Water Softener &
Purification Specialist
283 Broadway Orangeville
(across from the Beer store plaza)
519-941-9120

PETWA®
Water Treatment Solutions

PRO Series Commercial Reverse Osmosis Systems

The Petwa® PRO Series Commercial RO Systems remove up to 99% of the total dissolved solids (TDS) in raw commercial feedwater, producing high quality process water for applications such as boiler feed, drinking water, food and beverage processing, humidification systems, industrial processes and spot free rinse.

PRO SERIES Commercial RO Systems offer the following features:

Membrane: thin film composite (TFC) for maximum rejection of impurities.

Membrane Housings: standard stainless steel housings for PRO-150/300/450. Standard PVC housings for models PRO-600/1200/1800 (stainless steel optional).

Process Pump: direct coupled rotary vane pump designed for continuous high pressure service.

Frame: corrosion and scratch resistant powder coated steel.

Pre-Sediment Filter: 5 micron rated filter for removal of sediment and protection of system.

Pre-Carbon Filter: granular activated radial flow carbon filter for removal of chlorine must be replaced regularly.

Flow Meters: precise monitoring of operating conditions with three flow meters for product, waste and recycle streams (PRO-600/1200/1800 only).

Control Box: NEMA 12X rated control box with on/off switch and mode indicator lights (PRO-600/1200/1800 only).

Pre-Filter Isolation Valve: convenient shut off valve for easy filter replacement.

Pressure Gauges: high quality 2.5" liquid filled process pressure gauge for monitoring operating pressure. 1" dry pressure gauges for monitoring filter operation.

Low Pressure Cut-Out: insufficient feed water will automatically shut the system down protecting the process pump.

Tank Full Switch: R.O. system will automatically start when tank pressure falls below 30 psi and stop when pressure reaches 50 psi.

Air Purge: system automatically purges air out of pump and membranes before start up (PRO-600, PRO-1200, PRO-1800 only).

Float Switch (optional): mechanical float switch for open storage applications.

Automatic Flush (optional): unit will automatically flush for 1 minute every two hours of consecutive operation (PRO-600, PRO-1200, PRO-1800 only).

Simple Maintenance/ Inspection: all PRO series components are strategically located on the frame for easy access and inspection.

PRO Series Specifications

Model	PRO-150	PRO-300	PRO-450	PRO-600	PRO-1200	PRO-1800
Capacity (GPD)[1]	150	300	450	600	1200	1800
Max. Operating Pressure (psi)	190	190	190	190	190	190
Typical TDS Rejection[2]	>97%	>97%	>97%	>97%	>97%	>97%
Recovery	up to 50%	up to 50%	up to 50%	up to 50%	up to 50%	up to 50%
Motor HP	1/4	1/3	1/3	1/2	3/4	3/4
Dimensions (h x w x d inches)	32 x 14 x 20	32 x 14 x 20	32 x 14 x 20	53 x 22 x 24	53 x 22 x 24	53 x 22 x 24
Shipping Weight (lbs)	50	50	55	155	163	170
Number of Membranes	1	1	2	1	2	3
Feed Water Connection	1/2	1/2	1/2	1/2	1/2	1/2
Product/Reject Water Connection	3/8	3/8	3/8	3/8	3/8	3/8

[1] The capacity denotes the system production in U.S. Gallons per Day as defined by the membrane specifications and the feed water conditions of 2000 ppm (of NaCl), 25°C (77°F), 200 psi operating pressure and outlet to atmosphere.
[2] TDS rejection and water recovery are variable and can be affected by temperature and feedwater conditions.

PRO Series Operating Parameters

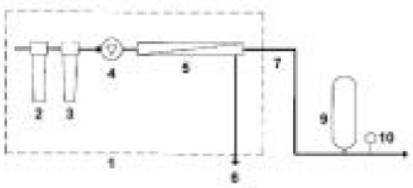
Feed Water Pressure Min/Max	30 - 85 psi	Organics Tolerance[3]	0 ppm
pH Range	2.0 - 11.0	Oil Tolerance	0 ppm
Feed Water Hardness	<10 gpg	Operating Temperature	40 - 100°F
Feed Water Iron	<0.1 ppm	Maximum Feed Turbidity[3]	1 NTU
Feed Water Manganese	<.05 ppm	Maximum Feed Silt Density Index	SDI 5
Feed Water Hydrogen Sulfide	must be removed	Maximum TDS	2000 ppm
Chlorine Tolerance[3]	0 ppm	Electrical Requirements	115V/60Hz/1 PH

[3] Sediment and Carbon pre-filters, standard on the PRO Series must be replaced regularly to protect membranes. Operating parameters are based on the assumption that the feed water is potable.

Recommended Installation Diagrams and Legend

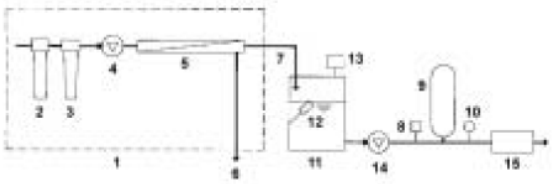
TYPE A – Pneumatic Pressure Tank

Operation: Flow to service drops pressure in pneumatic tank to cut-in point on pressure switch which starts RO booster pump. RO runs until cut-out pressure is reached when tank is full.



TYPE B – Storage Tank/Repressurization

Operation: Flow to service drops level in storage tank causing float switch to start RO booster pump. Repressurization pump operates as with Type A.



NOTE: All items outside dashed lines available at extra cost. Please contact your representative for details.

1. PRO Series Commercial Reverse Osmosis Unit
2. 5 Micron Cartridge Pre-Filter
3. Carbon Pre-Filter
4. R.O. Process Pump
5. R.O. Module/Membrane Assembly
6. Reject Water (Concentrate) to Drain
7. Product Water to Service
8. Pressure Switch
9. Pneumatic Storage Tank
10. Pressure Gauge
11. Polyethylene Storage Tank
12. Float Switch
13. Air Filter for Storage Tank Vent
14. Stainless Steel Repressurization Pump
15. Ultraviolet Sterilizer

MEMBER Water Quality Association

PETWA® Water Treatment Solutions

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