



# Alfa Laval Side mounted agitators Type ALS

Efficient Mixing and Agitation

## Application

Application	Typical examples
Maintain media homogeneous	Milk storage tanks, cream tanks, mixed product tanks, UHT product 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 protein + oil mix tanks, micro salt + milk product mix tanks, etc.
Suspension	Fluids with particles, i.e. juice tanks, crystallising tanks etc.
Heat transmission	Circulation of media in tanks with dimple jacket (cooling or heating)
Dairy Fermentation (break coagula + mixing)	Yoghurt tanks, cheese culture tanks, crème fraîche, etc.



## 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.

### 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

Available materials:

Steel parts: . . . . . AISI 316L (standard)  
Other materials on request.

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

Mechanical seal parts: . . . . . Carbon  
Carbon (FDA)  
Silicon carbide

### Certificates

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

### Dimensions

Propeller standard 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 side mounted propeller agitators is designed to meet almost every customer requirement. Due to their modular build, the agitators can be designed for every kind of application within the hygienic 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

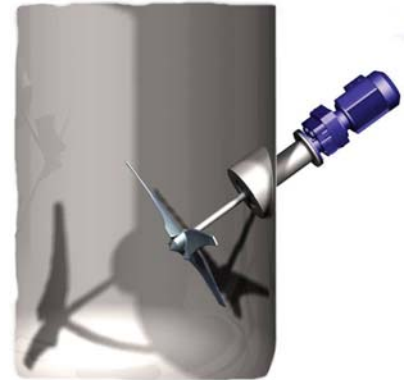
Type ALS agitator design is fully configurable divided in the following elements:

- 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

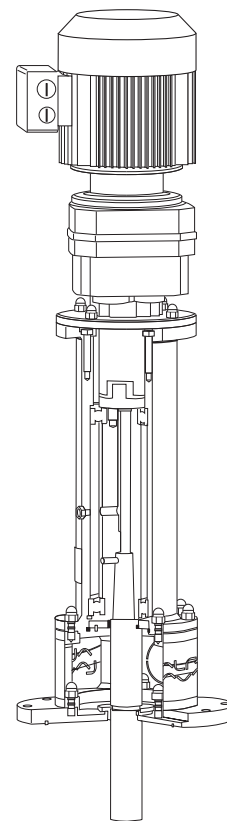
Each configuration offers a number of advantages, which are shown in the examples below:



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

Hygienic features	Due to
Easy external cleaning	stainless steel bearing frame design with O-ring seal (for wash down)
Connections inside the tank (risk zones) can be avoided	bearing frame drives with drive shaft and special internal shaft connection without having a flange coupling inside the tank
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 wear parts such as shaft seals, bearings etc.) can be done from outside of the tank	bearing frame drives with detachable shaft which can be dismantled from outside of the tank
Easy dismantling	use of spider type coupling and stainless steel parts (no corrosion)



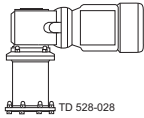
Type ALS

Configuration

Side mounted agitators

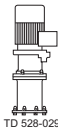
Drives

Bearing frame size = xx  
 Shaft diameter = yy  
 (not used if xx = yy)



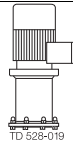
-ME-GR-Bxx(yy)

Stainless steel bearing frame and right angle gearbox



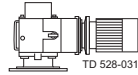
-ME-GC-Bxx(yy)

Stainless steel bearing frame and coaxial gearbox



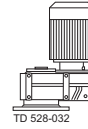
-ME-Bxx(yy)

Stainless steel bearing frame and direct motor drive



-ME-GR-yy

Right angle gearbox, shaft mounted in hollow shaft of gearbox



-ME-GP-yy

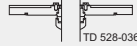
Parallel shaft gearbox, shaft mounted in hollow shaft of gearbox

Seal arrangements



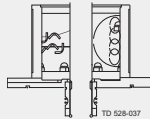
F-S1-

Description Seal flange with O-ring seal against tank flange, drain, oil trap (only geared versions) and shaft seal: single mechanical bellow seal



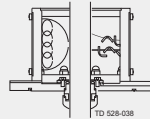
F-S2-

Description Seal flange with O-ring seal against tank flange, drain, oil trap (only geared versions) and shaft seal: single mechanical non-bellow seal



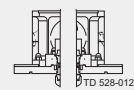
LF-S1-

Description Lantern (spacer), seal flange with O-ring seal against tank flange, drain, oil trap (only geared versions) and shaft seal: single mechanical bellow seal



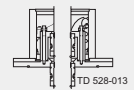
LF-S2-

Description Lantern (spacer), seal flange with O-ring seal against tank flange, drain, oil trap (only geared versions) and shaft seal: single mechanical non-bellow seal



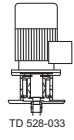
LF-D-

Description Lantern (spacer), seal flange with O-ring seal against tank flange, drain, oil trap and shaft seal: double mechanical seal for high pressure applications and aseptic use



LF-DT-

Description Lantern (spacer), seal flange with O-ring seal against tank flange, drain, oil trap and shaft seal: double mechanical seal (tandem) for low pressure applications



-ME-yyLF-S1-

Description Direct motor drive, shaft connected directly to motor, lantern (spacer), seal flange with O-ring seal against tank flange, drain and shaft seal: single mechanical bellow seal

Shaft



TD 528-034

Length = llll -Slll-

Description SS shaft, length

(material depending on application) according to application

Energy Saving

Foils

Diameter = vv (125 mm to 1900 mm)



TD 528-001

-PvvvD3P

Description 3 - bladed propeller, finish: polished Standard: Ra < 0.8 µm



TD 528-001

-PvvvD3PE

Description 3 - bladed propeller, finish: polished and electro polished Standard: Ra < 0.8 µm



TD 528-001a

-PvvvD3G

Description 3 - bladed propeller, finish: shot peened

Optional



TD 528-005

Welding flange

Description Incl. mounting pin bolts and nuts



TD 528-006

Blind flange

Description Incl. O-ring seal



TD 528-007

Cover for Motor / gear motor )

Description Stainless steel cover - comes in different shapes according to drive type

S

Spare part kit

Description Standard spare part kit



Alfa Laval reserves the right to change specifications without prior notification.

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**How to contact Alfa Laval**

Contact details for all countries  
are continually updated on our website.  
Please visit [www.alfalaval.com](http://www.alfalaval.com) to  
access the information direct.