DRUM

EVAPORATOR

Efficiently Dewaters Small Volume Waste Streams

✓ **Can also operate in dryer mode and reduce moist solids to a dry, landfill eligible pile of solids**

✓ **Waste streams too concentrated for traditional evaporators**

✓ **Drum Heating applications to maintain liquid condition**

✓ **Evaporator bottoms containing solids, soaps and oils**

✓ **Coolants, wash waters, mop waters…and more**

✓ **Water based inks, paints, adhesives, and glues**

✓ **Sludge drying applications**

✓ **Parts drying applications**

The optional condenser returns water vapor for re-use

ENCON EVAPORATOR

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ENCON Drum Evaporator

ENCON Evaporators is proud to offer the ENCON DE-2 (200 gallons per five day week) and DE-4 (400 gallons per five day week) Drum Evaporators. These systems are electrically heated and can operate in batch mode or the optional auto-fill mode. The ENCON Drum Evaporator can handle the same applications as our traditional ENCON Thermal Evaporators.

Beyond the capability of the ENCON Thermal Evaporators, The ENCON Drum Evaporator can also operate in dryer mode and reduce moist solids to a dry, landfill eligible pile of solids.

A great advantage of the ENCON Drum Evaporator over other dryer type evaporators is that the dry residue does not have to be scraped or removed from the evaporation vessel. The drum can simply be capped and hauled off for disposal.

The ENCON Drum Evaporator completely encapsulates a 55-gallon drum of wastewater and heats it from the outside, thereby eliminating contact of heating elements with the waste-water. This makes the ENCON Drum Evaporator appropriate for dewatering waste streams with high solids loading including water based inks, paints, adhesives, and concentrated residues from the ENCON Thermal Evaporator since there is no concern about "baking on" of contaminants to the heaters.
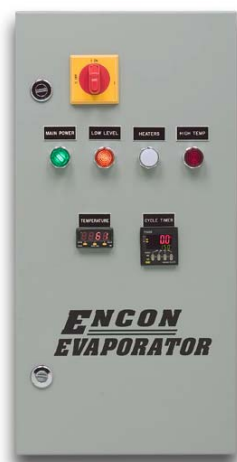
Drum Evaporator Features & Benefits

Feature:
Low purchase price and high quality stainless steel fabrication with incolloy heating elements.

Benefit:
Easy to justify financially.

Feature:
Full function controller to monitor or maintain temperature.

Benefit:
Allows operation as dryer and drum heater as well as evaporator.

Feature:
Hinged lids and sidewalls to easily access drum. Auto-fill option to provide unattended operation.

Benefit:
Ease of operation.

Feature:
Heating elements do not contact solution and are mounted and insulated on sidewalls of unit.

Benefit:
Maintains energy efficiency without concern for heater burnout

Feature:
The ability to concentrate and dispose of residue in the same drum.

Benefit:
Minimizes operator intervention.

Typical Batch Operation Process

Step 1: Place a 55-gallon open top drum onto the drum dolly. Transfer wastewater into the drum to within 6-8 inches of the top. With the evaporator in full open position, roll the drum into the evaporator. Wrap the rope gasket around the drum so that a positive seal will be made when the clamshell walls are closed and secured.

Step 2: Close and secure the clamshell walls and lid with the latching handles.

Step 3: The evaporator stack is then connected to the flexible section of the permanent exhaust stack with a quick disconnect fitting.

Step 4: Turn the red power switch to the "ON" position. Allow the system to heat up to boiling temperature. The system will shutdown upon reaching the low level or high temperature setpoint.

Installation of the ENCON drum Evaporator is very straightforward and is generally handled by facilities, maintenance, or plant engineering personnel. For auto-fill applications, primary connections include plumbing from the holding tank, sump, or pit to the feed pump and/or inlet valve. Then from the pump and/or inlet valve to the 1" NPT inlet located on the lid of the evaporator.

Stacks of varying materials are easily fitted to the exhaust stack with the provided quick disconnect adapter and ring clamp. The stack is typically installed vertically throught the ceiling but can also be run at an angle to a nearby wall then run vertically up the side of the building. Recommended stack materials include galvanized, stainless, or CPVC.

Finally, three phase 240 or 480 VAC power is run to the control panel. All major system components such as control panel, level probes, blowers, thermocouples, and temperature controllers are pre-wired and tested at the factory.

ENCON Drum Evaporator Specifications

The ENCON Drum evaporators are designed with the following features:

- Selector switch disconnect on panel door
- Digital high temperature shut-off
- 316 Stainless Steel low level shut-off
- 316 Stainless Steel high level shut-off (with the Auto-Fill option)
- Hastelloy C type J thermocouple
- Cycle Timer shut-off (Optional)
- 316L Stainless Steel mist eliminator
- 4" ceramic fiber insulation in walls
- 2" ceramic fiber insulation in lids
- Drum dolly with industrial grade casters
- Flexible stack connector with quick disconnect for a 5" stack

	Model DE-2	**Model DE-4**
Utilities Required: (Full Load Amps)	480V/3Ph/9.7 240V/3Ph/19.5 208V/3Ph/15.1* 220V/1ph/34.3	480V/3Ph/19 240V/3Ph/38 208V/3Ph/29*
Evaporation Rate:	200 gallons per 5 day week**	400 gallons per 5 day week**
Heater Description:	7.2Kw low watt density	14.4Kw low watt density
Evaporator Dimensions:	42" Diameter x 64" High (at exhaust stack outlet)	
Exhaust Stack:	5" Diameter insulated exhaust	
Volumetric Airflow:	120CFM at 70°F and 0.2 inches of water column	
Material of Construction:	304 Polished Stainless Steel	
55 Gallon Drum Requirement:	Open top, steel with a 21-23" diameter x 34-36" high (Supplied by Customer)	

Evaporation rate is reduced when run on 208V/3Ph power

** *Evaporation rate is based on tap water and auto-fill operation. Actual rate may vary based on waste stream*

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