PENTAIR

EVERPURE®

CONSERV® 75S

HIGH EFFICIENCY REVERSE OSMOSIS SYSTEM

PROTECT **COMBI-OVENS AND SMALL STEAMERS** WITH TRUE CORROSION PROTECTION AND SCALE INHIBITION IN ONE COMPACT SYSTEM

Mineral scale can be removed, but corrosion is both permanent and irreversible.

EVERPURE® CONSERV® 75S SYSTEM FOR STEAM EQUIPMENT

Steam equipment are expensive investments and are susceptible to water quality-related damage. Steam is 100 percent water and its mineral content can easily damage combi-ovens and steamers by causing corrosion and scale buildup.

Mineral scale can be removed, but corrosion is both permanent and irreversible. And most solutions in the steam equipment market address only scale buildup, with little protection against the more serious threat.

The Pentair Everpure Conserv 75S High Efficiency Reverse Osmosis System is specially designed to help protect combi-ovens and small steamers against both corrosion and scale to extend equipment life, reduce expensive downtime for servicing and avoid potentially costly repairs. The system's blending valve feature allows users to dial in the desired mineral content based on the water quality.

SMALL
FOOTPRINT

50%
WATER SAVINGS†

SCALE AND
CORROSION
PROTECTION

KNOW WHAT'S IN YOUR WATER

Knowing what is in your water is extremely important in steam applications and could help save your equipment. In addition to H_2O, water contains minerals, chemical compounds and/or contaminants which can alter taste and damage equipment. The most important contaminants are small particles, iron, hardness minerals, chlorine and chloramine sanitizers, chloride, sulfate and nitrates.

EFFECTS OF CHLORINE: Chlorine gas may be produced through the thermal composition of chlorine or chloramines disinfection methods used in municipal water treatment. In the moist and hot environment of a combi-oven or steamer, hydrochloric acid can be formed, which creates conditions for corrosion. The Everpure Conserv 75S RO System's pretreatment carbon filter removes chlorine from the water, helping to remove the threat of corrosion development on equipment.

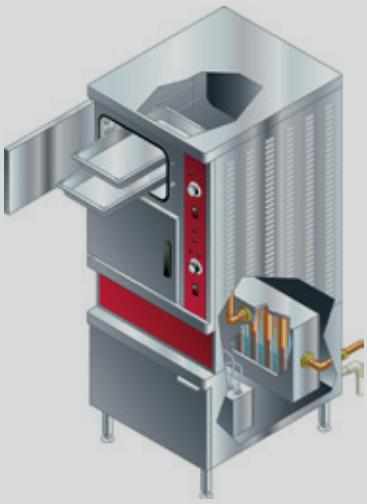
EFFECTS OF TOTAL DISSOLVED SOLIDS (TDS): Water supplies contain dissolved rocks and salts such as calcium, magnesium, bicarbonates, sulfates, chlorides and nitrates, as well as trace metals such as lead and aluminum. The TDS content of source water supplies can vary widely, but the national U.S. average is estimated at about 300 milligrams per each liter of water. That would translate about 1,140 milligrams per US Gallon. High levels of TDS can cause scale formation on steam equipment – the heat acts as a catalyst, causing mineral compounds to cling to dirt and fall out of solution as scale, which then clings to the surfaces of the equipment. The Pentair GRO-75EN High Efficiency RO Membrane built in to the Conserv 75S System removes TDS from the water, virtually eliminating the threat of scale formation. Additionally, the RO membrane reduces salt minerals that can cause corrosion.

EFFECTS OF SMALL PARTICLES AND SEDIMENT: Small, undissolved solids (greater than 5 microns in size) in water can negatively affect steam cooking. Amongst them are clogging, abrasion of small valves and spray heads, and mineral scale formation. The Conserv 75S pretreatment carbon filter removes sediment to reduce abrasion, plus keeps valves and spray heads clean and fully functional.

STEAM EQUIPMENT WATER SPECIFICATIONS

Most steam equipment manufacturers specify water requirements in order to maintain compliance with their warranty. The warranty is usually for a one-year period and is at risk of being voided if the end-user's water quality does not meet the recommended specification. Below is an example of ideal water specifications for steam applications as recommended by Pentair. Developed with these specifications in mind, the Conserv 75S System is capable of producing water quality that meets steam equipment manufacturers' requirements.

ATTRIBUTE	SPECIFICATION
Turbitity	Must not exceed 0.5 NTUs
Taste and Odor	Free from off-tastes and odor
Total Chlorine	<0.05 ppm
Iron	Not more than 0.25 ppm
Total Alkalinity	Not more that 100 ppm
Total Hardness	17-85 ppm
Total Dissolved Solids	25-75 ppm
pH	6.80-7.40
Chlorides	30 ppm



TWO CRITICAL WATER-RELATED PROBLEMS FACING STEAM EQUIPMENT:

Metal corrosion is a significant concern for combi-ovens and small steam applications. Chlorine and chloramines produce corrosive gases, while corrosive salts, such as sulfates, chlorides and nitrates, attack metal equipment componentry in the high energy environment of steam cooking. Corrosion rates will vary widely depending upon a number of water quality-related factors such as acidity (low pH), dissolved corrosive salts, municipal disinfection used, and operating temperature. Corrosion can manifest itself uniformly or be focused on certain areas like cabinet welds and oven racks. When rust breaks through the protective layer of the metal, it can never be fully cleaned, removed or restored to its original condition. Metal corrosion is progressive and permanent.

Mineral scale formation is another problem affecting steam cooking equipment. Mineral scale (or lime scale) is formed when water contains a combination of hard minerals (calcium and magnesium), carbonates, sulfates, and is at a neutral or higher pH level. The extreme degree of heat transfer involved in the steam cooking process generates the necessary energy to drive scale formation. Unlike metal corrosion, mineral scale can be removed with acid cleaning, but this process is harsh to all metal surfaces and can reduce the equipment's operating life.

EFFECTS OF METAL CORROSION AND MINERAL SCALE FORMATION ON STEAM EQUIPMENT

FRACTURES AND LEAKS	DAMAGED BOILER SHELLS	INCREASED ENERGY USAGE
DAMAGED CABINET WALLS AND RACKS	CLOGGED SPRAY HEADS AND TUBING	INCREASED OPERATING COSTS
DAMAGED SENSORS AND PROBES	SLOWER HEATING TIMES	REDUCED EQUIPMENT LIFE
DAMAGES STEAM GENERATORS	LONGER COOKING CYCLES	INCREASED MAINTENANCE COSTS

A SOLUTION TO THESE PROBLEMS...
PENTAIR EVERPURE CONSERV 75S HIGH EFFICIENCY REVERSE OSMOSIS SYSTEM

TRUE CORROSION PROTECTION. EFFECTIVE SCALE INHIBITION. REDUCED WATER WASTE.

The Everpure Conserv 75S High Efficiency Reverse Osmosis System combines a carbon filter, scale inhibition, high efficiency RO membrane, calcite feeder, and blending valve to create the right balance of minerals to help prevent both corrosion and scale formation.

Unlike conventional RO systems, which may not have enough alkalinity to prevent corrosion, the Conserv 75S System with its calcite feeder was specifically designed to raise the acid buffering capacity (alkalinity) in the water.

Also, its blending valve makes it easy to dial in the correct water mineral balance to inhibit scale buildup and corrosion. Couple that with its ability to feed minerals to buffer the water, the Conserv 75S System is extremely versatile in addressing water quality-related issues in steam applications. This simple, reliable solution meets manufacturers' target water specifications, reduces premature and/or unexpected warranty claims, increases equipment life, and ensures customer satisfaction.

SYSTEM FEATURES

- Everpure 4CC Post Treatment Calcite Feeder provides corrosion inhibition
- Pentair GRO-75EN High Efficiency Membrane Cartridge provides scale and lead reduction
- Everpure 4FC5 Pretreatment Cartridge contains a 5 micron Fibredyne™ II carbon block to remove small particles and chlorine
- Proprietary Fibredyne™ II filtration media effectively inhibits the growth of bacteria on the filter media that can decrease product life
- NSF/ANSI Standard 58 certified to reduce cysts such as *Cryptosporidium* and *Giardia* by mechanical means
- Mineral blending valve to balance the mineral content of the water
- Onboard storage tank holds up to 7.5 litres (two gallons) of product water
- 24 VAC power block runs the pump more efficiently and is safer to interact with when not contained within the system

SYSTEM BENEFITS

- Up to 50% water savings over conventional RO systems
- Automatic Shutoff Valve (ASV) allows for minimal downtime and mess when changing the carbon and calcite feeder cartridges
- Easy, sanitary quick-change filter replacement
- NSF Standard 58UL, and CE certified
- Compact design and small footprint allows for wall mount, countertop or under counter installation in small spaces

SYSTEM APPLICATIONS

- Steam Equipment – low volume
- Pressureless Steamers
- Pressure Steamers
- Flash Steamers
- Needle Injection Steamers
- Steam-Jacketed Kettles
- Combi-Ovens - using less than three (3) gallons of product water per hour
- Proofers

SYSTEM MAINTENANCE

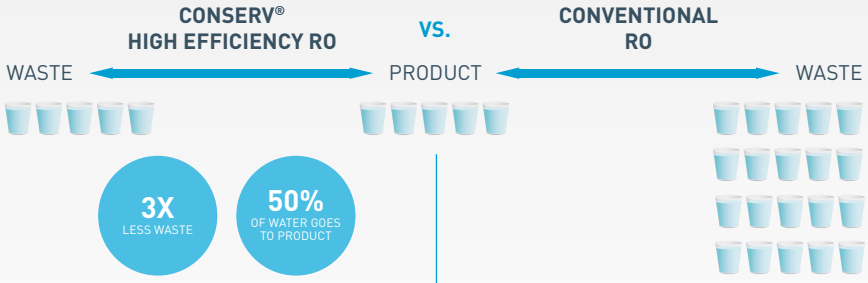
- Sanitary cartridge replacement is simple, quick, and clean; internal filter parts are never exposed to handling or contamination
- Cartridge replacement is recommended every one (1) year
- Replacement cartridge kits are available making cartridge change-out even easier – one part number to order and one part number to keep on hand. (Everpure Conserv 75S Cartridge Kit EV997625)

CONVENTIONAL REVERSE OSMOSIS VS. CONSERV'S HIGH EFFICIENCY REVERSE OSMOSIS: WHAT'S THE DIFFERENCE?

HOW DOES REVERSE OSMOSIS TREAT WATER? Reverse osmosis (RO) membranes separate water molecules from dissolved minerals, salts and trace metals by forcing the water through a semi-permeable membrane. The semi-permeable membrane contains tiny pores (10,000 times smaller than a micron) to effectively reduce or remove the contaminants. This accuracy in filtration cannot be achieved with a carbon filter alone. A typical reverse osmosis filtration system includes a carbon filter, RO membrane and a storage tank. Some reverse osmosis systems include a carbon post filter for even greater taste improvement.

THE SOLUTION IS CLEAR WHEN YOU COMPARE...

In a high efficiency reverse osmosis system, water sent to drain is significantly less compared to a conventional RO system. This means water savings, sewage savings, energy savings and sustainability.



CONSERV® GRO MEMBRANE

- Sends 3x less water to drain than a conventional RO membrane
- 50% of water goes to drain and 50% goes to product water; i.e., a ratio of 1:1 water to drain and water to product

CONVENTIONAL RO MEMBRANE

- Sends 3x more water to drain than Conserv's high efficiency GRO membrane
- 80% of water goes to drain and 20% of water to product

EVERPURE CONSERV 75S HIGH EFFICIENCY RO SYSTEM

DESCRIPTION	PART NUMBER
Everpure Conserv 75S High Efficiency Reverse Osmosis System*	EV997601
Conserv 75S Cartridge Kit	EV997625

Everpure 4FC5 Pretreatment Carbon Filter Cartridge

Pentair GRO-75EN RO Membrane Cartridge

Everpure 4CC Post Treatment Calcite Feeder

**The Conserv 75S RO System includes all three individual cartridges listed above. For simple ordering of replacement cartridges, use Cartridge Kit part number EV997625 to receive all relevant cartridges.*

SPECIFICATIONS

Daily production rate: .....50.51 gpd (191.20 lpd)

Water supply: .....0.5 gpm @ 50-85 psi (1.9L @ 3.4-5.8 bar)

Dynamic operating pressure: .....40 - 85 psi (2.7 - 5.8 bar, 0.27 - 0.58 MPa), non-shock

Maximum static pressure: .....125 psi (8.6 bar, 0.86 MPa)

Overall dimensions: .....475 mm x 431 mm x 260 mm

Certifications: .....NSF 58, UL, CE

PENTAIR

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