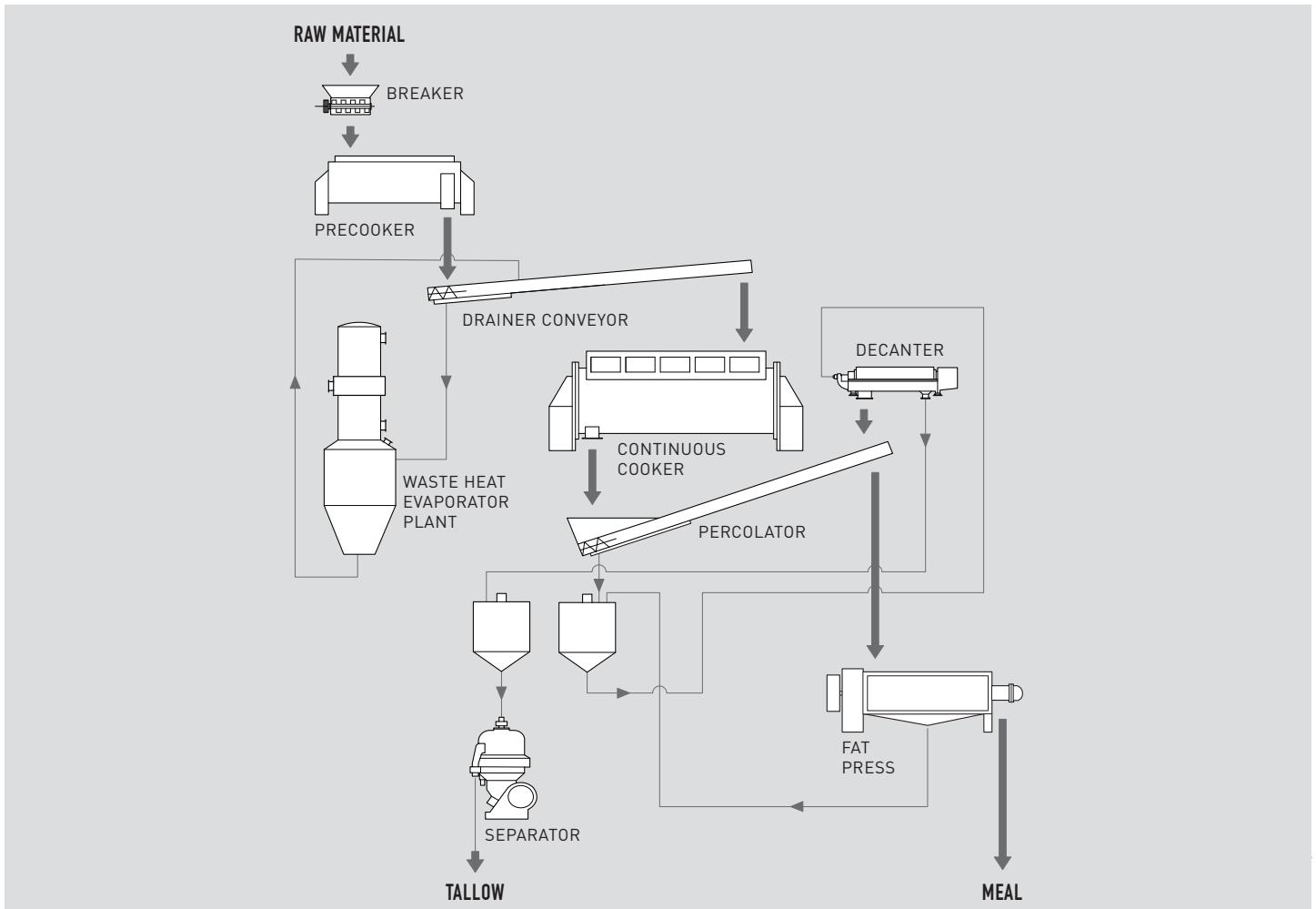


# LOW ENERGY DRY RENDERING


**RENDETECH**


The Rendertech Low Energy Dry Rendering (LEDR) process is a modified continuous dry rendering process designed for reduced energy use. The LEDR process preheats the raw material in a Precooker, removing some liquid for concentration in a Waste Heat Evaporator. By using waste heat from the Cooker as an energy source in the Waste Heat Evaporator, overall energy use is less than in the continuous dry rendering process. The LEDR process can be retrofitted to existing dry rendering plants.

## FEATURES AND BENEFITS

Increased throughput and improved energy efficiency when retrofitted to existing continuous dry rendering plants.

Utilises free energy generated by the Cooker for less overall energy use.

Better-quality tallow as most of the tallow is extracted at a lower temperature.

## PROCESS DESCRIPTION

### Raw material preparation

Raw material is broken in a Fine Crusher to give a particle size of 20–25mm. The broken material is then conveyed to the Precooker.

### Precooking

The Precooker is a continuous indirect heat exchanger. It consists of an outer shell and a heated disc rotor. The heat transfer is by rotation of the rotor in the raw material. The raw material is fed continuously to the Precooker where it is heated rapidly to 90–100°C to coagulate the proteins and break down the fat cells. The temperature is



controlled by automatic regulation of the steam supply pressure.

#### **Waste Heat Evaporator**

The free liquid is separated from the preheated raw material in a Drainer Conveyor and pumped to a Waste Heat Evaporator (WHE). The liquid is circulated through the tubes of the WHE under a vacuum where it is evaporated using the vapour from the cooker as a free energy source.

#### **Cooking**

The solids from the Precooker and concentrate from the WHE are conveyed into the Continuous Cooker, where most of the remaining water is evaporated from the material leaving solids and tallow.

#### **Defatting**

The discharge from the Continuous Cooker is conveyed across a percolator to allow the free tallow to be drained off, after which a Fat Press is used to press out the balance of the tallow.

#### **Ancillary equipment**

Rendertech can provide ancillary equipment to suit the specific requirements of your site, including raw material preparation and storage, conveying, meal milling and storage, tallow storage, steam generation, heat recovery, odour control, and wastewater treatment.

#### **OPTIONS**

Standard designs from 5 to 25 tonne/hr

Flexible layouts to suit available space

Complete turnkey installation

## **YOUR PROCESS PARTNER**

We are specialists in process and storage solutions, providing the products and technical expertise to get the best from your plant. For more information call for a no obligation chat about your processing needs.

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