

## Hydrothermal applications

### Hydrothermal cooking plant

Products requiring temperatures of more than 100 °C can be treated with the hydrothermal plant. A maximum temperature of approximately 150 °C can be reached in the plant by the introduction of steam.

The product is treated directly with steam. The cooker works continuously and is fed with product via timer-controlled locks. The greatest possible cooking time is about 25 - 30 minutes.

This plant can also be used for soaking products with water at a maximum temperature of 90 °C.

For ensuring uniform water absorption of the product, the water is continually circulated in the steeping bin during the soaking phase.



#### Advantages of the new plant:

- High temperatures can be reached.
- Uniform treatment due to reduced product depth.
- Gentle treatment – no mechanical pressure on the product as in case of the extruder or expander.
- No product losses during starting and stopping of the plant.
- Minor cleaning effort
- Continuously working autoclave

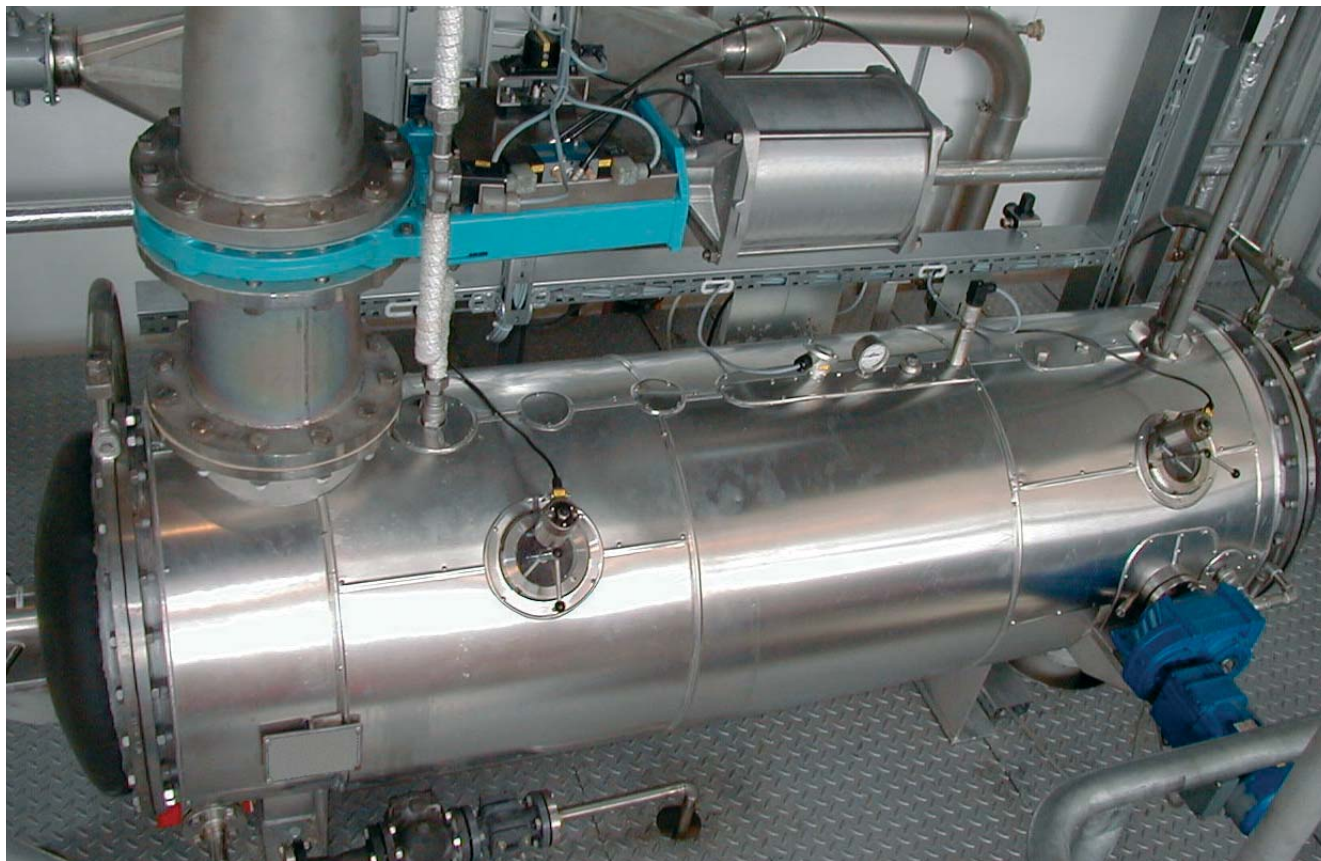
#### Hydrothermal treatment



- Biological
- Sterile
- Hygienic
- Decontaminated

Secure manufacturing and treatment of products.

# Hydrothermal cooking plant



## The pilot plant can be used for:

- Soaking and cooking of products
- Hygienic treatment up to a temperature of 150 °C
- Sterilization
- Drying
- Inactivation of bitter substances in beans, peas, rape, and soya
- Treatment of spices
- Production of bulgur and other cereals, such as rye, barley, millet, spelt, unripe spelt grain, buckwheat, maize, oat flakes

## Advantages of the plant operated under pressure in comparison with plants without pressure build-up:

- Higher temperatures can be reached and as a result higher starch modification
- Better hygienic treatment
- More uniform treatment of the products due to reduced product depth
- Lower product losses due to immediate product treatment at the start of the plant
- Minor cleaning effort
- Lower construction height
- Vacuum operation of the plant is also possible.
- Tests can be carried out in the pilot plant of SCHULE.

The hydrothermal cooking plant permits a hygienic treatment of up to 150 °C