



THE INTERNAL SHARK

BOILER

High-end Solution for Wort Boiling

Two Zones for Three Phases:

- Internal boiler design with two clever arranged heating zones allowing to heat outer jacket and inner cylinder separately
- Bundles with different tube diameters for optimum working conditions for all three wort boiling phases: heating, simmering and evaporation
- Venturi effects control circulation
- Operation with steam or with high temperature water possible

Advantages:

- Optimum wort quality
- Lowest thermal load values and minimized fouling
- Enables to more flexible and individual boiling programs





One essential feature of modern wort boiling is that this process, which is of crucial importance in terms of quality and economic efficiency, is divided into the following phases: heating, simmering and evaporation. Up to now, the use of an internal boiler has required extensive cleaning or, however, an active circulation by means of a pump. With its modified design, leading to a thermally forced flow, the new internal boiler SHARK copes with this challenge without presenting the above mentioned disadvantages.

SHARK

BY ZIEMANN



The internal boiler SHARK is equipped with two boiler zones, arranged concentrically to each other. The inner zone consists of a cylindrical peripheral wall, a circular bottom and a circular top. The outer boiler zone is designed as a hollow cylinder, consisting of a cylindrical internal and external wall and a circular bottom and top. Inside these two zones, the axially arranged boiler pipes are located. The boiler pipes of the inner zone have a smaller diameter than the pipes of the outer zone. Benefiting from the low impact pressure, the required two-phase flow starts rapidly in the thinner pipes of the inner zone. Due to the reduced diameter, the two-phase flow reaches a very high flow velocity. This high velocity results in the Venturi effect at the boiler outlet, "pulling" and circulating the wort actively through the boiler pipes.

Based on the optimized heating phase and the good flow through the boiler pipes, the internal boiler is resistant to fouling.

With SHARK, the master brewer is able to work flexibly and to implement his recipes and individual ideas without having to pay attention to any mechanical restrictions of the equipment.

SHARK is optimally suitable for new plants as well as for replacement investments because it can be operated with both steam and heating water without major technical efforts, but with maximum flexibility.

