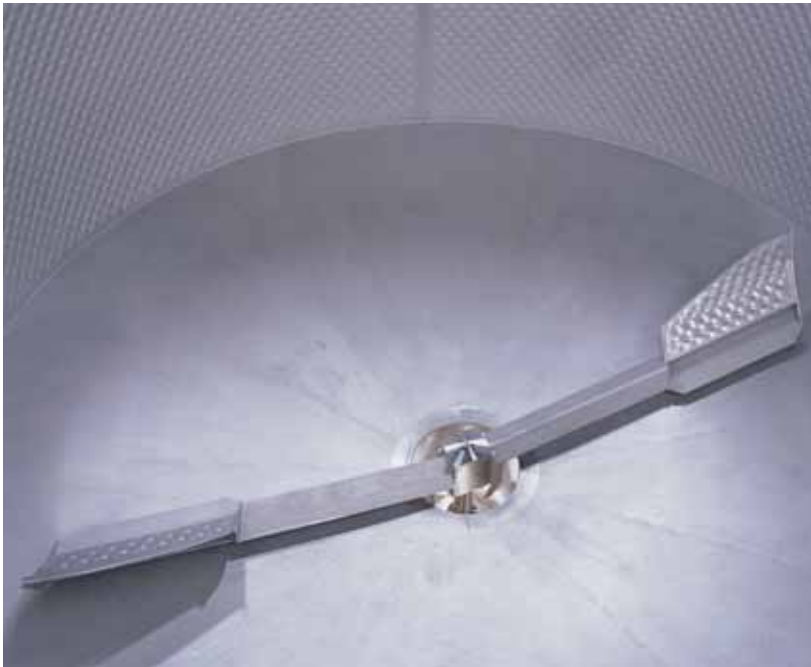


**STEINECKER** Mashing Technology  
ShakesBeer

# It's All In The Mix

Interior view



Your demands on the brewing process are economic efficiency, optimal leeway in configuring the process technology and the opportunity to implement highest performance in mashing as well as in every subsequent process step. Up to now, the fast succession of brews was limited by the time needed for mashing.

The STEINECKER mashing system ShakesBeer now opens up excellent possibilities right at the beginning of the brewing process. This system lays the ideal foundations especially for high gravity processes with higher mash concentrations. That you thus also score with regard to energy consumption goes without saying.

## The STEINECKER Solution for Efficient Mashing

- The flow-technologically optimal design of the premascher is the basis for short, dust-free and gentle mashing processes when processing dry grist or cereals.
- The specific construction of the heating areas in the mash tun provides a fast and consistent heat transmission.
- A gentle and shearing-force-reduced mixing effect when stirring the mash establishes a basis for the activities of enzymes in the temperature optimum.
- The steady heating rates of the system right through the production week assure a consistently high quality of the mash.
- Minimal fouling as a result of the heating concept allows to omit the intermediate cleanings – especially in high gravity processes.

# Stirred Gently

Fig. 1  
Detailed view  
premasher

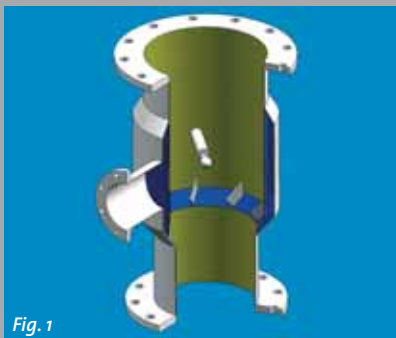


Fig. 2  
Top view

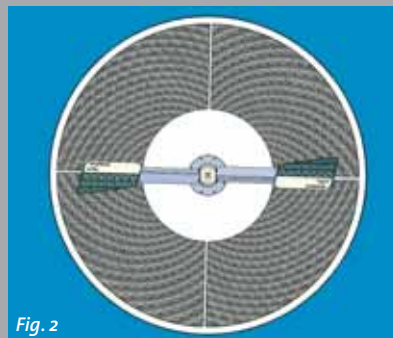
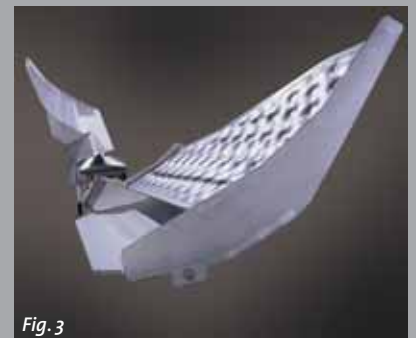


Fig. 3  
Photo agitator  
blade



## Mixed Gently

The design of the premasher allows to merge grist and water up to a ratio of 1:2 in a fast, dust-free and homogeneous way. By fanning out the grist/water mixture the turbulence on feeding the raw materials has been increased and, hence, only a modest underlet is required. This concept is also very effective when processing cereals as a homogeneous and lump-free mash can be produced. Thus, yield losses may be minimized and high conveying outputs can be obtained. A pleasant side-effect is that the production plant is no longer polluted by dust.

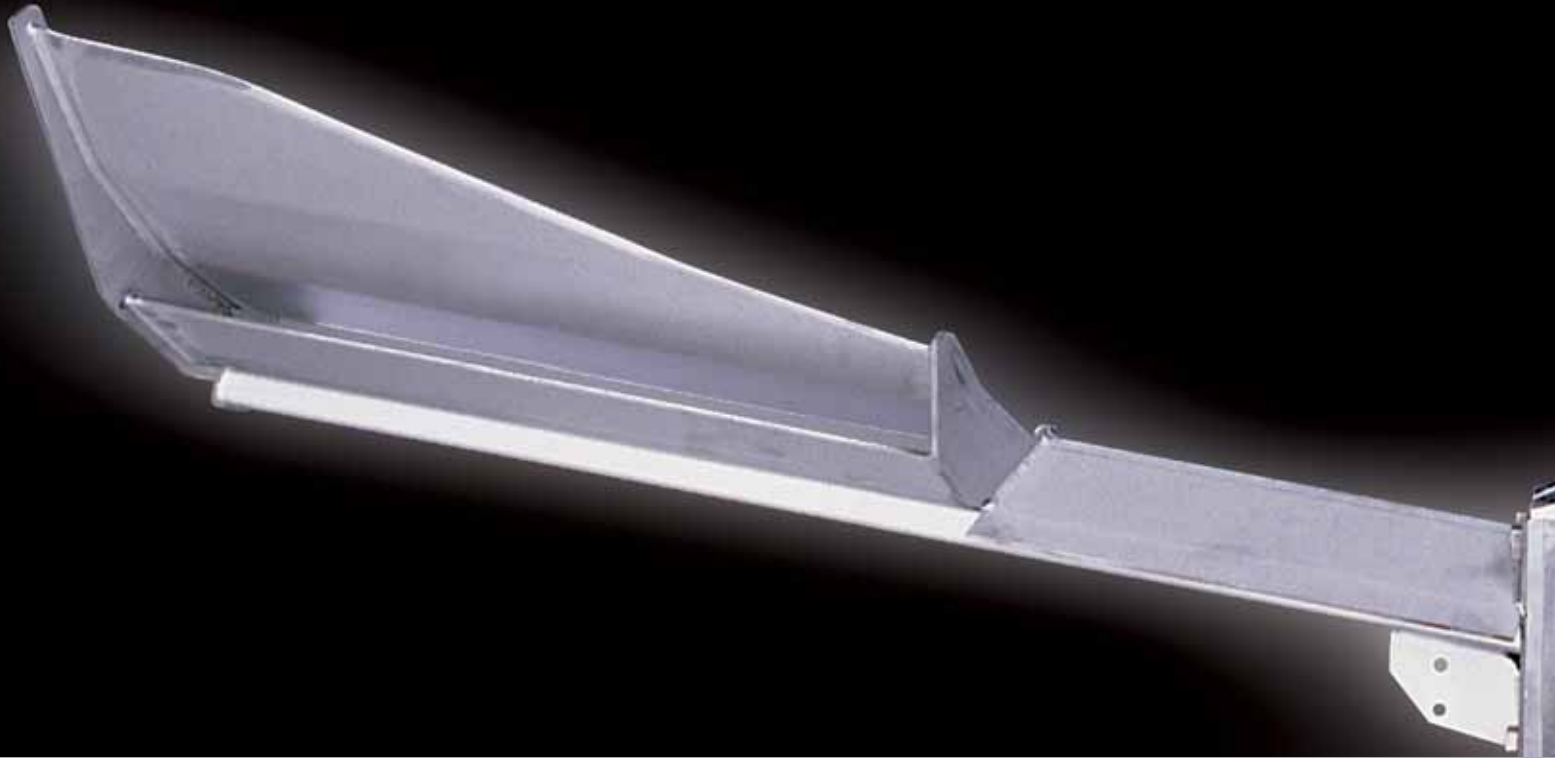
## Well-Tempered

The mash flows along the manifold vaulted heating surface of the mash tun. By this special construction, a micro-turbulent flow of the mash is obtained. Any overheating at the boundary layer is thus prevented. That way, the heat is taken up evenly (by the medium) and one obtains a temperature rise of max. 2,5 °K/min during the heating phase. Also, only low steam pressures of maximally 2 to 3 bar are required. This reduces fouling additionally and improves the quality of the mash. Another advantage is that the marginal fouling at the heating surfaces may be removed by fast and effective rinsing with water and extensive cleaning cycles interrupting the brew rhythm are dispensable.

Furthermore, we care about your flexibility – based on the freely adjustable heating surfaces even smaller quantities may be processed cost-effectively.

## Stirred Uniformly

An efficient enzymatic activity is only possible in a homogeneous mash in the temperature optimum. The design of the agitator brings about a shearing-force-reduced and gentle stirring effect with a constant temperature equalisation in vertical as well as in horizontal direction. Water jets integrated in the agitator blade promote the intensive heat transmission from the heating surface to the mash.



#### Busy times mash converter

Before conversion	144 min.
After conversion to ShakesBeer	104 min.

*Holding time ShakesBeer without intermediate cleaning 60 brews*

#### Excerpt from the acceptance protocol

Heating rates during mashing\*

		Mean value K/min	Steam pressure bar
Heating	63 → 71 °C	1,98	1,7–2,2
Heating	72 → 73 °C	2,00	1,7–2,3

*\*The heating rates were checked at different temperatures. These are, compared to conventional mashing plants, very high.*