WaterGroup

Economy Reverse Osmosis Drinking Water System Performance Data Sheet

Certified Contaminant Reduction Performance

Models E50TFC-3NSF and E75TFC-3NSF are tested and certified by WQA against NSF/ANSI 58 for the reduction of TDS.

Models E50TFC-3NSF and E75TFC-3NSF are WQA Tested and Certified against CSA B483.1.

The following Economy Reverse Osmosis Systems conform to NSF/ANSI 58 for the specific performance claims as verfied and substantiated by test data.

Models & System Configurations

Item Number	Model Description	Storage Tank	# of Vessels	Storage Tank Capacity Litres (gal)	Vessel 1	Vessel 2	Vessel 3	Vessel 4	Daily Production Rate[2] L/day (G/day)	Efficiency Rating[3] %	Recovery Rating[4] %
2885	RO,E50TFC-3NSF	Plastic	4	6 (1.6)	Sediment Filter	Carbon Filter	TFC[1] Membrane	Carbon Filter	45.4 (12)	8.5	17.5
2886	RO,E75TFC-3NSF	Plastic	4	8.7 (2.3)	Sediment Filter	Carbon Filter	TFC[1] Membrane	Carbon Filter	100 (26.4)	14.5	25.8
2887	RO,E50TFC-3NSF	Metal	4	8.3 (2.2)	Sediment Filter	Carbon Filter	TFC[1] Membrane	Carbon Filter	45.4 (12)	8.5	17.5
2888	RO,E75TFC-3NSF	Metal	4	8.7 (2.3)	Sediment Filter	Carbon Filter	TFC[1] Membrane	Carbon Filter	100 (26.4)	14.5	25.8

Conditions for Use

Source Water Supply Profile		Chemical Parameters	Max mg/L
Community/Private	Chlorinated/Non-Chlorinated	Hardness ($CaCO_3$)	<350 (< 20 gpg)
Feed Water Pressure[5]	242 – 690 kPa (35 – 100 psig)	Iron (Fe)	<0.1
Temperature	4° – 38°C (40° – 100°F)	Manganese (Mn)	<0.05
pH Range	3.0 – 11.0	Hydrogen Sulfide (H_2S)	0.00
Maximum TDS Level	2000 mg/L	Residual Chlorine (Cl_2)	<2.0
Turbidity**	<1.0 NTU	**Nephelometric Turbidity Unit	
Maximum SDI***	<4.0	***Silt Density Index: Value stated in SDI units.	

NOTES:

1. TFC refers to reverse osmosis membranes constructed from a THIN FILM COMPOSITE
2. The daily production rate is the volume of product water produced by the system per day and is determined by testing in accordance with the procedure outlined in NSF/ANSI Standard 58.
3. System's Efficiency rating as verified by testing in accordance with NSF/ANSI standard 58. Efficiency rating means the percentage of the influent water to the system that is available to the user as reverse osmosis treated water under operating conditions that approximate typical daily usage.
4. System's Recovery rating as verified by testing in accordance with NSF/ANSI Standard 58. System's Recovery rating means the percentage of the influent water to the membrane portion of the system that is available to the user as reverse osmosis treated water when the system is operated without a storage tank or when the storage tank is bypassed.
5. PRESSURE REGULATOR IS RECOMMENDED FOR FEED WATER PRESSURES EXCEEDING 552 kPa (80 psig)

Performance Data

This system has been tested according to NSF/ANSI 58 for reduction of the Total Dissolved Solids (TDS). The concentration of the TDS in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 58.

System Conforms to NSF/ANSI 58 for Specific Performance Claims as Verified and Substantiated by Test Data										
Total Dissolved Solids (TDS) Reduction									Daily Output	
Item Number	Model Description	Storage Tank	Average** Influent Concentration mg/L	Average** Effluent Concentration mg/L	Average** Reduction*** (%)	Lowest Reduction (%)	Average** Recovery (%)	Average** Efficiency Rating (%)	Average** Daily Production L/day (G/day)	Average** Storage Tank Capacity Litres (gal)
2885	E50TFC-3NSF	Plastic (Kemflo)	753.6	113.2	85.0	78.5	17.5	8.5	45.4 (12.0)	6 (1.6)
2886	E75TFC-3NSF	Plastic (Kemflo)	776.9	94.4	87.8	85.4	25.8	14.5	100 (26.4)	8.7 (2.3)
2887	E50TFC-3NSF	Metal (Flexcon)	753.6	113.2	85.0	78.5	17.5	8.5	45.4 (12.0)	8.3 (2.2)
2888	E75TFC-3NSF	Metal (Flexcon)	776.9	94.4	87.8	85.4	25.8	14.5	100 (26.4)	8.7 (2.3)

NOTES:

* The testing was performed under standard laboratory conditions, actual performance may vary.

** Average concentrations shall be arithmetic mean of all reported influent challenge or product water concentrations (the detection limit value shall be used for any nondetectable concentrations). The specified percent reduction shall not be greater than the reduction calculated using arithmetic means of the influent challenge and the product water concentrations respectively.

*** Minimum TDS reduction per NSF/ANSI 58 is 187 mg/L

1. The **daily production rate** is the volume of product water produced by the system per day and is determined by testing in accordance with the procedure outlined in NSF/ANSI Standard 58.
2. System's **Efficiency rating** as verified by testing in accordance with NSF/ANSI Standard 58. **Efficiency rating** means the percentage of the influent water to the system that is available to the user as reverse osmosis treated water under operating conditions that approximate typical daily usage.
3. System's **Recovery rating** as verified by testing in accordance with NSF/ANSI Standard 58. System's **Recovery rating** means the percentage of the influent water to the membrane portion of the system that is available to the user as reverse osmosis treated water when the system is operated without a storage tank or when the storage tank is bypassed.

Installation Requirements

All State/Provincial and local government codes regarding installation of these devices must be observed.

The Economy Reverse Osmosis (RO) Drinking Water Treatment Systems have been designed for ease of installation and serviceability and are constructed with the finest materials available. Using these instructions and paying close attention to the parameters outlined within "CONDITIONS FOR USE" detailed on Page 1 will ensure a successful installation.

To ensure a system continues to operate at its optimum level, it is necessary to have a routine maintenance and replacement schedule. Frequency at which filters must be changed will depend on quality of feed water supply and level of system usage.

These RO systems contain a replaceable treatment component critical to the efficiency of the system. Replacement of the reverse osmosis component should be with one of identical specification, as defined by WaterGroup to assure the same efficiency. Product water shall be tested periodically to verify the system is performing properly.

DO NOT USE WITH WATER THAT IS MICROBIOLOGICALLY UNSAFE OR OF UNKNOWN QUALITY WITHOUT ADEQUATE DISINFECTION BEFORE OR AFTER THE SYSTEM.

WE RECOMMEND YOUR WATER BE TESTED TO DETERMINE SYSTEM REQUIREMENTS.

Maintenance Schedule

This schedule is designed for the average potable water supply and should be followed to ensure the proper functioning of your drinking water system.

Pre-Filter - The pre-filter contains a 5 micron mechanical filter element. Its function is to remove suspended particles from the feed water, thus reducing the possibility of clogging the reverse osmosis membrane. The pre-filter element should be replaced every twelve months or earlier depending on the quality of the feed water.

Pre-Carbon Filter - The pre-filter contains a granular activated carbon. Its function is to remove chlorine from the incoming water to prevent any damage to the TFC membrane. The Pre-Carbon filter cartridge should be replaced every 24 months.

Reverse Osmosis Module - The reverse osmosis module contains a semi-permeable membrane. Its function is to separate water molecules from dissolved impurities in the feed water. This is accomplished by application of hydraulic pressure greater than the osmotic pressure in water containing dissolved solids. The life of the membrane can be determined by measuring the percentage of rejection of total dissolved solids in the water. The membrane should be replaced every 24 to 36 months when its efficiency will decrease.

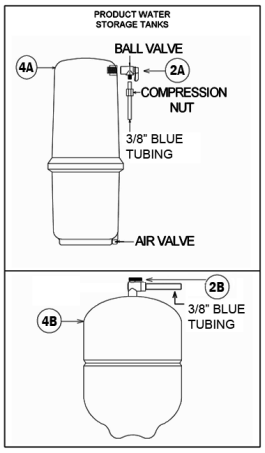
Post-Carbon Filter - The post-filter contains a granular activated carbon. Its function is to remove any taste and odor from the water prior to delivering it to the spigot. The post-filter cartridge should be replaced every 24 months.

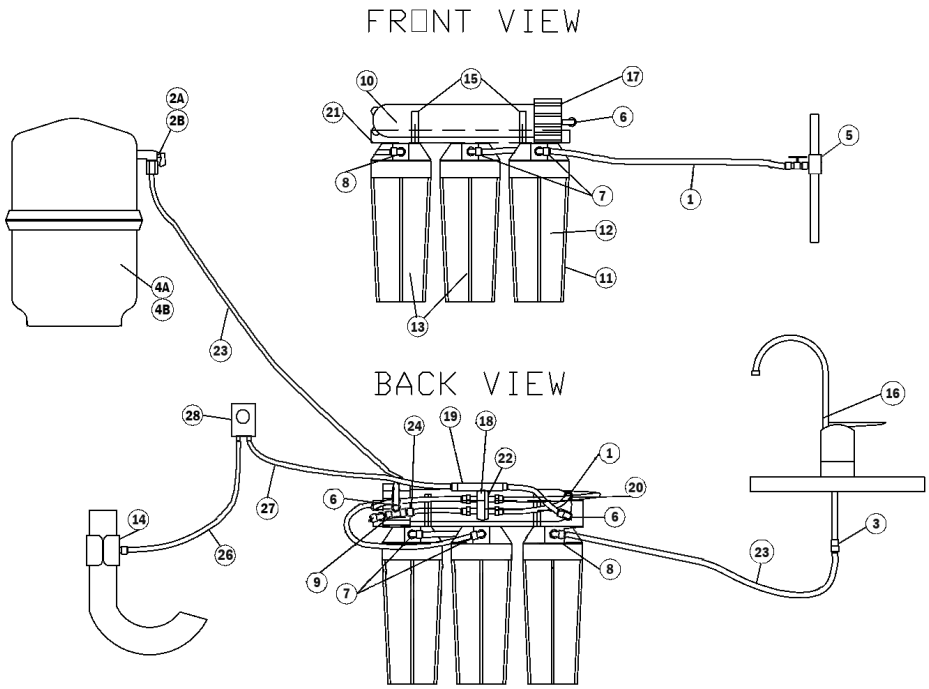
Performance Indicators

The product water needs to be tested at least once every six months. Please contact your local dealer for sampling service or sampling kit.

Parts List and Drawing - Models E(50 & 75) TFC-3NSF

Note: There may be some parts listed, which are not included with this model.





Component and Interconnection Locators*

Drawing No.	Description	Item No.
1.....	Tubing, 1/4" OD, poly, natural	92600
2A.....	Valve, 3/8", Shut Off	80704
2B.....	Ball valve, 3/8"	33503601
3.....	Connector, faucet, 3/8", QC	92601
4A.....	Tank, storage, RO, 3800, white, c/w shut off	92313
4B.....	Tank, storage, RO, 4.0 gal., metal	42600029
5.....	Valve, inlet, saddle, self-priming, 3/8"-1/2" pipe	92276
6.....	Elbow, 1/4" QC x 1/8" mnpt	92603
7.....	Elbow, 1/4" QC x 1/4" mnpt	92604
8.....	Elbow, 3/8" QC x 1/4" mnpt	92605
9.....	Tee, 3/8", QC	92606
10.....	Membrane, RO	
	50 GPD, TFC	92607
	75 GPD, TFC	92608
11.....	Housing, cartridge, white/black	92026
12.....	Cartridge, pre-filter, 5 micron	26091
13.....	Cartridge, carbon	26081
14.....	Saddle, drain, set, RO, 3/8"	92160
15.....	Clip, pipe, 2", set	92162
16.....	Faucet, standard	92609
17.....	Vessel, membrane	92211
18.....	Valve, shut-off, auto	92223
19.....	Control, flow	
	300 ml/min, RO 50 GPD	92610
	400 ml/min, RO 75 GPD	92611
20.....	Valve, check, product water	92612
21.....	Bracket, RO, 3 housing	92279
22.....	Bracket, Shut Off, Auto	92224
23.....	Tubing, 3/8" OD, poly, natural	92613
24.....	Reducer 1/4" x 3/8" Stem x QC	92614
25.....	Tubing, 3/8" OD, poly, blue	92615
26.....	Tubing, 3/8" OD, poly, red	87604
27.....	Tubing, 1/4" OD, poly, red	115201
28.....	Airgap, RO, Remote, Plastic	44403001

Drawing No.	Description	Item No.
Membranes and Filters		
10.....	Reverse Osmosis TFC Membrane	
	50 GPD, TFC	92607
	75 GPD, TFC	92608
12.....	Cartridge, pre-filter, 5 micron	26091
13.....	Cartridge, carbon (2 each)	26081
Flow Control		
19.....	Control, Flow, 300ml, RO 50 GPD	92610
19.....	Control, Flow, 400 ml, RO 75 GPD	92611
Product Water Faucet		
16.....	Faucet, Standard	92609
Product Water Tank*		
4A.....	Tank, Storage, Plastic	92313
4B.....	Tank, Storage, Metal	42600029
Installation Kit		
	Complete Kit	– – –
14.....	Saddle, Drain, 3/8"	92160
5.....	Valve, Inlet, Saddle, Self Piercing, 3/8"-1/2" Pipe	92276
3.....	Connector, Faucet, 3/8", QC	92601
1.....	Tubing, 1/4" OD, poly, natural	92600
23.....	Tubing, 3/8" OD, poly, natural	92613
24.....	Reducer, 1/4" x 3/8" Stem x QC	92614
25.....	Tubing, 3/8" OD, poly, blue	92615
26.....	Tubing, 3/8" OD, poly, red	87604
27.....	Tubing, 1/4" OD, poly, red	115201
28.....	Airgap, RO, Remote Plastic	44403001
	Owners Guide	90016
	Performance Sheet	90019

* Replacement parts can be obtained from your local dealer. Refer to your local dealer stamp at the back page of this performance data sheet.

Limited Warranty

One Year Limited Warranty:
Subject to the conditions and limitations described below, WaterGroup warrants its Economy Reverse Osmosis Drinking Water Treatment Systems (excluding membrane and cartridge filters), when installed in accordance with WaterGroup specifications, to be free from defects in materials and workmanship under normal use within the operating specifications for a period of one (1) year from the date of purchase with bill of sale.

Other than the membrane and cartridge filters, any part found defective within the terms of this warranty will be repaired or replaced by WaterGroup. If any part is found defective, WaterGroup also reserves the right to replace the drinking water appliance with a comparable WaterGroup drinking water system of equal or greater quality. You pay only freight for repaired or replaced parts from our factory and local dealer charges, including but not limited to labor charges, travel and transportation expenses and handling fees.

This warranty shall not apply to any part damaged by accident, fire, flood, freezing, Act of God, bacterial attack, membrane fouling and/or scaling, sediment, misuse, misapplication, neglect, alteration, installation, or operation contrary to our printed instructions, or by the use of accessories or components which do not meet WaterGroup specifications. If the drinking water system is altered by anyone other than WaterGroup the warranty shall be void.

ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THE PERIOD SPECIFIED ABOVE FOR THE PARTS DESCRIBED IN THIS LIMITED WARRANTY.

As a manufacturer, we do not know the characteristics of your water supply. The quality of water supplies may vary seasonably or over a period of time. Your water usage may vary as well. Water characteristics can also change if the drinking water appliance is moved to a new location. For these reasons, we assume no liability for the determination of the proper equipment necessary to meet your requirements, and we do not authorize others to assume such obligation for us. Further, we assume no liability and extend no warranties, express or implied, for the use of this product with a non-potable water source or a water source which does not meet the conditions for use as described in this Owners Guide.

WATERGROUP'S OBLIGATIONS UNDER THIS WARRANTY ARE LIMITED TO THE REPAIR OR REPLACEMENT OF THE FAILED PARTS OF THE DRINKING WATER SYSTEM, AND WE ASSUME NO LIABILITY WHATSOEVER FOR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, GENERAL OR OTHER DAMAGES, WHETHER FROM CORROSION OR OTHER CAUSES.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Similarly, some states do not allow the exclusion of incidental or consequential damage, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights that vary from state to state.

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