REVERSE OSMOSIS SYSTEMS

Reverse osmosis provides a primary purification stage, using a semi-permeable membrane to reduce ions and other contaminants, up to 99%. Aqueous solutions will permeate through a semi-permeable membrane to equilibrate the ionic concentration on either side of the membrane. This process is known as osmosis, in reverse osmosis pressure is applied to the concentrated solution to drive water through the membrane and produce permeate with a lower concentration of ions than the feed water.

The reverse osmosis treatment produces two streams, high quality permeate that is passed on to the next treatment stage and concentrate (approximately 25% of the feed) which contains the majority of the feed contaminants.

All reverse osmosis units can be combined with Applied Ionics other products to deliver an integrated water purification system. Reverse osmosis systems produce purified water suitable for most applications where de-alkalisation and chemical de-ionisation are currently used. RO removes 95~99% of all ions, silica, TOC and organic species. Combined with polishing technologies such as Liqui-Cel® and electro-deionisation ‘chemical free’ high purity water systems, suitable for pharmaceutical and semiconductor users, are available.

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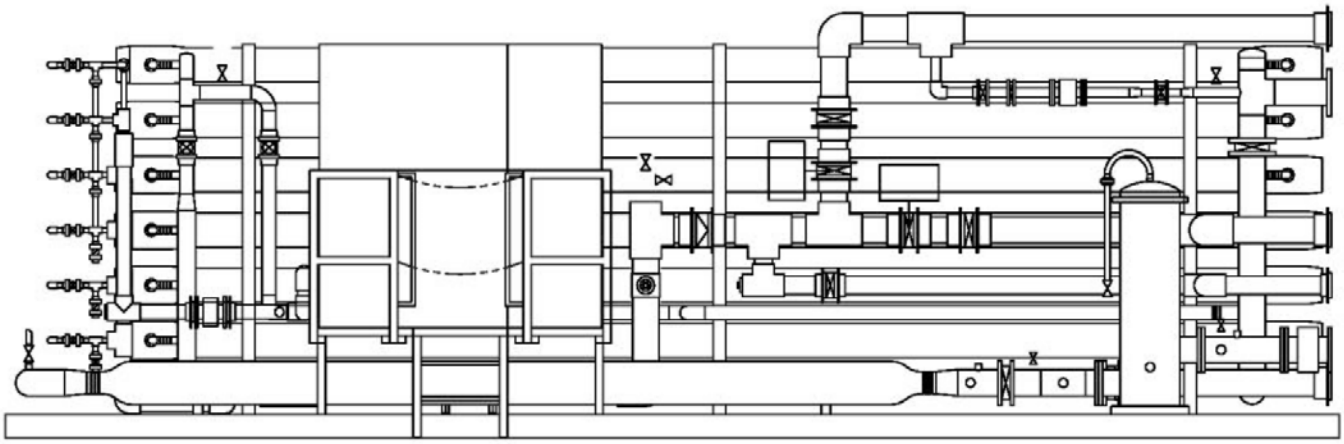
REVERSE OSMOSIS SYSTEMS

SYSTEM SPECIFICATIONS

- Programmable PLC control
- Stainless steel frame
- GRP pressure housings
- Stainless steel high pressure manifold
- Stainless steel multistage centrifugal pump
- ABS low pressure manifold
- Stainless steel pressure gauges
- Permeate flow meter
- Reject flow meter
- Permeate conductivity meter
- Integral alarms and system protection
- Service / Alarm / Status display
- Auto start, flush and operation modes
- Pre-treatment cartridge filtration



Performance Monitor:

- Logs all operating parameters and calculates key performance data
- Identifies fouling and scaling problems
- Predicts membrane cleaning requirements
- Logs 3 months of data
- Accessible via modem link—connects service engineer with equipment
- Integral sensors—Pressure, Flow, Conductivity, Temperature, pH.
- Output parameters—Differential pressures, Flow, Recovery, Salt Rejection, Normalised Flow.
- Data logging with graphical interface.

All reverse osmosis system need to be supplied with adequately treated feedwater. Polyamide membrane are susceptible to attack from chlorine and other oxidants, Applied Ionics standard specification includes activated carbon filters as protective pre-treatment. Regular servicing is recommended to ensure optimum performance of the RO system

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