

DECANTER CENTRIFUGES & PLANTS FOR SOLID/LIQUID SEPARATION



CONTINUOUS JUICE PRODUCTION FROM ROOT VEGETABLES USING MECHANICAL CELL MACERATION

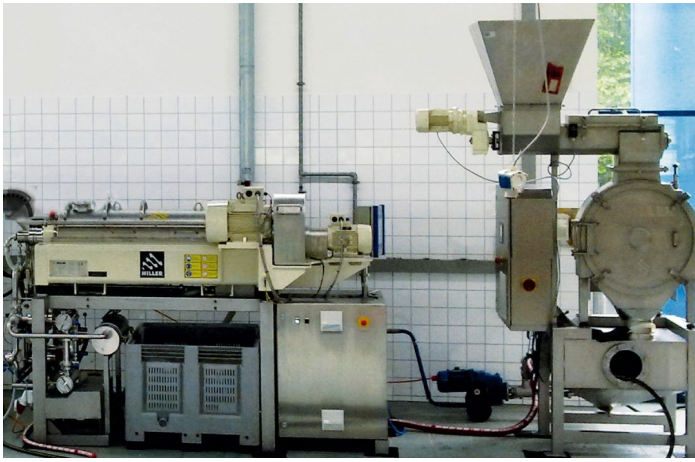
NEW PROCESS

To achieve high yields of the best quality when processing root vegetables, HILLER offers a new mechanical cell maceration process using a decanter, which provides even further benefits:

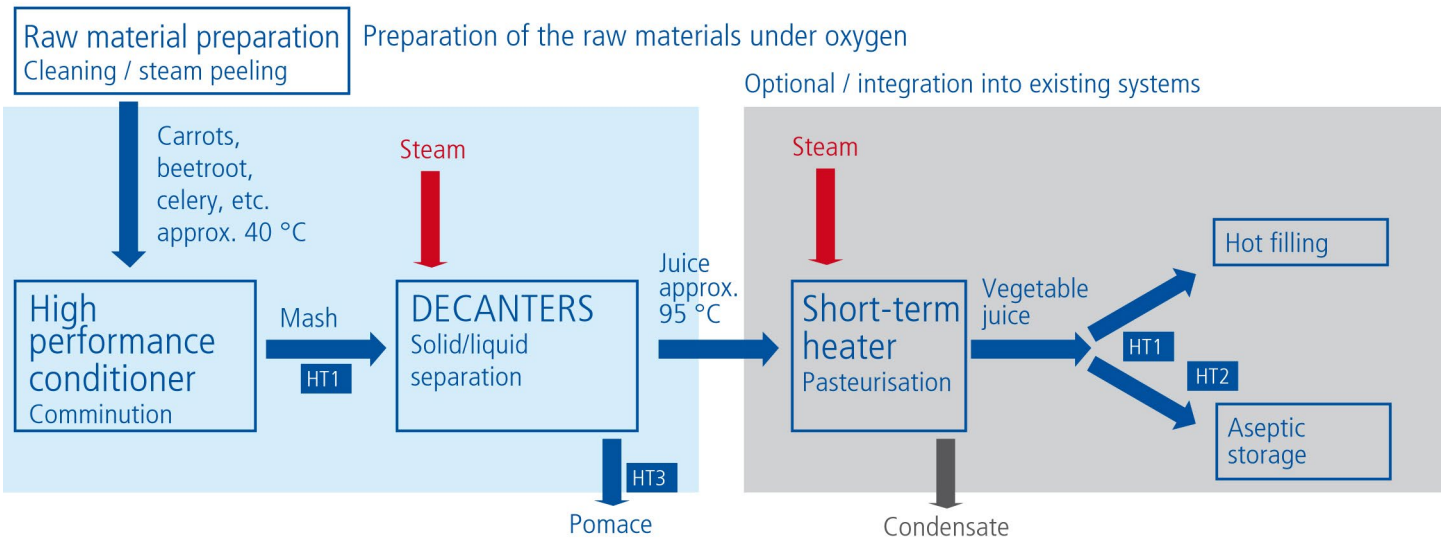
BENEFITS

- better product
- fresh vegetable taste
- retention of vitamins and high-nutrition components
- more intense colour
- stable, cloudy juice
- energy-efficient and
- product-enhancing





PROCESS DIAGRAM FOR THE CONTINUOUS VEGETABLE JUICE PRODUCTION



Plant consisting of:

- high performance conditioner for maximum mechanical cell maceration of the prepared product
- decanter with steam injection for short-term, homogeneous and controlled heating with special screw design for improved separation of the mash with controllable viscosity using the new mode in ongoing operation
- short-term heating to inactivate all micro-organisms and enzymes within the product *
- integrated heat exchanger system (HT) for energy efficient production*

* Optional or for integration into the existing system technology (heat exchanger, control, etc.)

Conventional process without HILLER technology

- open system (oxygenation capacity)
 - discontinuous production (macerate, press, fill)
 - thermally enzymatic cell maceration (costs for additives)
 - high heat loading
- oxidation and enzymatic degradation processes
 - typical cooked taste
 - destruction of vitamins and high-nutrition components
 - nutritious elements remain in the pomace during pressing
 - enriched, cloudy juice with stabilisation thanks to foreign enzymes
 - juice goes further thanks to greater condensate inclusion

NEW PROCESS

- closed production sequence (oxygen exposure)
 - continuous feeding and processing
 - mechanical cell maceration (without enzymes)
 - low heat loading
- better product in terms of physical properties and nutrition
 - more intensive and fresher vegetable taste
 - vitamins and high nutrition ingredients are retained
 - greater colour intensity
 - stable, cloudy juice without using enzymes or stabilising agents
 - no contamination from outside
 - energy-efficient and product-enhancing

