

## Rice Parboiling Plants

Leading Technology  
for all Parboiling Requirements



Worldwide experiences and latest knowledge of parboiling complete plant equipment for different techniques:

- Batch system, open tank without pressure
- Batch system, open tank with pressure
- Continuous pressure cooking system in vertical cooker or horizontal belt cooker
- Brown rice parboiling
- Laboratory parboiling system for research and test run

# SCHULE Rice Parboiling System

## Different Techniques of SCHULE Parboiling Systems

Parboiled rice is one of the most popular rice products in Europe and becomes more important not only by the fact of improved nutritional value but also by the improved cooking and processing properties which are desired from the industrial point of view.

Apart from the nutritional importance of parboiled rice there are plenty of advantages and effects which makes parboiling attractive. Those advantages are for instance the increased head rice yield during milling of parboiled rice, the reduced stickiness of the cooked rice and the improved cooking behavior of the parboiled rice.

There are presently a lot of traditional and industrial methods where the basic steps like soaking, thermal treatment (steaming or cooking) and drying often only differ by the application of different techniques and process parameters. In rice cultivation countries generally paddy (raw rice) is used for parboiling, in Europe there is a tendency to parboil also brown rice.

Apart from a constant quality the rice industry requires special quality specification of the rice products. A necessary prerequisite for this is the knowledge of the certain impacts of process parameters to different rice varieties and quality aspects on the final product. To achieve this special aim modern parboiling equipment is needed which permit to select adequate process parameters according to individual customers requirements.

Leading technology for all parboiling aspects can be provided by SCHULE Parboiling techniques. Batch system, open tank without pressure, continuous pressure cooking systems and recently brown rice parboiling indicate the wide range of SCHULE Parboiling possibilities. SCHULE Rice Parboiling technologies are based on many experiences from plants around the world and on intensive research and development at the own Parboiling Test facilities in Hamburg.



Non-parboiled rice - cooking time approx. 12-15 min.



Parboiled rice - cooking time approx. 18-22 min.

### General impacts of conventional parboiling

- Increased head rice yield during milling
- Simplified hulling process
- Uniform and stabil cooking and processing properties
- Reduced stickiness of cooked rice
- Improved nutritional value and extended shelf life

### Impacts of brown rice parboiling

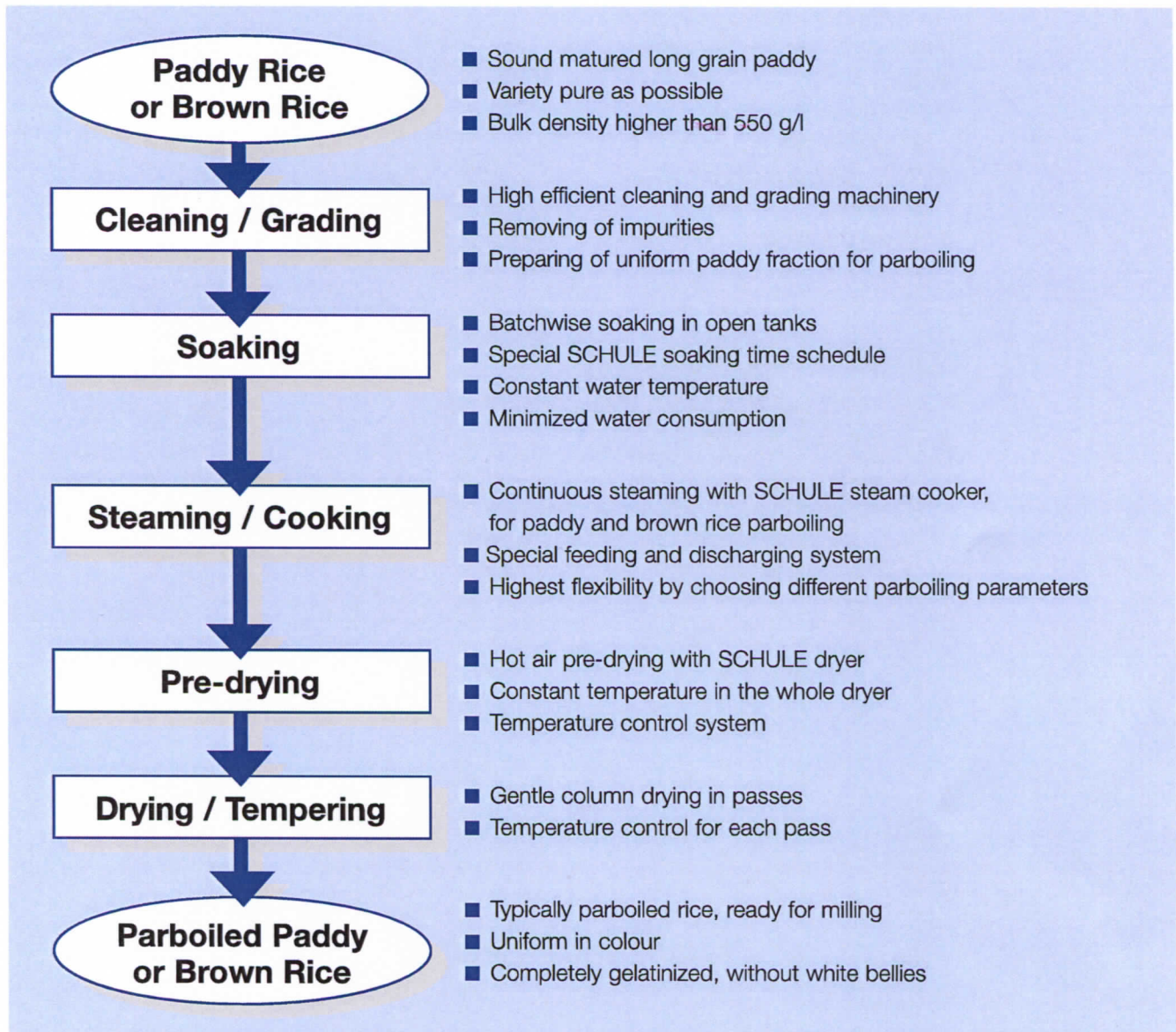
(generally same impacts as paddy parboiling with additional advantages)

- Reduced requirements on water and energy
- Prevention of dark colouring effects
- No parboiling smell and taste
- Better influence to final cooking behaviour
- Alternative for cargo rice importing countries



# SCHULE Rice Parboiling Plants

## Process Technology



## Advantages of SCHULE Continuous Parboiling Technique – for Paddy and Cargo Rice

- Only one cooker for high capacity
- Special system ensures uniform treatment during parboiling
- Most flexible system for choosing different parameters of parboiling according to the input paddy and desired final product properties
- Influencing of treatment possible by various parameters
- Automatically control system for easy operation

**Following SCHULE standard parboiling systems are available:**

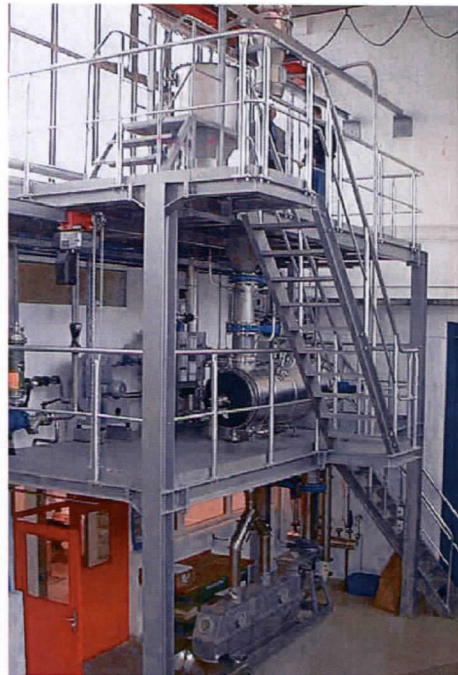
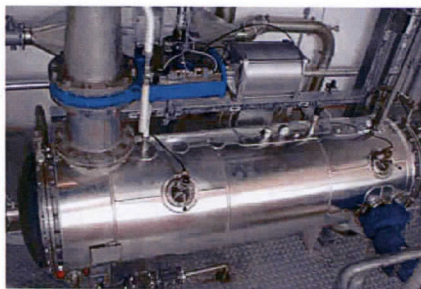
Capacity t/d	Product	Cooker System
12 paddy	batch	soaking/steaming
24 - 400	paddy	1 continuous vertical cooker
24 - 500	brown rice	1 continuous horizontal cooker



# SCHULE Laboratory Parboiling Plant

Our pilot plant is at our customers disposal for trials and tests at any time:

- Continuous operation up to 300 kg/h
- For simulating soaking/cooking procedures
- Pressure cooking



## Examples of SCHULE Plants Installed Worldwide



1 - 2 t/h parboiling plant



7,5 t/h parboiling plant



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