

# pozzani®

Water treatment products

## PRO300 COMMERCIAL REVERSE OSMOSIS SYSTEM



PRO300 Commercial Reverse Osmosis System

### LOW COST DE-IONISED WATER PRODUCTION

Reverse Osmosis is a very economical method of converting tap water into de-ionised water and has many advantages over distillation and ion exchange processes. Water is produced on demand at a low flow rate, the product water is usually stored in a pressure vessel or tank ready for use.

The recovery of de-ionised water is approximately 50% of the input volume on the PRO300 system, rejected water can be recycled for wash water, grey water, toilet flush etc.

### THE PRO300 SYSTEM

Pozzani's PRO300 Reverse Osmosis (RO) system is a compact freestanding or wall mounted module capable of producing up to 700 litres of de-ionised water a day (dependent on conditions).

RO is an extremely efficient method of converting tap water into demineralised water, a combination of post filtration cartridges can further produce High Priority or Ultrapure water for laboratory and other uses.

Pozzani specialises in small Reverse Osmosis systems, the PRO300 module is a completely integrated system which is simple to set-up, very easy to use and does not require expensive pre-treatment essential for larger RO plant. The PRO 300 module includes:-

- Built in 24vAC pressure pump
- On-line conductivity monitor with alarm
- Choice of 0-20 $\mu$ S or 0-200 $\mu$ S conductivity meters with alarm and relay contact
- Automatic high and low pressure cut outs
- Automatic membrane flush
- Pressure gauge
- Built in pre-filtration with choice of add-ons
- Built in post filtration with choice of add-ons
- Manual overrides for emergency use

### APPLICATIONS

- Laboratories
- Glass washing machines
- Paint workshops
- Garages and workshops
- Industrial applications (e.g. Laser cutter water reservoirs)
- Anywhere de-ionised water is used regularly

## CONDUCTIVITY METERS



- ⊙ Automatic Temperature Compensation
- ⊙ Simple one point calibration
- ⊙ Single setpoint relay operates when reading higher than setpoint
- ⊙ Lights indicate relay status
- ⊙ Easily accessible calibration and setpoint trimmers

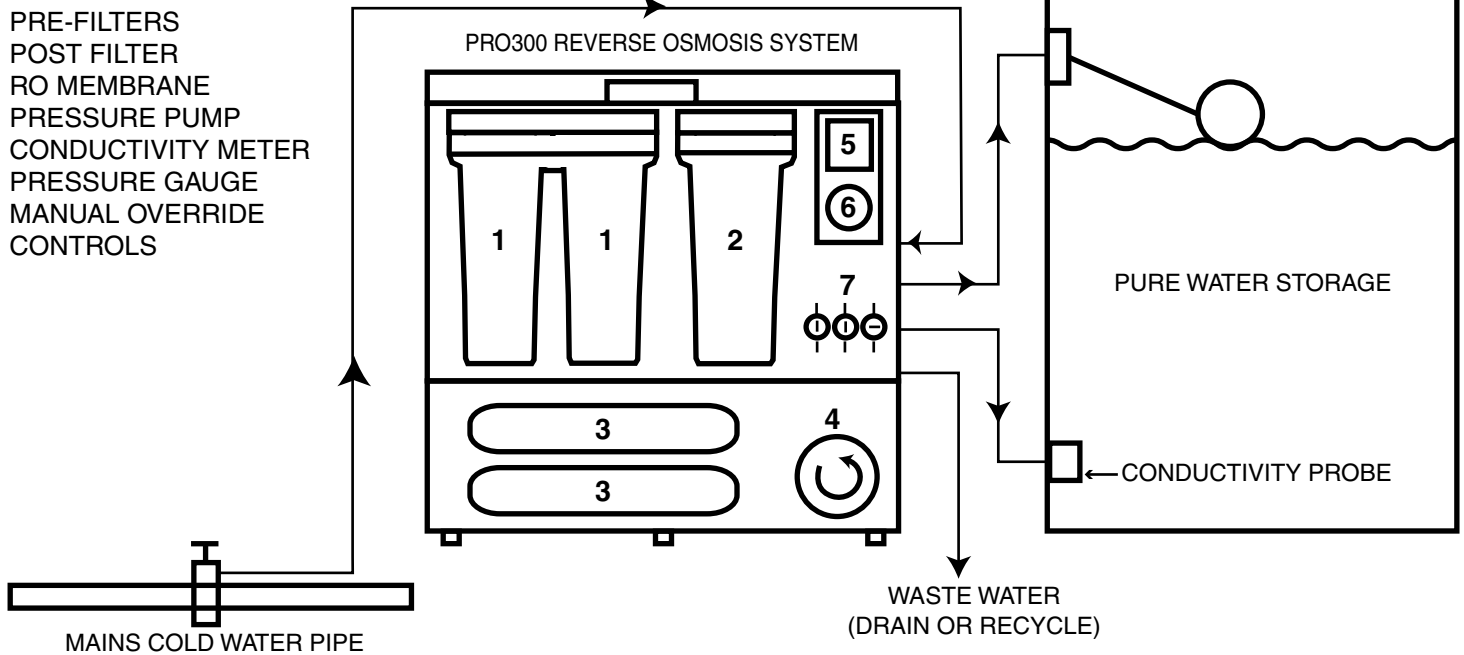
Picture Left: EC Controller Model Code HI-983320-1

### Technical Specifications

Model Code	HI-983322-0	HI-983320-1
Display	Digital	Digital
Range	0.00-19.99 $\mu\text{S}/\text{cm}$	0-199.9 $\mu\text{S}$
Resolution	0.01 $\mu\text{S}/\text{cm}$	0.1 $\mu\text{S}$
Accuracy	+/- 2% FS	+/- 2% FS
ATC	Automatic from 5 to 50 degree Centigrade	

## SCHEMATIC DIAGRAM OF TYPICAL INSTALLATION

- 1 PRE-FILTERS
- 2 POST FILTER
- 3 RO MEMBRANE
- 4 PRESSURE PUMP
- 5 CONDUCTIVITY METER
- 6 PRESSURE GAUGE
- 7 MANUAL OVERRIDE CONTROLS



Reverse Osmosis membranes reject approximately 90-95% of the Total Dissolved Solids (TDS), mains water with a conductivity of say  $600\mu\text{S}$  should therefore yield a product water of around  $30\mu\text{S}$  to  $60\mu\text{S}$ . Higher quality water is achieved by post filtration cartridges which can reduce conductivity to virtually zero and achieve a mechanical filtration of 0.2 micron absolute.

UV can also be added as a post filtration stage to ensure sterility - please call for details where a specific water quality is required.

### Technical Specifications PRO300

Output per day*	700 Lts
Recovery	Approx 50%
RO Membrane	3 x 12" TFC
Booster Pump	24vAC Automatic Start-Stop
Membrane Flush	Automatic
Feed Pressure Gauge	0-160 psi
Conductivity Meter	Digital display with variable set-point alarm and relay contact
Conductivity Range	Choice of 0-20 $\mu\text{S}$ or 0-200 $\mu\text{S}$ Accuracy +/- 2% FS
Controls	Low pressure cut out High pressure or Float switch cut out on full tank
Electronics	24vAC & 24vDC - Transformers supplied

### Feed Water Requirements

Water Feed Temperature	4° C to 25° C
Water Feed Pressure	4-7 bar
Chlorine	<0.1mg/1
Dissolved Iron	<0.2mg/1
Feed pH	3 to 11
Max Silt Density Index	5.0 (15 min)
Max Feed Turbidity	1.0 NTU
Max Feed Conductivity	500 ppm (approx. 1000 $\mu\text{S}/\text{cm}$ )
NB - mains water usually meets these requirements after pre-filter treatment.	



Pozzani Pure Water Plc  
Warwick Road  
Fairfield Industrial Estate  
Louth  
Lincolnshire LN11 0YB  
Telephone: 0845 165 1250  
Fax: 0845 165 1251  
email:enquiries@pozzani.co.uk  
www.pozzani.co.uk

\* Based on a water temperature of 16° C at a pressure of 60 psi. Lower temperature and pressure will reduce the production rate.