

Reverse Osmosis Pretreatment System (ROPT Series)

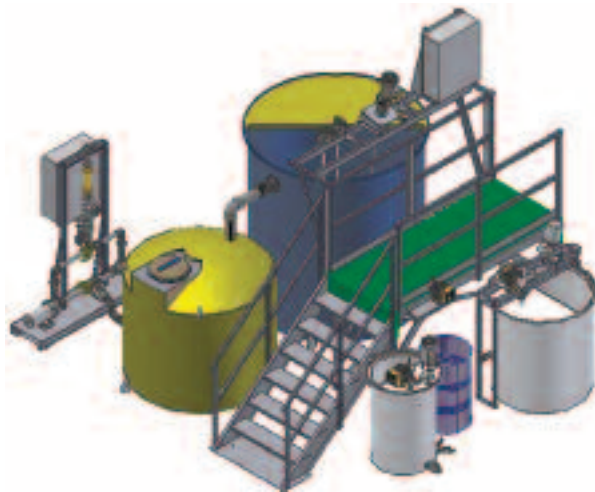
The Reverse Osmosis Pretreatment System (ROPT) is designed for the preconditioning of industrial wastewaters prior to a Reverse Osmosis (RO) unit. The purpose of the ROPT system is to adjust the pH, ORP and allow for the addition of specialty treatment chemicals, such as anti-scale chemistry.

The ROPT system consists of several tanks, beginning with a mechanically agitated pH and ORP adjustment tank. In this tank, the pH is adjusted to an appropriate level so the Langelier Index is correct, and the ORP can be adjusted to ensure that all free chlorine is destroyed prior to the RO unit. In this same tank, anti-scaling chemistry is added on a volumetric basis to assist in the prevention of scale formation within the RO membranes.

The water then overflows to a lift tank. This tank acts as a reservoir for the RO feed pump. The RO lift tank contains level controls that prevent the RO feed pump from running out of water preventing the tank from overflowing.

A control system, based on a Siemens PLC, controls all the functions of the ROPT system.

The reaction tank contains a Brawn mixer and GLI probes for pH and ORP signals. The pH and ORP signals are displayed on the GLI transmitters in the control panel. The output signals from the GLI transmitters will control the addition of acid and SBS to maintain the proper settings. Anti-scale chemistry is added volumetrically. All additions are made by LMI pumps.



ROPT-50

Features

- Fully assembled at the factory
- Factory tested
- Units are catwalk integrated
- Units are match marked for ease of reassembly
- Rapid installation assured by skidded assemblies and mistake proof electrical connections

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Specifications						
Model Number	ROPT-25	ROPT-50	ROPT-75	ROPT-100	ROPT-150	ROPT-200
Number of Tanks	Two	Two	Two	Two	Two	Two
Chemical Adjustment Tank	Open Top 1,000 gallons / 3.8 m ³	Open Top 1,500 gallons / 5.7 m ³	Open Top 2,975 gallons / 11.3 m ³	Open Top 2,975 gallons / 11.3 m ³	Open Top 5,700 gallons / 21.6 m ³	Open Top 6,400 gallons / 24.2 m ³
Tank Material	HDPE	HDPE	HDPE/FRP	HDPE/FRP	HDPE/FRP	HDPE/FRP
Type	Vertical Cylindrical	Vertical Cylindrical	Vertical Cylindrical	Vertical Cylindrical	Vertical Cylindrical	Vertical Cylindrical
Method of Construction	Catwalk-Mounted	Catwalk-Mounted	Catwalk-Mounted	Catwalk-Mounted	Catwalk-Mounted	Catwalk-Mounted
Recommended Through-Put	25 gpm 5.7 m ³ /hr	50 gpm 11.4 m ³ /hr	75 gpm 17.0 m ³ /hr	100 gpm 22.8 m ³ /hr	150 gpm 34.0 m ³ /hr	200 gpm 45.5 m ³ /hr
pH Probe	GLI	GLI	GLI	GLI	GLI	GLI
ORP Probe	GLI	GLI	GLI	GLI	GLI	GLI
Instruments pH and ORP	GLI Transmitter	GLI Transmitter	GLI Transmitter	GLI Transmitter	GLI Transmitter	GLI Transmitter
Pumps: Acid/Oxidizer/Anti-scale	LMI/ LMI w/PCP/ LMI w/PCP	LMI/ LMI w/PCP/ LMI w/PCP	LMI/ LMI w/PCP/ LMI w/PCP	LMI/ LMI w/PCP/ LMI w/PCP	LMI/ LMI w/PCP/ LMI w/PCP	LMI/ LMI w/PCP/ LMI w/PCP
Chemical Make-Up Tanks: Acid / Oxidizer / Anti-Scale	Drum (Customer Supplied)/ PCP-50 / PCP-50	Drum (Customer Supplied)/ PCP-100 / PCP-50	Drum (Customer Supplied)/ PCP-100 / PCP-50	Drum (Customer Supplied)/ PCP-250 / PCP-50	Drum (Customer Supplied)/ PCP-250 / PCP-50	Drum (Customer Supplied)/ PCP-250 / PCP-50
Mixers	1/3 HP, 460/3/60, TEFC	3/4 HP, 460/3/60, TEFC	1.5 HP, 460/3/60, TEFC	1.5 HP, 460/3/60, TEFC	2.0 HP, 460/3/60, TEFC	2.0 HP, 460/3/60, TEFC
Forwarding Tank	Vertical Cylindrical Domed Top 300 gallons / 1.1 m ³	Vertical Cylindrical Domed Top 650 gallons / 2.5 m ³	Vertical Cylindrical Domed Top 1,000 gallons / 3.8 m ³	Vertical Cylindrical Domed Top 1,500 gallons / 5.7 m ³	Vertical Cylindrical Domed Top 2,100 gallons / 8.0 m ³	Vertical Cylindrical Domed Top 3,000 gallons / 11.4 m ³
RO Feed Pump	Centrifugal horizontal stainless steel G&L with single mechanical seal 7.5 HP, 25 gpm @ 140' TDH 5.7 m ³ /hr @ 418 kPa	Centrifugal horizontal stainless steel G&L with single mechanical seal 7.5 HP, 50 gpm @ 140' TDH 11.4 m ³ /hr @ 418 kPa	Centrifugal horizontal stainless steel G&L with single mechanical seal 10.0 HP 75 gpm @ 140' TDH 17.0 m ³ /hr @ 418 kPa	Centrifugal horizontal stainless steel G&L with single mechanical seal 10 HP, 100 gpm @ 140' TDH 22.7 m ³ /hr @ 418 kPa	Centrifugal horizontal stainless steel G&L with single mechanical seal 20 HP, 150 gpm @ 140' TDH 34.1 m ³ /hr @ 418 kPa	Centrifugal horizontal stainless steel G&L with single mechanical seal 20 HP, 200 gpm @ 140' TDH 45.4 m ³ /hr @ 418 kPa

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