for 3-5 minutes each time you finish using your system** to help clean out your RO membrane and extend its life. See the Shutdown section of this manual for more details

5. TDS (Total Dissolved Solids) Meter



Total Dissolved Solids are the minerals and salts within source water that lead to spotting on glass as the water evaporates. Your TDS meter measures the amount of dissolved solids using the conductivity of the water. The meter can test water before and after individual filters or the entire system to determine how they are performing. TDS levels are measured in parts per million (ppm).

Push the “On” button on the handheld TDS meter to get a TDS reading of the water sample. A TDS reading of 0 – 10 is acceptable for cleaning most windows, though specific conditions and results may vary.

Remove the cap from the TDS meter and fill it with the sample you wish to test. When measuring source water before pure water TDS levels, it is important to rinse out any source water with pure water to ensure accurate readings. Even a single drop of source water will cause the pure water TDS reading to appear higher than it actually is. Gather multiple readings, rinsing each time, to ensure accurate readings.

Your TDS meter also has a thermometer that reads temperature. This can allow you to monitor the temperature of your feed water. Running your system at feed water temperatures of less than 10 °C (50 °F) will result in low flow exiting the system. RO membranes require more pressure to create the same amount of clean water as the temperature of the water gets colder. A pump can help to compensate for low source water temperatures. Do not let the system or any filter freeze when operating in lower temperatures.

6. Using A WaterFed Pole

Once your Titan system is hooked up, and you have a WaterFed® pole connected to the hose, you're ready to clean glass.

Always begin by cleaning the top row or highest windows first, including scrubbing the frames. Work the WaterFed® pole up one side of the frames, across the top, and back down the other side. Scrub the glass in an up and down motion, moving the pole the entire length of the glass with each stroke if possible. Return the pole to the top of the window, and with a side to side motion, allow rinse water to flow completely down the surface of the glass.

Frame rinsing may not be required. If the height of the glass and the weight of the pole allow for it, hold the brush slightly off of the surface of the glass to rinse. If this is not possible, move the pole side to side slowly with the brush on the glass at the top, and let the water flow down the glass to rinse.

Once you have completed the top row or highest glass on one side of the building, repeat these steps for each tier or level of glass, working your way down. A good initial scrubbing on the glass followed by a complete rinse will ensure that the glass dries completely spot-free.

Pure water is a great natural solvent for many soils. In some cases, such as heavy soils, a pre-soak or even a double scrub and rinse may be needed to achieve optimal results. The agitation of the brush, coupled with the flow of water through the brush when scrubbing, should break down and suspend most soils, readying them for complete removal via the rinse step.

As with any new procedure, practicing the use of your WaterFed® pole is the best way to achieve optimal results. Learn more about basic techniques at www.abcWindowSupply.com/StartingWF

WASH & LEARN

7. Soap Residue

Seeing spots when your TDS levels are below 10? A common issue encountered when transitioning buildings from traditional window cleaning methods to pure water cleaning is soap residue. After the initial cleaning with pure water, small white or gray spots and runs will be seen on the glass after drying. Most often, this is soap and/or detergent residue actually left behind by previous traditional cleanings and brought out of the pores of the glass by the pure water cleaning process. The soap can take up to 30 minutes to dissolve if it has been baked on or pushed into seals and frames. Soaking the glass 15-20 minutes before performing a normal agitation and rinse cycle will remove soap spotting. Repeat agitation and rinse if the spots persist.

8. Shutdown

1. If using a pump, shut off the pump before turning off supply water.
2. Close the shut-off valve to the pole. Open bypass valve to fully open position and flush out the system for 3-5 minutes.
3. Turn supply water off.
4. Disconnect the water line and hose connections and stand the Titan up draining is desired.

9. Maintenance

The Carbon filter should be replaced every 3 months with frequent use and should not be kept in service for more than a year. **Failure to replace the Carbon filter regularly can lead to chlorine reaching your RO membrane and result in damage to the membrane.** We often recommend that users should replace both their Carbon and DI filters at the same time as this usually ensures that the carbon is kept fresh without having to track service dates.

An RO membrane has the potential to process 100,000 gallons of water when properly maintained. To test the health of your RO membrane, compare the TDS levels of the source water to the level of pure water leaving the RO membrane. For example, 100 TDS source water with 10 TDS leaving the RO membrane indicates 90% rejection. When RO rejection rates drop below 80% it is generally time to replace the RO membrane canister. As

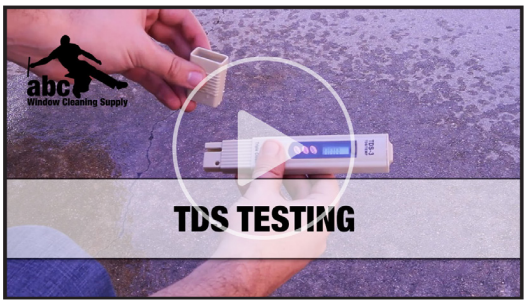
stated above, bleeding the RO at the beginning of each use and flushing the RO at the end of each use are essential to achieving maximum RO lifespan. Trapped air can result in the plastic overheating and pressure rating of the RO housing dropping. Setting up your system out of direct sunlight on hot days will also help protect the plastic RO housing from heat damage.

The lifespan of your DI filter depends on the TDS of the water entering the filter. As your RO membrane nears end of life your DI filter will exhaust much faster. Periodically check the TDS of the purified water leaving the DI filter with the provided handheld meter. When the TDS levels reach unacceptable levels for your application (abc suggests 10ppm or less for window cleaning and 40ppm or less for cleaning opaque surfaces) the DI filter is completely exhausted and should be replaced. See troubleshooting section below for more information on high TDS levels coming from the system.

10. Filter Replacement

Learn how to change your filters by video:
www.abcWindowSupply.com/TitanChange

Learn when to change your filters with this guide:
www.abcWindowSupply.com/FilterTime



Carbon/Sediment Filter

1. Loosen the housing by turning counterclockwise with the provided small wrench.
2. Remove the old carbon filter and discard it.
3. You can apply lubricant to the O-ring on housing to improve seal and prolong O-ring life.
4. Insert new carbon filter and tighten housing back by hand turning it clockwise. **t**

DI Filter

1. Loosen the housing by turning counterclockwise with the provided large wrench.
2. Remove the old DI filter and discard or refill with new resin.
3. You can apply lubricant to the O-ring on housing to improve seal and prolong O-ring life.
4. Insert new DI filter with gasket side facing up and tighten housing back by hand turning it clockwise. **Do not tighten with a wrench.**

RO Filter

1. Detach the brass elbow from the top of the RO housing.
2. Partially loosen one side of the clamp using a 9/16” socket and crescent wrench and then fully remove the other bolt and remove the clamp.
3. Using a flat head screwdriver and rubber mallet remove the top cap. It is helpful to stand on the base of the frame while removing the cap.
4. Pull out the used membrane with a pair of pliers rotating as you pull upwards. Grab the membrane by the outer fins with pliers.
5. Lubricate the O-ring on the membrane and insert new membrane into housing with the O-ring side facing up.
6. Reinsert plastic housing cap and lightly hit the top with a mallet until the bottom lip becomes flush with the stainless steel housing.
7. Reinstall the metal clamps using the same tools in step 2. Tighten one side half way before fully tightening the other side.
8. Reattach brass fitting elbow to the top of the RO housing.

11. Storage

Storage - Short Term (2-4 Weeks)

Do not allow the filters or system to freeze. Failure to do so could result in damage to your filters and Titan system. **Do not allow DI or RO membranes to dry out.** Dry DI resin will lose its charge and therefore become unable to remove dissolved solids from the water. Dry RO membranes will develop cracks which allow more dissolved solids to pass through the membrane. This will deplete the downstream DI filters at a faster rate. abc recommends that you run water through your Carbon/Sediment filter and RO membrane once every 2 weeks or so, not only to help keep your filters moist but to also wash out any microorganisms that might try to grow in your filters. RO and DI filters need to stay moist but do not need to be full of water. Always run your source water through the Carbon/Sediment filter before the RO membrane when flushing the filter.

Storage - Long Term (Winterizing)

abc strongly recommends flushing out the RO membrane filter once every 2-4 weeks during storage periods to ensure the maximum lifespan of the filters. When flushing the RO membrane, the source water should always be passing through the Carbon/Sediment filter before the RO membrane. This will prevent damage to the membranes from chlorine and chloramine. Periodic flushing will ensure that the RO membrane does not dry out and will reduce the chance that biological growth will foul the filter while in storage.

If periodic flushing is not feasible, we recommend that users wrap filters tightly in plastic wrap or plastic bags and then seal with tape. This will reduce the chance that the filter dries out when in storage. **Do not allow RO or DI filters to dry out.** Dry DI resin will lose its charge and therefore become unable to remove dissolved solids from the water. Dry RO membranes will develop cracks which allow more dissolved solids to pass through the membrane. RO and DI filters need to stay moist but do not need to be full of water.

Store filters indoors over the winter. **Do not allow the filters or system to freeze.** Failure to do so could result in damage to your filters and Titan system. After filters have been stored this way, they will need to be flushed thoroughly before use.

12. Troubleshooting

1. Low Pure Water Flow out of the Brush:

1. Low tap pressure is one of the most common causes of low flow of pure water. Source water pressure is the primary driver of system performance. Even sources that appear to have plenty of flow out of the tap may not have enough PSI to push water through the RO membrane. Ensure that the tap pressure is sufficient using a pressure gauge (TA-PG sold separately). Trying a different source may lead to better performance. Also, check all hoses (incoming and outflowing) for kinks or blockages, especially hose reels that are wound too tight. Trying a larger diameter hose (½") or a shorter hose length between the system and the tap can also improve flow. Adding a pump, such as the abc boost pump (WF1000-BP) can help compensate for low source pressure. **Do not exceed 100 PSI** when using a pump.

2. Mineral fouling of the RO membrane will lead to reduced pure water production from your system. Processing water through the RO membrane without enough (or any) bypass flow will lead to increasing mineral concentration within the RO housing. In minor cases, this will result in a temporary drop in production from the RO membrane. Flushing the excess minerals from the housing will return the filter to normal production rates if no fouling has occurred. In extreme cases, the mineral buildup will permanently reduce the flow rate of the filter. These cases can only be fixed by replacing the filter.

3. Biologic fouling is another potential cause of reduced pure water production from the RO membrane. Algae, bacteria, and fungi can land and grow on the surface of the RO membranes. These organisms eventually block off pores in the membrane leading to reduced production levels. Letting filters sit for long periods of time without running any water through them increases the chances of biological fouling. After long term storage, running a series of long flushes will often return the RO membrane to normal production levels. Fully open the bypass hose and then shut off your system's pure water outlet at the DI filter. Run it like this for 10 minutes and then open your pure water outlet and restrict your bypass to its normal running setting. We recommend removing the DI filter after the extended flush. Test the water coming out of the RO (not the bypass water). If levels are as expected, put the DI filter back on and use the system like normal. Doing this flushing process 2 or 3 times may be required to return to normal production levels.

4. Expect decreased production rates when running your RO membrane with colder source water. The ideal temperature for source water is 77°F. You can expect around half the flow for water at 50 degrees that you would get at 75 degrees, even if both sources are at the same PSI. Use your TDS meter to measure the temperature of your source water to determine if this is the cause of lowered flow rates.

5. Leaks in the system and the pole tubing can release pressure and take flow away from the jets in your brush. A couple of small leaks in the pure water lines can cut pressure to the jets in half. Read the "leaks" section below for more information on eliminating leaks in the system.

2. High TDS coming from the system:

1. Retest your water sample. When you get a higher than expected reading on your handheld TDS meter, use the water you are testing to wash out both the measuring lid and the measuring prongs of the meter itself then retest your water sample. **Do not get the body of the meter wet, it is not waterproof.** Minerals can stay in the cap from other measurements and can make the sample appear to have a higher TDS than it actually does. Taking multiple samples ensures maximum accuracy.

2. Elevated TDS levels coming from the RO membrane can indicate that both the RO and DI need to be replaced. First, disconnect the DI filter from the end of the RO membrane. Use your handheld TDS meter to measure the TDS of the water coming out of the RO and compare that to the TDS levels of the source water. Your RO should have a rejection rate of over 80%. If the rejection rates are below normal, follow the step below to ensure that the RO membrane needs to be replaced.

3. High TDS coming out of the system usually indicates that the DI filter is spent. Testing before and after the DI filter will verify that there is not another issue. If the TDS levels before and after the DI filter are the same, the filter is completely depleted. Replace the DI filter (P/N ABC50017) once depleted. If water coming from the RO membrane has high TDS levels, check the RO performance as well.

4. If your RO rejection is lower than expected, you can try running a 10 minute flush. Increasing flow through the filter housing will help the flushing process. Disconnect the bypass tube from the bottom of the filter and then shut off your system's pure water outlet at the DI filter. Water should be flowing out of the now open push-to-fit connector at the bottom of the RO membrane. Run it like this for 10 minutes. Turn off water. Open your pure water outlet, reconnect the bypass tube, and restrict your bypass valve to its normal running setting. Turn water on, then check your RO TDS to see if it is dropping to more acceptable levels. Repeat the flush 2-3 times if necessary to try and reduce the RO TDS.

5. If the TDS levels coming from the RO membrane do not drop, your RO is spent. You can continue to use the spent RO, however you will use up your DI filter faster than normal. Replace the spent RO membrane (WF3440-RO) as soon as possible.

3. Leaks:

Remove housing where you are seeing a leak and make sure the gasket is seeded properly and apply lubricant to the O-ring.

Leaks between brass garden hose fittings

1. With the source water off, check that fitting is properly tightened. Tighten until you feel the gasket engage. **Do not overtighten.**
2. Unscrew the leaky connection. Check the gasket in the female fitting for damage or deformation. Replace gasket if necessary.
3. Check brass fittings for damage or deformation.
4. If necessary replace brass fittings. Replacement parts can be ordered from abc or bought from a local store.

4. Water coming out of bypass regulator tube:

1. Strong bypass flow is normal during system operation. This water is the discharge water and it contains a very high TDS. This water is non-potable but is not harmful to plants. **DO NOT DRINK DISCHARGE WATER.**
2. Milky white bypass flow is a common occurrence when starting up the system or using a new RO membrane. It is trapped air being pushed out of the filter housing and will stop once the air is gone.

Expressed Warranty

abc Window Cleaning Supply warrants new water purification systems against manufacturing defects under normal use to the original purchaser.

abc Window Cleaning Supply warrants new equipment for one year from the original purchase date to be free from manufacture defect. Any parts sent out for warranty are warranted from the original purchase date of the machine.

The customer must first contact abc Window Cleaning Supply to notify them of the problem. abc Window Cleaning Supply may require the merchandise to be shipped back to them at the customer's expense to evaluate the warranty claim. It is the responsibility of the customer to package the product properly so that it arrives for evaluation undamaged. If the equipment is found to be a manufacture defect abc Window Cleaning Supply will reimburse shipping expense and parts will be sent out at no charge including standard ground shipping. Rush shipping will be the sole responsibility of the customer.

Wear items exempt from warranty include filters and membranes

This warranty does not apply to misuse or abuse causing failure of the system. The customer must contact abc Window Cleaning Supply before attempting any repairs or modification to the system. Failure to do so will void your warranty.

abc Window Cleaning Supply holds no responsibility for loss of labor, time or any costs associated with using the equipment. abc Window Cleaning Supply holds the sole discretion of whether a claim falls under warranty.

Returns

If for any reason the customer wishes to return the system they may do so at any time within 30 days of the original purchase date.

The customer must first contact abc Window Cleaning Supply to notify them of their intent to return the merchandise.

The customer is responsible for the return of all merchandise and insuring that the product is properly packaged to arrive in a new resellable condition. The customer is responsible for all costs associated with returning damaged merchandise to a new resellable condition.

Customer is responsible for any costs associated with shipping and repairing the merchandise to a new resellable condition. abc Window Cleaning Supply will issue a refund to the credit card on file once all repairs are completed.

Replacement Parts

Shut-off Valve
WF601311

TDS Meter
HMTDS-3

Rubber Feet
WF7000-RF

Wheel
WF65000-WH

RO Membrane
WF3440-RO

DI
Filter
ABC500117

Carbon/Sediment
Filter
WF2210-CF

Clear 2.5”x10” 1/2”
NPT Clear House
WF-OEM-
210HOUSING

Blue 4.5”x10”
3/4” NPT House
WF-OEM-
410HOUSING

40” Stainless Steel
Housing with 1/2”
NPT ports and
Hardware
WF-OEM-
4040STAINLESS

Optional Upgrades

Outlet Splitter Kit
WF7000-OSK

10’ Source Hose
WF612010

Booster Pump
WF1000-BP

Pressure Gauge
TA-PG

Replacement Hoses available upon request. 1-800-989-4003

www.abcWindowSupply.com
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