

FOAMEX CENTRIFUGES FOR MECHANICAL FOAM SEPARATION

GAS-/LIQUID-SEPARATION OF FOAM



Characteristics:

- For bioreactors and critical process units
- Installation in vessel heads or exhaust lines
- Separates foam into a gas and a liquid phase
- Avoids addition of antifoam agents
- Hygienic design for cleaning in place (CIP)
- Pressure design for sterilisation in place (SIP)
- GMP documentation on demand
- ATEX conformity if required

FOAMEX CENTRIFUGES FOR ADVANCED FOAM MANAGEMENT

Applications

FOAMEX systems are mainly used in fermentation plants. However, they have been also applied to a number of different other processes. Typically, they are used for:

- Reduction of chemical antifoam agents
- Enhancement of oxygen transfer in microbial fermentations
- Containment/filter protection in cell culture fermentations
- Foam level control in process vessels
- Maintaining vacuum in stirred tank evaporators
- Foam control in degassing units



FOAMEX 5 P for a 30 L Bioreactor



FOAMEX 10 P for a 150 L Bioreactor



FOAMEX 25 G for 300 L GMP Bioreactor



FOAMEX 300 B for 75 m³ Yeast Fermenter

Function and Installation

Foam enters the FOAMEX centrifuge directly from a (closed) tank or through a foam pipe. The foam is separated into a gas-fraction and a liquefied foam-fraction by aid of centrifugal forces inside a rotor. The gas leaves the device through a gas pipe while the foam concentrate is pumped through a spiral housing and a return pipe back into the vessel.

FOAMEX Designs

- G series: for GMP processes
- P series: for bioprocess plants
- B series: for brewery/bakery
- C series: for chemistry



Functional Sketch of a FOAMEX on the Head of a Pilot Scale Bioreactor

Sizing

Standardised sizes of FOAMEX systems are available for pilot scale bioreactors from 10 – 1,500 L. Connection flanges can be chosen from different options. For production plants a custom made design

will be carried out based on process and foam data and optionally on laboratory trials. Rotor diameter/height and motor size will be adapted to the specific defoaming task of the process.