NELSEN WATER SOLUTIONS Since 1954

NRO 440 SERIES SYSTEMS

1.7 - 13.8 Gallons per Minute

NRO

Commercial Reverse Osmosis

The **NRO Commercial Series of Reverse Osmosis Systems** are custom built by Nelsen Corporation to your specifications. These commercial systems of unmatched value in quality and price give you a multitude of standard features that are optional on most other ROs!

NSF-grade high quality parts are used to build this tough system.

The **NRO 440 Series** is designed for Commercial or Light Industrial applications requiring flow rates of 1.7 - 13.8 gallons per minute (GPM). The **NRO 440 Series** features the durability of a powder coated steel frame, an optional complete performance monitoring package, and simple system integration.

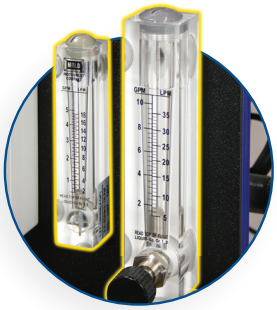
The NRO 440 Series features AXEON® XE1 high performance membrane elements that operate at a low applied pressure of only 100 psi.



Easy Motor Mount Bracket



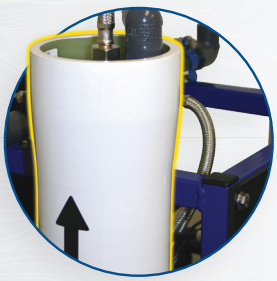
Multi Stage Booster Pumps



Permeate & Concentrate Flow Meters



Optional - Control Box w/Low Pressure, Permeate TDS & Level Controls



Gloss 300 psi FRP Membrane Housings, Stainless Steel Also Available



Liquid Filled Panel Mounted Concentrate Pressure Gauge



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SYSTEM FEATURES & OPTIONS

System Features Include:

- **Carbon Steel Frame** for strength & rigidity
- **Powder Coated Frame** for long life & durability
- **Extended Frame Legs** with plastic end caps for protection from ground contact and ease of movement
- **AXEON® XE1 Membrane Elements** - offer enhanced performance by operating at a low applied pressure of 100 psi
- **High Quality Gloss 300 psi FRP Housings** - Optional *stainless steel housings available*
- **High Pressure Multi-Stage Centrifugal Pump** for lasting performance
- **Replaceable Motor Mounting System** - makes field repairs easy, bracket mounts to motor and slides over frame
- **True Union Couplings** on inlet & outlet of motor No plumbing disassembly required for change out
- **Stainless Braided Hoses** for protection against corrosion, leaks & fraying
- **Replaceable Schedule 80 PVC** fittings for ease of field repairs
- **Quick Connect Fittings** on gauges & recycle operation for ease of service
- **Brass or Stainless Steel** inlet shut off valve
- **Integrated Recycle Valve**
- **Low Pressure Mechanical Switch** w/time delay snubber valve
- **Permeate & Concentrate Flow Meters**
- **Liquid Filled Gauges** for accurate & steady pressure readings
- **Panel Mounted Concentrate Pressure Gauge**
- **High Pressure Multi-Stage Centrifugal Pump** for lasting performance
- **Pump Throttle Valve** & pipe mounted discharge pressure gauge
- **Float Switch & Pretreatment Interlocks** - standard on all systems
- **High Flow 5 Micron** front mounted prefilter for ease of service

Optional NRO Series Upgrades:

- **Digital Display Electronic Control Box** with permeate TDS display, low pressure auto reset
- **Private Labeling Available**
- **Custom Photo Quality Controller Graphics** available (min order quantity required)
- **Upgrade Control Box** for interval fast flush
- **Upgrade Control Box** for permeate flush
- **Custom Operational Programs** at no cost
- **Second TDS Function** for feed water
- **Additional Panel Mounted Gauges** - customer specified
- **Pre & Post Filter Gauges**
- **Manual Auto Flush Valve**
- **Inter-stage Gauges**
- **Bladder Tank Control** available to provide pressurized storage
- **Wall Mount Frame**



Nelsen Corporation has many years of technical experience and service expertise ready to help optimize the performance of your system or build a system to your specific needs!

Nelsen Commercial Reverse Osmosis System Specifications

Model:	NRO-F-1440F-2500-3	NRO-F-2440F-5000-3	NRO-F-3440F-7500-3	NRO-F-4440F-10000-3	NRO-F-5440F-12500-2	NRO-F-6440F-15000-2	NRO-F-8440F-20000-2
Production GPD***	2500	5000	7500	10000	12500	15,000	20,000
Membrane	4 X 40 (1)	4 X 40 (2)	4 X 40 (3)	4 X 40 (4)	4 X 40 (5)	4 X 40 (6)	4 X 40 (8)
Permeate GPM	1.73	3.47	5.2	6.94	8.68	10.4	13.8
Feed GPM**	6.0	7.0	10.0	12.0	17.0	20.0	25.0
% Recovery w/Recycle	50%-75%	50%-75%	50%-75%	50%-75%	50%-75%	50%-75%	50%-75%
Pump	1 HP	1 HP	1.5 HP	1.5 HP	3 HP	3 HP	3 HP
FLA 60HZ 1Ø 220	19.2/9.6	19.2/9.6	*/12	*/12	*/15	*/15	*/15
Circuit Size	15A	15A	15A	15A	20A	20A	20A
Inlet	3/4"	3/4"	3/4"	3/4"	1" Big Blue®	1" Big Blue®	1" Big Blue®
Permeate	1/2"	1/2"	1"	1"	1"	1"	1"
Concentrate	1/2"	1/2"	1"	1"	1"	1"	1"
Shipping Dims	34"x34½"x58½"	34"x34½"x58½"	34"x34½"x58½"	34"x34½"x58½"	34"x34½"x58½"	34"x34½"x58½"	34"x34½"x58½"
Weight - Pounds	124 lbs.	149 lbs.	158 lbs.	169 lbs.	211 lbs.	224 lbs.	248 lbs.
Max Operating Pressure	160 psi	160 psi	160 psi	160 psi	160 psi	160 psi	160 psi

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Part # NRO-440-LIT
Rev-0325

* 110 Volt Not Available ** Minimum pressure of 35psi dynamic
*** The stated product performance is based on data taken after 30 minutes of operation at the following test conditions: 2,000 mg/L NaCl solution at 150 psig (1.5 MPa) applied pressure, 15% recovery, 77° F (25° C), pH 6.5–7.0