

# Reverse Osmosis Systems

Capacities Ranging from 9,000 to 30,000 GPD

**TFH**  
Series

RO membranes represent the finest level of filtration available today. With high rejection levels (99.4%), these membranes reject more hardness, sodium, nitrates and undesired impurities and produce clean and pure permeate water.

## EXCITING FEATURES OF THE TFH UNITS

- **60% RECOVERY:** High recovery translates into more feed water recovered as pure RO permeate & less water wasted to the drain.
- **FLEXIBLE OPERATION:** Concentrate valve is offered as a standard feature to allow changing the recovery & operating pressure for varying feed water quality.
- **EXPANDABLE DESIGN:** In most cases, to expand the product capacity, the unique TFH design lets you add more membranes. It's that simple!
- **SPACE SAVING:** TFH units need minimal space requirement because of their unique 2 elements housing arrangement and compact system design.
- **QUIET PERFORMANCE:** TFH's quiet high pressure pumps are advantageous in installations requiring low noise levels.
- **QUALITY YOU CAN DEPEND ON:** All TFH units are pre-tested and undergo a stringent quality assurance procedure prior to shipment.
- **MOST IMPORTANT... COMPETITIVE PRICING:** With all these exciting standard features & compared to similar units available in the market, TFH units definitely will be the best deal you find.



## STANDARD FEATURES

- Powder coated steel frame
  - Stainless steel concentrate valve
  - TFC membrane
  - PVC membrane housing
  - 304 Stainless steel multi-stage pump
  - 316 stainless steel Liquid-filled pressure gauge, 2 1/2" dial size for pump suction, membrane feed, and final concentrate pressure
  - Product/concentrate flow meters
  - Low & hi-pressure piping
  - Stainless steel throttle valve
  - Liquid-tight wire shrouding
  - Inlet diaphragm valve
  - 5 micron sediment prefilter
  - High & low pressure switch, Nema 4
  - Microprocessor controller containing all of the electronics and controls to efficiently and safely control the TFH unit
- Off/on switch                      - IEC motor contactor w/overload relay  
- Time delay start                  - Nema 4X fiberglass Enclosure  
- Status lamps                      - Low & Hi pressure switch input  
- High pressure cut-out          - Tank full switch input (Product water)  
- Motor starter                      - Tank low switch input (Raw water)

## AVAILABLE OPTIONS

- Pre-filter pressure gauges
- Stainless steel membrane housings
- Fiberglass membrane housings
- Recycle valve & flowmeter kit
- Feed pH controller/sensor
- Low pressure (Hi efficiency) membranes to reduce system operating pressure to as low as 150 psi
- Export wood crating
- Custom designed unit
- Disassembled unit kit
- Recommended spare parts
- Pretreatment lockout
- Permeate TDS Controller with digital display
- Water meter
- Hour meter
- High/low level switch
- Automatic flush
- PLC controller



**BIC Water and Wastewater Treatment**

# Reverse Osmosis Systems

Commercial Tap Water Reverse Osmosis Systems

**TFH**  
Series

## APPLICATIONS

- Drinking water
- Ice making equipment feed water
- Bottled water production
- Circuit board rinsing
- Steam boiler & humidification systems
- Spot feeder rinse for car washes
- Horticulture & greenhouses
- DI pretreatment
- Metal plating rinse water
- Laboratory water supply

MODEL	CAPACITY		SALT REJECTION (%)	WATER RECOVERY (%)	MEMBRANES		PUM P		UNIT SPECIFICATIONS	
	GPD	M <sup>3</sup> /D			SIZE	QTY	60Hz	50Hz	DIM ENSION	SHIPPING WEIGHT (LBS)
<b>TFH-9000</b>	9,000	34.7	90 - 98+	UP TO 60	4" x 40"	6	3	3	92"x26"x48"	650
<b>TFH-12000</b>	12,000	45.5	90 - 98+	UP TO 60	4" x 40"	8	3	4	92"x26"x48"	720
<b>TFH-15000</b>	15,000	56.8	90 - 98+	UP TO 60	4" x 40"	10	5	4	92"x26"x48"	840
<b>TFH-18000</b>	18,000	68.2	90 - 98+	UP TO 60	4" x 40"	12	5	4	92"x26"x56"	875
<b>TFH-21000</b>	21,000	79.5	90 - 98+	UP TO 60	4" x 40"	14	5	5.5	92"x34"x56"	910
<b>TFH-24000</b>	24,000	90.9	90 - 98+	UP TO 60	4" x 40"	16	5	5.5	92"x34"x63"	960
<b>TFH-27000</b>	27,000	102.3	90 - 98+	UP TO 60	4" x 40"	18	7.5	10	92"x34"x70"	1000
<b>TFH-30000</b>	30,000	113.6	90 - 98+	UP TO 60	4" x 40"	20	7.5	10	92"x34"x70"	1035

\* Product flow is based on feed water TDS of 2000 ppm at temperature of 25°C.

\* In case of low water temperature operation as low as 10°C, product flow can be sustained by using a special low Pressure membranes as an option.

\* All models are available with 480V/3 Ph/60Hz.

\* Recovery rates are determined by the feed supply and by the pre-treatment system used.

## OPERATING SPECIFICATIONS

- Feed Water Temperature: 85°F maximum
- Feed Water Pressure: 40-80 psi
- Operating Pressure: 200 psi maximum
- Feed Water TDS: 2,000 ppm maximum
- pH Range: 3-11
- Hardness over 1 gpg should be softened
- Hydrogen Sulfide must be removed
- Silica Tolerance: 25 ppm max. @ 60% recovery
- Turbidity should be removed
- Iron tolerance 0.05 ppm maximum

## BIC Water and Wastewater Treatment

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