

## 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:

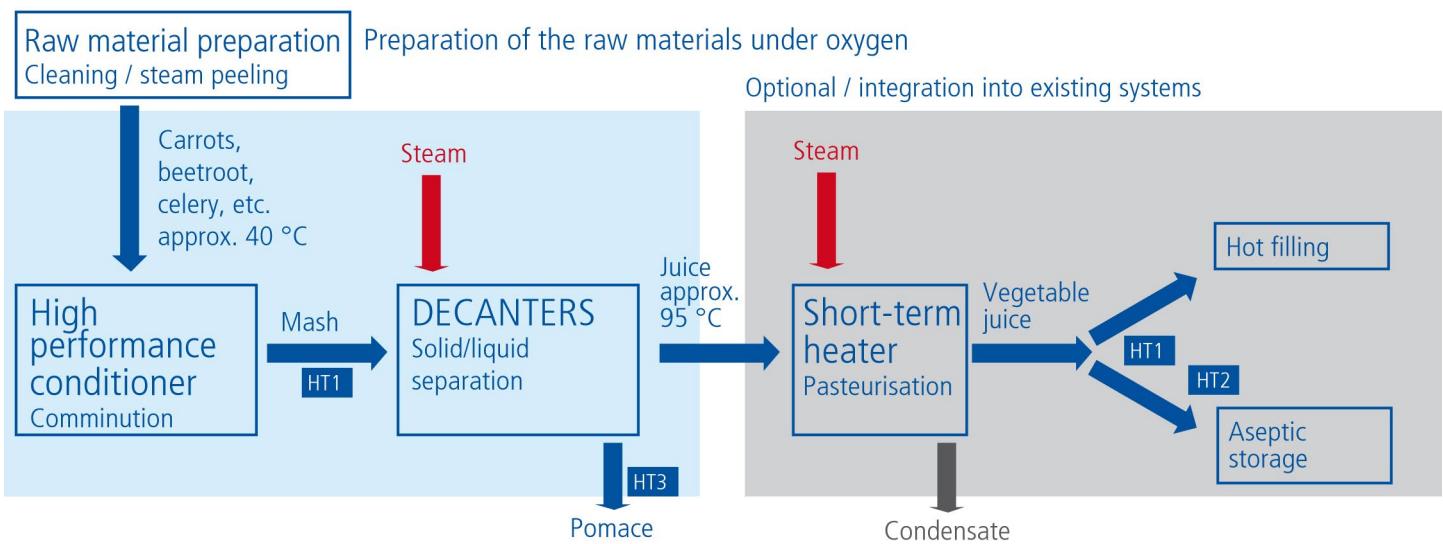
#### BENEFITS

- 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

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- 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

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- 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

