# Vacuum Cooling

- Rapid Cooling: Typically 45 minutes or less irrespective of batch size
- Low operating and maintenance costs
- Delicate, viscous or particulate sauce products handled easily and effectively
- Small footprint requirement in high care. (The vacuum set can be located outside).
- Reduced labor costs and increased production capacity
- Meets the requirements of the FDA
- Can be easily added to your existing cooking system.

## Vacuum cooling is the fastest and most effective means of heat removal from a batch process.

Vacuum or "evaporative" cooling is achieved through the evaporation of part of a products moisture under vacuum conditions. By the utilization of vacuum, we are able to reduce the boiling point of a product - driving off the latent heat by boiling off vapor; which in turn causes the product to fall in temperature.

By continually reducing the pressure we can continue to reduce the temperature of the product. This is achieved rapidly and therefore very fast cooling rates can be assured - typically from 200F - 39F within 45 minutes irrespective of the batch size.

Although cooling rates can vary between differing product types, we can still offer a high level of consistency, quality, and repeatability.

### Core Applications:

- Soups / Sauces / Slurries
- Stews
- Pie fillings
- Rice
- Jams / Jellies / Preserves
- Ground / Diced / Pulled / Shredded Meat
- Ready Meals
- Reductions
- Pet Foods

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### Water Recovery Options

- Cooling Options
  - Cooling Tower
  - Adiabatic Coolers
  - Chilled Water

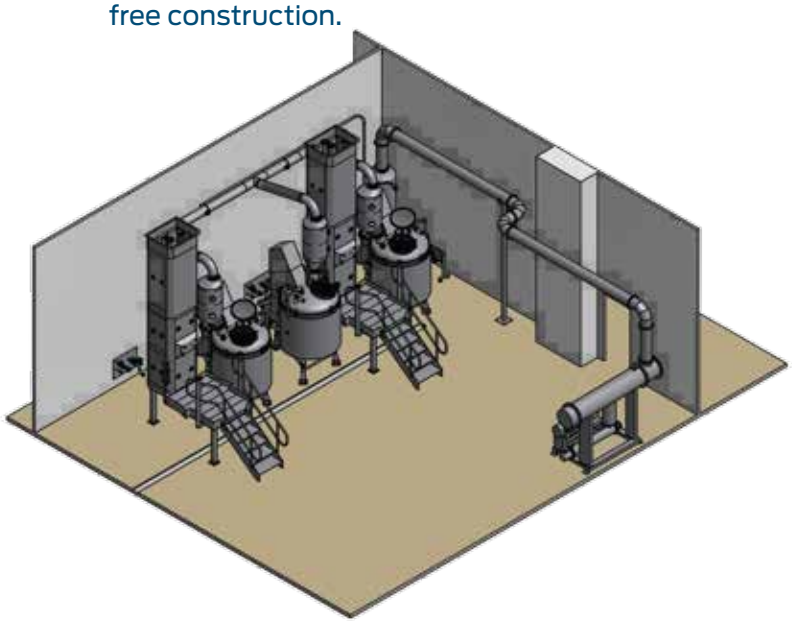
# The Equipment

## Standard

- An agitatated vacuum rated vessel, designed for operating at full vacuum 30” Hg. The vessel is fitted with a slow speed agitator, a 6” diameter bottom outlet, and large diameter manway for access. Hygienic design, and all constructed from stainless steel.
- A vacuum cooling system comprising of: a stainless steel vacuum duct connecting the cooling vessel to the stainless steel steam venturi, shell and tube heat exchan ger and liquid ring vacuum pump.
- An automated control system to provide effective control of the vacuum within the cooling vessel to maximize cooling efficiency and yields. Includes full data capture with downloadable historical trends and reports. Includes control of the plant utilities.

## Optional

- Tilting vessel, to allow for the controlled discharge of difficult to pour recipes, such as full absorption rice dishes.
- Combination cook / cool vessel. Designed for pressure cooking (15psi) with reduced cook times of up to 70%, then rapidly chilling to below 40F within 45 minutes, all in one vessel.
- CIP. All options are suitable for clean in place with rotary sprayballs and easy clean, crevice free construction.



## Capacity Range:

80, 125, 250, 400, 500 Gallon



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