



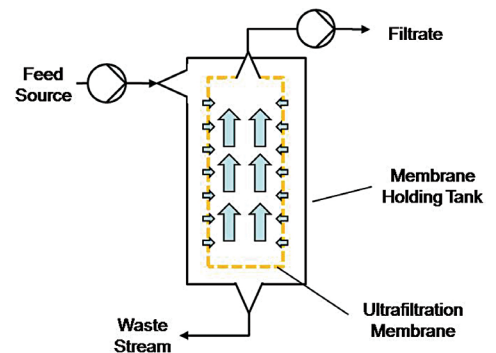
# KINETICS WP 300

## Water Purification System, High Capacity

- **Effective**—transforms surface or ground water, or contaminated tap water into high-quality drinking water
- **Consistent**—Reliable operation, consistent water quality
- **Economical**—Reduces costs by recycling and reclaiming water

### SYSTEM OVERVIEW

The Kinetics WP 300 Water Purification System is a self-contained water treatment system that produces up to 5200 liters of potable water per hour (120,000 LPD). Based on proven membrane ultrafiltration separation technology, the WP 300 eliminates virtually all types of particles, suspended solids and viable organisms. The system is ideal for water reclamation projects, where household and office grey-water can be treated and recycled back to irrigation, laundry or personal-hygiene uses. This cost-effective, compact water treatment system can also provide a constant, reliable supply of high-quality drinking water in a variety of commercial, residential and rural environments.



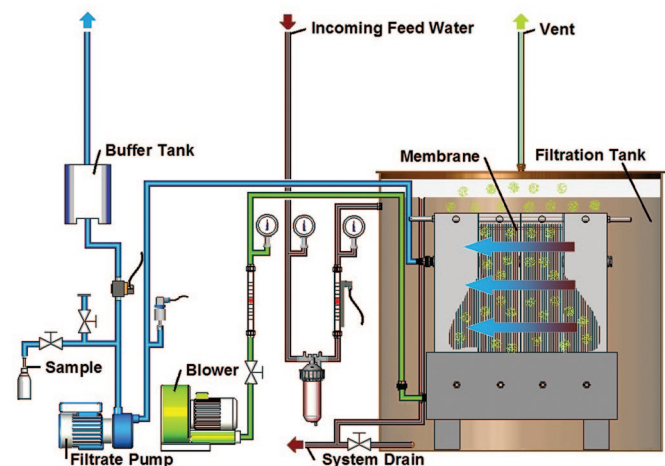
### KEY FEATURES:

- Fully-automated operation
- 130 M<sup>2</sup> effective membrane area
- Capacity from 2600 to 5200 L/hr, depending on influent quality
- Aeration module, for self-cleaning of Ultrafiltration membrane
- Adjustable filtrate rate
- Adjustable back-flushing sequences

### OPTIONS:

- Submerged pump for tank, reservoir, or other non-pressurized sources
- High-pressure filtration pump, to transfer purified water to a remotely-located effluent tank
- Drinking Water Package--includes chlorine dosing, activated carbon filter, and on-line particle sensing
- Various on-line measurement instruments, including turbidity and particle sensing ( $\geq 1.3 \mu\text{m}$ )

### MEMBRANE ULTRAFILTRATION MODULE



FILTRATION PROCESS FLOW

# TECHNICAL DATA

## CONTROLS

- Compact SPS - SPEED-Technology
- 5.7-inch Blue-mode Monochrome Touch-screen LCD, that displays and sets:
  - System P&ID status
  - Adjustment of filtration rate
  - Adjustment of flushing cycle
  - Values of flow rate and filtration pressure
  - Process Flow Diagrams
  - Alarm Screens
  - Maintenance Screens

## SAFETY FEATURES

- Segregated electrical and water compartments
- Pressure detection for membrane protection
- Local and remote EMO
- Audible and visible warnings and alarms
- Transparent door for viewing

## SPECIFICATIONS

PARAMETER	CAPABILITY
Application	Removal of Water Contaminants for Water Reclamation, with option for Drinking Water Application
Membrane Area	130 M <sup>2</sup>
Water Treatment Capacity—Minimum Level <sup>1</sup>	2640 Liters/Hour
Recovery Rate (% filtrate vs. waste water)	≤ 90 %
Influent Water Specification <sup>2</sup>	<ul style="list-style-type: none"> <li>• Total Solids (TS): ≤ 12 g/L</li> <li>• Total Dissolved Solids (TDS): ≤ 500 mg/L</li> <li>• Free chlorine: ≤ 3 mg/L</li> <li>• Salt Concentration: ≤ 500 mg/L</li> <li>• Heavy metals: ≤ 1 mg/L</li> <li>• Water Temperature: 5 – 40 °C</li> </ul>
Effluent Water Quality	Refer to Kinetics Document entitled “Kinetics Specification for Water Purification Systems, September, 2010”
Filtration Tank Size	4000 Liters
Blower Capacity	≤ 40 SCFM (66 Nm <sup>3</sup> /hr)
Skid Materials	Zinc-coated steel framework
System Footprint (W×D×H)	48” × 27” × 67” (1200mm × 675mm × 1700mm)
Filtration Tank Footprint (D×H)	71” × 79” (1800mm × 2000mm)
Maximum Operating Pressure	5.8 psi (400 mbar)
Maximum Backwash Pressure	2.2 psi (150 mbar)
Plant Weight (unfilled)	530 kg
Component Materials	<ul style="list-style-type: none"> <li>• Polyethersulfone (PES) membrane</li> <li>• Polypropylene (PP) filtration tank</li> <li>• PVC valves, tubing and fittings</li> </ul>

<sup>1</sup>Based on maximum Total Solids (TS) value of 12 g/L. Lower TS values could produce up to 5200 L/hr total capacity

<sup>2</sup>Maximum allowable impurities for influent water to meet effluent quality levels. Routine testing recommended.

## FACILITY REQUIREMENTS

UTILITY	REQUIREMENT	CONNECTION TYPE
Power	230 VAC, 50 Hertz, 25 amps	¾” conduit
Fresh Ambient Air for Aeration	40 SCFM (66 Nm <sup>3</sup> /hr)	n/a
Exhaust-Filtration Tank	≤ 40 SCFM (66 Nm <sup>3</sup> /hr)	BSPP 2¼” male thread
Raw Water	≤ 8000 LPH @ 0.5 barg (7 psi)	BSPP 2¼” male thread
Waste Water of the WPU	≤ 2000 LPH, atmospheric pressure	BSPP 2¼” male thread
Filtered Water	n/a	BSPP 1½” male thread