Product Data Sheet

Process Water | Wastewater | Water Reuse

Safer water for future generations

Nyex™-e Treatment System

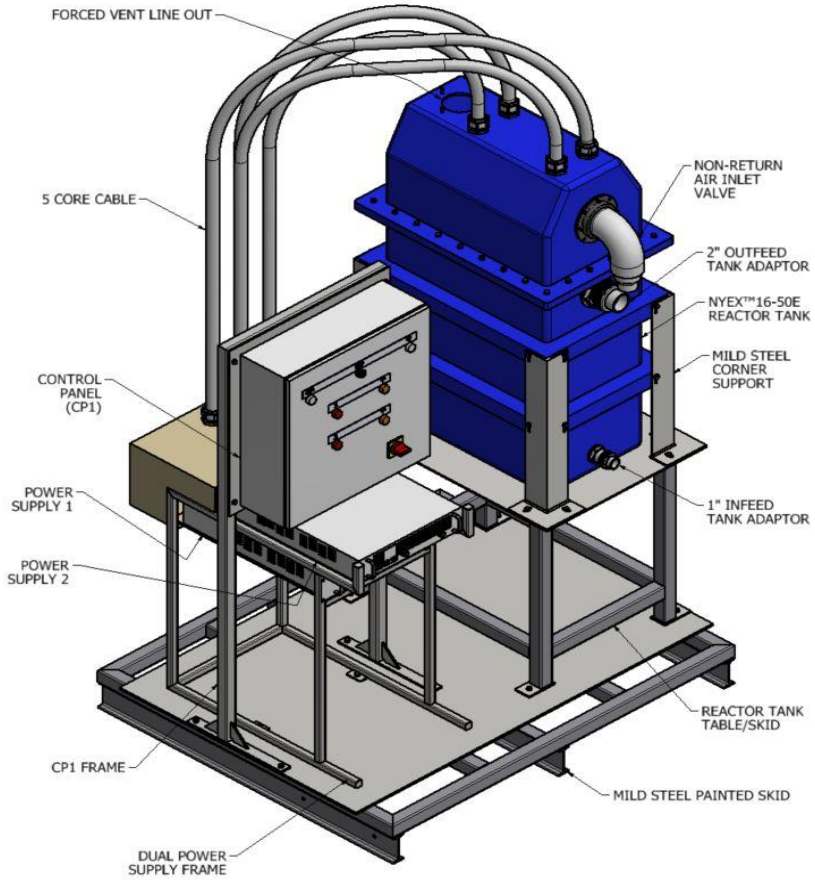
Overview

The Nyex™-e treatment process is an energy efficient electrochemical oxidation technology without the use of an adsorbent media. The resulting process offers significant benefits to industrial and laboratory water treatment processes which require highly effective removal of organic contaminants in a simple to operate and maintain package.

✓ Removes higher concentrations of organic contaminants such as COD, micropollutants, and colour from water
✓ Maximum flow of up to 3 m3/h per module depending on treatment load.
✓ No chemical dosing
✓ No sludge produced
✓ Actively prevents biofilm formation
✓ Low maintenance
✓ Switch treatment on and off on-demand

How it works…
When water enters the reactor, organic contaminants are oxidised with highly reactive oxidative species generated by a low electrical current. Contaminants are converted to H_2O, H_2 and CO_2.

Nyex™-e Schematics



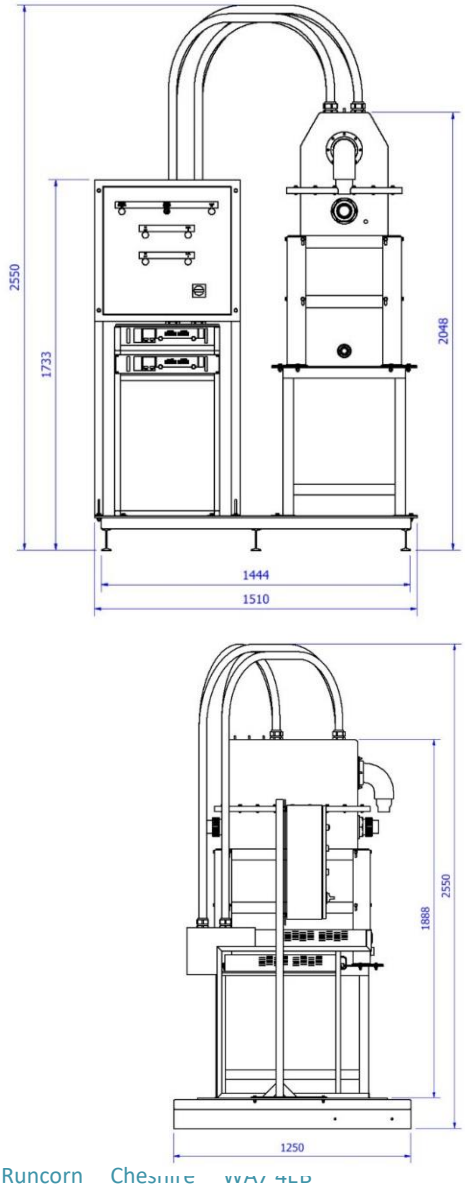


Figure 1. Above: Schematic of integrated package
Figure 2. Left: Front and side dimensions of standard package

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Nyex™-e Product Information

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Model: Nyex™ 16-50e		
Scope of Supply	**Standard Package**	**Integrated Package**
Nyex™ 16-50e Reactor Tank	✓	✓
Electrodes	✓	✓
Mild Steel Painted Skid and Support Frame	✓	✓
Two Power Supply Unit 10V DC 600 Amps	-	✓
Control Panel	-	✓

Model: Nyex™ 16-50e	
Maximum Flow Rate	
Hydraulic flow per Nyex™ 16-50e Reactor (m^3/h)	Up to 3
Typical Chemical Oxygen Demand (COD) removal range mg/L	Up to 10,000
Electrical Requirements (integrated package only)	
Electrical Supply (4 wire plus ground)	3 Phase 415V 50 - 60Hz + N
Maximum Supply Power (kW)	12
Power consumption (kWh/kg COD)	10 – 20 dependant on water quality
Control (integrated package only)	
Control system	Siemens Logo
User interface	Simple HMI display
Maximum ambient operating temperature (°C)	45
Reverse polarity switching control	Optional
Control system function	Enable / disable power safely
Switch Mode Power Supplies (integrated package only)	
Voltage out (VDC)	Variable to 10V
Current (Amps)	Variable to 600A per power supply
Control selectable between Constant Voltage and Constant Current	Standard for the integrated package
Operating humidity (RH)	20 – 90% non-condensing
IP rating	IP3x
Treatment Reactor Tank	
Outer Casing Materials of Construction	GRP
Reactor Tank Dimensions (mm)	820 × 539 × 1182
Inlet/Outlet Connection	1-inch tank adapter
Overflow	2-inch
Ventilation (for operating inside a building)	Forced vent line out (external operation can vent to atmosphere)
Mass of standard unit (kg)	340
Operating Parameters	
pH Range	1 to 11
Water temperature Range (°C)	Less than 60
Carbonate Concentration Maximum (mg/L)	500
Total Dissolved Solids (TDS) Maximum (mg/L)	No limit
Salt Concentration Requiring Reverse Polarity (%)	3.1
Oil and Grease Maximum	Emulsify up stream

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