



## NEWS FOR BREWERIES

### The Aeration Spider (fig.1)

It is not alive, but its aim is reproduction... of yeast cells in so-called propagators. Propagators are aerobic fermenters used to grow brewer's yeast in wort. As soon as the cell density has reached more than 10 Mio cells/cm<sup>3</sup>, the fermenting liquid is transferred to the beer fermentation vats.

The aeration spider is designed for sterilization by automatic cleaning systems (CIP, SIP); thereafter, it is free from living cells. It aerates the wort in a propagator with a conical bottom (90°). Aeration spiders can be installed in propagators with different sizes; the one shown in the above figure aerates a propagator with a total volume of 36 m<sup>3</sup>.



Fig.1: Aeration Spider

### The Foam-Shocker (fig. 2)

When wort is aerated foam is produced, a lot of unpleasant and unpleasant foam. This foam must not escape from the propagator. The aim of the mechanical defoamer is to stop the foam from escaping by splitting

it into liquid and air. The liquid is pumped back into the propagator, the air escapes into the atmosphere.

Like the aeration spider the foam shocker is designed to be cleaned and sterilized by the automatic cleaning systems CIP and SIP. Defoamers are produced in different sizes to fit the corresponding aeration systems.



Fig.2: Defoamer

## EASY DETERMINATION OF ALCOHOL CONCENTRATION IN VINEGAR AND MASH

### Alkomat (fig. 3)

Once you have used this instrument you will never again want to work with conventional methods, such as neutralization, distillation, pycnometry, or probing; the Alkomat is simply too fast and easy to handle. The sample to be analyzed, which has to be free from air bubbles, is sucked into a syringe and then injected into the analysis chamber of the Alkomat. After 1 - 2 minutes' waiting time the result is displayed on the Alkomat. The accuracy of the result obtained with the Alkomat is higher than 0.05% v/v. The teething troubles experienced during the introduction period are gone; now a stable, state-of-the-art software ensures a smooth operation.



Fig.3: Alkomat



## WHO OFFERS MORE ACIDITY?

### Single-stage high-strength vinegar fermentation

During our visits to customers it is fascinating to hear about high acidities being achieved that were considered to be impossible only a few years ago. The procedure used to achieve these high acidities is called single-stage high-strength fermentation. There is good reason to affirm that 18% acetic acid can be obtained regularly at the end of high-productivity fermentation cycles; some of our customers even boast an impressive 19% acetic acid and more. It is true that the quality of process control, of nutrients and aeration play an important role in this process; nonetheless, this inspiring success could never be achieved without the energy, commitment, and enthusiasm of our customers.

If high acidity is an important economic factor for you too, we will be pleased to help you.

### Redumax

Are you producing more than 10 Mio litres of vinegar (10%) per year? Are you using a Frings Micro-Crossflow filtration system? Then we have an interesting, new Frings product for you: the Frings filter REDUMAX. This small filter equipped with a special module allows to increase the bio mass concentration substantially.

Your benefit: You obtain an additional 80% of high-quality vinegar from a liquid which is difficult to treat otherwise. You reduce the negative effects on your wastewater treatment plant or the amount of neutralization agents needed.

## FRINGS INTERNAL INFORMATION

### Spare part supply for vinegar industry

Frings has been providing vinegar production equipment and plants for more than 80 years. At the beginning, closed wooden tanks filled with shavings of beech wood (generators) were used (until 1960). This technology has been replaced by submerged fermentation (Acetators), now the heart of a vinegar plant. As a result, there is an enormous variety of replacement parts Frings has to provide. Therefore, for all Frings plants exists a special documentation consisting of one file that contains all technical data, and a second file containing all instructions for installation, start-up and maintenance, the latter being handed out upon delivery of the plant. The second file contains the drawings and identification numbers. All replacement parts ordered by indicating the respective drawing and identification numbers can be identified without any problem. However, all spare parts ordered without any specification number, are hard to identify and therefore cost-intensive. Thus, please understand that we have to handle these cases as follows:

1. You give us at least the serial number and year of construction of your main reactor or Acetator, the assembly group or instrument the spare part is needed for. Frings will search the archives, copy and send out the relevant documentation. The costs arising will be charged to you as follows: 0.50 for Euro each copied page, minimum cost 25.00 Euro plus postage / carriage costs.
2. When spare parts or assembly groups are no longer available in their original form, Frings shall provide replacements with identical functioning. Parts manufactured at Frings are usually available over a period of 15 years.

Note: The more precise your description, the faster our response.

... Your Partner

