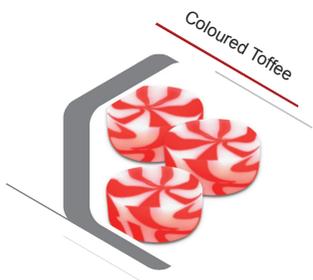
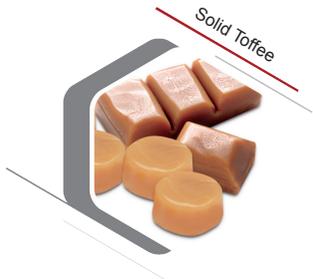


# Toffee Cooking Plant

At the heart of Baker Perkins' continuous cooking and caramelising systems for toffee and caramel products are the Microfilm™ cooker and the Carablend™ carameliser. There are many different types of toffee and caramel recipes, each requiring different ingredients, cooking temperatures and caramelisation times. Utilising these unique units, Baker Perkins' toffee and caramel systems provide the required flexibility, with high levels of automation and consistency.



## 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.

### Precise automated control

Cooking and caramelising of the syrup are carried out separately to provide the flexibility and independent control needed to make a wide range of products. The system is fully automated from ingredient weighing to final cooking and provides precise control over critical process parameters for consistent quality and low waste.

### Choice of process capability and output

Modular design of Baker Perkins' toffee and caramel plants, based around the Carablend™, provides a broad choice of process options and outputs. A system can be specified to replicate the appeal of traditional toffee at low to medium outputs, or to provide excellent quality at high outputs.

### Flexible operation for varied recipes

Toffee recipes and ingredients can vary widely, from budget toffee to the highest quality products with high proportions of fat and milk. Separation of the cooking and caramelisation phases means that systems can be specified to handle all recipes, with a wide range of cooling temperatures and caramelisation times.

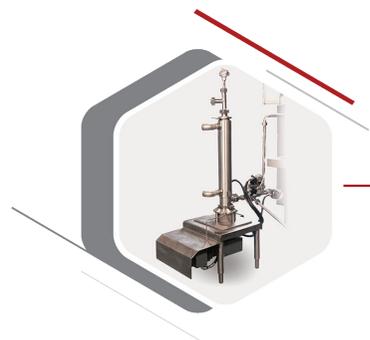
### Typical Installation Includes:





**Autofeed: fully automatic ingredient weighing and mixing system**

The Autofeed is a batch-continuous system for weighing and mixing sugar slurries. Each ingredient is individually weighed into a vessel mounted on load cells and then mixed. The batches of slurry are passed to a reservoir tank that provides a continuous feed to the cooker. Multiple recipes may be stored and recalled using the touchscreen HMI that also provides full process visualisation and batch reporting.



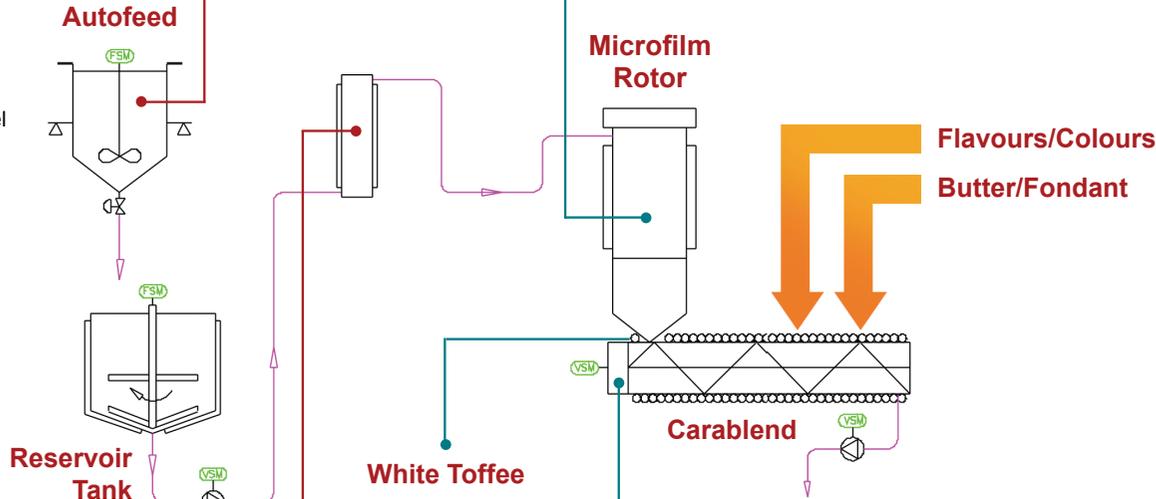
**Scraped Pre-Heater**

The scraped pre-heater is a continuous process that fully dissolves the syrup and pre-heats it prior to cooking. For larger systems several units may be used in series.



**Microfilm™ Cooker**

The unique Microfilm™ provides accurate cooking of the pre-heated syrup. A hinged rotor sweeps a thin, even film of syrup onto the inside of the heated tube where it cooks quickly. This ensures that no burning of the product or fouling of the cooker occurs, even at high concentrations of dairy protein.



**EC Carablend™**

The cooked syrup is gently heated and agitated in the Carablend™ to produce the desired degree of caramelisation. This is determined by the residence time, which can be adjusted to the recipe. Butter, fondant, colours and flavours are easily added during the caramelising process. A range of sizes, including twin-rotor units are available to achieve outputs between 400 and 1,300kg/hr.

**Range & Specifications**

Each part of the cooking and caramelising process is carried out in a specialised unit. These are configured in various ways to provide the required process capability and output.

**Modular System**

- Every system includes a fully-automatic Autofeed to weigh and mix ingredients to form a premix slurry
- A reservoir tank provides a continuous feed to the system
- One or more pre-heaters fully dissolves and pre-heats the syrup before cooking
- A single Microfilm™ cooker of the appropriate size cooks the syrup to final moisture. The white toffee it produces may be sent direct to the depositor or passed to the Carablend™
- An EC Carablend™ with one to four modules caramelises the white toffee to the required degree. Butter, fondant, colours and flavours may be added
- For lower outputs, a TCB Carablend™ that cooks and caramelises the syrup simultaneously while applying steam pressure to achieve the correct final moisture for depositing may be specified

**Output**

Output is determined by the number of Carablend™ modules specified.

**EC Carablend™ (including Microfilm™ cooker)**

Microfilm™ Rotary Type	Carablend™ Modules	Output kg/hr
20	1	400
27	2	910
27	3	1,090
380	4	1,300

**TCB Carablend™**

Carablend™ Modules	Output kg/hr
1	290
2	370
3	580
4	740