

Heartland Concentrator™

10,000 - 144,000 GPD



Features

- Direct Contact Evaporator – no heat exchange or membrane to scale foul our corrode
- Flex-Heat - utilizes multiple sources of thermal energy for cost effective evaporation
- Superior materials of construction – 20+ year operating life
- High availability - 95%+ up-time
- Proprietary LM-HT® evaporation - processes the widest range of wastewater, generally without pre-treatment
- Skid-mounted, factory-wired and tested – simplified installation and long term moveability
- Multiple operating modes - MLD/ZLD in a single unit operation
- Ultimate turndown - Start-up and shut-down in under 5 minutes
- Highly automated remote monitoring, diagnostics, and control

Instrumentation/Monitoring

- Infeed Flow Rate
- Motor Run Hours
- Liquid level
- Pressure/Temperature
- Process warnings and alarms
- Average processing rates and efficiency

Operating Parameters

PARAMETER	VALUE
CAPACITY	10,000-144,000 gal/day
VOLUME REDUCTION	Up to 97+ %
MIN/MAX GAS TEMPERATURE (°F)	300/1200
TURNDOWN	2 to 1
EVAPORATION RATE	11,600 BTU/Gallon

Utilities (Type 1 shown)

Thermal Load	4-6.5 MMBTU/hr (HHV)
Electrical	460VAC - 3 Phase 150 amp main
Classification	General Location, Class I Division 2 available

Features by Concentrator Type

FEATURE	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	TYPE 6
CAPACITY (GAL/DAY)	9,000-13,000	13,001-20,000	20,001-30,000	30,001-53,000	53,001-83,000	83,001-144,000
THERMAL LOAD (MMBTU/HR HHV)	4.5-6.5	6.5-9	9-15	15-26	26-41	41-72
ELECTRICAL	460VAC 3 Phase	460VAC 3 Phase	460VAC 3 Phase	460VAC 3 Phase	460VAC 3 Phase	460VAC 3 Phase
SKID FOOTPRINT L' X W' (FT)	8.3' x 28.5'	9.3' x 28.5'	10.3' x 28.5'	10.3' x 39'	13.8' x 39'	30' x 60'
SKID WEIGHT (LBS)	18,000	18,000	30,000	40,000	50,000	50,000+

Major Equipment

FEATURE	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	TYPE 6
PUMP	Horizontal overhung impeller			Dry pit vertical cantilever pump		
FAN	Induced Draft Fan - Stainless housing with duplex stainless wheel					
CONTROLLER	Allen-Bradley CompactLogix™					

Residual Delivery Modes

NAME	% SOLID	DESCRIPTION
BRINE	<30%+	Saturated water
MINIMAL LIQUID (MLD)	30-70%	Pumpable slurry
ZERO LIQUID (ZLD)	>90%	Primarily solid

Vapor Post Processing Modules

- Water recovery
- Plume Mitigation
- Ammonia Recovery
- Odor Control
- VOC Destruction

Materials of Construction

COMPONENT	MATERIAL
RECIRC PUMP	Corrosion resistant metal
FAN	SS housing with duplex SS wheel
EVAPORATION ZONE	AL6XN
CONCENTRATOR BODY	Fiberglass Reinforced Plastic
PROCESS PIPING	CPVC
BURNER/DUCT WORK	Insulated Carbon Steel

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