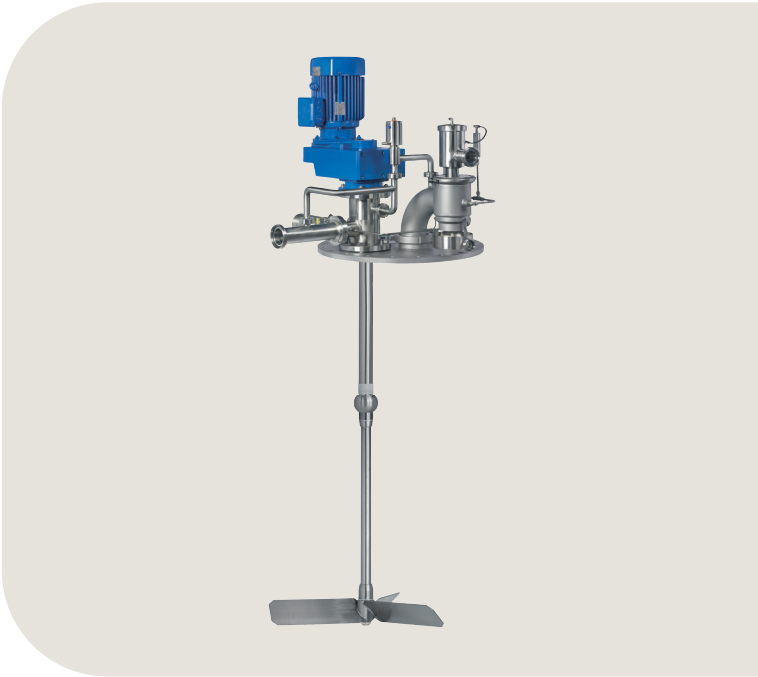
Alfa Laval ALT-SB-15

Scandi Brew Agitator

Application

The hygienic agitator/yeast mixer is used for conditioning and mixing of harvest yeast in small and medium scale storage tanks obtaining a homogeneous slurry with uniform temperature and consistency. Optional facility to aerate or acid wash through propeller nozzles is available. The mixer is designed for mixing yeast slurry with a wet solids content of 25-55 vol/vol%



Design

The mixer comprises gear motor, gear console with separate entry for sterileair and CIP and CIP pipe with spray ball penetrated by the hollow mixer shaft with propeller unit. Shaft end propeller with CIP nozzles.

The type 15 mixer has no sanitary tripod support welded into the tank bottom. For larger tanks more propellers are used to ensure correct homogenisation.

During cleaning there are no CIP shadow areas caused by the propeller shaft or propeller blades as these parts are integrated in the cleaning.

Benefits:

- No tripod meaning no welding in the tank cone.
- Integrated cleaning of mixer with no CIP shadow areas.
- Individual mixer design as per tank details and yeast consistency.
- Propeller blade designed for optimal mixing.
- Optional aeration through shaft end propeller nozzles
- Optional acid washing through shaft end propeller nozzles
- Improved tank cooling-efficiency

Working principle

For low viscous yeast optimal mixing efficiency is obtained by interval agitation. In order to minimize mechanical stress of the yeast cells and oxygen pick-up, the agitation should normally be restricted to the cooling down period and prior to pitching. During storage agitation is only needed once in a while to keep the suspension homogeneous.

If equipped with the optional aeration housing, it is possible to aerate through the shaft end propeller nozzles when agitating. Due to the efficient agitation, this facility may also be employed for pH lowering of the yeast suspension through acid washing.

Mounting

The SCANDI BREW® top-entry mixer is mounted either as a stand alone equipment on the tank top or alternatively as an integrated part of the top plate. To ensure optimum mixing it is recommended to install the mixer slightly off centre (125 mm).

Detailed mounting instructions and installation tools for fixing mixer shaft during installation are required for correct mounting.

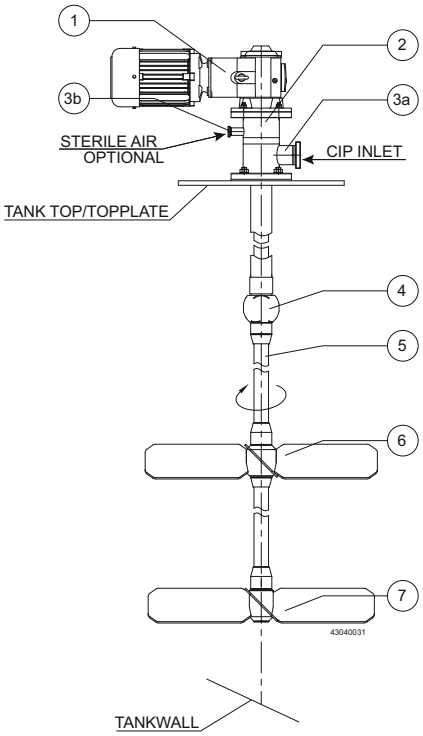
Cleaning/Sterilization

Hot caustic cleaning (approx. 65°C) is recommended. Max. cleaning temperature is 90°C when mixer is running. During cleaning the main part of liquid is lead through the CIP-pipe to the spray ball while a smaller amount is lead through the hollow shaft to the shaft end nozzles. The shaft is cleaned outside from a slot in the spray ball bearing. If an upper propeller is included, same is cleaned by cleaning nozzles sitting on the lower propeller. In this way a proper cleaning of the mixer shaft in- and outside as well as the propeller(s) is ensured. The mixer should always run during CIP.

If required, the arrangement is steam or hot water sterilisable as well, during this procedure the mixer **must stand still**

Specifications

Materials:	Stainless steel EN 1.4404/AISI 316L (standard). All other parts in contact with product are FDA approved.
Standard propeller speed:	60-140 rpm
Power supply:	400 V, 50 Hz (standard)
Motor size:	0.25 - 2.2 kW
CIP supply:	Capacity and inlet pressure:
Without aeration:	13 m^3/h at 2 bar (29 psi) 13 m^3/h at 2 bar (29 psi)
With aeration:	17 m^3/h at 2 bar (29 psi) 21 m^3/h at 3 bar (44 psi)



Pos. 1: Gearmotor
Pos. 2: Gear console
Pos. 3a: CIP entry
Pos. 3b: Aeration entry (optional)
Pos. 4: Spray ball with shaft bearing
Pos. 5: Hollow mixer shaft
Pos. 6: Extra propeller included if necessary
Pos. 7: Shaft end nozzles for CIP, air or acid

Optional equipment

- Built-in aeration valve for aeration/acid washing
- Propeller shaft with extra intermediate propeller unit for larger tanks
- Installation tool

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