



# TREATING WATER NATURALLY.

## AltelaRain<sup>®</sup> 750

The water desalination and decontamination solution inspired by nature itself.

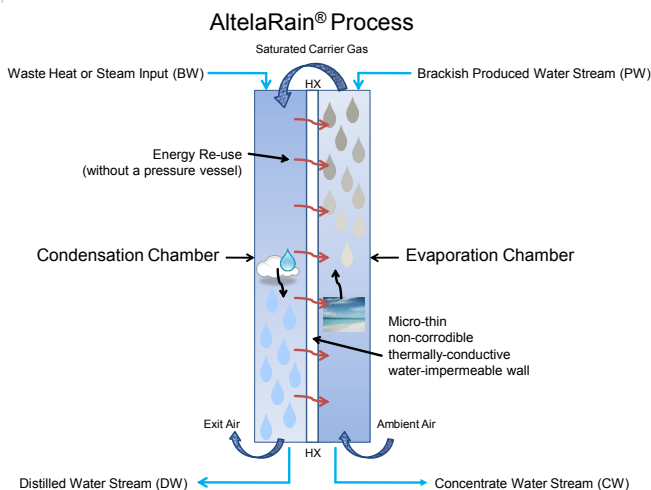


Altela has redefined the fundamentals of water purification. With world-changing implications, the technology has practical and realistic applications. AltelaRain<sup>®</sup> 750 is a modular water desalination system that excels at treating highly challenged wastewater. Taking the simplest of nature's processes for purifying water — making rain — and through revolutionary technology, AltelaRain<sup>®</sup> 750 recreates that process using low energy and readily available materials compared with conventional thermal distillation.

Benefits include:

- Low capital requirements
- Low operating cost
- Precise control of economics
- Low maintenance
- Infinitely scalable
- Reduced facility requirement
- Extremely high quality of treated water

The AltelaRain<sup>®</sup> 750 Module treats approximately 31,500 gallons per day, the equivalent of 750 barrels per day. It concentrates incoming water to 20% or less of the original volume delivered by the customer (eliminating 4 out of 5 disposal trucks), and at the same time returns ~55% of the original volume back to the customer as clean, distilled water. The treated water quality meets or exceeds even the most stringent U.S. government Environmental Protection Agency (EPA) standards.



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**AltelaRain<sup>®</sup> 750**  
Pat. U.S. 8,444,829

# AltelaRain<sup>®</sup> 750

## Technical Specs

### Features

One AltelaRain<sup>®</sup> 750 Module consists of:

- 12 Towers /1,600 lbs. (725 kg) each (Dry)
- 1 Center piping chase /7,500 lbs. (3,402 kg) (Dry)
- 1 Heat exchanger chase /5,400 lbs. (2,450 kg)
- 1 150 HP Steam Boiler (Can be supplied by Altela as an option)
- Misc. equipment /4,000 lbs. (1,815 kg)

Shipping Weight: 36,000 lbs. (16,330 kg)

Dimensions: ~40' long x 13' wide x 14' tall

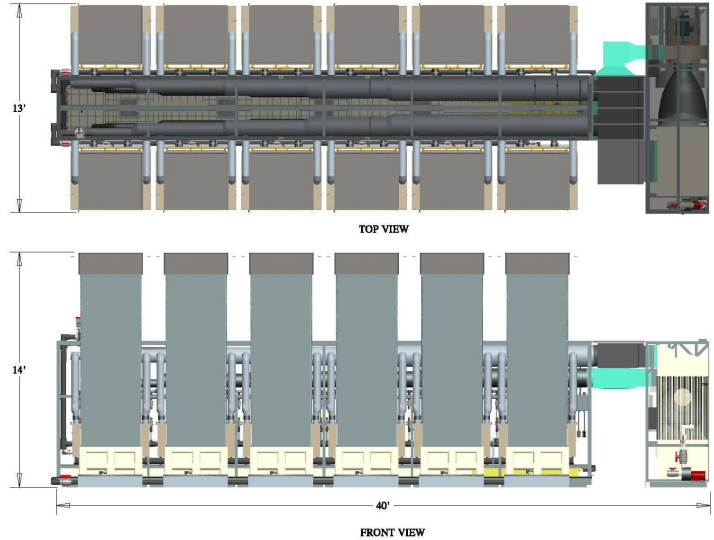
Footprint: 520 square feet (40' x 13') without boiler

### Materials

Inexpensive polypropylene plastic eliminates fouling/scaling

### Site Requirements

- Level and structurally stable concrete or gravel floor
- Tent roofing or existing building
- Electrical service to the Module panels:  
460V three-phase @ 65 RLA/75 FLA,  
110V single-phase @ 15 RLA/60 FLA
- Tanks:
  - 2 Produced Water / Frac Water tanks, between 5,000 and 12,500 gallon capacity
  - 1 Concentrate Water tank between 1,500 and 5,000 gallon capacity
  - 1 Distilled Water tank between 4,000 and 10,000 gallon capacity
- Piping between Module and all tanks
- Air exhaust for saturated air venting
- Piping or trucking for all water



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## What's new?

Altela has developed the world's first multiple effect distillation technology that does not require pressure. With the removal of the pressure requirements and through the use of plastics, dramatic energy and cap-ex benefits can be realized.

## What energy drives the process?

The AltelaRain<sup>®</sup> technology operates at low temperatures similar to nature's process for making rain and therefore can utilize low grade waste heat, natural gas or solar.

## How much energy is required?

Altela uses approximately 120 MCF of natural gas and approximately 1400 kWh of electricity per 24 hour day.

## What is the efficiency?

The Module can reduce effluent disposal volumes by as much as 90%.

## What is the quality of the treated water?

Independent water quality tests confirm that the treated water is distilled water quality historically well below 250 ppm TDS. Each Module produces ~400 BPD of useable clean water that may be delivered back to the customer.

## Answers to FAQs

### How long does it take to receive my order?

Current orders are being delivered within 60 days from receipt of down-payment.

### Can it be custom manufactured?

The AltelaRain<sup>®</sup> technology is scalable and can be produced in customizable configurations to fit individual project needs in 2,100 gallons per day/50 barrels per day, increments starting at a minimum of 12,600 gallons per day/300 barrels per day.

### What maintenance is required?

Each Module requires ~5 hours per week in routine maintenance. Use of plastic minimizes or eliminates many traditional maintenance issues directly related to scaling, fouling or corrosion.

### Where does the reject stream go?

Altela's concentrate stream retains its RCRA exemption and is disposed of in UIC reinjection or alternate approved commercial disposal facilities.



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