

# WATER TREATMENT SYSTEM

*RO 400 Series*



## *RO 400 Series:*

- *Easy installation*
- *Ease of maintenance with color coded tubing*
- *Configurable product*
- *Permeate divert functionality*
- *Comprehensive Vapor-logic® controls*

# SUSTAINED QUALITY AND DEPENDABILITY

## HIGH PURITY WATER FOR A WIDE VARIETY OF APPLICATIONS

DriSteem's water treatment systems are designed to work for a wide variety of processes and applications that need high purity water. These systems make it simple to achieve commercial or industrial water quality requirements.

This product can also team up with DriSteem's leading humidification and evaporative cooling systems delivering an all-in-one solution that meets clean steam or humidification requirements.

Industrial quality design provides high purity water with over 98% of all dissolved solids removed.

## THE RO 400 SERIES IS A CONFIGURABLE, FLEXIBLE, AND EXPANDABLE DESIGN THAT WILL MEET THE NEEDS OF MANY APPLICATIONS

Built with proven components, DriSteem's reverse osmosis (RO) systems operate for years with only simple filter changes and significantly reduce or eliminate maintenance of connected equipment.

The industry's only innovative front-only maintenance allows easy access to the system. Quickly replace membranes by simply sliding the racks which eliminates the need to wrestle within tight spaces or work around other equipment. The filter housing is easily accessible to the front side.

## COMPLETE WATER TREATMENT SYSTEM FEATURES FROM DRISTEEM

- SS membrane housings
- Energy efficient multistage pump
- Inlet solenoid valve
- Pretreatment sediment filter
- Concentrate and recycle throttling valves
- Pressure gauges
- Rotameters for flow measurement
- Permeate TDS monitoring/alarm
- Vapor-logic Controller with comprehensive system monitoring
- Keypad display
- Low pressure switch with Auto restart
- Connection for pretreatment interlock
- Level control connection for float switch
- Pressure control connection for bladder tank operation
- Visual alarms
- Run time monitor
- Remote alarming via BACnet, Modbus, LonTalk
- Permeate divert
- Inactivity flush
- Membrane flush options
- Leak sensor connection
- Plus more options!



### RO 400 SERIES

Remove TDS via membrane separation technology to service applications such as: humidification, steam production, washing/rinsing operations, pretreatment to high purity systems, ingredient raw water for agriculture and other processes.

Learn More



## COMPREHENSIVE CONTROL WITH VAPOR-LOGIC CONTROLLER

DriSteem offers the most advanced controller, Vapor-logic®, available for 400 series RO systems, delivering improved communications and comprehensive management.

Alarms quickly inform the users of issues or changes for easy monitoring facilitating corrective action of the system.

Building on DriSteem's tradition of innovations, Vapor-logic makes these RO systems the first interoperable systems available using BACnet, Modbus, and LonTalk. It also provides web access allowing users to easily make changes from a PC. The Vapor-logic firmware can be easily updated using just a USB/memory stick and provide historical operating data for 21 days (at 1 minute intervals).



**Table 3-1:**  
400 series RO station specifications

Model	401*	402*	403**	404**	406**	408**	412**
Permeate flow rate, GPD (LPD) 50 °F (10 °C) or lbs/hr (kg/hr) (see Note 4)	1,429 (5,409) 498 (226)	2,381 (9,013) 829 (376)	4,127 (15,622) 1,436 (651)	5,159 (19,528) 1,795 (814)	7,937 (30,044) 2,762 (1,253)	10,317 (39,054) 3,590 (1,628)	15,808 (59,840) 5,500 (2,495)
Permeate flow rate, GPD (LPD) 77 °F (25 °C) or lbs/hr (kg/hr) (see Note 4)	1,800 (6,810) 620 (280)	3,000 (11,350) 1,040 (470)	5,170 (19,570) 1,800 (821)	6,500 (24,600) 2,250 (1,020)	10,000 (37,850) 3,475 (1,580)	13,000 (49,200) 4,510 (2,050)	19,000 (71,910) 6,600 (3,000)
System voltage/phase, Amp draw with RO components (see Note 1)	480/3, 2.5 220-240 /1, 10.0 120/1, 19.2	480/3, 2.5 220-240 /1, 10.0 120/1, 19.2	480/3, 6.0 208-240 /1, 15.4	480/3, 6.0 208-240 /1, 15.4	480/3, 6.0 208-240 /1, 15.4	480/3, 6.0 208-240 /1, 15.4	480/3, 6.0 208-240 /1, 15.4
Fuse size with RO components (see Note 2)	480/3, 15 220/1, 15 120/1, 25	480/3, 15 220/1, 15 120/1, 25	480/3, 15 220/1, 20	480/3, 15 220/1, 20	480/3, 15 220/1, 20	480/3, 15 220/1, 20	480/3, 15 220/1, 20
Dimensions (W/D/H), inches (mm)	28/26/63 (711/660/1600)			37/26/63 (940/660/1600)			46/26/63 (1181/660/1600)
Shipping weight, lbs (kg)	440 (200)	470 (213)	510 (231)	540 (245)	645 (293)	705 (320)	870 (395)
Operating weight, lbs (kg) (see Note 5)	460 (209)	510 (231)	570 (259)	620 (281)	775 (352)	875 (397)	1100 (499)
Supply water connection dia., inches (see Note 3)	¾" FNPT						
RO system permeate water outlet connection dia., inches	¾" FNPT						
Connection to pressurized RO storage tank dia., inches	1						
Common drain outlet connection dia., inches	1" FNPT						
5-micron RO prefilter diameter x height, inches (mm)	4 x 20 (102 x 508)						
RO pump motor power, hp (kW)	1 (0.75)			3 (2.2)			
Qty. of RO membranes	1	2	3	4	6	8	12
RO membrane diameter x height, inches (mm)	4 x 40 (102 x 1016)						

Notes:

1. 220V/1-phase systems can also operate on 208V/1-phase and 240V/1-phase power.
2. Wiring and branch circuit protection (Type RK1, J, or T fusing) to be provided by installer in accordance with NEC requirements.
3. 40 psi (280 kPa) minimum supply water pressure.
4. Extra low energy membranes.
5. Without tank weight
- \* RO-401 and 402 220V/1-phase systems can also operate on 240V/1-phase power.
- \*\* RO-403 thru RO-412 220V/1-phase systems can also operate on 208V/1-phase and 240V/1-phase power.



**DRI-STEEM Corporation**

a subsidiary of Research Products Corporation  
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**Expect quality from the industry leader**

Since 1965, DriSteem has been leading the industry with creative and reliable humidification solutions. Our focus on ease of ownership is evident in the construction of DriSteem products. DriSteem leads the industry with a Two-year Limited Warranty and optional extended warranty.

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