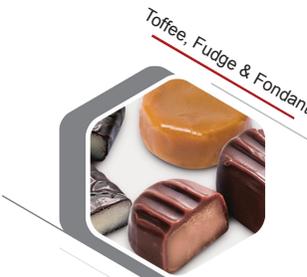


## Microfilm™ Cooker

The Microfilm™ cooker sits at the heart of Baker Perkins' range of flexible cooking systems. Its unique, thin-film cooking process delivers consistent high quality across many types of sugar and sugar-free confectionery syrups for hard candy, cream and high-milk.



### innovation centre

The development work required to launch a successful new product or improve an existing process can be carried out in the Baker Perkins Innovation Centre. With a full range of pilot-scale equipment and assistance from our expert food technologists, all the necessary tests can be conducted without using valuable plant time.

#### High quality cooking by a rapid swept thin-film process

The Microfilm™ dissolves sugar slurries and converts them to final-moisture syrups using a three-stage cooking process. Combined with precise control, this continuous process ensures that both quality and consistency are rigorously maintained.

#### Improved water and energy efficiency

The continuous process produces very little waste and is efficient in its use of energy and water. Vapour drawn during cooking is condensed in a heat exchanger, so no cooling water is sent to waste, while steam used to heat the Microfilm™ tube is condensed and converted into low pressure steam to heat the dissolver plate heat exchanger. An optional system to reclaim heat from flash vapour is also available.

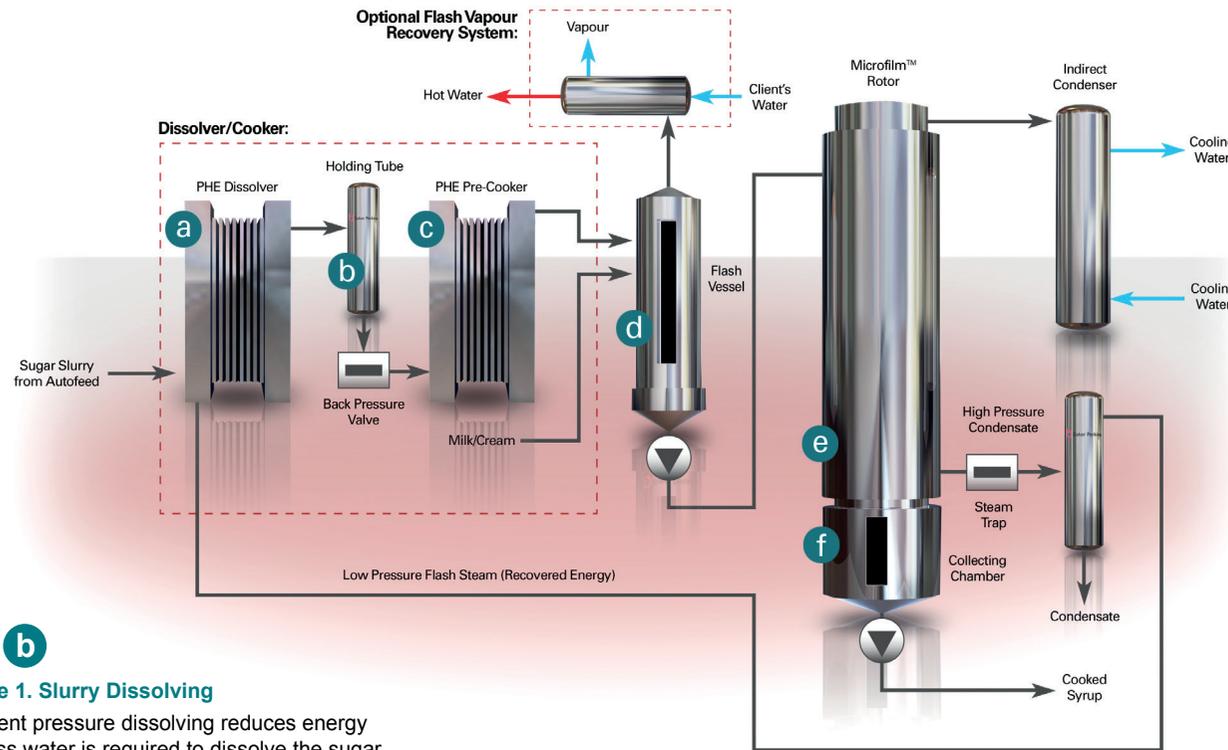
#### Easy to operate, clean and maintain

Fully automatic PLC control with a touch screen HMI provides full process visualisation, recipe management and alarm handling. Routine cleaning is by a simple flush-through procedure, with chemical cleaning required infrequently. All major maintenance items can be reached from outside the frame.

#### Typical Installation Includes:



# The Unique Three-Stage Microfilm™ Process



**a b**

## Stage 1. Slurry Dissolving

Efficient pressure dissolving reduces energy as less water is required to dissolve the sugar.

**c d**

## Stage 2. Pre-Cooking and Flash Vapour Separation

Reclaimed and recycled vapour reduces waste. Vapour separated out in a flash vessel may be recovered by condensing it in a heat exchanger, to be used in other parts of the process. Dairy or other delicate ingredients are added in the flash vessel to avoid burning the product or fouling the dissolver or pre-cooker.

**e f**

## Stage 3. Cooking to Final Moisture

The unique Microfilm™ evaporator ensures accurate cooking. A hinged rotor sweeps a thin, even film of syrup onto the inside of the tube where it cooks quickly. Cooking temperature is reduced by the vacuum, ensuring no process inversion or burning can occur. A collecting chamber allows controlled caramelisation and manual monitoring.



### Single or Twin Discharge Pumps

Wide inlet and heated pump head designed specifically to handle saturated sugar solutions. Single or twin pumps match the number of depositor hoppers.

### Fully automatic controls require minimal operator intervention

Centralised HMI provides clear process visualisation with alarm handling and history. Reduced wiring improves hygiene and makes troubleshooting easier. Closed loop cooking using temperature or pressure modes achieve an accurate final cooked temperature or moisture.

### Materials of Construction

<b>Rotors</b>	Available in nickel, 316 stainless steel or HT brass, subject to size
<b>Skid Frame</b>	304 stainless steel
<b>Plate Heat Exchangers</b>	Stainless steel
<b>Syrup Pumps</b>	Stainless steel
<b>Product Pipework</b>	Stainless steel

### Product Options

- Twin rotors for high output
- Indirect or direct vacuum condenser systems
- Atmospheric cooking with pumped discharge
- Liquid acid metering system
- Large collecting chamber for development of colour and flavour for high-milk candies
- Vacuum evaporator skid for sugar-free cooking with direct or indirect condenser
- Dairy ingredient preparation and injection system for high milk and cream candies