

# SCANDI BREW

## CARLSBERG FLASK

### Application

To sterilize wort and propagate pure yeast culture for yeast propagation plants in laboratory scale.

### Construction

The Carlsberg Flask is available in the following standard size:

Net volume	Total volume	Diameter	Total height	Netweight
25 l	30 l	323 mm	535 mm	18,5 kgs

Other sizes on request.

Materials: Stainless steel AISI 304.

The Carlsberg Flask is constructed as a cylindrical container with flat bottom, suitable for placing on a gas burner or electric hot-plate.

The flask is closed with a top cover equipped as follows:

- 3 tightening handles
- Insulated lifting ring
- Breathing filter in st.st. with hygroscopic cotton filling
- Cock with aeration/emptying lance
- Membrane fitting for aseptic introduction of pure yeast culture or connection acc. to customer specification.

As standard the flask is supplied complete with connecting hoses and extra filter for sterile aeration.



The design of the flask enables an easy introduction into an autoclave.

Sterile air supply during inoculation into yeast propagation plant must not exceed 2 bar (29 psi).

### Operation

**I)** The flask is filled with wort to the net capacity corresponding to appr. 80% of the total volume. Sterilization takes place in an autoclave, on a gas burner or an electric hot-plate.

After sterilization the flask is placed in a refrigerator or a cold room in order to cool down the wort to the desired working temperature.

The breathing filter can remain mounted on the flask during sterilization, however, if the breathing filter has been sterilized separately it is important to remount it in the end phase of wort sterilization while steam is still evaporating from the flask so that the filter connection is also sterilized.

**II)** Aeration of the cold wort is made through the cock connected to the aeration lance. It is important to use sterile air and for safety reasons it is recommendable to pass a filter

### Benefits

- Hygienic design
- Wort sterilization in autoclave, alternatively on gas burner or electric hot-plate
- Suitable for wort aeration
- Providing safe conditions during transfer of yeast culture
- Easy to clean
- Handy construction
- Easy to transport

**Air supply and flow should be moderate in order not to create too much foam which must not enter the breathing filter as it will destroy the filter and may lead to blockage of same.**

Practical tests with open lid will normally be the easiest way to determine the right conditions for air supply as well as duration of aeration (normally less than 10 minutes). Wort from such tests should not be used.

**III)** When the wort is well aerated yeast culture can be introduced aseptically through the membrane fitting by means of a syringe with a content of 150200 ml.

In case bigger quantity of yeast is needed the lid can be dismantled and the culture poured into the flask - this procedure requires sterile surroundings and maximum precautions.

**IV)** The transfer of pure yeast culture into the propagation plant should take place at 'high kr@ussend' stage under aseptic conditions. This procedure requires sterile air supply to the breathing filter and the yeast culture can be pressed from the flask into the inoculator when the cock on the lid of the Carlsberg Flask has been connected to a sample device on the receiving vessel (the inoculator),

Connecting hose, cocks, and all connections must be thoroughly sterilized before this transfer takes place.

**Please observe that air supply must not exceed 2 bar.**

When the connection has been established and the inoculation is to take place we recommend

that the sterile air supply is opened first, thereafter the cock on top of the flask and finally the sample device on the inoculator are opened.

When the culture has been transferred (this can be noticed as bubbling noise in the inoculator) we recommend to continue with air supply for another 1-2 minutes in order to be sure that all the culture is transferred.

Finally the sample device on the receiving vessel and the cock on the Carlsberg Flask can be closed, thereafter air supply is stopped.

### Cleaning

After use, the Carlsberg Flask must be taken apart and cleaned manually with normal detergents.

### Mounting

During transfer of pure yeast culture from the Carlsberg Flask to the yeast propagation plant it is important that all hose tails are fastened strongly and safely with hose clips.

### Maintenance

Be sure that the filter is clean and intact before use; if not change it.

The tightening washer in the lid as well as the membrane of the sample fitting should be checked regularly for signs of wear.

The cock should be disassembled regularly and lubricated with grease of food quality.

### Extra Equipment

- Silicone hoses
- Other type of breathing and aeration filters on request.

