

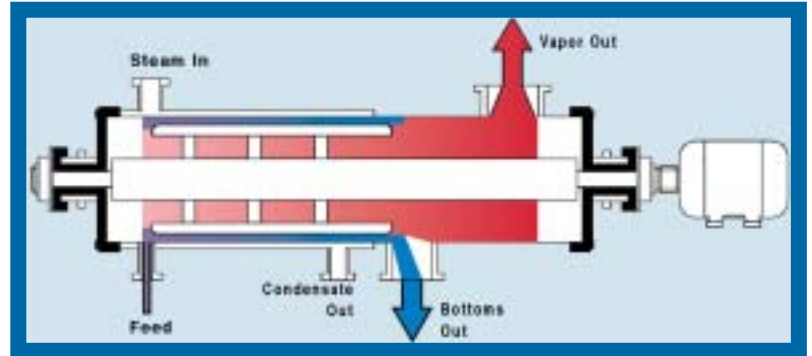
# ARTISAN



## The Artisan Rototherm<sup>®</sup>

The Artisan Rototherm is a horizontal, mechanically-aided, thin film processor designed to handle a wide range of difficult evaporation and reaction applications.

As an evaporator, the rotor creates centrifugal force that keeps the feed against the heated process wall. The turbulent thin-film between the rotor blade and the process wall covers the entire heated section at all times, regardless of feed or evaporation rates. This film is constantly renewed as the progressively more concentrated material is displaced towards the bottoms discharge nozzle by the incoming feed. As the residence time is generally measured in seconds, the degradation of heat sensitive materials is minimized.



As a reactor, multiple feed points, multiple temperature zones, controlled residence time and simultaneous evaporation offer total flexibility for carrying out complex, continuous reactions. Even powders can be produced in a single step.



70 sq. ft. Rototherm  
internals visible

Compared to other thin film or wiped film evaporators, the Rototherm offers numerous advantages, including:

- Reduced degradation of heat sensitive materials
- Improved product quality
- Higher yields
- High viscosity capability (up to  $4 \times 10^6$  cP)
- Up to 99% evaporation in a single pass
- High turndown ratio ( $>10:1$ )
- No dry spots or fouling
- Smaller heat transfer area required
- Easier installation
- Easier to maintain
- Cocurrent or countercurrent operation
- Less solvent required for cleaning

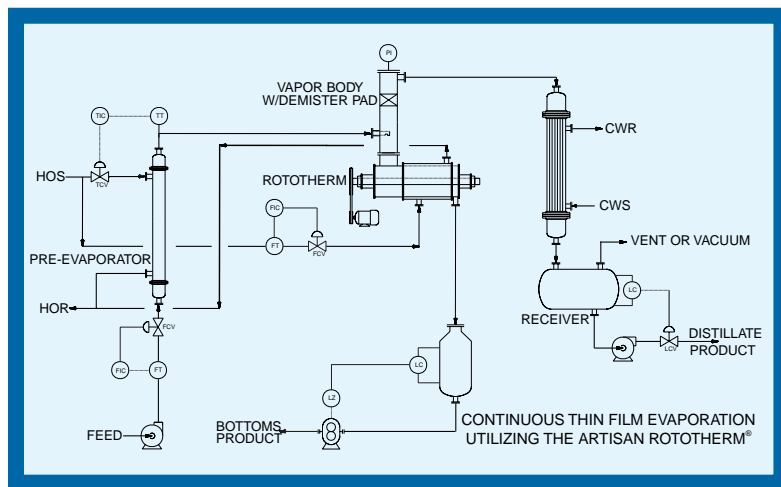
Over 500 Rototherms are running on a wide variety of products. Examples of applications are:

- Concentration** specialty polymers & resins, flavors.
- Purification** herbicides, pesticides
- Dehydration** lecithin, industrial coatings
- Desolventizing** photoresist, photographic chemicals
- Reaction** esterification, saponification, polymerization
- As a reboiler** antioxidants



Skid mounted Rototherm system

Because each application is unique, Artisan selects the optimal design based on extensive experience and process-specific data from our pilot facility. Rototherm heat transfer areas range from 1/4 sq.ft. to 200 sq.ft. with single unit capacities



from several pounds/hour to 30,000 pounds/hour. Standard sizes include 1, 5, 10, 15, 20, 30, 40, 50, and 60 sq. ft. Custom sizes are available. The heating medium can be steam or hot oil. Materials of construction include stainless steel (300 series and Duplex), carbon steel, nickel, Inconel®, Monel®, Hastelloy® and titanium.

Since 1934 Artisan experts have led the way, providing integrated solutions to the most challenging separation problems. We combine an innovative approach with an unparalleled depth of knowledge to develop cost effective, practical solutions. Designed and built to exacting standards, our powerful technologies have enabled us to succeed where our competitors have failed. That is why the Artisan name is synonymous with unrivaled product quality and level of service.

- problem definition ❖ technology selection ❖ process design and optimization
- bench scale testing ❖ in house or at site pilot scale testing
- equipment design and specification ❖ complete system manufacture
- start-up assistance ❖ operator training ❖ after sales support

**For further information call our sales team at:**

**781-893-6800**

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