



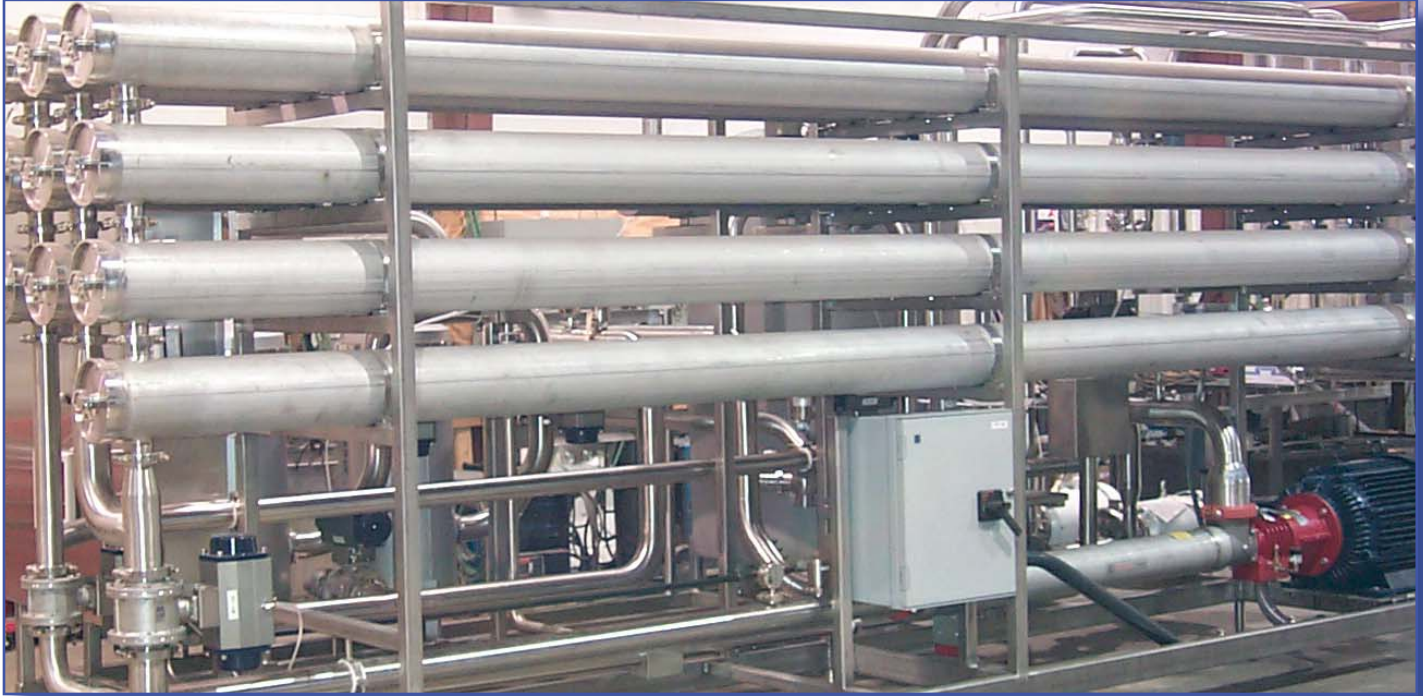
CFR

Complete Filtration Resources, Inc.

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3400 E. 34th Street
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www.gotocompletfiltration.com

RO POLISHERS



APPLICATIONS

Dairy Polishers are used to:

- ✓ Recover evaporator condensate
- ✓ Recover water from milk, whey or UF Permeate RO systems
- ✓ Other low BOD such as product rinses

Beverage Polishers are used to:

- ✓ Recover recover low BOD rinse waters
- ✓ Recover food value from sugar containing rinse waters

Vegetable Polishers are used to:

- ✓ Recover the water from low BOD rinse waters
- ✓ Recover water from product chillers and ice baths

Waste treatment Polishers are used to:

- ✓ Lower BOD's and COD's in effluent
- ✓ Lower phosphate content

CFR can design, fabricate, and install your membrane filtration process. CFR also provides controls, programming, full start up assistance, and training. You can rely on CFR to stand behind every system that we put in. Even more, you can rely on CFR to provide full after-start up service and support if problems occur or if system modification or expansion is desired..

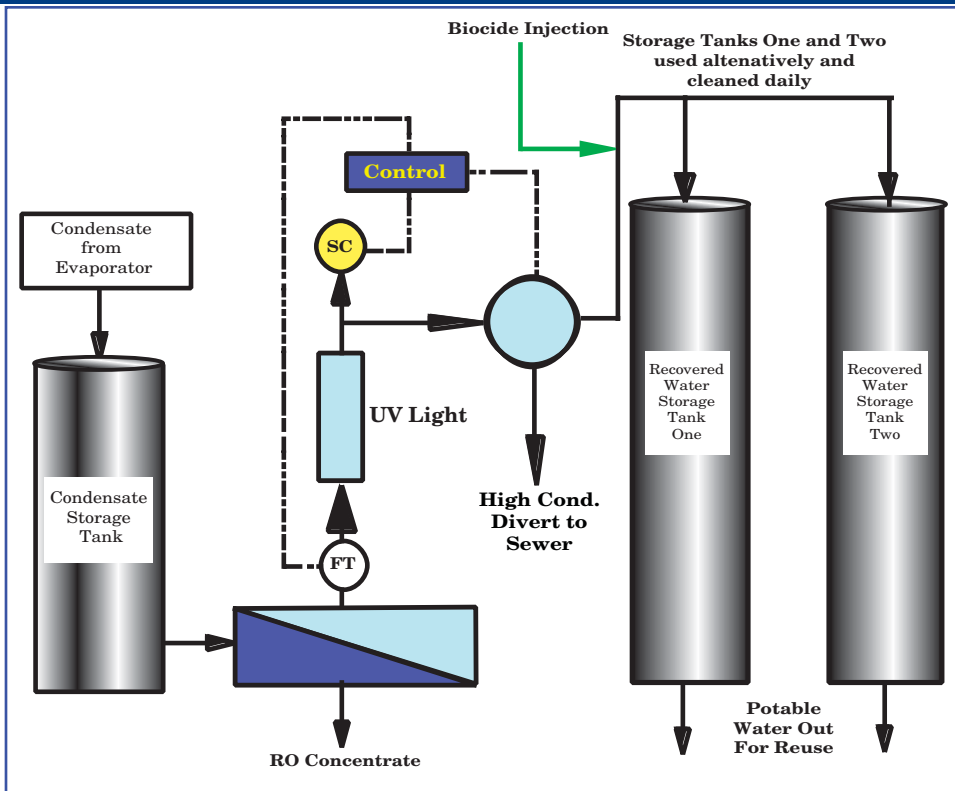


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Quality of Reverse Osmosis Polished Water

Evap. Condensate	Condensate BOD	RO Polisher BOD
Skim Milk Evaporator	10-100	0 - 10
Whey Evaporator	60 - 260	3 - 16
Whey RO Permeate	100-500	5 - 25

Reuse Schematic

Above is a typical flow scheme used to recover water with RO and upgrade the water to potable water standards. This is but one of several types of process flows which may be used to upgrade water to potable water standards.

Evaporator condensate is stored in a tank. Water from this tank is passed through an RO system. The RO permeate then passes through a UV disinfection system. The water passing through the UV system is monitored for quality and automatically diverted to drain should quality fall out of specification. The UV treated water is chlorinated and stored for further use in one of two storage tanks. The treated water tanks are alternated, cleaned and sanitized on a daily basis.

WATER RECOVERY AND REUSE BY RO POLISHING

Reverse Osmosis can recover and reclaim water for reuse within your plant. Don't send low BOD water down the drain and pay for its discharge. RO can be used to recover the low BOD water from your milk, whey or permeate RO, your evaporator condensate water and in some cases even rinse waters existing in the plant.

Remember many of these streams such as cow water also contain heat and recovering these waters will lower energy costs in addition to lowering your need for city or well water and cutting the discharge from your plant. The recovered water has very low total solids, conductivity and hardness. It may be reused as boiler feed water, to replace soft water and as CIP make up water.

The permeate from the RO can be upgraded to potable water standards with additional investment. This permits the use of this water throughout the plant. Upgrading the water so that it meets potable water standards can be done in several ways so that the upgrade can be tailored to existing conditions in the plant.