

# SELECTION GUIDE

## Reverse Osmosis



**ULTROPURE—LARGE VOLUME REQUIREMENT? NO PROBLEM!**



**ROPURE INFINITY—THE ULTIMATE RO SYSTEM!**



**30 LITER RESERVOIR—STORAGE FOR ALL YOUR WATER REQUIREMENTS!**

### REVERSE OSMOSIS SYSTEMS

	Product	System Production	Product Water Flow //Hr 25°C/60 psi	Reservoir Capacity Options	Mounting	Page
<b><i>THE ULTIMATE RO SYSTEM!</i></b>	ROpure® Infinity Premier	From 50 to 400 //day	15 or 30	60 or 100 liters	Wall or Bench	378
<b><i>SMALLER SIZE, BUT NOT SMALLER VOLUME!</i></b>	EASypure® RO	Up to 100 //day	10	30 liters	Wall or Bench	381
<b><i>LARGER VOLUME REQUIREMENT? NO PROBLEM!</i></b>	ULTROPure	Up to 1325 //day	60, 80, 110, or 157	100+ liters	Wall or Bench	382
<b><i>SIMPLE AND EFFICIENT!</i></b>	ROpure LP	From 100 to 400 //day	15, 20, 30, or 40	100+ liters	Wall	383

### STORAGE RESERVOIRS

	Product	Storage Capacity	Material of Construction	Mounting	Page
<b><i>COMPACT STORAGE SYSTEM!</i></b>	ROpure Infinity	60 liters	Fluorinated Polyethylene	Wall or Bench	380
<b><i>STORAGE FOR ALL YOUR WATER REQUIREMENTS!</i></b>	Storage Reservoirs	30 liters	Polyethylene	Wall or Bench	384
<b><i>OUR MOST VERSATILE RESERVOIR!</i></b>	100 Liter	100 liters	Polyethylene	Wall	386
<b><i>OUR LARGEST STORAGE RESERVOIRS!</i></b>	Fiberglass Tanks	50, 100, Or 200 gallons	Premium Fiberglass Resin	Floor	387

# Reverse Osmosis

WHAT IS REVERSE OSMOSIS?

**Barnstead**

## OSMOSIS

To understand reverse osmosis we must first understand osmosis. During natural osmosis, water flows from a less concentrated solution through a semipermeable membrane to a more concentrated saline solution until concentrations on both sides of the membrane are equal. (See Figure 1.)

## REVERSE OSMOSIS

Reverse osmosis requires external pressure to reverse natural osmotic flow. As pressure is applied to the saline solution, water flows from a more concentrated saline solution through the semipermeable membrane. (See Figure 2.)

## REVERSE OSMOSIS MEMBRANE

A reverse osmosis membrane has a thin microporous surface that rejects impurities, but allows water to pass through. The membrane rejects bacteria, pyrogens, and 85%-95% of inorganic solids. Polyvalent ions are rejected easier than monovalent ions. Organic solids with a molecular weight greater than 300 are rejected by the membrane, but dissolved gases pass through. Reverse osmosis is a percent rejection technology. The purity of the product water depends on the purity of the inlet water. The purity of reverse osmosis product water is much higher than the purity of the feed water. (See Figure 3.)

Figure 1: Osmosis



Figure 2: Reverse Osmosis



Figure 3: Rejection Characteristics

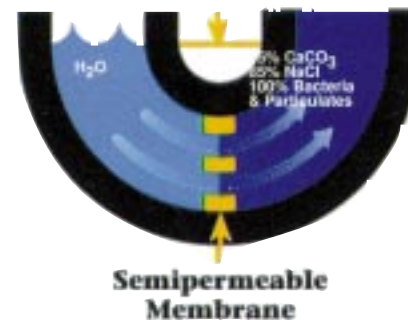
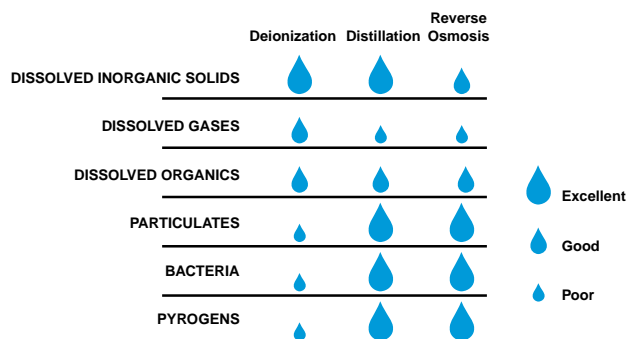


Figure 4



# Reverse Osmosis

## PRINCIPLES OF REVERSE OSMOSIS

**Barnstead**

### REJECT WATER

A large percentage (50-90%) of the feed water does not pass through the membrane but flows across the membrane surface, constantly cleaning it and carrying the inorganic and organic solids to drain. This water is called "reject."

### BARNSTEAD MEMBRANES

Barnstead offers the following three reverse osmosis membrane materials:

- Cellulose acetate
- Polyamide
- Thin film

### FEED WATER FACTORS

Feed water factors affecting membrane performance and life include the following:

#### Pressure

Feed water pressure affects both the quantity and purity of reverse osmosis product water. Lower feed water pressure causes lower product flow rate and lower product purity.

#### pH

Feed water pH range is important and Barnstead recommends using wider pH range membranes when feed water is basic, acidic, or unstable.

### LANGELIER SATURATION INDEX (LSI)

The LSI indicates the tendency for scale to form on a membrane surface. It requires feed water testing for temperature, total inorganic solids, calcium hardness, alkalinity, and pH. If the LSI calculation is positive, Barnstead recommends installing a water softener (cation exchange) or MPS (membrane protection system) prior to the reverse osmosis system. A water softener exchanges scale forming ions with sodium. The MPS envelopes the membrane surface and prohibits scale build up.

### FREE CHLORINE AND BACTERIA

Cellulose acetate membranes require constant free chlorine to prevent bacterial growth and membrane damage. In contrast, polyamide and thin film membranes are damaged by free chlorine. Activated carbon is used to remove free chlorine when polyamide and thin film membranes are chosen.

### TEMPERATURE

Membrane performance is based on feed water temperature of 25°C. For every 1°C below 25°C product water quantity is reduced by 3%. When feed water temperature is regularly below 25°C, Barnstead recommends a hot and cold water mixing valve to increase the temperature to 25°C. Feed water which is greater than 35° will damage most membranes.

### SILT DENSITY INDEX

The SDI is a measurement of submicron particles and their tendency to block membranes. Flowing water at specific pressure is filtered through a membrane disc and collected for a fixed period of time. The speed of water flow and total volume collected determine the index value.

### TURBIDITY

Turbidity is a measurement of suspended submicron particles that obscure light rays.

### SELECTING A SYSTEM

Prior to choosing a reverse osmosis system, a Barnstead W.A.T.E.R. analysis is highly recommended.

### MEMBRANE FEED WATER REQUIREMENTS

	Cellulose Acetate Membrane	Polyamide Membrane	Thin Film Composite Membrane
pH	4-8	1-11	1-11
Langelier Index	Negative	Negative	Negative
Free Chlorine	0.2 - 1.0 ppm of free	Damaged by free chlorine; requires carbon pretreatment	Damaged by prolonged exposure to free chlorine requires carbon pretreatment
Bacteria	Damaged by bacteria; requires free chlorine	Not affected	Not affected
Temperature*	4°C - 30°C	4°C - 30°C	4°C - 50°C
Still Density Index	< 5%	< 5%	< 5%
Turbidity	< 1 NTU	< 1 NTU	< 1 NTU

# Reverse Osmosis

ROPURE<sup>®</sup> INFINITY

Barnstead

ROpure Infinity



## THE ULTIMATE REVERSE OSMOSIS SYSTEM!

- — 15 or 30 liters per hour
- — Automatic operation
- — Flexibility to meet future lab needs

## PRODUCT DESCRIPTION

- Designed to meet the changing demands of your laboratory by producing from 50 to 400 liters of water a day.
- Each unit is capable of producing up to 15 or 30 liters per hour of laboratory grade water to meet your needs.
- Systems are wall and bench mountable, providing you with the opportunity to choose the best location.
- Systems can be easily upgraded from 15 to 30 liters an hour.
- Microprocessor control allows for 24 hour fully automatic operation.
- An integral pump provides consistent operation and flow rates.
- Automatic flush cleanses RO membranes for 10 minutes every four hours, eliminating contaminant build-up.
- A series of internal pressure gauges allow you to monitor membrane operating pressure and the performance of the prefilter.
- Each system is supplied with everything you need for operation. Each system comes complete with membrane(s), pretreatment cartridge, prefilter cartridge, and MPS cartridge.

## OPERATION

- The large pivoting LCD display allows you to constantly monitor the water quality to ensure optimum system performance.
- This unit includes a special Membrane Protection System (MPS) to enhance membrane life and performance. This unique system inhibits scale build up on the membrane surface to give you the best performance possible.
- System can display membrane % rejection, water conductivity, resistivity, TDS level and more! Plus, it automatically reminds you when it's time to change the pretreatment and MPS cartridges.

## 60 Liter Reservoir

The ROpure Infinity system requires storage to provide you with the quantity of water you require when you need it. Our new rigid fluorinated polyethylene reservoir is specially designed for operation with our Infinity series systems. This new reservoir is filtered to prevent airborne contamination and incorporates level controls to start and stop your ROpure Infinity when needed. It also contains outlets for your NANOpure, dishwasher and allows you to draw water directly from the tank.

Inside of Premier ROpure Infinity unit showing MPS system



# Reverse Osmosis

## ROPURE INFINITY

**Barnstead**

### ORDERING INFORMATION

Model #	Type	Production Flow Rate	Volts	Unit Includes	Overall Dimensions			US List Price
					W	Inches (cm) H	D	
D9011	Premier	15 /hr	120V	1 membrane, 1 prefilter, 1 carbon cartridge, 1 MPS cartridge	20 (51)	24 (61)	16 (41)	\$5040.00
D9014	Premier	30 /hr	120V	2 membranes, 1 prefilter, 1 carbon cartridge, 1 MPS cartridge	20 (51)	24 (61)	16 (41)	\$5880.00
D9012-33	Premier	15 /hr	240V	1 membrane, 1 prefilter, 1 carbon cartridge, 1 MPS cartridge	20 (51)	24 (61)	16 (41)	\$5040.00
D9015-33	Premier	30 /hr	240V	2 membranes, 1 prefilter, 1 carbon cartridge, 1 MPS cartridge	20 (51)	24 (61)	16 (41)	\$5880.00

-33 Models CE Marked

### PRODUCT SPECIFICATIONS

Shipping Weight:	85 lb.
Inlet Pressure:	30 psi minimum - 100 psi minimum
Plumbing Connections:	
Feed water:	3/8" OD tubing (supplied)
Product Water:	1/4"
Reject Water:	3/8" OD tubing (supplied)
% Recovery:	10-25%
<b>Membrane Specifications</b>	
Type:	Thin Film (TFM)
Operating Pressure:	60 psi
Product Flow Rate:	15 /hr or 30 /hr <sup>1</sup>
Inlet Pressure:	30 psi minimum - 100 psi maximum
Water Consumption:	144 /hr
Chlorine Tolerant to:	1000 ppm-hours
Rejection Rates:	Monovalent Ions: 90-95% Polyvalent Ions: 95-99% Particles: > 99% Microorganisms: > 99% Organics: > 99%

<sup>1</sup> At 25°C feed water ± 2 lph

### Membrane Feed Water Requirements

pH: Optimum range:	6.5 - 7.5
Operating range:	4 - 11
Temperature Range:	4 - 50°C
Silt Density Index:	< 5%
Turbidity:	< 1.0 NTU
Maximum TDS:	500 ppm (CaCO <sub>3</sub> )
Langelier (LSI) Index:	Negative
Iron Total as Fe:	< 0.5 ppm

**48 Hour or Sooner  
Express Shipping  
Guaranteed!\***



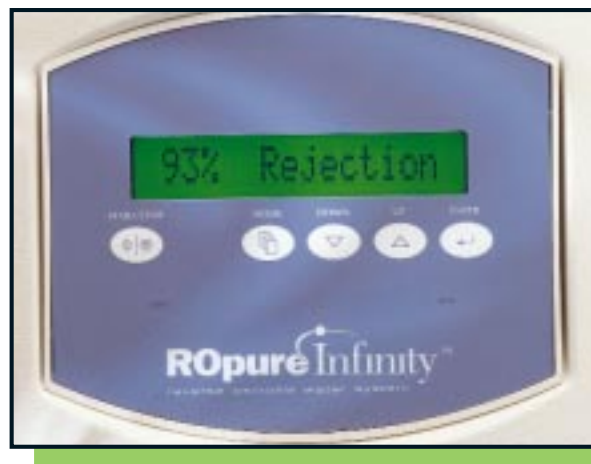
\*see inside front cover for details

### ACCESSORIES

Model #	Description	US List Price
CM900X1	MPS Replacement Cartridge	\$68.00
D0605	Automatic mixing valve connects to hot & cold water lines & maintains feed water temperature at 25°C ± 2°C. Ensures optimal system performance.	\$366.00
D50258	Sanitization Cartridge	\$34.00
D9004	Prefilter, 15 micron, ROPure Infinity	\$42.00
D9005	Pretreatment Carbon Cartridge, ROPure Infinity	\$78.00
D9006	TFM, ROPure Infinity, 15 /hr	\$832.00
D9021	60 Liter Infinity Storage Reservoir for ROPure Infinity	\$940.00
LM902X1A	Optional UV Bulb Attachment for use with distribution pump	\$292.00
PU902X1	Optional Distribution Pump for 60 Liter Reservoir, 120V	\$575.00
PU902X2	Optional Distribution Pump for 60 Liter Reservoir, 240V	\$575.00
TU902X1	Optional Sight Glass for 60 liter Infinity Reservoir	\$80.00

TFM is a trademark of Desalination Systems, Inc.

Large pivoting LCD display included on all ROPure Infinity systems.



# Reverse Osmosis

## ROPURE INFINITY STORAGE RESERVOIR

**Barnstead**

*ROpure Infinity  
Storage Reservoir*



### COMPACT STORAGE SYSTEM!

- — 60 liter storage capacity
- — Automatic operation with ROpure Infinity
- — Range of accessories

### PRODUCT DESCRIPTION

- Complete with automatic controls, ensuring automatic operation when used in conjunction with ROpure Infinity reverse osmosis systems.
- Draw-off points include spigot, dishwasher port, and feed to NANOpure® Infinity systems.
- Constructed of rigid fluorinated polyethylene, providing strength and protection against material contamination.
- Can be bench or wall mounted.
- Vent protected to eliminate the introduction of airborne contamination.
- Pump protector provided; protects NANOpure to ensure it will not be damaged when there is not enough water in the reservoir.

### OPTIONAL ACCESSORIES

#### Sight Glass

- Available to alert you of water level within the reservoir.

#### UV Lamp Accessory

- Sterilizes reservoir water to minimize bacterial growth.
- Water is automatically circulated past UV bulb for 15 minutes every hour when used with the distribution pump.



\*see inside front cover for details

### PRODUCT SPECIFICATIONS

W	Dimensions Inches (cm)		Shipping Weight Lb. (kg)	Operating Weight Lb. (kg)
	H	D		
20 (51)	24 (61)	17 (43.2)	35 (15.8)	168 (76)

### ORDERING INFORMATION

Catalog #	Description	US List Price
D9021	60 Liter Infinity Storage Reservoir for ROpure Infinity	\$940.00

### ACCESSORIES

Catalog #	Description	US List Price
D9021	60 Liter Infinity Storage Reservoir for ROpure Infinity	\$940.00
LM902X1A	Optional UV Bulb Attachment for use with distribution pump	\$292.00
PU902X1	Optional Distribution Pump for 60 Liter Reservoir, 120V	\$575.00
PU902X2	Optional Distribution Pump for 60 Liter Reservoir, 240V	\$575.00
TU902X1	Optional Sight Glass for 60 Liter Infinity Reservoir	\$80.00

### Distribution Pump

- Perfect for supplying water to a remote NANOpure or glassware washer.
- Easily mounts to base of 60 liter Infinity reservoir.
- Can supply reverse osmosis water up to 35 feet away.
- Capable of delivering up to 1 gallon of water/min. at 15 psi.
- Automatically circulates water for 15 minutes every hour when in standby.
- Pump Protector: ensures distribution pump will not operate when tank is empty.

# Reverse Osmosis

EASYPURE® RO

**Barnstead**

EASYPure RO



## SMALLER SIZE BUT NOT SMALLER VOLUME!

- — Compact size
- — Bench or wall mountable
- — Automatic operation

## PRODUCT DESCRIPTION

- Integral pump provides consistent flow rate of 10 liters per hour.
- Microprocessor control allows for 24-hour, fully automatic, unattended operation.
- Automatic or manual flush cleanses RO membranes for 10 minutes every four hours, eliminating contaminant build-up.
- Rejection monitor indicates membrane's performance, alerting the operator if problems exist.
- A built-in low pressure switch prevents pump burnout due to low pressure feed water.
- The system's compact design allows it to be wall mounted or used anywhere on a bench. An optional bracket is available for easy wall mounting.
- 6.5 liter reservoir incorporates an air filter to prevent airborne impurities from contaminating water during storage.
- An optional 30 liter reservoir provides additional storage as required.
- An automatic reject water flow control simplifies operation and prolongs the life of the RO membranes.
- Panel-mounted indicator lights register the unit's current status, including "stand-by," when the reservoir is full, when the pretreatment cartridge needs changing, and when the membranes require replacement.
- The EASYpure RO is ideally suited for pretreating EASYpure LF, UF, UV and UV/UF compact ultrapure water systems.
- Offers an excellent purification option for applications requiring up to 100 liters of RO water daily.
- All components are constructed of extremely inert materials to ensure maximum ionic and organic purity.

## MEMBRANE SPECIFICATIONS



Type:	Thin Film (TFM)
Product Flow Rate:	10 //hr.
Inlet Pressure:	30 psi minimum (2 bar) 100 psi maximum (6.5 bar)
Water Consumption:	54 //hr.
Recovery:	19%
Rejection Rates:	Monovalent Ions: 90-95% Polyvalent Ions: 95-99% Particles: > 99% Microorganisms: > 99% Organics (300 mw): > 99%

## ORDERING INFORMATION

Model #	Electrical (50/60 Hz)	Overall Dimensions Inches (cm)			Shipping Weight Lb. (kg)	US List Price
		W	H	D		
D7421	120 VAC	12.25 (31.1)	18.5 (46.0)	18.75 (47.6)	35 (15.8)	\$3064.00
D7422-33	240 VAC	12.25 (31.1)	18.5 (46.0)	18.75 (47.6)	35 (15.8)	\$3056.00
D7428	120 VAC	for low feed water pressures, 9-15 psig			35 (15.8)	\$3187.00
D7429-33	240 VAC	for low feed water pressures, 9-15 psig			35 (15.8)	\$3187.00
TY742X2A*	N/A	15 (46)	15 (46)	29.5 (34)	61.6 (28)	\$1163.00

-33 Models CE Marked

\* Optional 30 Liter Reservoir, Operating Weight is 130 lb. (60 kg)

## ACCESSORIES

Model #	Description	US List Price
D7426	Start-up Kit- Consists of (2) TFM membranes and (1) pretreatment cartridge (required)	\$598.00
D7384	Optional Wall Bracket	\$234.00
D7424	Optional Bench Mounting Stand (To be used if bench mounting an EASYpure RO used in conjunction with an optional 30 liter reservoir)	\$154.00
TY742X2A	Optional 30 liter reservoir	\$1163.00
D7425	Membrane TFM	\$270.00
D7427	Hot & Cold Water Mixing Valve, EASYpure RO	\$352.00
D50245	Sanitization Cartridge EASYpure RO	\$30.00
D50246	Pretreatment Cartridge EASYpure RO	\$62.00

TFM is a trademark of Desalination Systems, Inc.

**48 Hour or Sooner  
Express Shipping  
Guaranteed!\***



\*see inside front cover for details

# Reverse Osmosis

## ULTROPURE™

**Barnstead**

ULTROPure



### LARGER VOLUME REQUIREMENTS? NO PROBLEM!

- — Fully automatic operation
- — Can produce up to 1325 //day
- — Great for entire lab, floor, or small building

LED Control Panel



Pressure Gauges and flow meters



### PRODUCT DESCRIPTION

- If you require reverse osmosis to pretreat a NANOpure or provide water for an entire laboratory, floor or small building, the ULTROpure reverse osmosis unit is the logical system.
- Capable of delivering between 60-157 liters per hour, making it ideal for central systems requiring up to 1325 liters per day.
- Up to 50% feed water recovery allows for the conservation of water.
- Microprocessor controlled, allowing for fully automatic and unattended operation.
- Percent salt rejection monitor gives a real-time reading of membrane performance, including resistivity and temperature of the feed and product water.
- High and low pressure switches prevent low pressure pump burnout and high pressure hardware damage.
- Product and reject flow meters allow for quick and easy evaluation of system performance.
- Pressure gauges both before and after the prefilter, alerting you when the need exists to change the prefilter.
- Four membranes available, providing for increased versatility in feed water and flow requirements.
- Automatic and manual flush, reducing the build-up of contaminants on the membrane surface.
- Wall mounted, available to be floor mounted with the addition of the optional floor stand, which provides for more flexibility in choosing the location.
- Computer aided water analysis, in addition to a W.A.T.E.R. analysis, provides for optimal pretreatment and membrane choice, as well as operating conditions.

### ORDERING INFORMATION

Model #	Description	US List Price
D6821	ULTROpure with monitor and prefilter, 120V	\$6096.00
D6822	ULTROpure with monitor and prefilter, 240V	\$6096.00

### ACCESSORIES

Catalog #	Description	US List Price
D6827	Optional floor mounting stand	\$315.00
D6828	Standard cellulose acetate membrane. Produces 60 lph (15 gph) in ULTROpure at 25°C, 200 psi*	\$924.00
D6829	High flow cellulose acetate membrane. Produces 110 lph (29 gph) in ULTROpure at 25°C, 200 psi*	\$924.00
D68210	Polyamide membrane. Produces 157 lph (41 gph) in ULTROpure at 25°C, 200 psi*	\$1227.00
D68211	TFM™ membrane. Produces 80 lph (21 gph) in ULTROpure at 25°C.* Operates in pH range of 4-11. Zero chlorine tolerance in feed water.	\$1227.00
D0605	Automatic mixing valve. Connects to hot and cold water lines and maintains feed water temperature at 25°C. Ensures specified output capacity.	\$366.00
D2622	100 liter storage reservoir, rigid polyethylene tank including high water control. (Order NANOpure low water pump protector separately.)	\$1396.00
FL583X1	Pre-filter 10" (25.4 cm), 5 micron	\$32.00
D8451	Optional Carbon Canister 1 cu. ft., processes up to 1 million gallons (25°C, 1ppm free chlorine)	\$837.00

\* Membrane life: one to three years dependent upon feed water conditions.

TFM is a trademark of Desalination Systems, Inc.

**48 Hour or Sooner  
Express Shipping  
Guaranteed!\***



\*see inside front cover for details



# Reverse Osmosis

## ROPURE LP

**Barnstead**

ROpure LP



### SIMPLE AND EFFICIENT!

- — Operates on inlet pressure
- — Produces 100-400 //day
- — Quiet operation

### PRODUCT DESCRIPTION

- An economical reverse osmosis system designed to operate on inlet line feed water pressure, eliminating the need for high pressure pumps.
- Capable of delivering between 15-40 liter per hour product flow, making it the ideal pretreatment system for point-of-use pure water requirements.
- Operates from inlet line pressure eliminating high pressure pumps and providing for quiet operation.
- Automatic flush helps eliminate the build-up of contaminants on the membrane surface.
- Four membranes to choose from, providing for versatility in flow rates and less pretreatment.
- Fixed orifice on the reject line provides for constant recovery without the need of manual adjustment.
- Simple operation provides for economical unit with minimal maintenance.

### ORDERING INFORMATION

Model #	Description	US List Price
D2716	ROpure LP reverse osmosis system including prefilter, 120 VAC, 60 Hz., 8.0 amps. (Order membrane and reservoir separately.)	\$2238.00
D2717	ROpure LP reverse osmosis system including prefilter, 240 VAC, 50 Hz., 4.0 amps. (Order membrane and reservoir separately.)	\$2238.00

**48 Hour or Sooner  
Express Shipping  
Guaranteed!\***



\*see inside front cover for details

### PRODUCT SPECIFICATIONS

#### Plumbing Connections:

Feed water:	.4" NPTF or .5" tube (adapter and tube supplied)
Product Water:	2.5" NPTF or 1.4" NPTF (2 adapters supplied .4" hose barb x .5" NPTM .4" OD tube x .5" NPTM)
Reject:	.5" OD Tube

#### Dimensions:

Overall (W x H x D)	20.4" x 38" x 8.75" (51.7 x 96.5 x 22.2 cm)
---------------------	---

#### Weight:

Shipping 75 lb. (34 kg)
Operating 75 lb. (34 kg)

#### Electrical Requirements:

115 VAC, 60 Hz, 1 phase, 8.0 amps
230 VAC, 50 Hz, 1 phase, 4.0 amps

### ACCESSORIES

Model #	Description	US List Price
D2730	Cellulose acetate RO membrane* Standard, 15 //hour, <sup>1</sup> (4 gph)	\$708.00
D2731	Cellulose acetate RO membrane* Hi Flow 30 //hour, <sup>1</sup> (8 gph)	\$803.00
D2734	TFM™ RO membrane 20 //hour, <sup>1</sup> (5 gph)	\$932.00
D2732	Polyamide RO Membrane* 40 //hour, <sup>1</sup> (10 gph)	\$1122.00
D2729	ROpure LP prefilter 10" (25.4 cm), 5 micron	\$22.00
D0605	Automatic mixing valve connects to hot and cold water lines and maintains feed water temperature at 25°C ±2°C. Ensures specified output capacity	\$366.00
D2622	100 liter storage reservoir including high level control	\$1396.00
D8451	Optional Carbon Canister, 1 cu. ft., processes up to 1 million gallons (25°C, 1ppm free chlorine)	\$837.00

\* Membrane life: one to three years dependent upon feed water conditions

<sup>1</sup> Based on 60 psi and 25°C.

TFM is a trademark of Desalination Systems, Inc.

# Reverse Osmosis

## STORAGE RESERVOIRS

**Barnstead**

Storage Reservoir with ROpure Infinity and NANOpure Infinity



### STORAGE FOR ALL YOUR WATER REQUIREMENTS!

- — 30 liters to 200 gallons capacity
- — Strong, inert materials
- — Completely automatic operation

### CHOOSE THE REVERSE OSMOSIS SYSTEM AND STORAGE RESERVOIR TO MEET YOUR LABORATORY REQUIREMENTS

	30 Liter	60 Liter	100 Liter	Fiberglass Tanks 50, 100 & 200 gallon
EASypure RO	Optional			
Infinity RO		Yes	Yes	Yes
ROpure LP			Yes	Yes
ULTROpure			Yes	Yes

### ORDERING INFORMATION

Model #	Dimensions Inches (cm)			Operating Weight (Full) Lb. (kg)	Shipping Weight Lb. (kg)	US List Price
	W	H	D			
<b>EASypure RO 30 Liter Storage Reservoir</b>						
TY742X2A	15 (38.1)	14.75 (37.5)	29.5 (74.9)	130 (60)	61.5 (28)	\$1163.00
<b>ROpure Infinity 60 Liter Infinity Storage Reservoir</b>						
D9021	20 (51)	24 (61)	17 (43.2)	168 (76)	35 (15.8)	\$940.00

### PRODUCT DESCRIPTION

- Reverse osmosis systems require storage to eliminate back pressure on the reverse osmosis membrane and provide the quantity of water that will meet your requirements.
- Barnstead provides a variety of storage reservoirs ranging in volume from 30 liters to 200 gallons, depending upon your needs. All tanks are designed to ensure automatic operation when used in conjunction with Barnstead reverse osmosis systems.

### ACCESSORIES

Catalog #	Description	US List Price
D7424	Optional Bench Mounting Stand (to be used if bench mounting an EASypure RO when used in conjunction with an optional 30 Liter Tank)	\$154.00
PU902X1	Optional Distribution Pump for 60 Liter Reservoir, 120V	\$575.00
PU902X2	Optional Distribution Pump for 60 Liter Reservoir, 240V	\$575.00
LM902X1A	Optional UV Bulb Attachment for use with distribution pump	\$292.00
TU902X1	Optional Sight Glass for 60 Liter Infinity Reservoir	\$80.00

48 Hour or Sooner  
Express Shipping  
Guaranteed!\*



\*see inside front cover for details

# Reverse Osmosis

## MEMBRANES

**Barnstead**

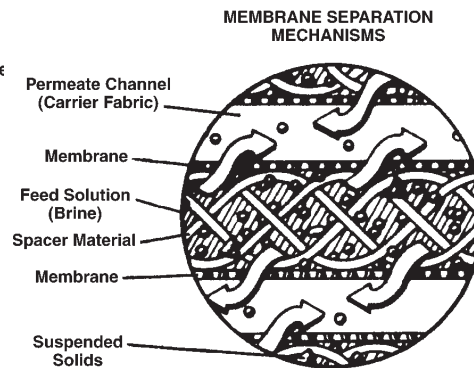
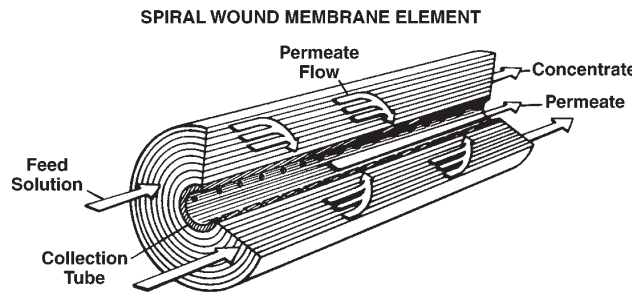
### PRODUCT SPECIFICATIONS<sup>1</sup> AND ORDERING INFORMATION

	Standard Cellulose Acetate		High Flow Cellulose Acetate		Polyamide		Thin Film Membrane			
	D2730	D6828	D2731	D6829	D2732	D68210	D2734	D68211		
<b>Product Flow Rate</b> (±15% at 25°C)										
ROpure LP	15 lph (4gph)		30 lph (8 gph)		40 lph (10 gph)		20 lph (5 gph)			
ULTROpure	60 lph (16 gph)		110 lph (29 gph)		157 lph (41 gph)		80 lph (21 gph)			
ULTROpure Series 682		60 lph (15 gph)		110 lph (29 gph)		157 lph (41 gph)		80 lph (21 gph)		
<b>Rejection Rates:</b>										
Monovalent Ions	95%	90-95%	90-95%	90-95%	90-95%	90-95%	90-95%	90-95%		
Polyvalent Ions	95-99%	95-99%	95-99%	95-99%	95-99%	95-99%	95-99%	95-99%		
Particulates, most organics (>300 MW), bacteria and pyrogens	> 99%	> 99%	> 99%	> 99%	> 99%	> 99%	> 99%	> 99%		
<b>Recovery<sup>3</sup></b>	10%	10-50%	10%	30-50%	10%	30-50%	10%	30-50%		
<b>Feed water Requirements<sup>2</sup></b>										
<b>Inlet Residual Chlorine</b>	0.2 to 1.0 ppm	0.2 to 1.0 ppm	0.2 to 1.0 ppm	0.2 to 1.0 ppm	zero	zero	< 0.1 ppm	< 0.1 ppm		
<b>Inlet pH Range</b>	4-8	4-8	4-8	4-8	1-11	1-11	4-11	4-11		
<b>US List Price</b>	\$708.00	\$924.00	\$803.00	\$924.00	\$1222.00	\$1127.00	\$932.00	\$1227.00		
<b>TDS (Max. ppm CaCO<sub>3</sub>)<sup>2</sup></b>	800		Inlet iron total (as Fe) < 0.5 ppm		Turbidity < 1.0 NTU		Langelier Saturation Index Negative		Silt Density Index (S.D.I.) < 5%	

<sup>1</sup> Membrane performance is dependent upon membrane condition, pressure, recovery, water temperature and water composition. Listed membrane performance for a new membrane is based on 25°C (77°F) feed water temperature, feed water composition of 1000 ppm NaCl at a pH of 6.0-6.5 and stated design specifications for operating pressure and feed water recovery for each model.

<sup>2</sup> Feed water suitability MUST be determined by a Barnstead W.A.T.E.R. analysis. This service is provided FREE. Please contact the Barnstead technical service hotline at 319-556-2241 or 1-800-446-6060 and request an ULTROpure W.A.T.E.R. Kit.

<sup>3</sup> Based on results of ULTROpure W.A.T.E.R. analysis.



**48 Hour or Sooner Express Shipping Guaranteed!\***

\*see inside front cover for details

**REVERSE OSMOSIS**  
The RO process removes virtually all ions from the feedwater and passes the purified product

# Reverse Osmosis

## STORAGE RESERVOIR

**Barnstead**

100 Liter Storage Tank



### OUR MOST VERSATILE RESERVOIR!

- — Rigid polyethylene
- — 100 liter capacity
- — 24-hour, automatic controls

### PRODUCT DESCRIPTION

- Reverse osmosis systems require storage to eliminate back pressure on the reverse osmosis membrane and provide the quantity of water that will meet your requirements. Barnstead provides a variety of storage reservoirs ranging in volume from 30 liters to 200 gallons, depending upon your needs.
- All tanks are equipped to ensure automatic operation when used in conjunction with the Barnstead reverse osmosis systems. Whether your need is for small volumes to feed a NANOpure, E-pure, or EASYpure, or large volumes to feed an entire building, Barnstead has the tank for you.
- Complete with automatic controls, ensuring automatic operation in conjunction with Barnstead reverse osmosis systems (except ROPure ST).
- Draw-off points include spigot and feed port to NANOpure, E-pure, and EASYpure systems.
- Port to provide for installation of NANOpure, E-pure, or EASYpure pump protectors.
- Rigid polyethylene, providing strength and protection against material recontamination.
- Optional sight glass available to alert you of water level within the reservoir.

### ORDERING INFORMATION

Model #	W	Dimensions Inches (cm)		D	Operating Weight (Full) Lb. (kg)	Shipping Weight Lb. (kg)	US List Price
		H					
D2622	20.25 (51)	38 (96)		10.25 (25)	256 (116)	75 (34)	\$1396.00

### ACCESSORIES

Catalog #	Description	US List Price
D2623	Optional sight glass for 100 /reservoir	\$82.00

**48 Hour or Sooner  
Express Shipping  
Guaranteed!\***



\*see inside front cover for details

# Reverse Osmosis

## STORAGE RESERVOIRS

**Barnstead**

### PRODUCT DESCRIPTION

- Reverse osmosis systems require storage to eliminate back pressure on the reverse osmosis membrane and provide the quantity of water that will meet your requirements.
- Barnstead provides a variety of storage reservoirs ranging in volume from 30 liters to 200 gallons, depending upon your needs. All tanks are designed to ensure automatic operation when used in conjunction with Barnstead reverse osmosis systems. For automatic operation with the fiberglass storage reservoir, please order the float switch accessory.
- Whether your need is for small volumes to feed a NANOpure, E-pure, or EASYpure, or large volumes to feed an entire building, Barnstead has the tank for you.

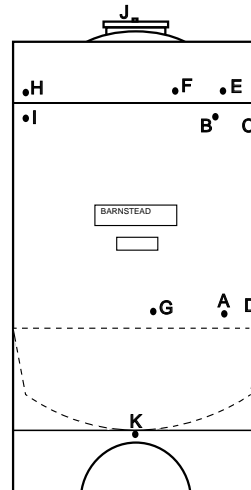
### OUR LARGEST STORAGE RESERVOIR!

- — 50, 100, and 200 gallon capacity
- — Access ports for distribution
- — Rigid fiberglass construction

### PRODUCT SPECIFICATIONS

#### Fiberglass Tanks—Tank Fitting Schedule

	50 gallon	100 gallon	200 gallon
A: Low Level Monitor	0.5"	0.5"	0.5"
B: Overflow	0.75"	0.75"	0.75"
C: Bypass/Pump Return	0.75"	0.75"	1"
D: Outlet	0.75"	0.75"	1"
E: Auxiliary	0.5"	0.5"	0.5"
F: Vent	0.5"	0.5"	0.5"
G: Spare (for spigot)	0.75"	0.75"	0.75"
H: High Level Float Switch	0.5"	0.5"	0.5"
I: Inlet	0.75"	0.75"	0.75"
J: Fillwell/Removable Cover	5"	5"	10"
K: Drain/Auxiliary Pump Suction	1"	1"	2"



*EASYpure RO with 30 liter tank feeding EASYpure UV*

### ORDERING INFORMATION

Model #	Dimensions Inches (cm)		Storage Volume gal.	Shipping Weight Lb. (kg)	US List Price
	H	D			
<b>Fiberglass Storage Reservoirs</b>					
B5041	44 (111.8)	24 (60.9)	50	32 (14.5)	\$1030.00
B5042	70 (177.8)	24 (60.9)	100	44 (19.9)	\$1230.00
B5043	79 (200.7)	32 (81.3)	200	89 (40.4)	\$1650.00

### ACCESSORIES

Catalog #	Description	US List Price
16975	Float switch assembly for fiberglass storage reservoirs	\$506.00

