High quality water for commercial applications.

Water solutions using membrane technology equipment.

WGR SERIES COMMERCIAL REVERSE OSMOSIS SYSTEMS

Hydrotech®

Your clear choice in water treatment.

WGR Series

The Hydrotech WGR Series Commercial Reverse Osmosis Systems remove up to 99% of the total dissolved solids (TDS) in raw commercial feedwater, producing high quality process water for applications such as:

- Boiler Feed
- Drinking Water
- Food and Beverage Processing
- Humidification Systems
- Industrial Processes
- Spot Free Rinse

WGR 150

WGR 300

WGR 450

WGR 150, 300 and 450 Reverse Osmosis Systems

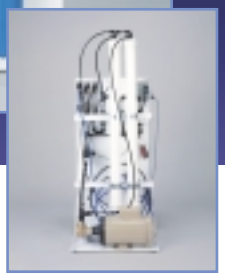
Features:

- Membranes: Thin Film Composite (TFC) for maximum rejection of impurities
- Membrane Housings: WGR 150, 300 and 450 housings are stainless steel
- Process Pump: Direct coupled rotary vane pump, designed for continuous high pressure service
- Frame: Corrosion and scratch resistant powder coated steel
- Prefilters: 5 Micron Pre-Filter - for the removal of sediment
  Granular Activated Carbon Pre-Filter - for the removal of chlorine
- Inlet Isolation Valve: Provides a convenient shut-off for easy pre-filter replacement
- Inlet Low Pressure Shutoff Switch: Automatic protection for the process pump should insufficient feed water pressure be available
- Outlet Tank Full Shutoff Switch: System will automatically start when tank pressure falls below 30 psi and stop when pressure reaches 50 psi
- Simple Maintenance / Inspection: WGR Series components are strategically located on the frame for easy access and inspection

WGR 150, 300 and 450 Optional Features:

a. Stainless Steel Process Pump - replaces standard brass process pump
b. Float Switch - mechanical tank full float switch for atmospheric type storage tanks
c. Low Energy Membranes - available on WGR 300 only

WGR 600



WGR 1200

WGR 1800

WGR 600, 1200 and 1800 Systems

Features:

- Membranes: Thin Film Composite (TFC) for maximum rejection of impurities
- Membrane Housings: WGR 600, 1200 and 1800 housings are PVC
- Process Pump: Direct coupled rotary vane pump, designed for continuous high pressure service
- Frame: Corrosion and scratch resistant powder coated steel
- Prefilters: 5 Micron Pre-Filter - for the removal of sediment
  Radial Flow Activated Carbon Pre-Filter - for the removal of chlorine
- Flow Meters: Product, Reject and Recycle stream flow meters for monitoring of operating conditions.
- Control Box: NEMA 12X rated control box with ON/OFF switch and mode indicator lights
- Air Purge: System automatically purges air out of process pump and membranes before startup
- Inlet Isolation Valve: Provides a convenient shutoff for easy pre-filter replacement
- Inlet Low Pressure Shutoff Switch: Automatic protection for the process pump should insufficient feed water pressure be available
- Tank Full Pressure Switch: System will automatically start when tank pressure falls below 30 psi and stop when pressure reaches 50 psi
- Simple Maintenance / Inspection: Components are strategically located on the frame for easy access and inspection

WGR 600, 1200 and 1800 Optional Features:

a. Stainless Steel Membrane Housings - replaces standard PVC membrane housings
b. Stainless Steel Process Pump - replaces standard brass process pump
c. Float Switch - mechanical tank full float switch for atmospheric type storage tanks
d. 230V / 1 Ph / 60Hz - optional electrical
e. Automatic Flush - allows unit to automatically flush membranes for 1 minute every two hours of consecutive operation.
f. Low Energy Membranes - available on WGR 600, 1200 and 1800

Performance Specifications

Item Number	Model	Capacity (GPD) [1]	Maximum Operating Pressure (psi)	Typical[2] TDS Rejection	Typical[2] Recovery	Membranes	Dimensions HxWxD (In.)	Inlet Connection	Motor (HP)	Electrical (Standard)	Shipping Weight (lbs)
2610	WGR-150	150	190	> 97%	up to 50%	1	32 x 14 x 20	1/2"	1/4	115V / 1Ph / 60Hz	48
2611	WGR-300	300	190	> 97%	up to 50%	1	32 x 14 x 20	1/2"	1/3	115V / 1Ph / 60Hz	50
2612	WGR-450	450	190	> 97%	up to 50%	2	32 x 14 x 20	1/2"	1/3	115V / 1Ph / 60Hz	55
2613	WGR-600	600	190	> 97%	up to 50%	1	53 x 22 x 24	1/2"	1/2	115V / 1Ph / 60Hz	155
2614	WGR-1200	1200	190	> 97%	up to 50%	2	53 x 22 x 24	1/2"	3/4	115V / 1Ph / 60Hz	163
2615	WGR-1800	1800	190	> 97%	up to 50%	3	53 x 22 x 24	3/4"	3/4	115V / 1Ph / 60Hz	170

[1] The capacity denotes the system production in U.S.Gallons per Day as defined by the membrane specifications and the feedwater conditions of 2000 ppm (of NaCl), 25ºC (77ºF), 200 psi operating pressure and outlet to atmosphere.
[2] TDS rejection and water recovery are variable and can be affected by temperature and feedwater conditions.

Feed Water Requirements

Minimum Feed Pressure (psi)	30	Hydrogen Sulfide (H_2S)	0.00 mg/L
Maximum Feed Pressure (psi)	85	Organics Tolerance [3]	0 mg/L
Temperature Range	40 - 100°F (4 - 37°C)	Oil (Hydrocarbons) Tolerance	0 mg/L
Total Dissolved Solids (TDS)	<2000 ppm	Turbidity [3]	<1 NTU
Hardness	<10 Grains/USGal as $CaCO_3$	SDI (Silt Density Index)	<5
Total Iron (Fe)	<0.1 mg/L	Chlorine Tolerance [3]	0 mg/L
Manganese (Mn)	<0.05 mg/L	pH Range	2.0 - 11.0

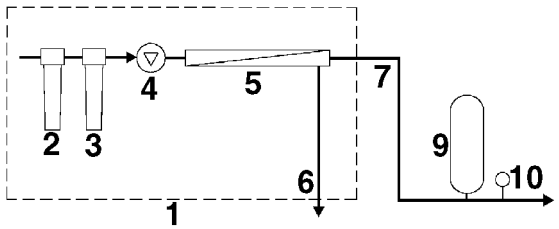
[3] Sediment and Carbon pre-filters, standard on the WGR Series must be replaced regularly to protect membranes. These feed requirements also include that the water be potable before treatment by a WGR Series RO system.

Recommended Installations

Hydrotech has a wide variety of storage tank and repressurization equipment options to complement the WGR Series of Reverse Osmosis systems. Contact customer service for details.

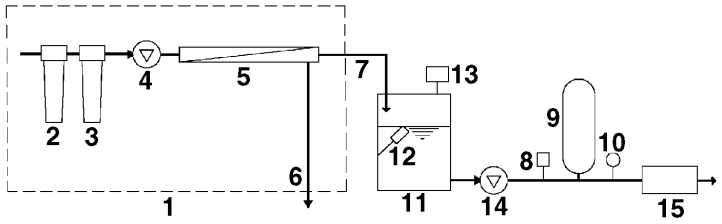
Type A
Pneumatic Pressure Tank

Operation: Flow to service drops pressure in pneumatic tank to cut-in point on pressure switch which starts R.O. booster pump. R.O. runs until cut-out pressure is reached when tank is full.



Type B
Storage Tank / Repressurization

Operation: Flow to service drops level in storage tank causing float switch to start R.O. booster pump. Repressurization pump operates as with Type A.



Legend:

1. WGR Series Commercial Reverse Osmosis Unit
2. 5 Micron Cartridge Pre-Filter
3. Carbon Pre-Filter
4. R.O. Process Pump
5. R.O. Module/Membrane Assembly
6. Reject Water (Concentrate) to Drain
7. Product Water to Service
8. Pressure Switch
9. Pneumatic Storage Tank
10. Pressure Gauge
11. Polyethylene Storage Tank
12. Float Switch
13. Air Filter for Storage Tank Vent
14. Stainless Steel Repressurization Pump
15. Ultraviolet Sterilizer

Hydrotech has other commercial reverse osmosis equipment available including larger capacity systems. Call for details.

WaterGroup Inc.
Fridley, Minnesota
Sun Valley, California
1-800-354-7867

WaterGroup Companies Inc.
Cambridge, Ontario
Regina, Saskatchewan
1-877-299-5999

www.hydrotechwater.com

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