

Hybrid Evaporator



THE DAWN

OF A NEW

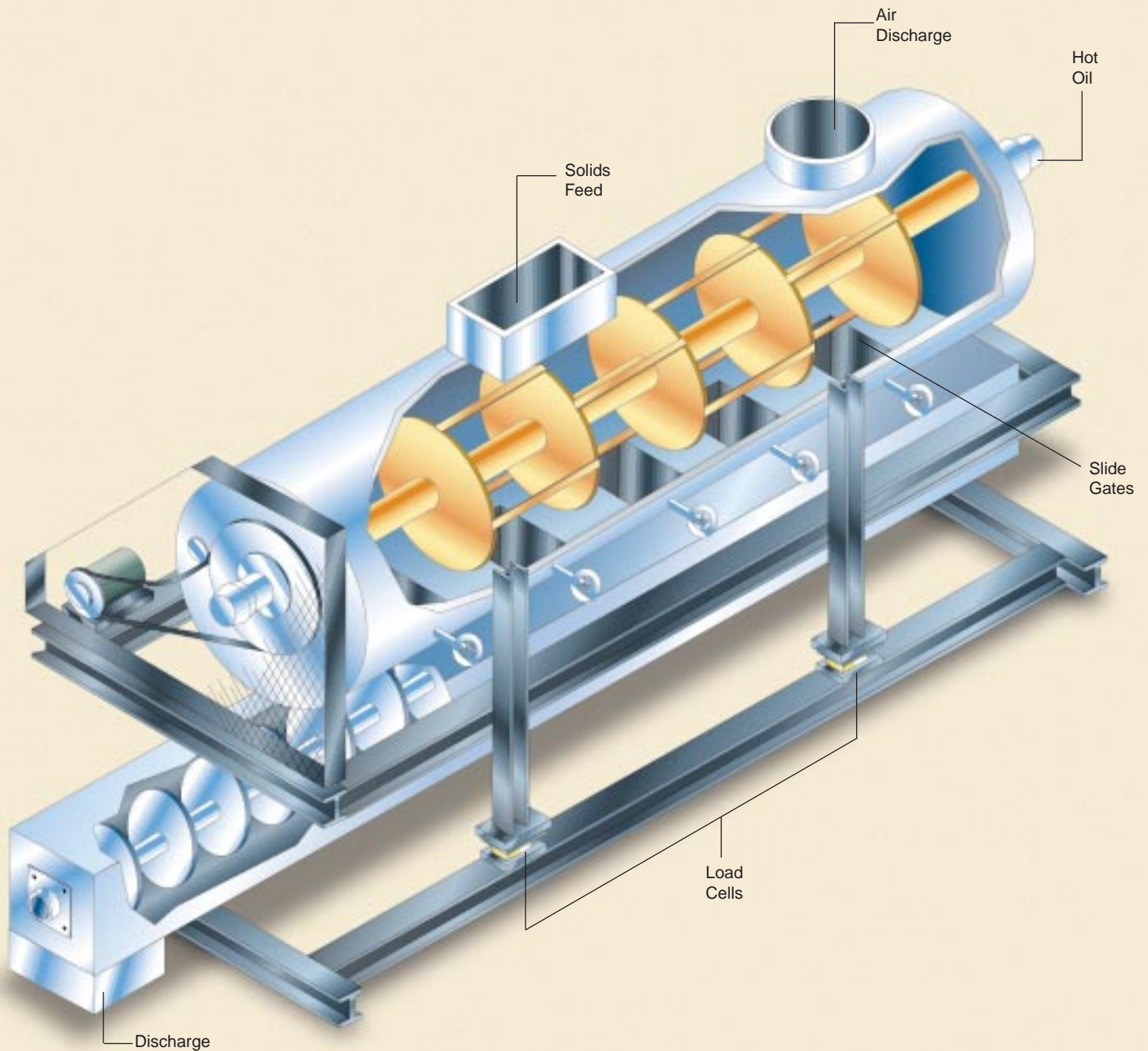
BIOSOLIDS

PROCESS



RDP Technologies, Inc.

Hybrid Evaporator™

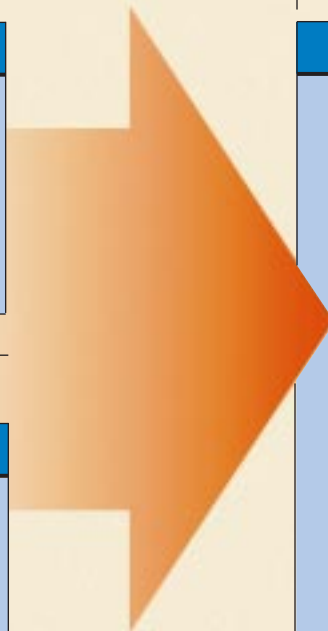


The Hybrid Evaporator™ can be operated as a dryer or as a pasteurizer. In both cases, biosolids are automatically loaded from a storage bin. The biosolids are processed on a batch basis. The Hybrid utilizes a rotor mounted in a stationary drum, both of which are heated using a thermal

fluid. The entire assembly is mounted on load cells. When the predetermined final solids content is achieved, the bottom slide gates automatically open, and the end product is conveyed to storage. The entire system is totally enclosed to minimize odors and dusting.

DRYERS	
DISADVANTAGES	ADVANTAGES
<ul style="list-style-type: none"> • Dusty end product • High capital cost • High operating cost • Complicated operation 	<ul style="list-style-type: none"> • Volume reduction • Class A end product • Easy end product to handle, store and convey

PASTEURIZATION	
DISADVANTAGES	ADVANTAGES
<ul style="list-style-type: none"> • No volume reduction • Wet end product 	<ul style="list-style-type: none"> • Low capital cost • Low operating cost • Class A end product • Long-term stable product • Easy to operate



HYBRID EVAPORATOR™
ADVANTAGES
<ul style="list-style-type: none"> • Volume reduction • Low capital cost • Class A end product • Long-term stable product • Easy product to handle, store and convey • Moderate operating cost • Easy to operate

The Hybrid Evaporator addresses both vector attraction reduction and pathogens in a single vessel. The process starts by automatically loading biosolids into the heating chamber.

If the desired end product solids content is 90% or greater, then the biosolids are simply dried.

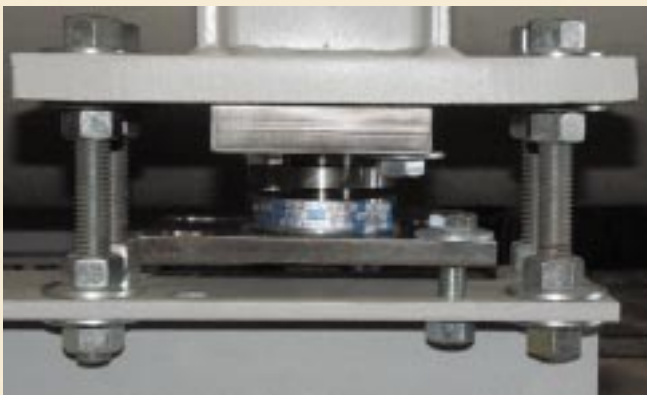
If the desired end product is 75 – 90% solids, then vector attraction is achieved by drying. Pathogens are destroyed by exceeding the time-temperature requirements for Class A biosolids, alternative #1.

When the desired end product is between 20 – 75% solids, vector attraction is achieved by the addition of a small amount of lime, typically 5%. Pathogens are destroyed through the Class A time and temperature requirements. The end product solids concentration is then achieved by further heating of the pasteurized solids

The load cells allow the operation to be precisely controlled and produce consistent final solids content.



Hybrid Evaporators can be run using natural gas, methane, heating oil or electricity. The boiler provides hot oil to both the heating drum and the rotating rotor.



Load cells provide precise control of the end product solids content. For each batch, input cake solids and desired final solids are entered into the control system. The system calculates the final weight, to produce the final solids content, and operates until evaporation produces the final weight.

By precisely controlling moisture content of the final product, the Hybrid Evaporator avoids dusting problems caused by overly dried biosolids.



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