SUPRA-TDS™ Series

Advanced Filtration. Simplified Maintenance.

The SUPRA-TDS™ Series semi-automatic disc filter combines advanced disc filtration technology with a simple, user-friendly flushing system to deliver reliable performance and easy maintenance. Designed to efficiently remove solids, debris, and contaminants, it helps protect irrigation systems while reducing downtime and maintenance effort — without the need to open the filter or invest in complex automated systems.

- Fast and simple flushing with quarter-turn handle and flush valve
- High-efficiency disc filtration captures fine particles and debris
- Protects drip emitters, micro sprinklers, and sensitive irrigation components
- Compact design fits a wide range of agricultural, landscape, and industrial installations
- Durable UV-protected, chemical-resistant polymer construction
- Optional clogging indicator allows easy monitoring of head loss

BOX CONTENTS

- **Filter Assembly** – inlet & outlet with filter element *(Fig. A)*
- **Flush Valve** – 2″ female thread inlet & outlet *(Fig. B)*
- **Flush Valve Adapter** – 1/2″ FPT × MPT *(Fig. C)*
- **Pressure Indicator Kit** *(Fig. D)*

FIGURE A

Filter Assembly

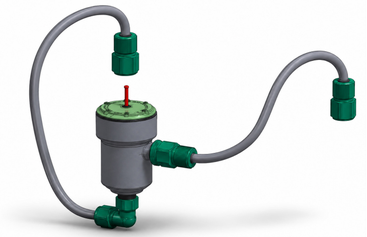
FIGURE B

2″ Flush Valve

FIGURE C

Flush Valve Adapter

FIGURE D



Pressure Indicator Kit

ASSEMBLY INSTRUCTIONS

Flush Valve Assembly

1. Attach the flush valve to the bottom of the filter cover. *(Fig. A, B)*
2. Attach the ½″ flush valve adapter to the flush screen outlet located between the filter inlet and outlet. *(Fig. A, C)*

Note: *Teflon tape is not required. All valves are self-sealing.*

Pressure Indicator Assembly *(Fig. D)*

Note: *Unit may come preassembled*

1. Connect the flush valve to the flush screen outlet, mounted between the filter inlet & outlet (Teflon tape is not required).
2. Connect the two ¼″ female couplers to the filter body ¼″ outlets.
3. Connect the two ¼″ male threaded elbows to the couplers on the filter body.
4. Connect the ¼″ female threaded elbow to the bottom of the indicator.
5. Press fit the indicator to the slots on the filter body.
6. Connect the 7.6″ (200 mm) length of micro tubing from the filter inlet port to the indicator bottom outlet (marked "+").
7. Connect the 6″ (150 mm)) length of micro tubing from the filter outlet port to the indicator side outlet (marked "–").
8. The hydraulic fitting requires Teflon tape to seal.

Initial Operation Procedure

- Gradually open the water source and check all connections for leaks.
- Perform 2–3 flushing cycles following the instructions in the next section.
- The filter is now operational.

FIGURE C

Flush Valve Adapter

FIGURE B

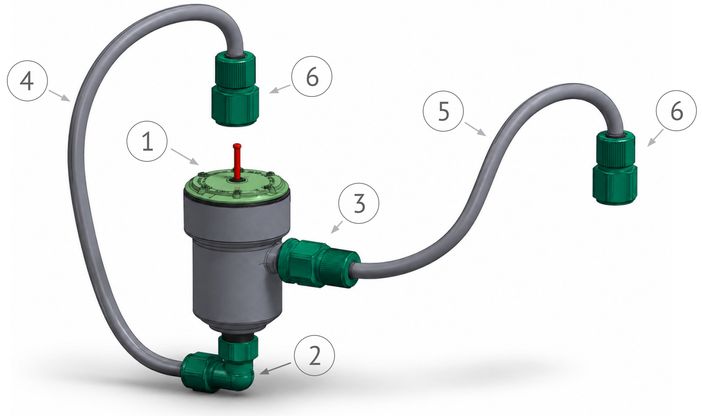
Flush Valve

1. **Pressure Indicator Gauge**
   Center unit with red pin (rises at 7–10 PSI)
2. **Bottom Elbow Connector**
   Connects to inlet / high-pressure port (+)
3. **Side Adapter**
   Connects to outlet / low-pressure port (–)
4. **Micro Tubing**
   Inlet line 7.6″ (200 mm) length
5. **Micro Tubing**
   Oulet line 6″ (150 mm) length
6. **Female Threaded Coupling**
   Connects tubing to filter inlet / outlet ports
7. **Male Elbow Connector**
   Connects tubing to fittings

FIGURE A

Filter Assembly

FIGURE D



Pressure Indicator Kit

INSTALLATION GUIDELINES

Flush Valve Installation

1. Install the filter vertically or at a 90° angle to the pipeline. Ensure the flush valve is oriented downward (open position) or sideways (closed position).
2. Confirm the flow direction matches the arrows indicated on the filter body.
3. Ensure both flush valves are fully closed before operation.
4. It is recommended to install a shut-off valve upstream of the filter to allow for easy maintenance.
5. The filter is now ready for initial operation.

Pressure Monitoring

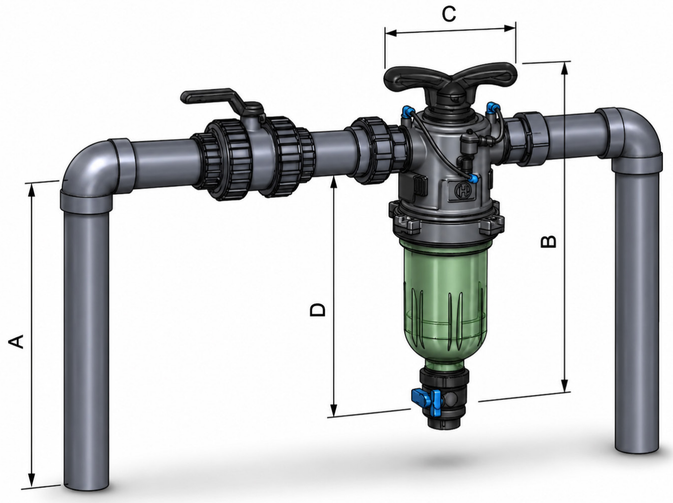
Measure pressure manually using a gauge at the filter ports.

For easier monitoring, use the included pressure indicator:

- Red pin rises at 7–10 PSI (0.5–0.7 bar) ⟶ flushing required
- Pin retracts after flushing ⟶ normal operation

Installs directly to the filter ports—no manual checks needed.

Note: *Flush the filter when pressure loss reaches 7–10 PSI (0.5–0.7 bar).*



Installation Layout

A	B	C	D
29 in (740 mm)	**25 in** (645 mm)	**9 in** (235 mm)	**19 in** (485 mm)

FILTER FLUSHING STEPS

1. Slowly open the flush valve at the bottom of the filter. *(Fig. H)*
2. Turn the top handle counterclockwise in small increments (¼ turn) until fully open. *(Fig. F)*
3. Allow the filter to flush for 15–30 seconds.
4. Turn the handle back to the closed position.
5. Close the bottom flush valve and check the pressure.
6. If a pressure indicator is installed, confirm the red pin has retracted.
7. If pressure remains high or the red pin stays raised, repeat the flushing cycle.

Note

- Water flow to the irrigation system remains uninterrupted during automatic flushing.
- After every few flushing cycles, briefly open the secondary flush valve for 10 seconds, then close it. This helps clean the internal backup filter. *(Fig. G)*
- The force required to turn the handle may vary depending on water quality and inlet pressure.

SECONDARY ½″ FLUSH PORT MAINTENANCE

Inspect the secondary flush port every 30 days, or if flushing does not reduce head loss effectively.

Cleaning Procedure:

1. Disassemble the female coupling with the ½″ flush valve.
2. Rotate the screen disc counterclockwise and remove it.
3. Rinse thoroughly under running water.
4. Reinsert the disc and rotate clockwise until it stops.
5. Reassemble the coupling with the flush valve and close securely.
6. Repeat the flushing procedure.

FIGURE E

FIGURE F

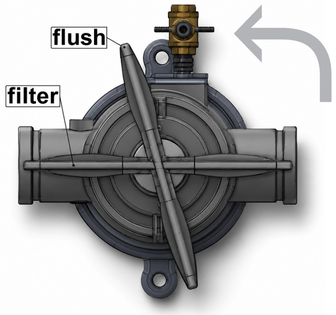


FIGURE G

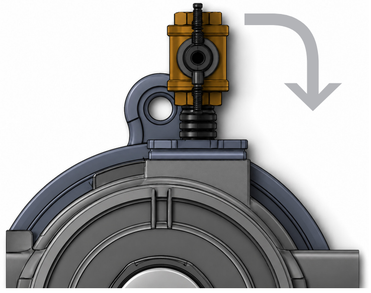
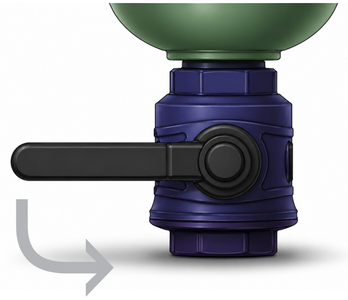


FIGURE H



DISC MANUAL CLEANING

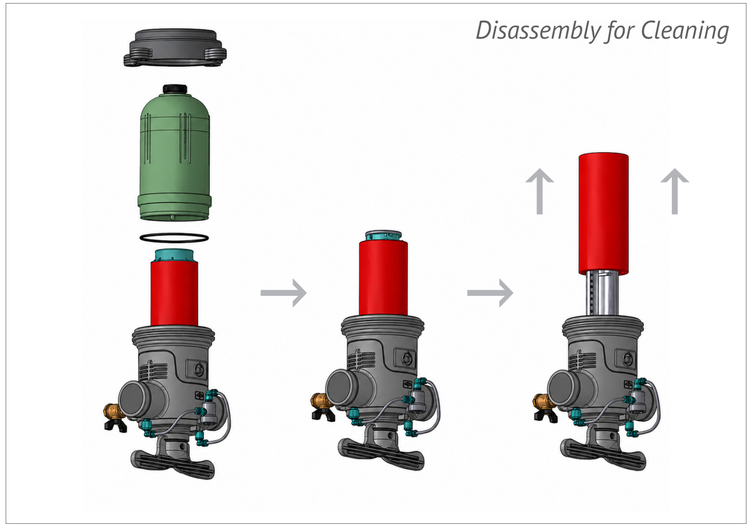
The discs must be cleaned manually at the start of the irrigation season, every 90 days thereafter, or whenever flushing does not reduce head loss (filter is not flushing effectively).

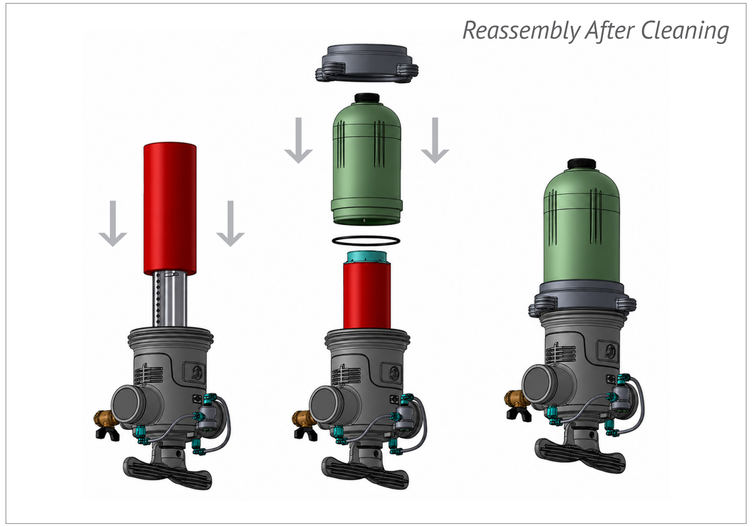
Cleaning Procedure

1. Turn the locking ring counterclockwise, pull it down, and set aside.
2. Release the filter cup/cover by gently shaking and pulling it downward.
3. Open the disc assembly and remove it from the lower thread without disassembling the spring.
4. Remove the piston.
5. Carefully remove the disc stack, avoiding damage to the seal.
6. Rinse all disc elements thoroughly under running water, ensuring all debris and buildup are removed.
7. Reassemble the discs onto the spine, making sure all discs are returned in place.
8. Verify the seal is properly seated.
9. Reinstall the piston, ensuring correct orientation, and push it upward into position.
10. Important: Ensure the two rails align with the two matching slots. All other rails have a single slot.
11. Reattach the filter cup/cover, aligning the cup protrusion with the corresponding socket on the filter body.
12. Reinstall the locking ring and tighten by hand until secure.

Warning

Do not open the filter cup/cover while the system is under pressure.





SPECIFICATIONS

Available Sizes
- 2″ and 3″

Filtration Area
- 147 in² *(950 cm²)*

Maximum Operating Pressure
- 145 psi *(10 bar)*

Maximum Flow Rate
- 2″ Filter: 110 GPM *(25 m³/h)*
- 3″ Filter: 220 GPM *(50 m³/h)*

Filtration Grades
- 40–140 mesh

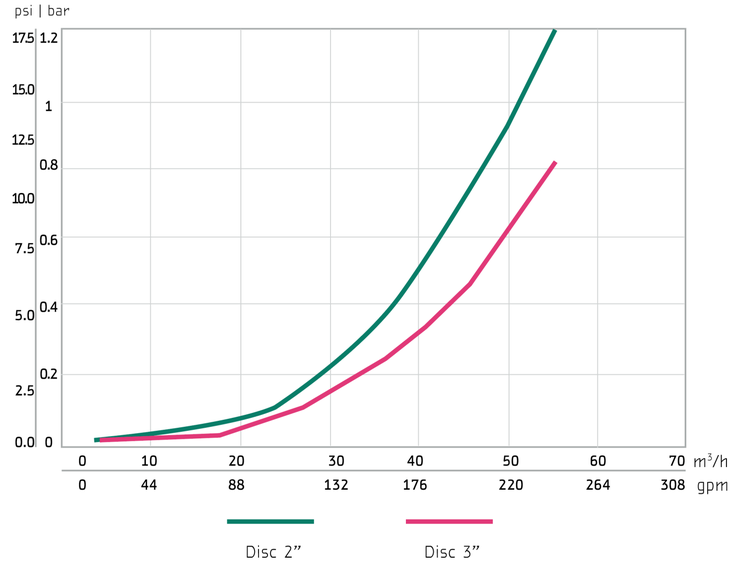
Minimum Flushing Pressure
- 29 psi *(2 bar)*

Flushing Flow Rate
- 24 GPM @ 29 psi *(5.4 m³/h @ 2 bar)*
- 30 GPM @ 44 psi *(6.8 m³/h @ 3 bar)*

Installation

Construction Materials
- Nylon
- Polypropylene

HEAD LOSS CHART*



*Clean Filter Performance – 120 Micron Filtration Grade