



# Reverse Osmosis System

## AS-ROS System Highlights

The AS-ROS waterjet reverse osmosis system features a compact free standing design, excellent pre-filtration and high quality components. Able to support 500-2000 GPD, the AS-ROS offer high performance, high recovery rates and low energy consumption, allowing you to experience greater savings with lower maintenance and operation costs.



2000 gpd shown

### 1 | WATERJET SPECIFIC DESIGN

Designed specifically for the waterjet industry to produce high quality RO water at a rate that supports waterjet pumps up to 75 hp.

### 2 | PLUG AND PLAY

The RO System includes all the necessary parts and connections to seamlessly connect your softened water to your waterjet pump.

### 3 | ON-DEMAND RO

The onboard boost pump and accumulator, combined with the atmospheric tank, provide a readily available source of pressurized RO water directly to your system.

### 4 | MAXIMIZED WATER CONSUMPTION

The RO unit is designed with oversized water filters and cold water membranes that efficiently and effectively process the incoming water while producing the a 63% recovery rate.

This means less water is going down the drain and more pure RO water is being sent directly to the cutting head.

### 5 | BLENDING OPTIONS

The RO system is equipped with a digital TDS meter for instant TDS readings. With this you are able to visually see the quality of the water being produced and the blending valve allows you to instantly adjust the water any specific setting.

## HOW THE SYSTEM WORKS

Reverse Osmosis works by forcing the incoming softened water through a semi-permeable membrane to remove dissolved solids and hard ions. The resulting water is sent directly to the waterjet pump.

## Specifications

Models:	AS-ROS 500	AS-ROS 2000
<b>Design and Rates</b>		
Gallons Per Day (gpd)	500	2000
Feed Water Source	Softened	Softened
Standard Recovery Rate	26%	63%
Permeate Flow gpm (lpm)	0.35 (1.32)	1.38 (5.22)
Min Feed Rate (lpm)	1.5 (5.67)	2.5 (9.46)
<b>Connections</b>		
Inlet (Feed) inch	1" FNPT	1" FNPT
Outlet (Permeate) inch	3/8" Tube	3/8" Tube
Drain (Concentrate) inch	3/8" Tube	3/8" Tube
<b>Electrical, RO</b>		
Motor HP (kw)	1/3 (0.24)	3/4 (0.55)
Standard Voltage	110V 60Hz 1 PH	110V 60Hz 1 PH
Voltage Options*	220V 60Hz 1PH , 220V 50Hz 1PH	220V 60Hz 1PH , 220V 50Hz 1PH
Voltage Amp Draw (110V 60Hz/220V 60Hz/220V 50Hz)	6.6 / 3.2 / 3.7	11 / 5.6 / 6.6
<b>Electrical, Boost</b>		
Motor HP (kw)	1/2 (3.7)	1/2 (3.7)
Standard Voltage	115V 60Hz 1 PH	115V 60Hz 1 PH
Voltage Options*	220V 60Hz 1PH , 220V 50Hz 1PH	220V 60Hz 1PH , 220V 50Hz 1PH
Voltage Amp Draw (110V 60Hz/220V 60Hz/220V 50Hz)	7.2 / 3.7 / 4.3	7.2 / 3.7 / 4.3
<b>System Dimensions</b>		
L x W x H inch (cm)	35 x 30.3/8 x 30 (89 x 77 x 76.2)	35 x 30.3/8 x 49 (89 x 77 x 124)
Weight lb. (kg)	196 (88.9)	241 (109.32)

\*Must Specify voltage options when ordering. Longer lead times apply.



# THE FACTS on WATER QUALITY

Poor water quality raises your operating cost through accelerated wear on components which results in an increase in maintenance intervals. There are two important factors when monitoring water quality: suspended solids and total dissolved solids.



**AS-ROS 2000 GPD**  
shown with  
atmospheric tank

## SUSPENDED SOLIDS

Suspended solids refers to small solid particles which remain suspended in water. Removal of these solids is generally achieved through use of filtration found on most waterjets.

## TDS (TOTAL DISSOLVED SOLIDS)

Total dissolved solids (TDS) refers to sub-molecular particles or ions that are in solution in water. TDS can include hard elements like iron, silica and calcium that can precipitate out of the water as scale on the inside of high pressure plumbing. This scale can break off the inner walls and damage downstream valve components and orifices.

WATER	TDS	TREATMENT	ACTION
High Quality	TDS < 50 ppm	No Treatment	No Action
Good Quality	50 ppm < TDS < 150 ppm	Soften Only	Contact Local Specialist
Medium Quality	150 ppm < TDS < 250 ppm	Soften or TDS Removal	Specialist or RO System
Poor Quality	TDS > 250 ppm Silica > 15 ppm	TDS Removal	Soften & RO System

**Moderate amounts of TDS** are controlled by using water softening. Softeners remove the hard ions that can scale and replaces them with soft ions, usually salt, that stays in solution.

**High levels of TDS** are addressed first by softening and then with reverse osmosis(RO). RO removes the hard ions and lowers the TDS to acceptable levels.

## TDS TESTING

The TDS Testing Pen (13897) is an inexpensive solution to test your water. By testing a sample you will be able to quickly evaluate the results and take the proper steps to treat.



**All water should be tested to ensure TDS readings are at a suitable level.**

## FILTERING PRODUCTS



**Water Filters** remove suspended solids from your incoming water supply.



**In-line Filters** eliminate suspended contaminants from high pressure water.



**RO Systems** are the most efficient and effective means for controlling TDS levels.