

# Process Technology Solutions

## Rototherm® V

Continuous, vertical thin-film processor delivers higher product yield and purity

### PRODUCTIVITY

Space-saving Rototherm®V consistently delivers high throughput, yield, and purity, removing the bottlenecks from your process and improving profitability.

### APPLICATIONS

Designed for concentration, evaporation and stripping applications involving high value, heat sensitive, viscous, fouling, and foaming materials.

### INDUSTRIES

- Alternative Fuels
- Chemicals
- Environment
- Food
- Nuclear
- Nutraceuticals
- Oleochemicals
- Petrochemicals
- Pharmaceuticals
- Polymers
- Power



### Highlights

- For processing high-viscosity and solids-containing materials
- Minimal to no degradation of heat sensitive materials
- Up to 90% evaporation in a single pass
- Operating pressure to as low as 1 mm Hg absolute
- Co-current or counter-current operation
- Integral mist eliminator
- Overhung or double-ended design for heavy duty service
- Robust construction for unparalleled service life
- Easy installation and maintenance
- Small footprint

### Green Technology



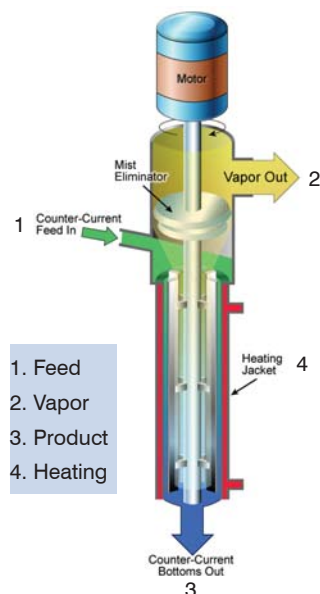
At Artisan we streamline complex, multi-step processes by decreasing the number of unit operations and reducing energy consumption. We improve the environment by reducing fugitive emissions and minimizing waste.

### Pilot Testing

We operate one of the most comprehensive pilot test facilities in the industry. Custom configured single or multi-staged systems are designed for your specific process. Whether you need to pilot a new process or improve an existing one our experienced engineers will work with you to develop a cost effective solution to give you the competitive edge.

Since  
1934

## Operation



The Artisan Rototherm® V can handle a wide range of difficult evaporation and concentration applications. The spinning rotor distributes the product as a turbulent thin-film inside the jacketed process wall, maximizing heat transfer performance. The film is constantly renewed by the incoming feed as the concentrated material falls towards the bottoms outlet.

As the residence time is generally measured in seconds, the degradation of heat sensitive materials is minimized or eliminated.

The integral mist eliminator minimizes product carry-over into the vapor stream, without the need for an external entrainment separator.

## Rototherm V Pilot Unit

### Technical Data

#### PHYSICAL SPECIFICATIONS

<b>Surface area</b>	1 square foot
<b>Inside Diameter</b>	4 inches
<b>Footprint (Overall Dimensions)</b>	105 H x 42 W x 42 D inches (267 H x 107 W x 107 D cm)
<b>Weight</b>	900 pounds (408 kg)

#### ELECTRICAL REQUIREMENTS

<b>Voltage</b>	230 to 460
<b>Frequency</b>	60 hertz
<b>Power Consumption</b>	3 phase

#### MOTOR DATA

<b>Torque</b>	3 horsepower
<b>Speed</b>	1800 revolutions per minute

### Applications

<b>Concentration</b>	foods, beverages, flavors, fine chemicals, pharmaceutical API's and intermediates...
<b>Purification</b>	emulsifiers, antioxidants, surfactants, herbicides, renewables...
<b>Desolventizing</b>	oleoresins, polymers, coatings, plasticizers, photographic chemicals, fats and oils...
<b>Stripping</b>	polymers, oleochemicals, foods, flavors, aromas, essential oils, plant extracts...
<b>Drying</b>	lecithin gums, foods, nutraceuticals, industrial coatings, nuclear waste ...

### TECHNICAL SUPPORT

Artisan provides best-in-industry, experienced chemical engineers who will work with you to develop a customized solution for your application.

### COMPLIANCE

ASME Section VIII, DIV. I & II  
Section III for nuclear applications

NQA-1

European PED and CE

China SQL

CSA B51, DOSH, GOST-R

JIS-MOL Standards

### SERVICES AVAILABLE

- Process Evaluation
- Feasibility & Pilot Testing
- Engineering Studies
- Installation and Commissioning
- After Sales Support

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