



Efficient Mixing and Agitation

Alfa Laval Bottom mounted agitators Type ALB

Applications

| Application | Typical examples |
|----------------------------------|--|
| Maintain media homogeneous | Milk storage tanks, mixed product tanks, UHT storage tanks etc. |
| Mixing and Solutions (dissolves) | Fluid and fluid mixing, i.e. drinking yoghurt and fruit mix tanks, flavoured milk mix tanks, syrup mix tanks, etc. |
| Solid Dispersion | Powder + fluid mix tanks, etc. |
| Suspension | Fluids with particles, i.e. juice tanks |
| Heat transmission | Circulation of media in tanks with dimple jacket (cooling or heating) |



TECHNICAL DATA

Motor

Motor size and speed as required for duty.
As standard with IEC motor IP55, other types on request.
As standard painted RAL5010.

Voltage and frequency

As standard for 3x380 to 420V, 50Hz - 3x440V to 480V, 60Hz.
All motor voltages and frequencies are available.

Gears

Different gear types available according to configuration.
As standard filled with normal synthetic or mineral oil, optional: Food approved oil. As standard painted RAL5010.

ATEX - option

Agitators can be delivered approved for use in an ATEX environment with declaration of conformity according to directive 94/9/EC.

Ordering

The following information is required to ensure correct sizing and configuration for ordering:

- Tank geometry
- Product properties
- Task of agitator
- Enquiry forms are available



PHYSICAL DATA

Materials

List the range of materials available for wetted parts:

Steel parts: AISI 316L (standard)
AISI 304
AISI 904L
SAF 2205
Other materials on request.

Seal rubber parts

(o-rings or bellows): EPDM
FPM/FEP (only for stationary o-rings)
FPM
Other materials on request.

Specific selection of materials will depend on the actual configuration selected.

Material certificate - option

3.1 Material certificates/FDA conformity statement according to 21 CFR177 on steel/elastomer parts in contact with media

Dimensions

Standard propeller diameter range: \varnothing 125 mm to 1900 mm.
Specific dimensions on the drive unit and propeller(s) will depend on the actual configuration selected.

Standard design

The Alfa Laval range of bottom mounted propeller agitators is designed to meet almost every customer requirement. Due to their modular build the agitators can be designed for every type of application with the sanitary industry. The modular construction is designed with the aim to meet both European and American standards and regulations, such as EHEDG, USDA, FDA, 3A etc.

Configurable design

Type ALB agitator design is fully configurable divided in the following elements:

- Drives (drive + shaft support + shaft diameter)
- Seal arrangements (oil trap + shaft seal type)
- Shaft (length)
- Energy Saving Foils (propeller type + surface finish)
- Options

Each element has a broad range of different characteristics which makes it possible to size the agitator for all applications and requirements.

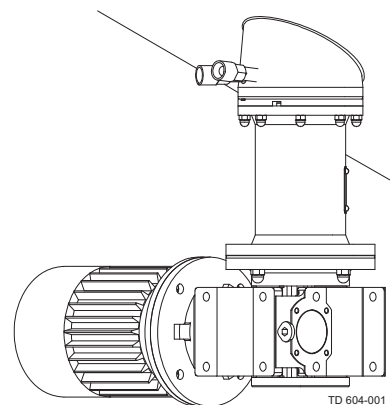
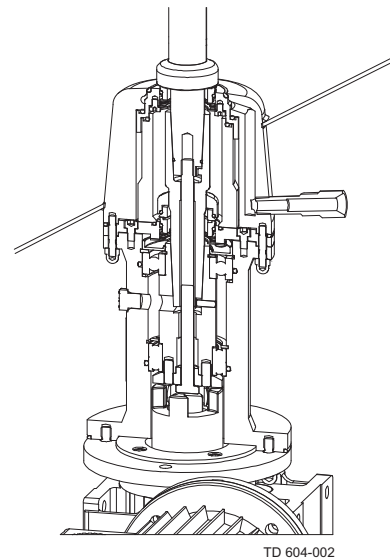
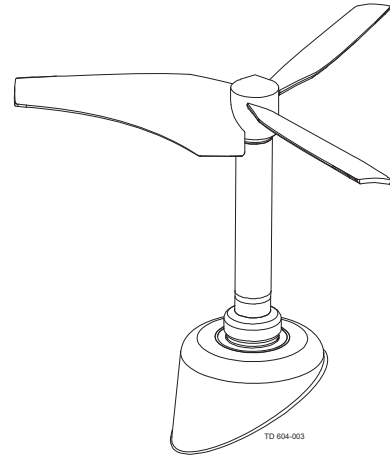
Advantageous and profitable design

Each configuration offers a number of advantages, which are shown in the examples below:

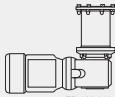

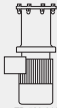
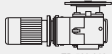
| Operation features | Due to |
|--------------------------|--|
| Low energy consumption | the wide range of high efficiency propellers and drive units makes it possible to design for low operational costs |
| Gentle product treatment | the wide range of high efficiency propellers makes it possible to design for low shear operation |

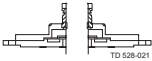
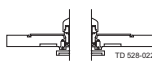
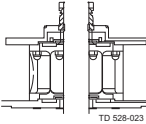
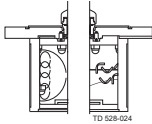
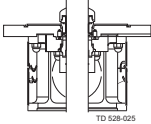
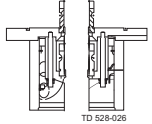
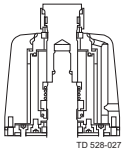
| Sanitary features | Due to |
|--|--|
| Easy external cleaning | stainless steel bearing frame design with seal O-rings (for washing) |
| Connections inside the tank (risk zones) can be minimised | bearing frame drives with drive shaft and special internal shaft connection without having a flange coupling inside the tank |
| All seals both stationary and rotating seals are sterilised during running | the unique cone shaped seal arrangement with flushed sterile seal system |
| Good drip off properties | no plane surfaces or grooves on internal parts |
| Easy cleaning | no interior shadow sides between the blades and smooth surfaces |


| Maintenance features | Due to |
|---|--|
| All service (replacement of wearing parts such as shaft seals, bearings etc.) can be done from outside the tank | bearing frame drives with detachable shaft which can be dismantled from outside the tank |
| Easy dismantling | use of spider type coupling and stainless steel parts |









Type ALB Configuration Bottom mounted agitators

| Drives | | | | |
|---|--|---|---|---|
| Bearing frame size = xx Shaft diameter = yy (not used if xx = yy) |  |  |  |  |
| Description (power, speed and shaft diameter depending on application) | -ME-GR-Bxx(yy) Right angle gearbox, shaft mounted in hollow shaft of gearbox | -ME-GC-Bxx(yy) Stainless steel bearing frame and coaxial gearbox | -ME-Bxx(yy) Stainless steel bearing frame and direct motor drive | -ME-GR-yy Right angle gearbox, shaft mounted in hollow shaft of gearbox |

| Seal arrangements | | | | | | | |
|--|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |
| | F-S1- | F-S2- | LF-S1- | LF-S2- | LF-D- | LF-DT- | C-D- |
| Description (lower flange and seal material depending on application) | Seal flange with O-ring seal against tank flange, drain, fluid trap and shaft seal: single mechanical bellow seal | Seal flange with O-ring seal against tank flange, drain, fluid trap and shaft seal: single mechanical non-bellow seal | Lantern (spacer), seal flange with O-ring seal against tank flange, drain, fluid trap and shaft seal: single mechanical bellow seal | Lantern (spacer), seal flange with O-ring seal against tank flange, drain, fluid trap and shaft seal: single mechanical non-bellow seal | Lantern (spacer), seal flange with O-ring seal against tank flange, drain, fluid trap and shaft seal: double mechanical seal for high pressure applications and aseptic use | Lantern (spacer), seal flange with O-ring seal against tank flange, drain, fluid trap and shaft seal: double mechanical seal (tandem) for low pressure applications | Cone shaped welding flange, flushed O-ring seal between welding flange and agitator seal house, drain, fluid trap and shaft seal: double mechanical sterile seal for high pressure applications and aseptic use |

| Shaft | |
|--|---|
| Length = llll |  |
| Description (material depending on application) | -Slll- SS shaft, length according to application |

| Energy Saving | | | |
|--|---|--|---|
| Foils | | | |
| Diameter = vv (125 mm to 1900 mm) |  |  |  |
| Description (material depending on application) | -PvvU3P 3 - bladed propeller, finish: polished Standard: Ra < 0.8 µm | -PvvU3PE 3 - bladed propeller, finish: polished and electro polished Standard: Ra < 0.8 µm | -PvvU3G 3 - bladed propeller, finish: shot peened |

| Optional | | | | |
|-------------|---|---|---|-------------------------|
| |  |  |  | S |
| | Welding flange | Blind flange | Cover for Motor / gear motor | Spare part kit |
| Description | Incl. mounting pin nuts and bolts | Incl. seal O-ring | Stainless steel cover - comes in different shapes according to drive type | Standard spare part kit |

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ESE00217EN 1507

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