



# API Heat Transfer

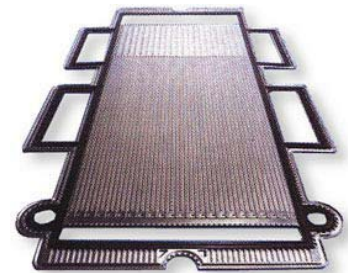
*...world leaders in heat transfer technology*

Introduces our new **Schmidt** Pilot Evaporator for rent or sale

## Technology for Liquid Food and Beverage Products



API Schmidt-Bretten, a division of API Heat Transfer Inc., announces the availability of a new **SigmaStar**<sup>®</sup> Evaporator and Aroma Recovery pilot plant, either for rental or purchase.



SigmaStar<sup>®</sup> 90 Product Plate

### Why use a SigmaStar<sup>®</sup> evaporator?

- The patented plate design forms strong “pseudo tubes” from metal to metal contact points. This combines the benefits of a tube with the flexibility of plate designs.
- Product is distributed equally to all “tubes” with no flashing required. Superior natural thermosyphon effect occurs even at reduced flow conditions.
- The short flow distance and high product film velocity combine to guarantee gentle thermal treatment of the product.
- High vapor velocity in the rising film allows the processor to achieve high concentrations and viscosities with minimal residence time.
- Product flows through clearly defined flow channels, eliminating local over-concentration.
- No orifices are needed for flow distribution where fibers and solids can plug.
- The absence of internal mechanical supports eliminates corrosion associated with welding.

For more information or a quotation on rental or purchase of our Schmidt Pilot Plant Evaporator, please contact Jim Carlson at 716-684-6700 ext. 304.



Rear view of API Schmidt-Bretten pilot plant showing left to right: a refrigeration system, an aroma recovery unit, a model Sigma 48 plate condenser and model Sigma Star 90 1st and 2nd effect plate evaporators.

## Features

- The two-effect SigmaStar plate evaporator system can operate with or without the patented Advance aroma recovery unit, featuring bubble cap tray distillation technology.
- The pilot plant is complete with Allen Bradley controls, hot water generator and chiller package. Just position the skid and hook up to utilities for immediate operation.
- Aroma can either be removed before or during product concentration.
- Scale-up issues are eliminated by using the same major components as larger commercial SigmaStar plate evaporator systems.
- Applications include juices, sweeteners, gelatine and waste streams.
- Final effect boiling temperatures as low as 100° F can be achieved, ideal for highly heat sensitive products such as coffee, herbal extracts, pharmaceuticals etc.

## Specifications

- Up to 800 lb/hr of water can be evaporated from the feed stream.
- The single skid mounted system has a footprint of 27'6" (L) x 7'4" (W) x 11'2" (H).
- Feed flows of 1 to 5 gpm can be accommodated.
- Steam consumption - 500 lb/hr to 1000 lb/hr depending on evaporation rate.
- Water consumption - 40 gpm @ 65 °F.
- Electrical characteristics - 3ph/60hz/460 volt.
- Electrical usage - 46 Kw.
- Air requirements - 6 scfm @ 80 psig.
- Shipping weight - 10 tons.