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Efficient Mixing and Agitation

Alfa Laval Side mounted agitators Type ALS



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)
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.

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: ø125 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

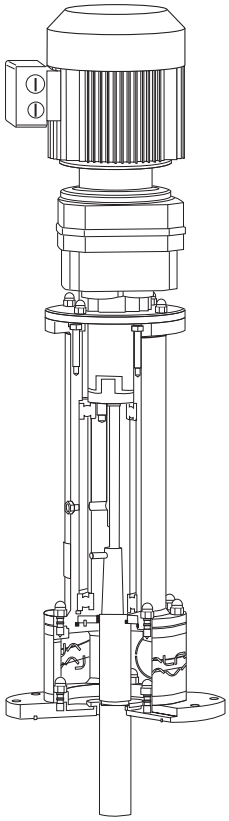
Each configuration offers a number of advantages, which are shown in the examples below:

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 dismounted from outside of the tank
Easy dismantling	use of spider type coupling and stainless steel parts (no corrosion)



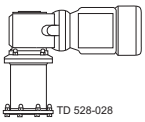


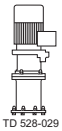
Drives

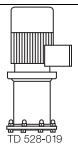
Bearing frame size = xx

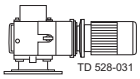
Shaft diameter = yy

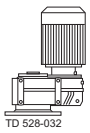
(not used if xx = yy)


TD 528-028


TD 528-029


TD 528-019

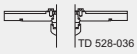

TD 528-031

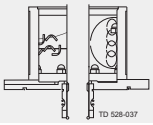

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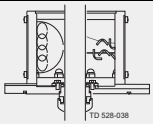
	-ME-GR-Bxx(/yy)	**-ME-GC-Bxx(/yy)**	**-ME-Bxx(/yy)**	**-ME-GR-yy**	**-ME-GP-yy**
Description (power, speed and shaft diameter depending on application)	Stainless steel bearing frame and right angle gearbox	Stainless steel bearing frame and coaxial gearbox	Stainless steel bearing frame and direct motor drive	Right angle gearbox, shaft mounted in hollow shaft of gearbox	Parallel shaft gearbox, shaft mounted in hollow shaft of gearbox

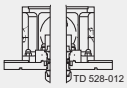
Seal arrangements

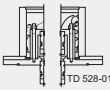

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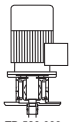

TD 528-036


TD 528-037


TD 528-038

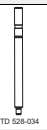

TD 528-012


TD 528-013


TD 528-033

	F-S1-	**F-S2-**	**LF-S1-**	**LF-S2-**	**LF-D-**	**LF-DT-**	**-ME-yyLF-S1-**
Description (lower flange and seal material depending on application)	Seal flange with O-ring seal against tank flange, drain, oil trap (only geared versions) and shaft seal: single mechanical bellow seal	Seal flange with O-ring seal against tank flange, drain, oil trap (only geared versions) and shaft seal: single mechanical non-bellow seal	Lantern (spacer), seal flange with O-ring seal against tank flange, drain, oil trap (only geared versions) and shaft seal: single mechanical bellow seal	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	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	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	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

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

Energy Saving Foils

Diameter = vvv (125 mm to 1900 mm)


TD 528-001


TD 528-001


TD 528-001a

	-PvvvD3P	**-PvvvD3PE**	**-PvvvD3G**
Description (material depending on application)	3 - bladed propeller, finish: polished Standard: Ra < 0.8 µm	3 - bladed propeller, finish: polished and electro polished Standard: Ra < 0.8 µm	3 - bladed propeller, finish: shot peened

Optional


TD 528-005


TD 528-006


TD 528-007

S

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