

DIRECT FLOW WATER TECHNOLOGY

PW RO 700

Engineered inside.
Pure by design.

Direct-flow reverse osmosis.
Two precision cartridges.
Intelligence built in.

PRODUCT BOOK +
TECHNICAL MANUAL

Installation · Operation · Maintenance · Service



TANKLESS / POINT-OF-USE

PREVENT WATER.

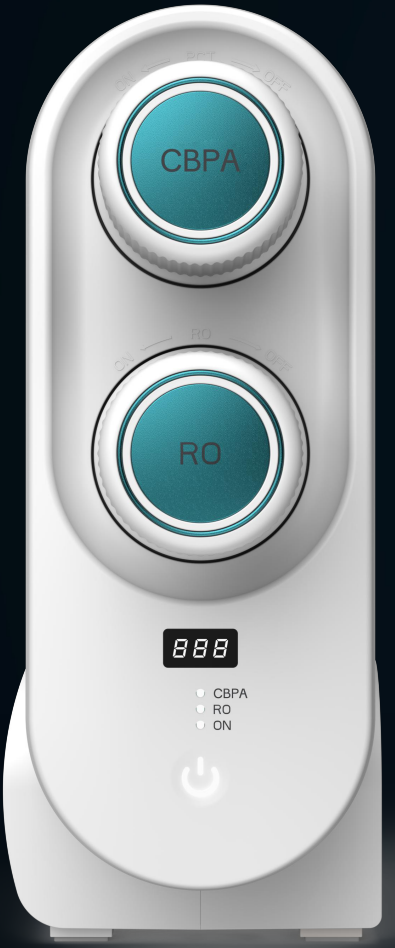
PW RO 700 / DIRECT FLOW WATER TECHNOLOGY

REV 2.0 · EN

THE SYSTEM

7 layers of protection & intelligence

2 CARTRIDGES / 4 PURIFICATION STAGES / + 3 SMART TECHNOLOGIES



CBPA UPPER CARTRIDGE

- 01** Sediment Pre-Filtration
- 02** Residual Chlorine Reduction
- 03** Color & Odor Reduction

RO LOWER CARTRIDGE

- 04** Reverse Osmosis
Nominal 0.0001 µm membrane rating.

- 05** TDS Monitoring
Dissolved-solids readings.
- 06** Filter-Life Monitoring
CBPA and RO status reminders.
- 07** Automatic RO Flushing
Programmed membrane flushing.

TWO PHYSICAL CARTRIDGES, NOT SEVEN FILTERS

“7 layers” describes four purification functions plus three smart technologies. The three CBPA functions are performed by one composite cartridge; the smart technologies are not additional filters.

THE CORE

Precision, made visible.



0.0001 μm

NOMINAL MEMBRANE RATING

The RO membrane separates the incoming stream into purified water and concentrate. The concentrate is routed to drain.

Manufacturer membrane illustration. Conceptual enlarged view, not a scale drawing of the installed cartridge. Nominal rating is not a certified contaminant-removal claim.

ENGINEERING IN VIEW

Real components. A connected system.

The documented S9 internal layout, with its cartridge housings, hydraulic components and control electronics.



MANUFACTURER INTERIOR PHOTOGRAPH



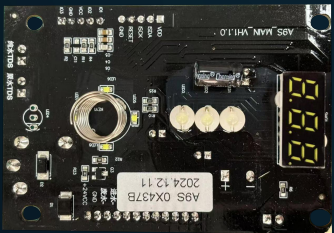
Integrated waterway

Routes water between the cartridge interfaces and hydraulic components.



24 VDC booster pump

Raises working pressure for reverse-osmosis production.



Control & status

TDS sensing and the board supervise operation. The pressure switch stops production as outlet pressure rises.

Manufacturer component views; placement varies by production revision.

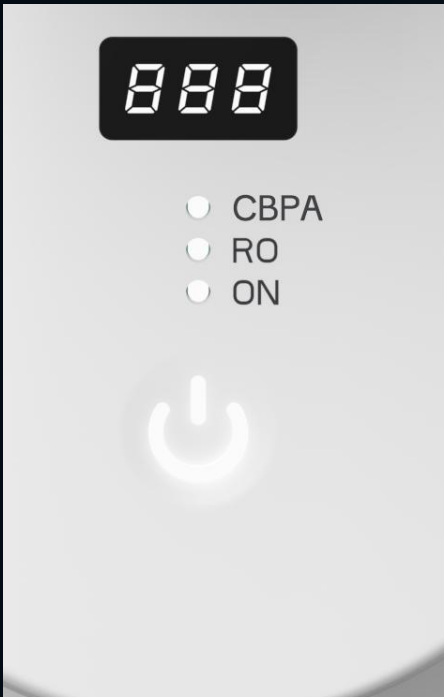


Inlet / wastewater valves

Inlet valve controls feed. Wastewater valve routes concentrate to drain. Purified water exits through the check valve.

THE INTELLIGENCE

It filters. It monitors. It flushes.



DOCUMENTED FRONT PANEL

Illustrated display segments are not an operating TDS reading.

05 TDS Monitoring

The display reports dissolved-solids information for operational monitoring. Compare stabilized readings with the service baseline.

06 Filter-Life Monitoring

Dedicated CBPA and RO indicators help plan replacement. Actual service life depends on water quality and usage.

07 Automatic RO Flushing

Programmed flushing supports membrane operation and clears retained concentrate. The startup cycle is separate from the first-use flush.

TDS IS AN OPERATING INDICATOR

TDS does not identify individual contaminants or replace water-quality testing. A TDS reading alone does not establish drinking-water safety.

THE EXPERIENCE

On demand. Without a storage tank.

Point-of-use drinking and cooking water from a suitable municipal potable cold-water supply.

700

GPD MEMBRANE CLASS

Nominal membrane capacity class.

1.83

L/MIN PUBLISHED FLOW

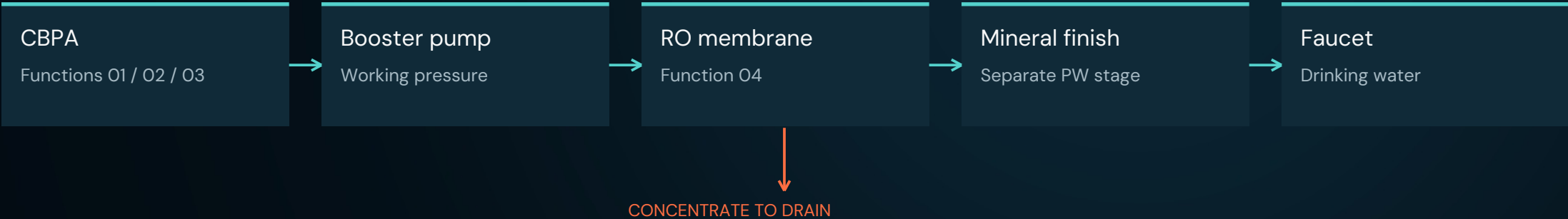
Approximately 0.48 gpm.

2:1

TYPICAL PURE-TO-DRAIN RATIO

Under normal operating conditions.

FUNCTIONAL WATER PATH



PW alkaline mineral finish. Post-treatment after RO, separate from the two-cartridge core and the four purification functions. Composition and mineral profile depend on the installed cartridge.

Output varies with pressure, temperature, feed TDS, membrane condition and configuration.

OWNER + INSTALLER REFERENCE

From technology to everyday operation.

Keep this manual available during installation, commissioning, routine maintenance and technical support.

READ FIRST

Before connecting water or power.

Review the operating envelope and site requirements. Use the rating label and approved service instructions for the installed production revision.

For technical support
preventwaterfl.com

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OPERATING ENVELOPE

Published specifications.

Use these values together with the rating label on the installed unit. Performance depends on site conditions.

TREATMENT + FEED WATER

Product family	PW RO 700 Direct Flow, tankless
Nominal membrane class	700 GPD
Purified-water flow	1.83 L/min / 0.48 gpm
Feed-water pressure	0.1 to 0.4 MPa / 14.5 to 58 psi
Feed-water temperature	5 to 38 °C / 41 to 100 °F
Membrane rating	Nominal 0.0001 µm
Pure-to-drain ratio	Typically 2:1; conditions apply

HARDWARE + CONNECTIONS

Unit dimensions	419 × 158 × 381 mm 16.5 × 6.2 × 15.0 in
Published net-water volume	4,000 L; cartridge life depends on water quality
Internal booster pump	24 VDC; working current ≤ 3.0 A; maximum current ≤ 4.5 A
Pump working pressure	Nominal 0.5 MPa
Pump working flow	≥ 3,600 mL/min; open flow ≥ 6,000 mL/min
Connection tubing	1/4 in PE tubing in the supplied installation architecture

POWER INPUT

Adapter specifications can vary by production revision. Verify the installed unit rating label before electrical service.

BEFORE INSTALLATION

Prepare the site.

Correct site conditions protect the membrane, electronics and cabinetry.

Location	Indoor, dry, stable and accessible for cartridge replacement.
Clearance	Allow space around the 419 × 158 × 381 mm body for tubing bends and filter rotation.
Cold-water supply	Municipal potable cold water, with an accessible feed-water shutoff valve.
Pressure	14.5 to 58 psi. Add pressure regulation above the published limit.
Drain	Provide a code-compliant RO concentrate connection.
Electrical	Use the supplied adapter and a properly grounded receptacle that complies with local code.
Environment	Avoid direct sun, freezing, high heat and strong acids or alkalis.

FEED QUALITY

Sediment-heavy or unusually turbid water may require upstream sediment protection.

PROFESSIONAL INSTALLATION

Connect. Inspect. Commission.

Follow the labeled ports and the configured mineral-stage routing. Local plumbing code takes precedence.

01 Plan

Confirm cabinet clearance, faucet position, feed-water valve, drain route and receptacle access.

02 Isolate

Close the cold-water supply and relieve pressure before making connections.

03 Install the faucet

Use the supplied seals and hardware. Tighten evenly at the dedicated drinking-water faucet.

04 Connect the feed

Install the tee / adapter. Connect the inlet tube to the port marked WATER IN.

05 Connect the drain

Connect the wastewater tube to WASTE / DRAIN and route it to the approved drain connection.

06 Connect product water

Route PURE WATER through the PW mineral finishing stage, where fitted, to the faucet as configured.

07 Restore water & power

Confirm tubing is fully seated. Open feed water, check for leaks, then connect power.

08 Commission

Run startup flushing. Verify pure-water flow, drain flow, TDS response and leak-free operation.

FIRST USE

Do not skip the first flush.

Startup clears preservative, carbon fines and manufacturing residues, and establishes a service baseline.

20 to 30

MINUTES / INITIAL FLUSH

Flush the new system before drinking.

Automatic

STARTUP CYCLE

About one minute at startup; not a substitute for the initial flush.

Record

SERVICE BASELINE

Feed TDS, purified TDS, flow and date.

Commissioning checklist

- ☐ Feed valve fully open; fittings and cartridge interfaces are leak-free.
- ☐ Purified water becomes clear after initial flushing.
- ☐ Drain flows during production; drain line remains securely connected.
- ☐ Pure-to-drain flow is approximately 2:1 under normal conditions.
- ☐ Stabilized purified TDS is materially below feed TDS, measured before mineral finishing.
- ☐ Faucet flow is stable for site pressure and water temperature.
- ☐ No abnormal noise, vibration or repeated cycling with the faucet closed.

SEASONAL PERFORMANCE

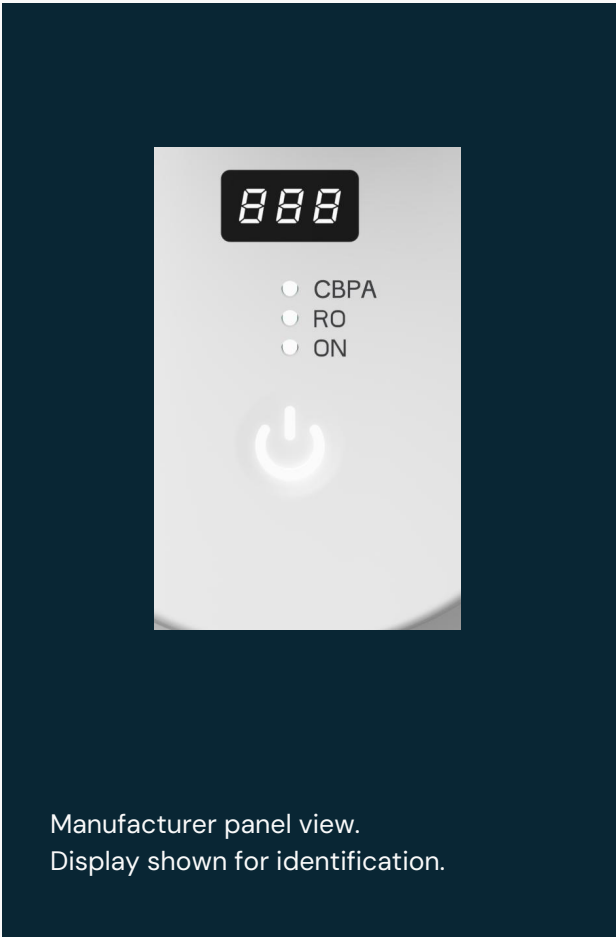
RO output falls as feed water becomes colder. The supplied manual notes approximately 3% less production per 1 °C decrease under comparable conditions. Reduced winter output is not necessarily a fault.

For first installation, touch the power button to turn on the machine, then open the faucet for the initial flush.

THE FRONT PANEL

Understand the status.

TDS readings and dedicated cartridge indicators support operation and maintenance planning.



Manufacturer panel view.
Display shown for identification.

TDS display	Shows the system’s measured dissolved-solids value for operational monitoring.
CBPA indicator	Pre-treatment cartridge status / replacement reminder.
RO indicator	RO membrane status / replacement reminder.
Power / status	Shows powered operating state and is used during filter reset.
Automatic flush	Programmed membrane flushing supports performance and reduces retained concentrate.

FILTER RESET AFTER REPLACEMENT

Hold the power button until the confirmation beep, then release. Power-cycle as required by the installed control revision and confirm normal indicator status. Panel behavior may vary by firmware or production revision.

SERVICE PLANNING

Maintain performance over time.

Replacement intervals are planning ranges. Water quality, usage, TDS trend, flow and taste remain important.

8 to 12

MONTHS / CBPA

Composite-cartridge replacement planning range.

12 to 24

MONTHS / RO

Membrane-cartridge replacement planning range.

Per cartridge

MINERAL FINISH

Follow the PW-supplied specification and water usage.

Consider earlier replacement when

- Purified-water flow decreases significantly.
- Purified TDS rises from the service baseline.
- Taste or odor changes unexpectedly.
- Feed water is sediment-heavy or chemically challenging.
- The filter-life indicator signals replacement.

Inspection & periods out of service

At each service, inspect tubing, fittings, the drain connection and leak condition. Review TDS against the commissioned baseline and feed-water conditions.

During a long absence, close feed water and disconnect power. On return, open the purified-water faucet and flush for at least 10 minutes. For prolonged stagnation or uncertain conditions, contact PW for sanitation / service guidance.

SERVICE PROCEDURE

Front access. Controlled replacement.

Use the correct PW-approved cartridge. Depressurize the system before releasing a cartridge.

- 01

Shut down

Close the feed valve. Open the drinking-water faucet to relieve pressure and drain residual water.
- 02

Disconnect power

Unplug the power adapter before removing a cartridge.
- 03

Remove the cartridge

Rotate counterclockwise and pull outward. Keep towels ready for residual water.
- 04

Install the replacement

Insert the correct cartridge fully, then rotate it into the locked position.
- 05

Restore operation

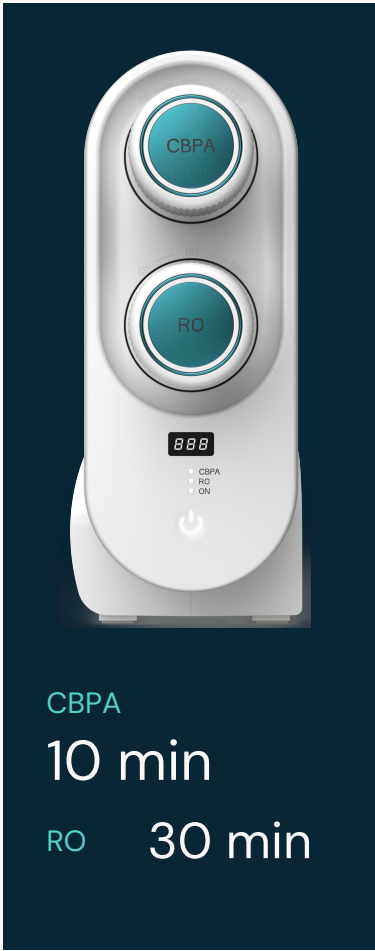
Reconnect power and slowly reopen feed water. Inspect carefully for leaks.
- 06

Flush before drinking

CBPA: approximately 10 minutes. RO: approximately 30 minutes.
- 07

Reset & record

Reset the relevant indicator. Record the service date and readings.



Carbon fines may briefly darken initial CBPA flush water and should clear with continued flushing.

PREVENT WATER.

FIELD DIAGNOSTIC GUIDE

Find the symptom. Check the cause.

Stop and contact service for active leakage, electrical odor, overheating or any unsafe condition.

SYMPTOM	CHECK / SERVICE DIRECTION
Unit does not start	Verify power adapter / receptacle, feed-water availability and adequate inlet pressure.
Pump runs; no purified water	Check feed valve, pre-filter, inlet valve, membrane restriction, check valve and pump pressure.
Low purified-water flow	Check temperature, inlet pressure, cartridge restriction, membrane condition and drain flow.
Wastewater after shutdown	Possible inlet-valve, check-valve or pressure-switch issue. Service inspection is required.
Repeated start / stop	Possible downstream pressure loss, check-valve leak or pressure-switch issue.
TDS rises	Confirm a stabilized reading after flushing. Review membrane age, feed TDS, flow and possible bypass / seal issues.
Excessive drain flow	Check the automatic-flush / wastewater valve and whether the unit remains in flush mode.
Unusual noise	Check feed pressure, cabinet contact points, pump mounting and air remaining after service.

Do not bypass safety switches or restrict the drain line to change recovery. This can damage the membrane or system components. Internal electrical and hydraulic diagnostics are for qualified service personnel.

OPERATING BOUNDARIES

Know the limits.

Designed for point-of-use treatment of a suitable potable cold-water supply.

STOP USE WHEN SOMETHING IS WRONG

Immediately disconnect power and close the feed-water valve if a leak, electrical fault, burning odor or abnormal behavior occurs.

01

Installation boundaries

Do not use hot water or operate outside the published temperature and pressure limits.

Do not install in freezing locations or use a power circuit / adapter that does not match the rating label.

02

Water-quality limitations

Do not rely on this system as the only microbiological barrier for an unsafe or unknown source without appropriate upstream disinfection and a validated treatment design.

TDS and alkaline pH alone do not support health or therapeutic claims.

03

Performance & components

Contaminant reduction depends on the installed cartridges, feed chemistry, pressure, temperature, maintenance and verified test / certification data for the exact configuration.

Use genuine or PW-approved replacement components to maintain fit, performance and service support.

INSTALLATION + MAINTENANCE LOG

Record every service.

Compare current readings with the commissioned baseline and current feed–water conditions.

INSTALLATION ADDRESS / CUSTOMER

UNIT SERIAL NUMBER

SERVICE / MEASUREMENT	COMMISSIONING	SERVICE 01	SERVICE 02
Date / technician			
Feed TDS / purified TDS (ppm)*			
Feed pressure / water temperature			
Purified–water flow			
CBPA replacement date			
RO replacement date			
Mineral cartridge model / date			
NOTES / CORRECTIVE ACTION			

* Record whether purified TDS was measured before or after mineral finishing; added minerals can affect the result.

PREVENT WATER TECHNICAL SUPPORT

Support, for the life of your system.

For installation questions, service planning or technical documentation, contact Prevent Water.

Have the unit serial number, installation date, cartridge details and recent service readings available.



preventwaterfl.com

Scan or click to visit Prevent Water.

DOCUMENT CONTROL

Revision 2.0 · September 2026 · English
PW RO 700, direct-flow reverse osmosis with separate PW alkaline mineral finishing.

Technical basis: supplied S9 installation instructions and product documentation; PW branding master. Specifications may vary by production revision. The installed unit label and approved service documentation take precedence.