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# AGITMIM

Agitation and mixture



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**MD / MDN**

## Vertical agitators



MD and MDN direct motor vertical agitators are designed to prepare reagents in small volume vessels. The main characteristics of these agitators is that they are basic, very compact and lightweight but with high performance, making them ideal to attach directly on HDPE vessels.

The connection system between the motor and the shaft using a coupling sleeve makes maintenance tasks easier. The interchangeability of the agitating components makes these units highly versatile and adaptable to different agitating requirements. The MD and MDN units can be used to make dilutions, dissolutions, homogenisations and agitations of mixes thanks to the high turning speed of the impeller.

MD and MDN agitators are used mainly in water treatment, and can also be found in the food industry.

### CHARACTERISTICS

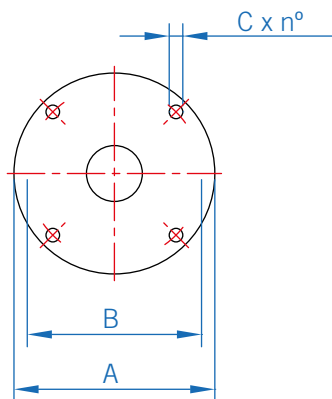
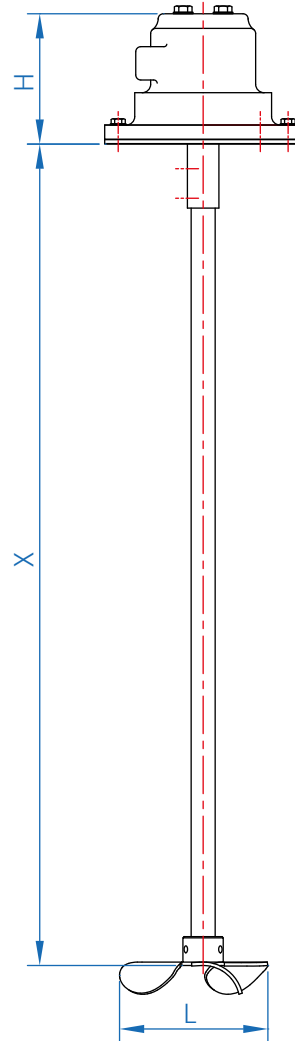
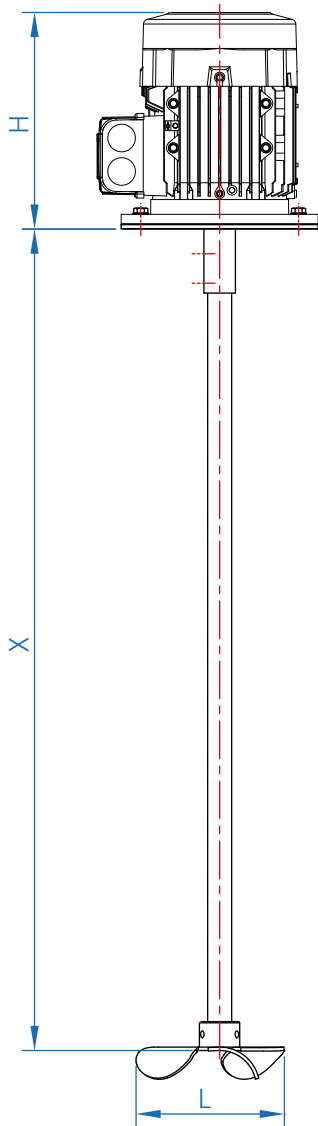
- IEC Motor flange
- Direct motor
- Simplicity of parts
- Easy assembly/dismounting
- MARINE propeller
- Interchangeability of agitator components

### MATERIALS

Shaft/propeller material stainless steel AISI 316

### OPTIONS

- Other materials
- Control panel
- Pneumatic motor (MDN agitator)
- V-ring sealing
- Other types of propeller
- Propeller and shaft cover
- Manual/automatic elevation system
- Polyethylene tank
- Casing



**IEC FLANGE AGITATOR  
BASE**

OVERALL DIMENSIONS				
FLANGE	A	B	C	n°
<b>IEC 160</b>	160	130	9	4x90°
<b>IEC 200</b>	200	165	11	4x90°
<b>IEC 250</b>	250	215	9	4x90°

**SB / SBR / SBN**

## Vertical agitators



Within the wide range of vertical agitators, INOXMIM has developed SB, SBR and SBN portable agitators to provide a high level of agitating in small volume vessels. Thanks to their compact design and simple clamp anchoring system, they are ideal for agitating open vessels, dispersing reagents and powders, and maintaining mixes. The bolstering tower extends the working life of the motor, increasing its resistance and allowing a longer shaft length.

The agitator fitted in these models means they can be widely used in the water treatment, chemical, food, pharmaceutical and cosmetics industries. Moreover, the semi-shaft transmission system facilitates the interchangeability of agitator elements whenever different vessels and/or applications are used. The result is a high degree of sanitisation.

### CHARACTERISTICS

- MARINE propeller
- Anchor clamp
- Bolstering tower
- Lip seal
- Easy assembly/dismounting
- Interchangeability of agitator components
- Lightweight portable unit
- Direct motor (SB) / Geared motor (SBR)

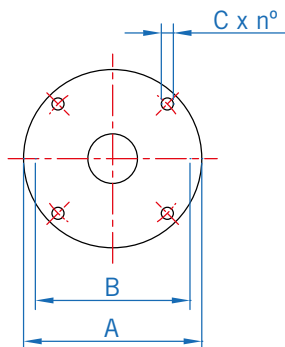
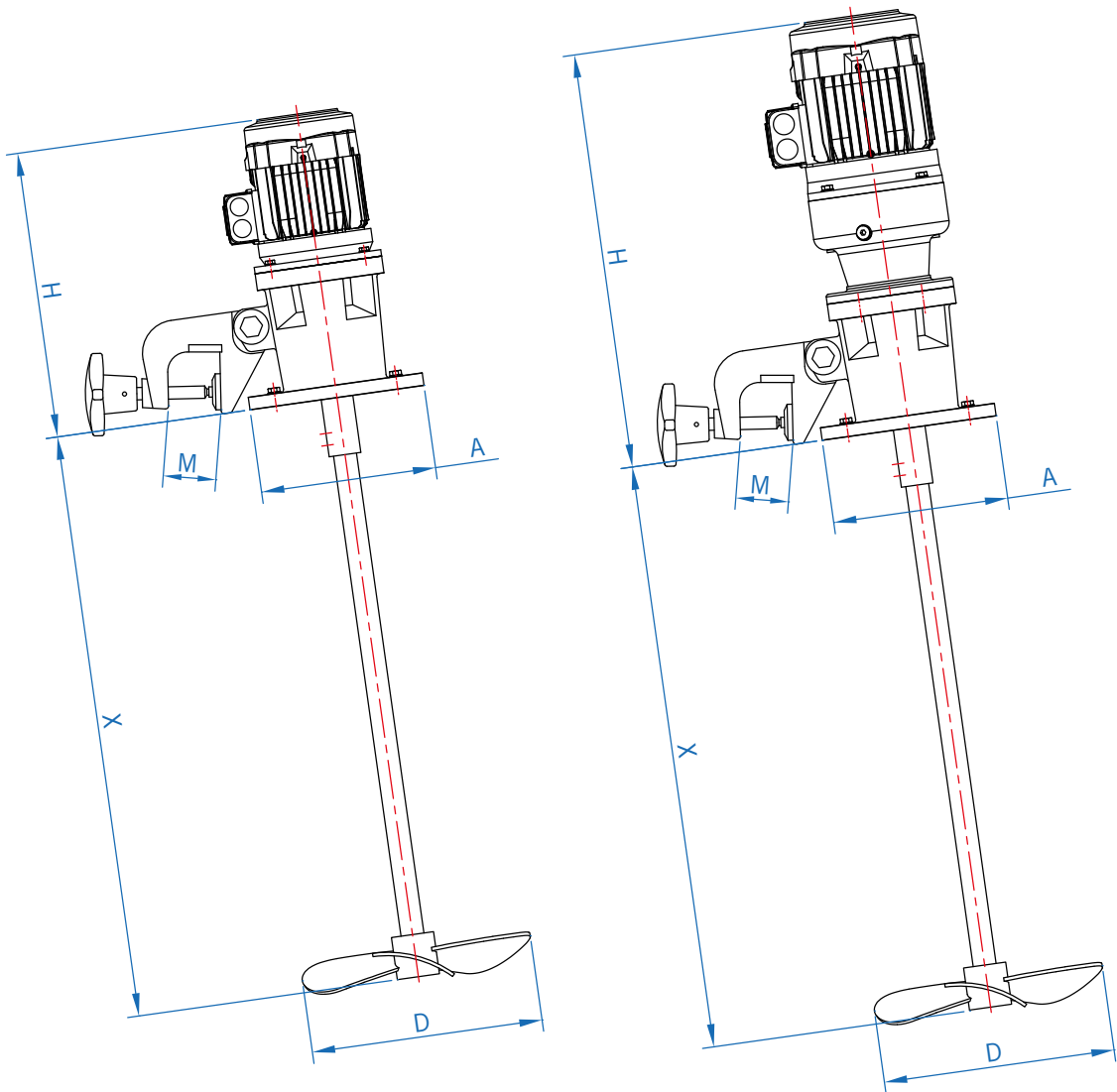
### MATERIALS

- Shaft/propeller material SS AISI 316
- Turret material: Cast aluminium

### OPTIONS

- Control panel
- Pneumatic motor (SBN agitator)
- Propeller and shaft cover (PVC, PE or resin)
- Other types of propeller





DN 50 FLANGE AGITATOR BASE

OVERALL DIMENSIONS					
FLANGE	A	B	C	n°	M
DN50	165	128	13	4x90°	40

**VAI / VSI / VDI / VSIN**

**Vertical agitators**



In order to satisfy the extensive requirements of the agitating and mixing field, INOXMIM has designed VAI, VSI, VDI and VSIN vertical agitators, which are ideal for preparing reagents. The main characteristic of these units is their bolstering tower system, which significantly extends the working life of the motor and allows a longer shaft. This system is fitted with a semi-shaft which transmits the traction generated by the motor to the shaft. This, along with the lip seal guiding system in the tower, guarantees the robustness of the unit and its high agitating capacity.

MODEL	DRIVE	GEARED MOTOR
<b>VAI</b>	Electrical motor < T90	-
<b>VSI</b>	Electrical motor > T90	-
<b>VDI</b>	Electrical motor	Coaxial gears
<b>VSIN</b>	Pneumatic motor	-

The simplicity of the parts and the shaft coupling system facilitate maintenance work and operation with a high degree of sanitisation. Thanks to these characteristics, these units are widely used in the food, cosmetic, pharmaceutical and chemical industries for agitation of dosing vessels, dispersion of reagents, maintenance of mixes and dissolution of solid products.

**CARACTERISTICS**

- DN50 DIN 2576 PN10 Anchor flange
- Direct motor or geared motor
- Level of finish: Industrial / Foodstuff / Sanitary
- Bolstering tower
- Semi-shaft
- Easy assembly/dismounting
- High degree of hygiene
- Interchangeability of agitator components

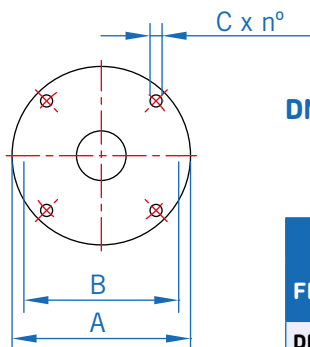
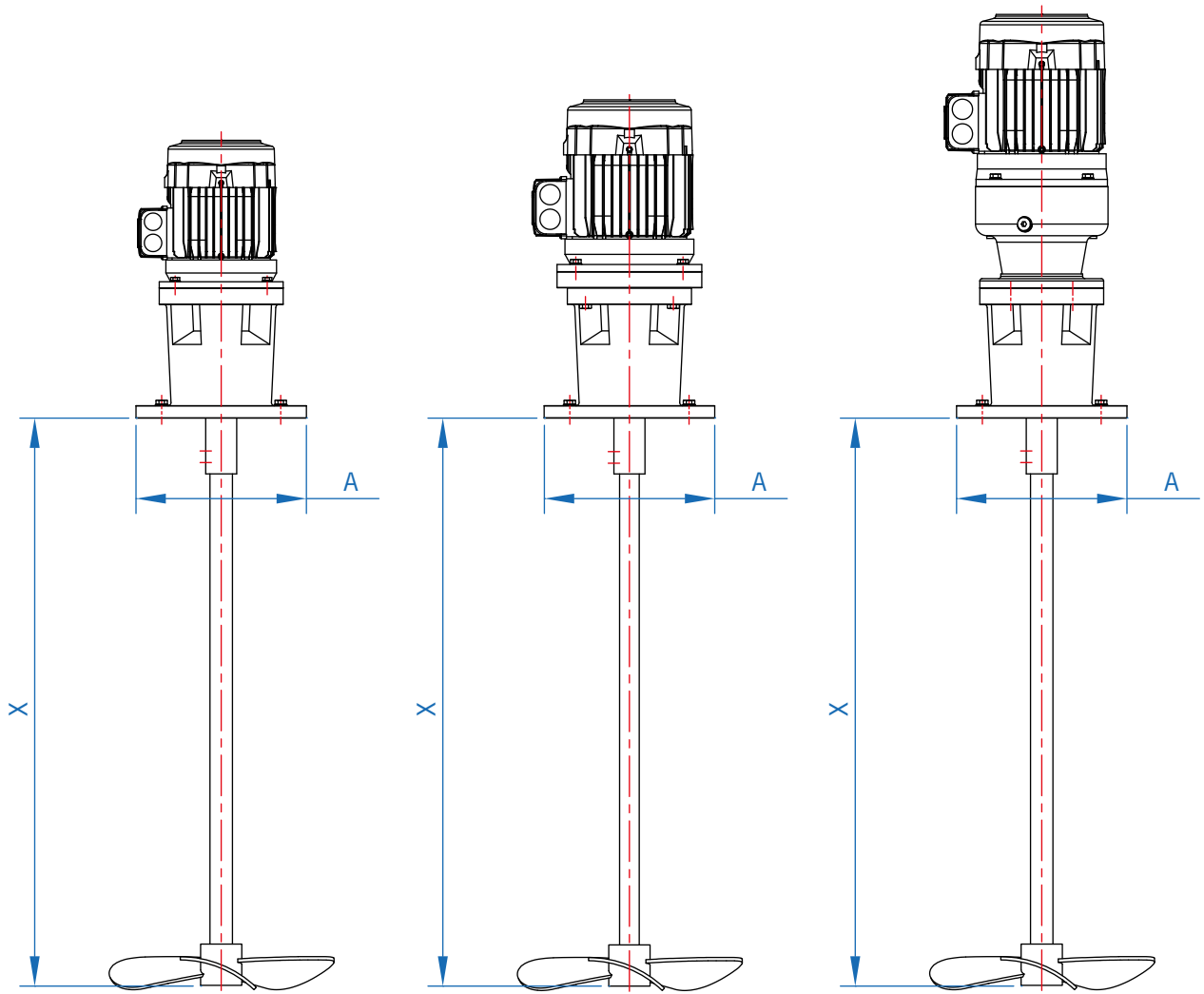
**MATERIALS**

- The propeller and shaft are made from stainless steel AISI 316
- The other parts are made from stainless steel AISI 304
- Aluminium tower

**OPTIONS**

- Pneumatic motor (VSIN)
- Control panel
- Propeller and shaft cover (PVC, PE or resin)
- Manual/automatic elevation system
- Stainless steel casing
- PEHD tank

OVERALL DIMENSIONS AND CHARACTERISTICS OF THE VAI, VSI AND VDI MODELS



DN 50 FLANGE AGITATOR BASE

OVERALL DIMENSIONS				
FLANGE	A	B	C	n°
DN50	165	128	13	4x90°



**VMD / VMR**

## Vertical agitators



Within its wide range of vertical agitators, INOXMIM has designed the VMD and VMR agitators to satisfy agitating and homogenisation requirements in medium volume vessels (2000-15,000 litres).

VMD and VMR agitators are fitted with a lip sealing system which, along with the bolstering tower and semi-shaft transmission, provide high agitating performance and capacity and also extend the working life of the unit. Their characteristics mean a wide variety of impeller elements can be used, working with high viscosity products which tend to form lumps or which are difficult to mix.

These units are capable of carrying out a wide range of operations including dilution, dissolving, reagent mixes, product maintenance, etc. For these reasons, these agitators are extensively used in water treatment and in the food, chemical, pharmaceutical and cosmetic industries.

Some examples of applications which can be carried out are as follows:

- Dissolving of sugar (in milk, wine, juices, etc.), cocoa powder, reagents, salt in water, calcium hydroxide, etc.
- Dilution of pigments, additives, colorants, etc.
- Preparation of sodium hypochlorite/calcium, thickeners, adhesives, syrups, gels, creams, distilled drinks.
- Asphalt emulsion
- Slicing fruit and vegetables
- Mixing and maintaining acidic, basic or corrosive products.

### CHARACTERISTICS

- DIN 2576 PN10 Anchor flange
- Tower for bearings
- Lip seal
- Semi-shaft
- Level of finish: Industrial / Foodstuff / Sanitary

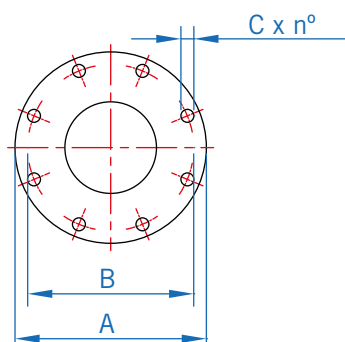
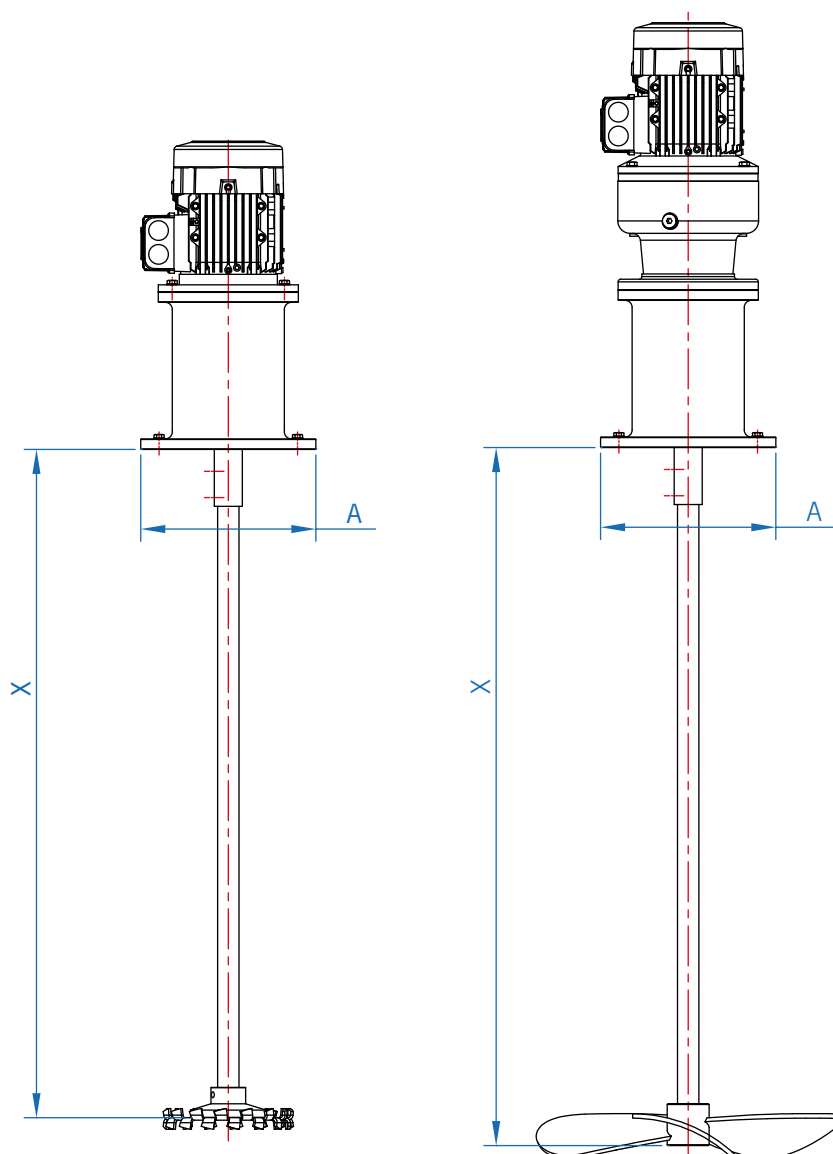
### MATERIALS

- Shaft/propeller material stainless steel AISI 316
- Aluminium tower

### OPTIONS

- Control panel
- Anchor flange: square, IEC type
- Other materials: AISI 304L
- V-ring sealing
- Mechanical or frequency variator
- Propeller/shaft cover (PP, PE, PVC, resins, etc.)
- Lip seal with splash safety
- Stabiliser ring
- Stainless steel casing

## DIMENSIONS OF THE VMD / VMR MODEL



### FLANGE AGITATOR BASE

OVERALL DIMENSIONS				
FLANGE	A	B	C	n°
<b>DN125</b>	250	210	16	4x90°
<b>DN200</b>	340	295	18	8x45°
<b>DN250</b>	395	350	22	12x30°

**IBC**

# Vertical Agitator

IBC vertical agitators are widely used in pharmaceuticals industry because of their high performance and efficient agitation plus their low cost. The high versatility of these agitators comes from the different sizes, the range of impeller types and the coaxial geared-motor, which has a wide range of selectable speeds.



### APPLICATIONS

The IBC design changes in line with agitation characteristics and application requirements, with one or more impellers of the same or different kinds being used to provide the agitation required for each system. The level of finish and the design of the agitator ensure safety conditions and high degrees of hygiene. All these characteristics make the IBC highly recommended for the following operations:

- Dilutions, dissolutions and homogenizations
- Product maintenance
- Suspensions
- Chemical product homogenization
- Temperature homogenization

### CHARACTERISTICS

Level of finish: Sanitary  
IEC Anchor flange  
Coaxial gears gearbox  
Interchangeable agitation components  
Easy assembly/dismantling

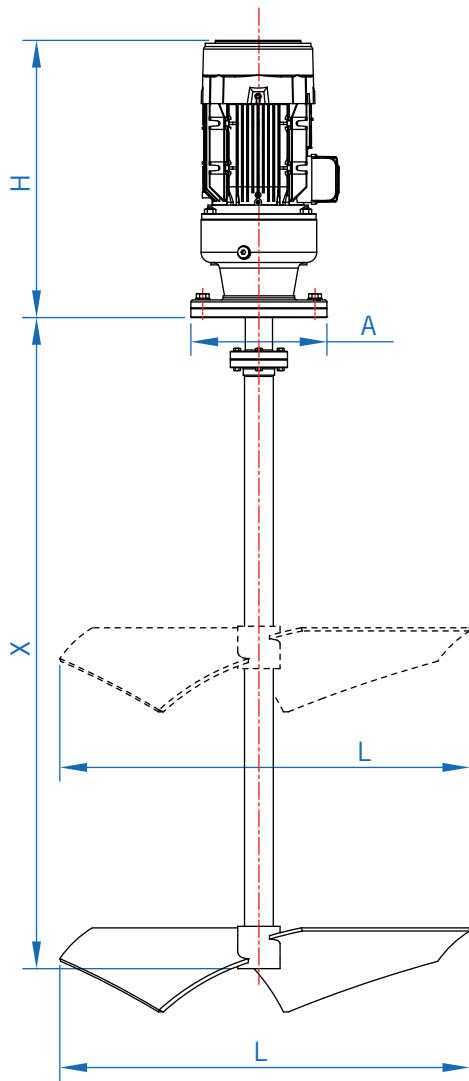
### MATERIALS

Parts in contact with the product in SS AISI 316L  
Parts without contact in SS AISI 304L, carbon Steel and others

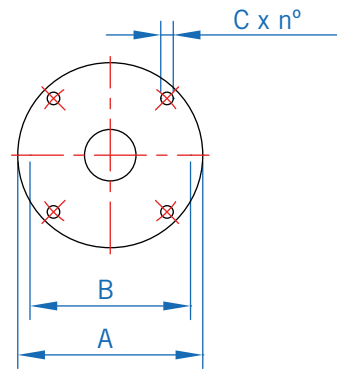
### OPTIONS

Other materials: SS AISI 304L, SS AISI 904L, Hastelloy, etc.  
Reinforcement turrets  
Other anchoring flanges  
Pneumatic motor  
Control panel  
Frequency converter  
Gearbox covering



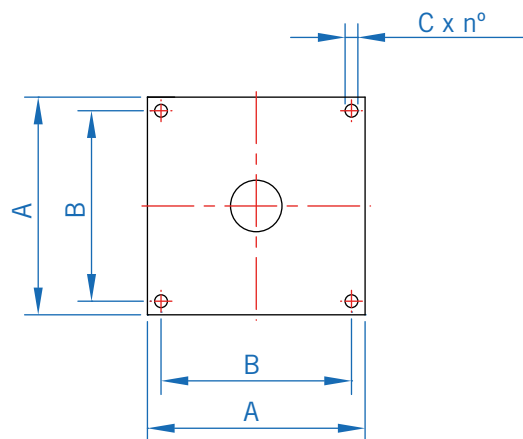


ANCHOR FLANGE IEC TYPE



OVERALL DIMENSIONS IBC				
FLANGE	A	B	C	n°
IEC 160	160	130	9	4x90°
IEC 200	200	165	12	4x90°
IEC 250	250	215	14	4x90°

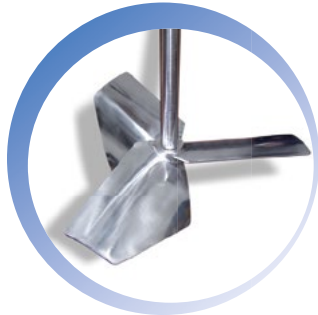
SQUARE PLATE ANCHOR FLANGE



OVERALL DIMENSIONS IBC				
FLANGE	A	B	C	n°
250 x 250	250	200	18	4
300 x 300	300	250	18	4
400 x 400	400	350	18	4

**VCI / VCIN**

**Vertical agitators**



INOXMIM has developed VCI and VCIN vertical agitators using a simple, compact design which provides high agitating performance at low acquisition cost.

Both the VCI and the VCIN are fitted with a worm geared motor and lip sealing system, allowing the use of impellers with a large vane surface in order to achieve high agitating performance.

All these characteristics, along with the interchangeability of agitating components and the specific selection of the ideal configuration for each process, mean these vertical agitators are widely used in water treatment, in the food industry and, in particular, in the dairy sector. They are also used in the chemical, cosmetic and pharmaceutical industries to mix, maintain and homogenise products or suspensions.

Some of the applications of these devices are:

- Homogenisation of yogurt, milk, squid paste, oil, pulp, etc.
- Agitating in flocculation chambers, chloride polyelectrolyte preparation plants, etc.
- Homogenisation for heat exchange
- Maintaining and product suspension (cream, milk, oil, juice, punches, additives, etc.)
- Dissolving of solids in liquids (salt, malt, powdered milk, fertiliser, etc.)
- Dilutions of additives

**CHARACTERISTICS**

- Level of finish: Industrial / Foodstuff / Sanitary
- Worm geared motor
- Anchor flange: IEC / DIN 2576 PN10
- Interchangeability of agitator components
- Lip seal

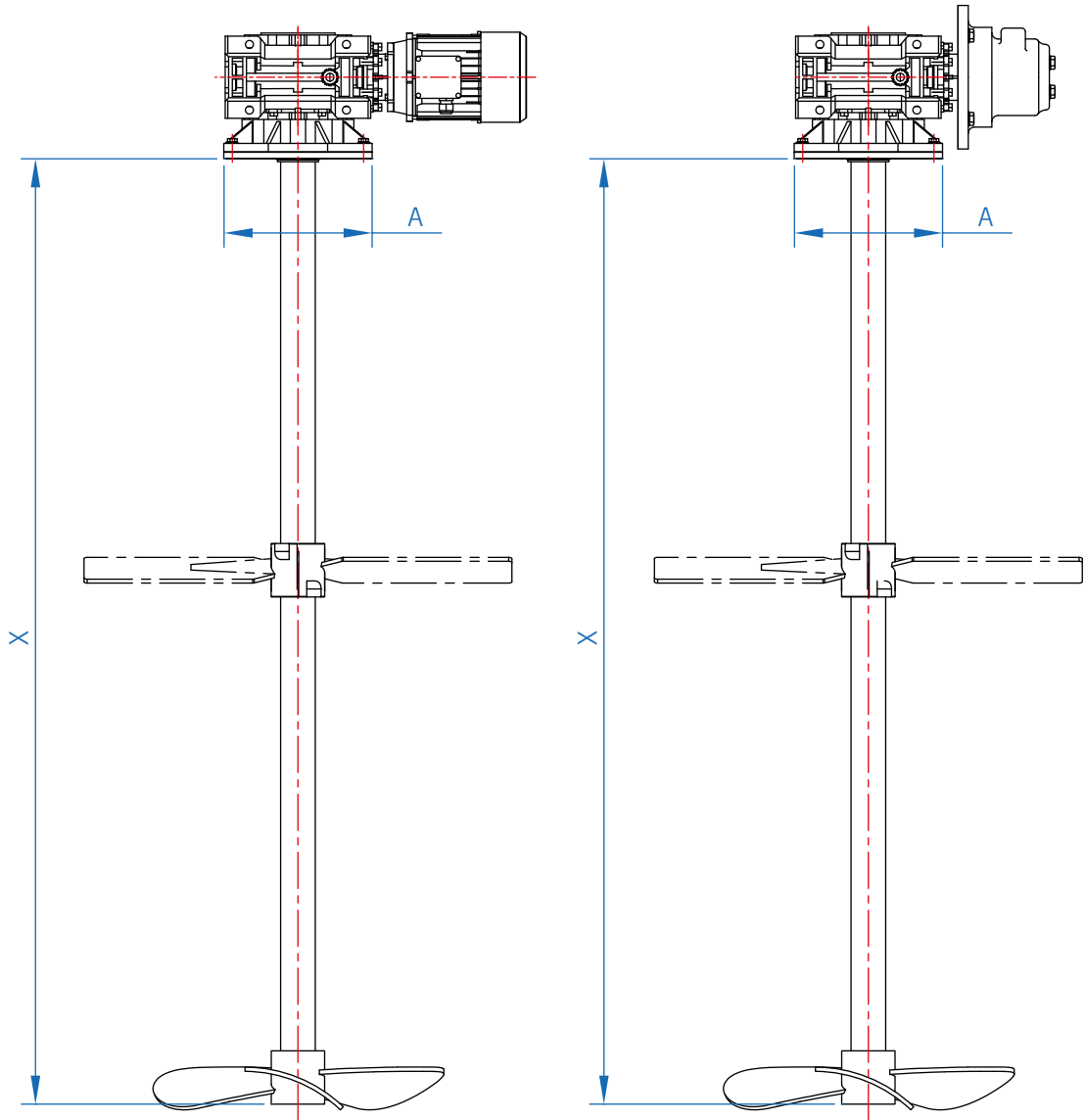
**MATERIALS**

- Parts in contact with the product in stainless steel AISI 304L, carbon steel or others
- Parts not in contact with the product in stainless steel AISI 304L, carbon steel or others

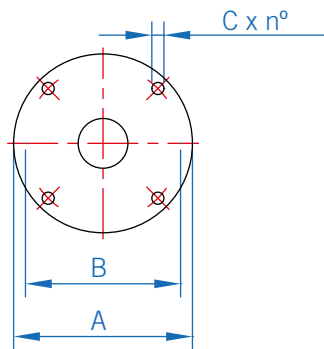
**OPTIONS**

- Mechanical or frequency variator
- Control panel
- Bolstering tower
- Lip seal with splash safety
- RIBBON propeller for high viscosity products
- Single, dual, cartridge and/or cooled mechanical seal
- PEHD tank

DIMENSIONS OF THE VCI / VCIN MODELS

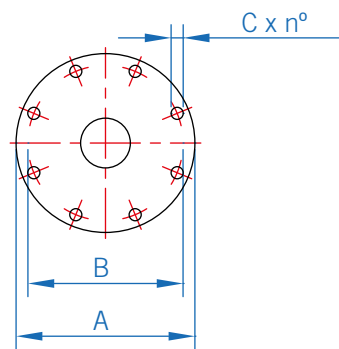


IEC FLANGE AGITATOR BASE



OVERALL DIMENSIONS				
FLANGE	A	B	C	n°
IEC 160	160	130	9	4x90°
IEC 200	200	165	11	4x90°

DIN 2576 PN10 FLANGE AGITATOR BASE

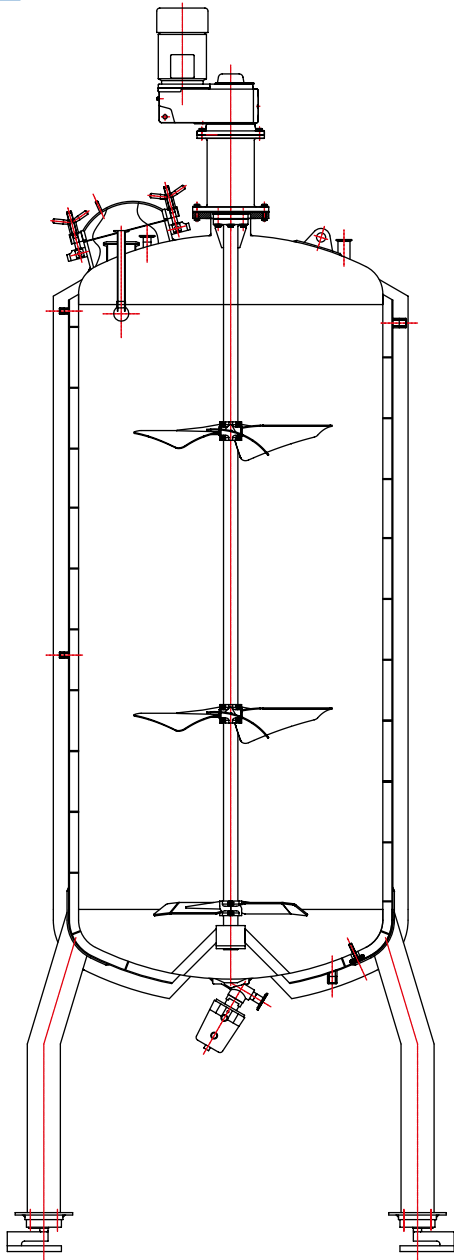


OVERALL DIMENSIONS				
FLANGE	A	B	C	n°
DN150	285	240	18	8x45°
DN200	340	295	18	8x45°
DN250	395	350	22	12x30°



GFL

## Vertical agitator



GFL vertical agitators, driven by a parallel geared motor, work at low turning speeds, allowing the use of agitator elements with a large surface area in order to achieve high work performance.

These agitators are characterised by their wide range of applications and high agitating capacity. This is achieved through the multiple configurations of the impellers, which also means GFL agitators can adapt to the requirements of each system. As a result, they are essential in the food, cosmetics, pharmaceutical and chemical industries.

In the food sector they can be used in the preparation of dairy desserts, manufacture of cream for distilled drinks, juices, gazpacho, chocolate, etc.

In the chemical sector they are used to agitate and homogenise medium and large volume vessels.

The most common applications in the pharmaceutical industry are: homogenisation, temperature exchange,

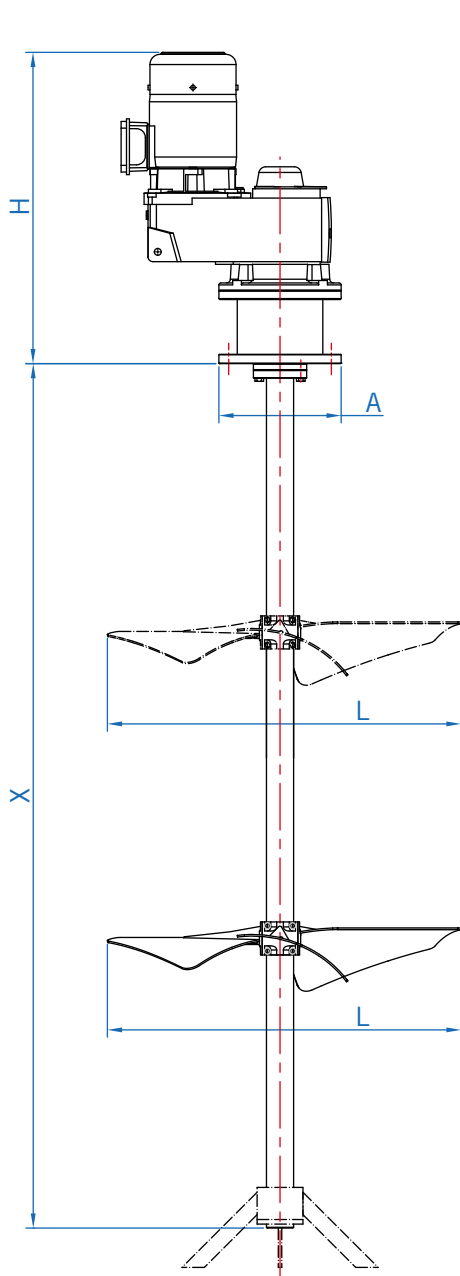
mixes and suspensions for products in tablets, solutions or creams.

In the cosmetics industry these agitators are used to manufacture gel, soap, eau de cologne, etc. They are also used in homogenisations, heat exchange, mixes and suspensions.

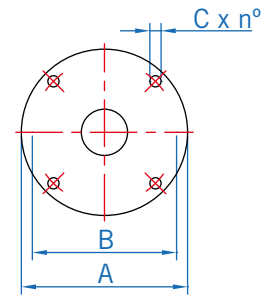
The different configurations used are:

- One or several vane levels
- Combination of different types of impellers
- Lower anchor with tripod guide
- Top anchor with turret
- Semi-shaft in flange plate and shaft in multiple parts
- Agitator in reverse assembly position and quick coupling

DIMENSIONS AND CHARACTERISTICS OF THE GFL MODEL

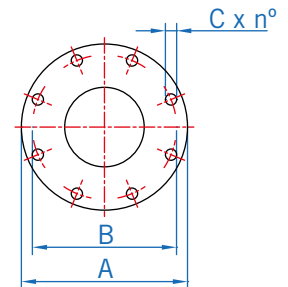


IEC FLANGE  
AGITATOR BASE



OVERALL DIMENSIONS				
FLANGE	A	B	C	n°
IEC 160	160	130	9	4x90°
IEC 200	200	165	11	4x90°
IEC 250	250	215	14	4x90°
IEC 300	300	265	14	4x90°
IEC 350	350	300	18	4x90°

DIN 2576 PN10  
FLANGE AGITATOR BASE



OVERALL DIMENSIONS				
FLANGE	A	B	C	n°
DN80	200	160	18	8x45°
DN125	250	210	18	8x45°
DN150	285	240	18	8x45°
DN200	340	295	18	8x45°
DN250	395	350	22	12x30°
DN300	445	400	22	12x30°

**CHARACTERISTICS**

- Level of finish: Industrial / Foodstuff / Sanitary
- Anchor flange: Square / DIN 2576 / IEC type
- Parallel geared motor
- Interchangeability of agitator components
- Single mechanical seal

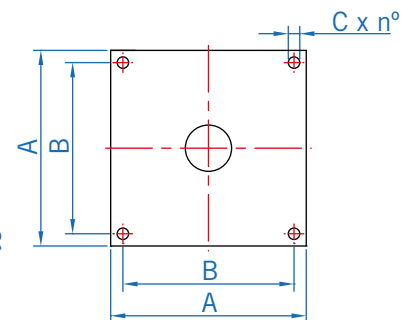
**MATERIALS**

- Parts in contact with the product in stainless steel AISI 316L
- Parts not in contact with the product in stainless steel AISI 304L, carbon steel and others

**OPTIONS**

- Other materials: AISI 304L, AISI 904L, Hastelloy, etc.
- Mechanical seal: dual, cooled
- Bolstering tower
- Other anchor flanges
- Tripod guides
- Control panel
- Speed variator
- Casing

SQUARE PLATE  
FLANGE AGITATOR  
BASE



OVERALL DIMENSIONS				
FLANGE	A	B	C	n°
250 x 250	250	200	18	4
300 x 300	300	250	18	4
400 x 400	400	350	18	4
450 x 450	450	400	22	4
500 x 500	500	450	22	4



The GFLE model allows different sealing systems to be installed in accordance with the application.

- Low pressure sealing systems with lip seal or stuffing box
- High pressure or vacuum sealing systems with mechanical seal: single, dry turn or dual cartridge

Their characteristics mean contrarotator agitator systems can be installed to satisfy the most complex agitating and mixing requirements, making it possible to work with highly viscous products or products which tend to stick to the walls of the tank.

These agitators are characterised by their wide range of applications and their high agitating capacity. This is achieved through the multiple configurations of the impellers, which also means GFLE agitators can adapt to the requirements of each system. As a result, they are essential in the food, cosmetics, pharmaceutical and chemical industries.

They can work with products such as distilled drinks, juices, gazpacho, dairy products, syrups, creams, gels, colognes, etc. Some of the operations which this equipment can carry out are dissolutions, homogenisation and agitating of mixes, heat exchanges, chemical reactions, etc.

**CHARACTERISTICS**

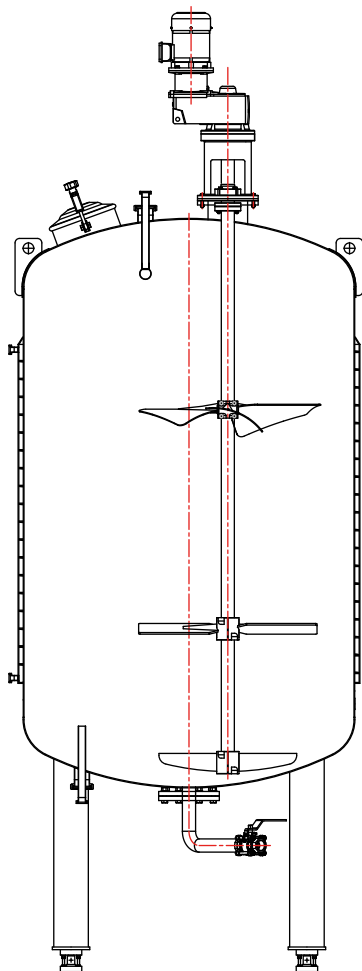
- Specific sealing system in accordance with the application: single mechanical seal, dry turn or dual cartridge
- Level of finish: Industrial / Foodstuff / Sanitary
- Anchor flange: Square / DIN 2576 / IEC type
- Parallel geared motor
- Interchangeability of agitator components

**MATERIALS**

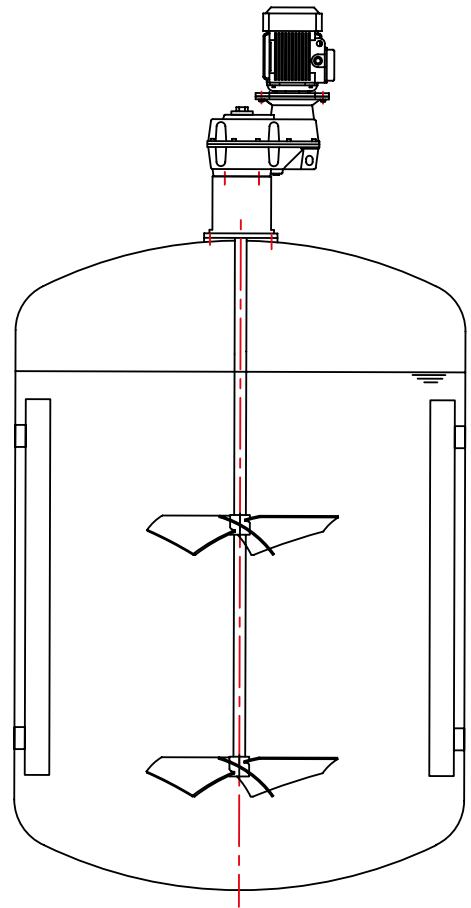
- Parts in contact with the product in stainless steel AISI 316L
- Parts not in contact with the product in stainless steel AISI 304L, carbon steel or others

**OPTIONS**

- Other materials: AISI 304L, AISI 904L, Hastelloy, etc.
- Thermosiphon pressurised/cooled mechanical seal
- Contrarotator reassembly
- Other anchor flanges
- Guide tripod
- Control panel
- Frequency or mechanical speed variator
- Stainless steel casing



Assembly of a misaligned GFLE agitator for improved reagent mixing. AXIAL propellers impose a mostly descendant flow, and the deep scraper prevents precipitates. In contrast, GAMMA propellers installed in the top section provide high circulation speed, optimising agitating conditions.



Assembly of a GFLE agitator with 2 levels of GAMMA type propeller blades. GAMMA type propellers mostly create an axial flow and the deflectors facilitate mixing in a tangential direction.



### CARTRIDGE SEAL

Rinsing without pressure. Dimensions in accordance with DIN 24960 C. The ingenious modular system allows the seal to adapt to a wide range of applications which improve the performance of the agitator.



### DUAL SEAL

Dual seals in accordance with DIN 24960. The DIN standard specifies single seals arranged back-to-back, making it easier to replace the seal faces.



### SINGLE SEAL

Balanced, with conical spring and unidirectional turning. Dimensions in accordance with DIN 24960.



**TANDEM**

**Vertical agitators**



The TANDEM model allows different sealing systems to be installed in accordance with the application.

- Low pressure sealing systems with lip seal or stuffing box
- High pressure or vacuum sealing systems with mechanical seal: single, dry turn or dual cartridge

These agitators are characterised by their wide range of applications and their high agitating capacity. This is achieved through the multiple configurations of the impellers, which also means TANDEM agitators can adapt to the requirements of each system. As a result, they are essential in the food, cosmetics, pharmaceutical and chemical industries.

They can work with products such as distilled drinks, juices, gazpacho, dairy products, syrups, creams, gels, colognes, etc. Some of the operations which this equipment can carry out are dissolutions, homogenisation and agitating of mixes, heat exchanges, chemical reactions, etc.

**CHARACTERISTICS**

- Specific sealing system in accordance with the application: single mechanical seal, dry turn or dual cartridge
- Level of finish: Industrial / Foodstuff / Sanitary
- Anchor flange: Square / DIN 2576 / IEC type
- Parallel geared motor
- Interchangeability of agitator components



**MATERIALS**

- Parts in contact with the product in stainless steel AISI 316L
- Parts not in contact with the product in stainless steel AISI 304L, carbon steel or others

## OPTIONS

Other materials: AISI 304L, AISI 904L, Hastelloy, etc.

Thermosiphon pressurised/cooled mechanical seal

Contrarotator reassembly

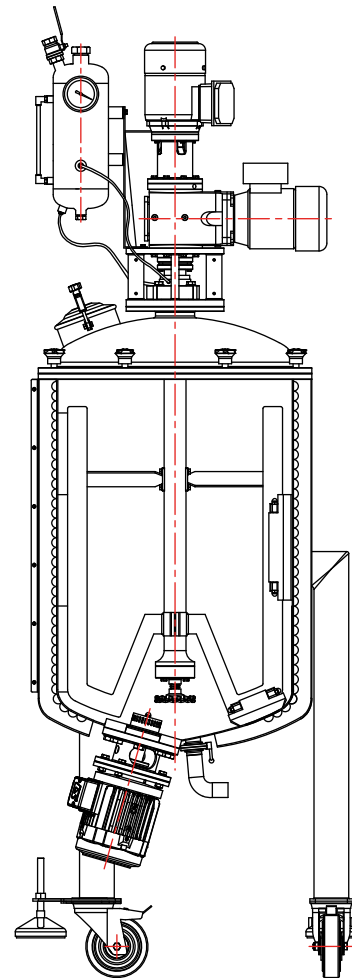
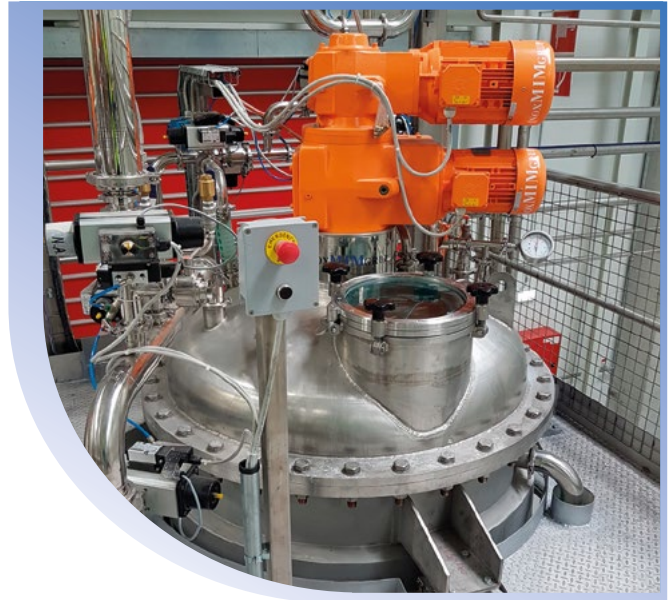
Other anchor flanges

Guide tripod

Control panel

Frequency or mechanical speed variator

Stainless steel casing



Contrarotator agitating system comprising TANDEM agitator with ANCORA vane with scrapers, a vertical VMD agitator with COWLES disc and deep mixer. Thermosiphon-cooled mechanical seal, along with the tower and tank anchoring system, ensure the sealtightness of the reactor.

Application used to prepare high viscosity cosmetic products.



**LV**

## Wine agitator



The LV lateral agitator, with is assembled to the tank ball valve, introduced in the tank shaft and operated by simply pressing a start/stop switch, is designed as a portable model for small vessels. Thanks to its features, performance and portability, this unit is widely used in the wine industry.

Sphere of application:

- Coupages
- Fermentation processes
- Gasification (SO<sub>2</sub> and CO<sub>2</sub>)
- Temperature homogenisation
- Dissolving of sugars
- Mixing of syrups
- Maintaining mixes and suspensions
- Dilutions
- Mixing of distilled drinks

### MODELS

**LV 1.1-1500/160**

### CHARACTERISTICS

Portable design with handle for transport  
 Easy assembly and dismounting  
 Slidable shaft through the motor  
 Mechanical sealing C/C/N  
 PLE foldaway propeller  
 Anchor nut/bushing DIN 11851

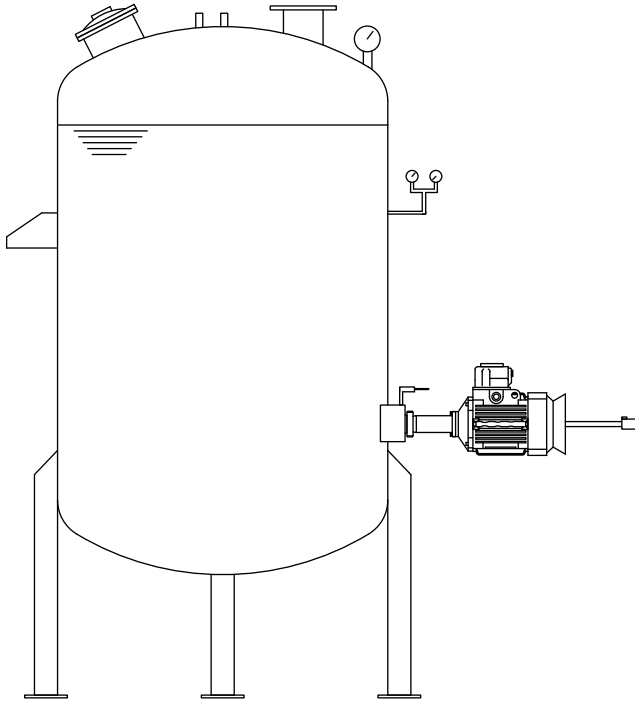
### MATERIALS

Shaft and propeller manufactured in stainless steel AISI 316  
 Nitrile gaskets

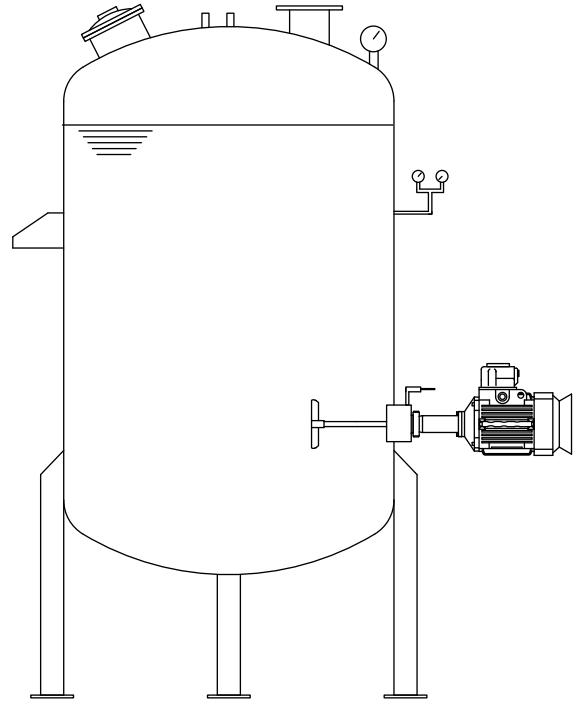
### OPTIONS

Shaft and propeller manufactured in stainless steel AISI 304  
 Other anchor systems: MÂCON, GAROLLA, etc.  
 Forklift  
 Agitator connections system  
 Mechanical seal S/S/V  
 Control panel with timer

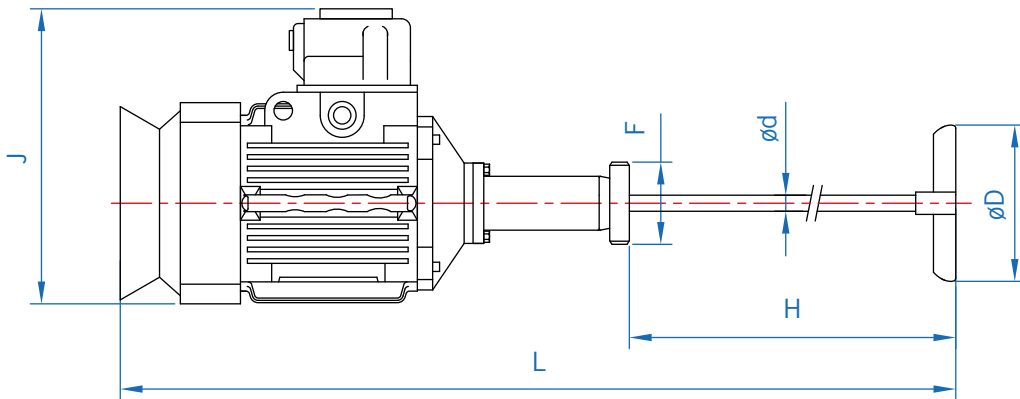
## DIMENSIONS OF THE LV MODEL



Assembly with valve shut off



Assembly with valve open and agitator running



MODELS	TECHNICAL CHARACTERISTICS				DIMENSIONS					WEIGHT	
	kW	rpm.	m <sup>3</sup> vessel	Max. pressure	DN	D	d	H	L	J	Kg
<b>LV 1.1-1500/160</b>	1.1	1500	10 - 50	6 bar	50	160	18	550	1100	280	18

LMDS

# Lateral agitators



INOXMIM has designed LMDS side agitators with a compact size and a configuration which allows vessels with small and medium volumes to be homogenised. The simplicity of the parts, along with the mechanical sealing system, allows these agitators to achieve optimum mixing in a large variety of applications. For these reasons, LMDS are economical, high-performance agitators.

LMDS lateral agitators are used in the food, cosmetics, chemical, pharmaceutical and water treatment industry. Some examples of applications are:

- Agitating and homogenising mixes
- Maintaining products/reagents
- Homogenisation of the mix for heat exchange
- Heavy particle suspension

#### MODELS

- LMDS 0.25
- LMDS 0.37
- LMDS 0.55
- LMDS 0.75
- LMDS 0.37 R

#### CHARACTERISTICS

- DN50 DIN 2576 Anchor flange
- Direct motor and geared motor
- Single mechanical seal C/C/N
- Interchangeability of agitator components
- Easy assembly/dismounting
- Simplicity of parts

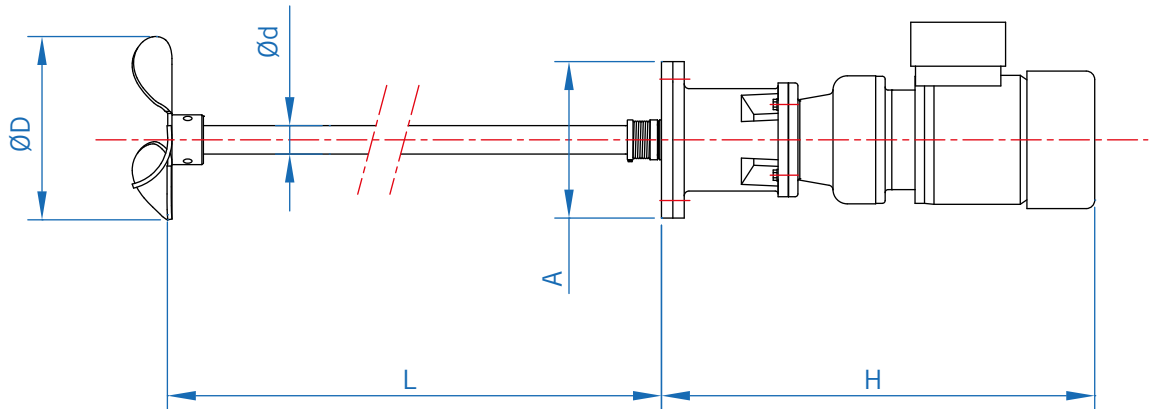
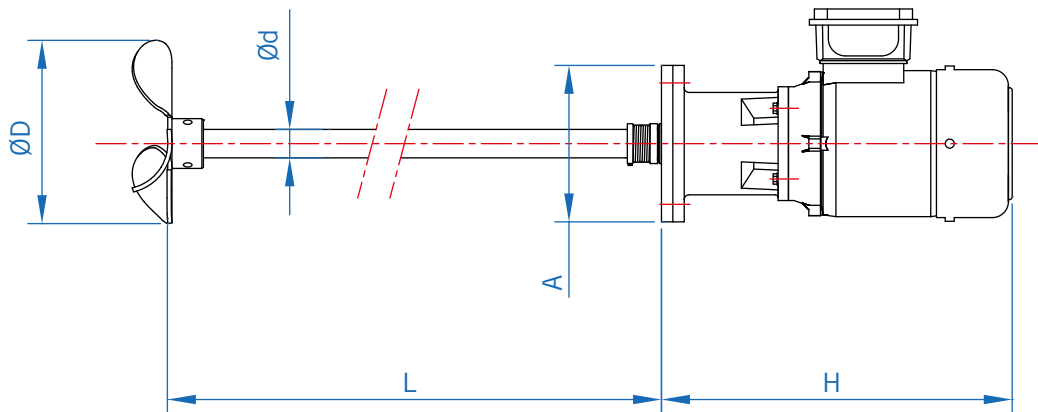
#### MATERIALS

- Parts in contact with the product in stainless steel AISI 316
- Parts not in contact with the product in stainless steel AISI 304, carbon steel and others

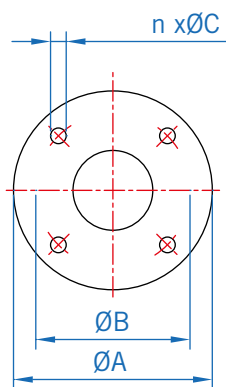
#### OPTIONS

- Control panel
- Double mechanical seal
- Speed variator
- Other materials
- Motor cover

## DIMENSIONS OF THE LMDS MODEL



### AGITATOR BASE



FLANGE	OVERALL DIMENSIONS							WEIGHT	
	A	B	C	n°	d	D	L	H	Kg
<b>DN50</b>	165	128	13	4x90°	25	110-250	450	340-520	17 - 24.5

**LMD / LECO**

# Lateral agitators



LMD and LECO lateral agitators are highly suitable for maintaining and mixing products in medium and large volume vessels.

Both models are installed in the bottom of the vessel, slanted to obtain the optimum mix ratio. The shaft length, diameter and propeller type are selected with this same purpose. All this, along with the mechanical sealing system in the shaft, allows these agitators to offer high performance and durability.

Their characteristics mean they can be used in the chemical, water treatment, food, cosmetics and pharmaceutical industries by simply changing the final finish. Both the LMD and the LECO can work with brines, oils, acids and other chemical products, flocculants, thickeners, colourants and flavourings, spirits, wines and distilled drinks, buttermilk, yeast, sugars, etc.

Some of their main applications are:

- Heat exchanges
- Dissolving and homogenisation of reactants
- Particle suspension
- Dilutions
- Maintaining products

### CHARACTERISTICS

- DIN 2576 anchor flange
- Level of finish: Industrial / Foodstuff / Sanitary
- Single mechanical sealing
- GAMMA/MARINE propellers
- Self-aligning bolster bearing (LECO)
- Simplicity of parts

### MATERIALS

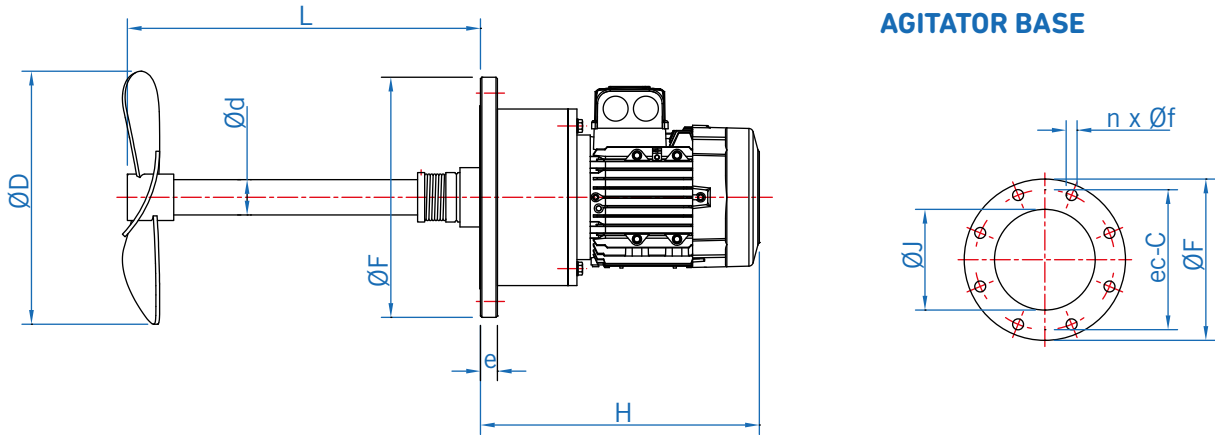
- Mechanical seal C/C/N
- Shaft and propeller manufactured in stainless steel AISI 316L

### OPTIONS

- Control panel
- Safety stuffing box
- Mechanical seal S/S/V and/or double (for other materials, please ask)
- Portable elevator support piece in AISI 304L
- Other materials
- Frequency variator
- Motor cover in stainless steel 304L
- Other anchor systems
- Big flow GAMMA propeller
- Other shaft lengths

DIMENSIONS AND CHARACTERISTICS OF THE LMD / LECO MODEL

DIN 2576 PN10 FLANGE  
AGITATOR BASE



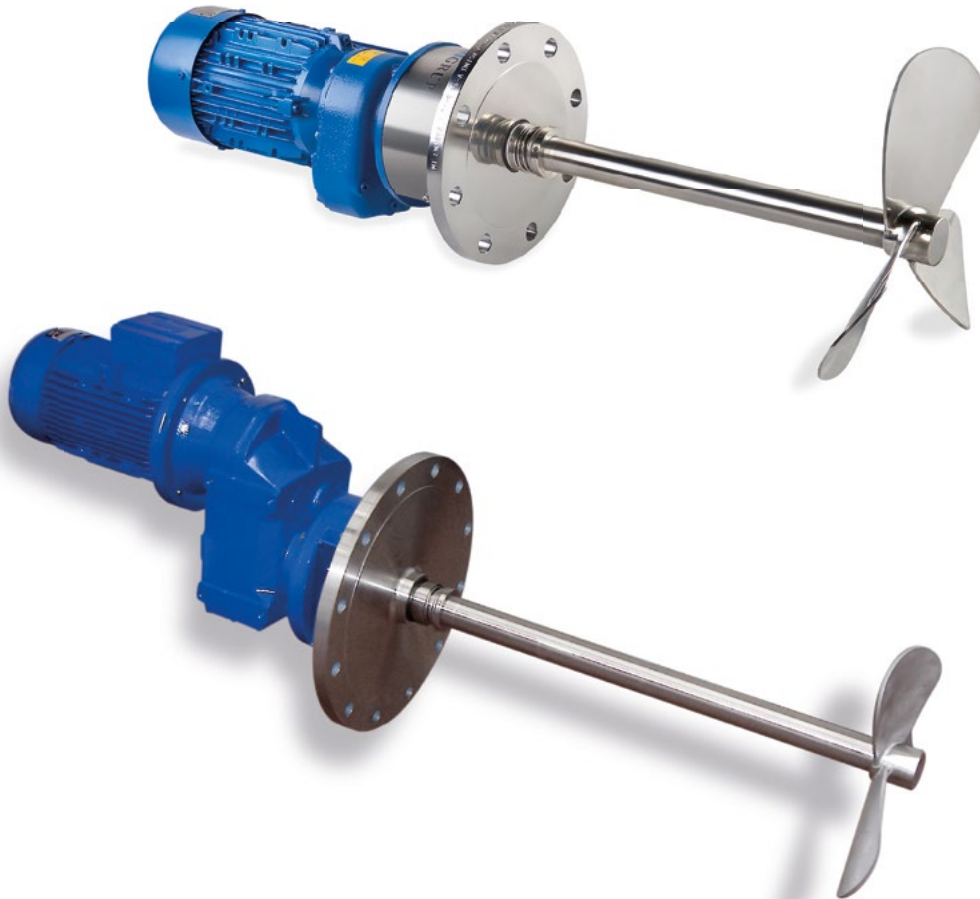
OVERALL DIMENSIONS							ANCHOR FLANGE ACCORDING TO DIN 2576 PN10					
MODEL	Power (kW)	d	D	e	H	L	DN	C	f	F	J	n
LMD 0.25-1500/110	0.25	30	110	22	370	300	125	250	18	210	140	8
LMD 0.37-1000/130	0.37	35	130	22	425	400	150	240	18	285	169	8
LMD 0.75-1500/150	0.75	35	150	22	450	400	150	240	18	285	169	8
LMD 1.1-1000/200	1.1	35	200	22	475	500	150	240	18	285	169	8
LMD 1.5-1500/175	1.5	35	175	22	475	500	150	240	18	285	169	8
LMD 2.2-1000/225	2.2	40	225	22	540	500	200	295	18	340	220	8
LMD 2.2-750/250	2.2	40	250	22	640	500	200	295	18	340	220	8
LMD 3-1000/250	3	50	250	24	640	500	200	295	18	340	220	8
LMD 3-1500/200	3	40	200	24	515	500	200	295	18	340	220	8
LMD 3-750/300	3	50	300	24	640	500	200	295	18	340	220	8
LMD 4-1000/275	4	50	275	26	640	500	200	295	18	340	220	8
LMD 4-750/325	4	60	325	26	790	500	250	350	22	395	274	12
LMD 5.5-1000/300	5.5	50	300	26	640	500	200	295	18	340	220	8
LMD 5.5-1500/250	5.5	50	250	26	540	500	200	295	18	340	220	8

OVERALL DIMENSIONS							ANCHOR FLANGE ACCORDING TO DIN 2576 PN10					
MODEL	Power (kW)	d	D	e	H	L	DN	C	f	F	J	n
LECO 0.25-1500/110	0.25	30	110	22	370	300	125	250	18	210	140	8
LECO 0.37-1000/130	0.37	35	130	22	425	400	150	240	18	285	169	8
LECO 0.75-1500/150	0.75	35	150	22	450	400	150	240	18	285	169	8
LECO 1.1-1000/200	1.1	35	200	22	475	500	150	240	18	285	169	8
LECO 1.5-1500/175	1.5	35	175	22	475	500	150	240	18	285	169	8
LECO 2.2-1000/225	2.2	40	225	22	540	500	200	295	18	340	220	8
LECO 2.2-750/250	2.2	40	250	22	640	500	200	295	18	340	220	8
LECO 3-1000/250	3	50	250	24	640	500	200	295	18	340	220	8
LECO 3-1500/200	3	40	200	24	515	500	200	295	18	340	220	8
LECO 3-750/300	3	50	300	24	640	500	200	295	18	340	220	8
LECO 4-1000/275	4	50	275	26	640	500	200	295	18	340	220	8
LECO 4-750/325	4	60	325	26	790	500	250	350	22	395	274	12
LECO 5.5-1000/300	5.5	50	300	26	640	500	200	295	18	340	220	8
LECO 5.5-1500/250	5.5	50	250	26	540	500	200	295	18	340	220	8



**LECOR / LMRE**

**Lateral agitators**



LECOR and LMRE lateral agitators are highly suitable for maintaining and mixing products stored in medium and large volume tanks. They are installed in the lowest part of the vessel with different distances to the bottom, and slanted in line with the characteristics of the tank (shape and size).

LMRE and LECOR are fitted with two systems of shaft sealing. On the inner part, where the shaft is in contact with the product, there is a mechanical seal, whilst the external part can be fitted with a stuffing box.

Propeller design and selection is done according to agitation requirements, product properties, vessel geometry and agitator location in order to achieve optimal performance with the lowest operating costs.

Their range of application is wide and they are used in very different fields of the industry. For example, they are used in:

- Heat exchanges
- Chemical reactions
- Dissolutions
- Dilutions
- Reactant mixing
- Product homogenisation (oils, sludge, slurries, waste water, urea, etc.)
- Product/suspension maintenance (ammonium sulphate, glues, melamine, latex, resins, etc.)

**CHARACTERISTICS**

- DIN 2576 anchor flange
- Level of finish: Industrial
- Gearbox with high performance helicoidal gears
- Single mechanical seal sealing system
- GAMMA/MARINE propeller
- Simplicity of parts

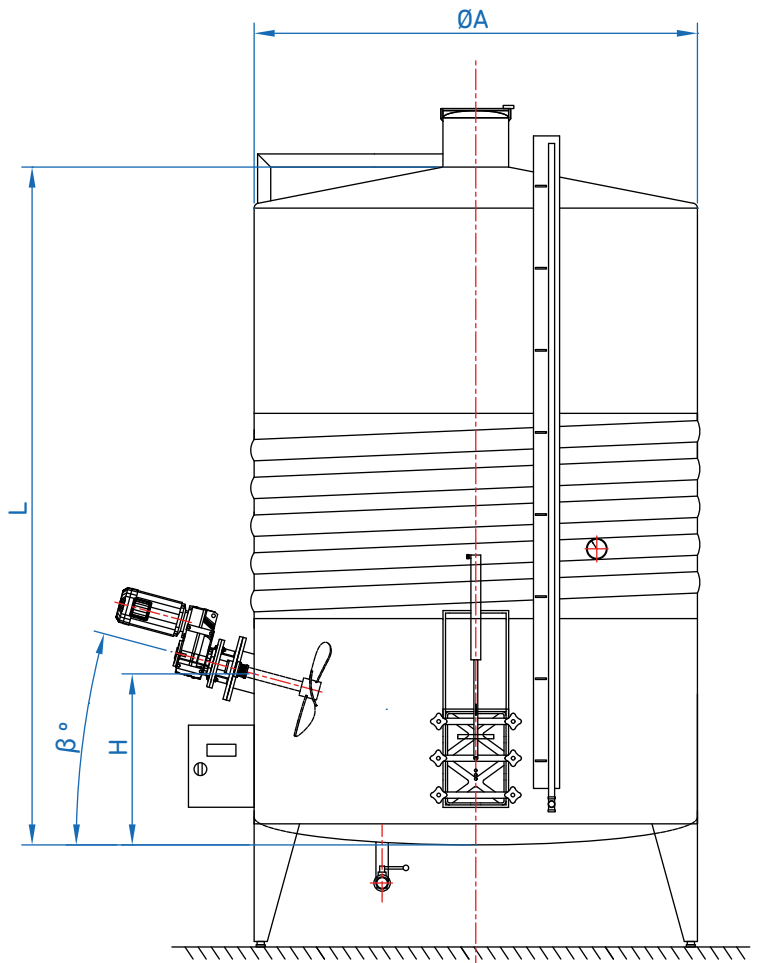
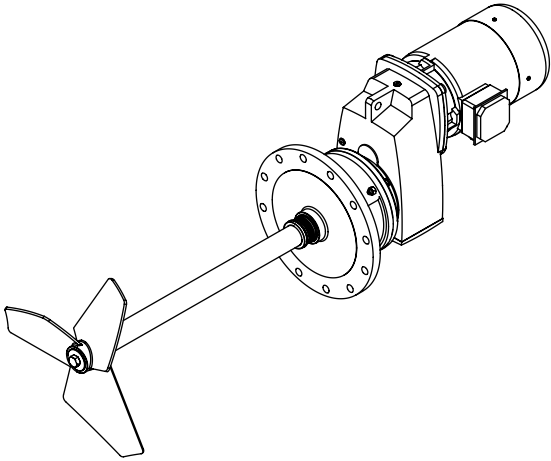
**MATERIALS**

- Shaft and propeller manufactured in stainless steel AISI 316L
- Mechanical seal C/C/N

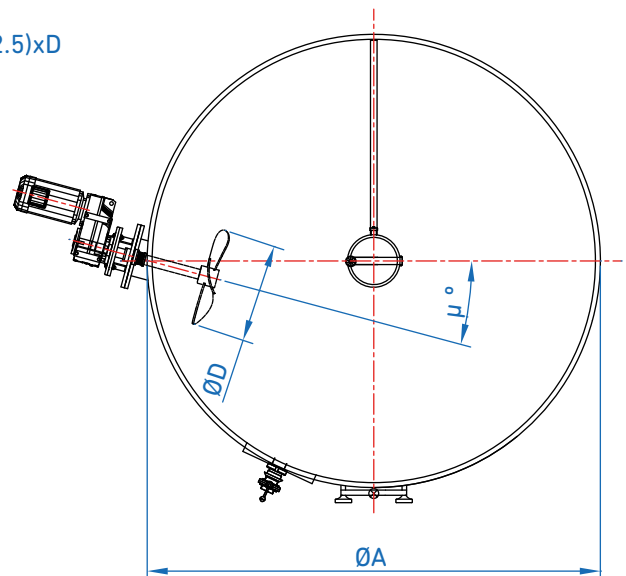
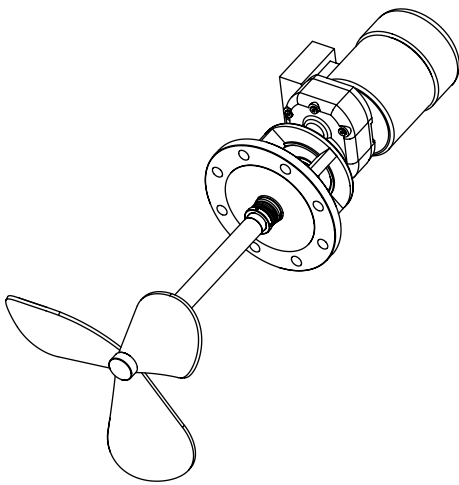
**OPTIONS**

- Control panel
- Safety stuffing box
- Mechanical seal S/S/V or dual
- Shaft and propeller covering against corrosion and wearing up
- Motor cover
- Other materials
- Big flow GAMMA propeller
- Other anchor systems
- Mechanical or frequency converter
- Other shaft lengths

DIMENSIONS OF THE LECOR MODEL



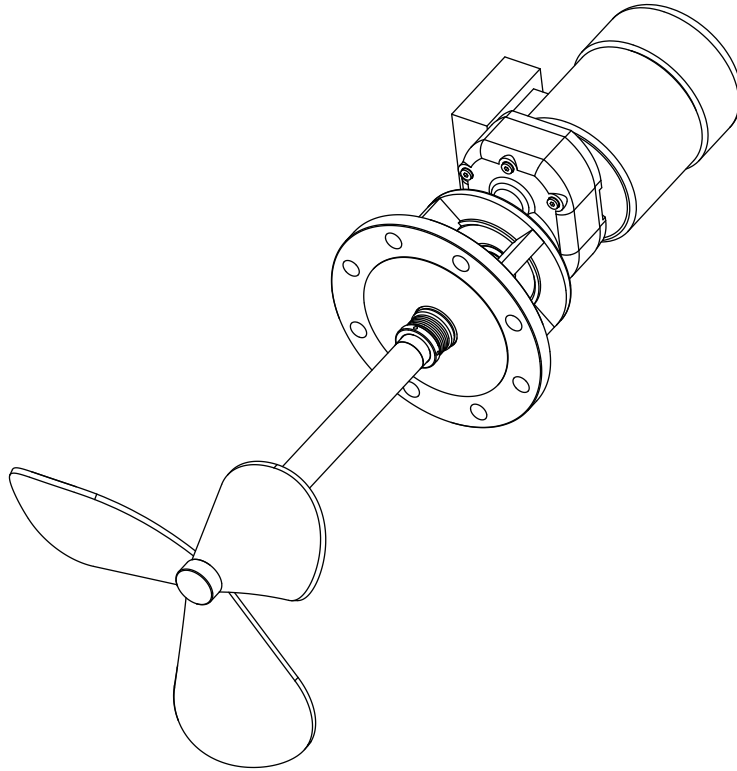
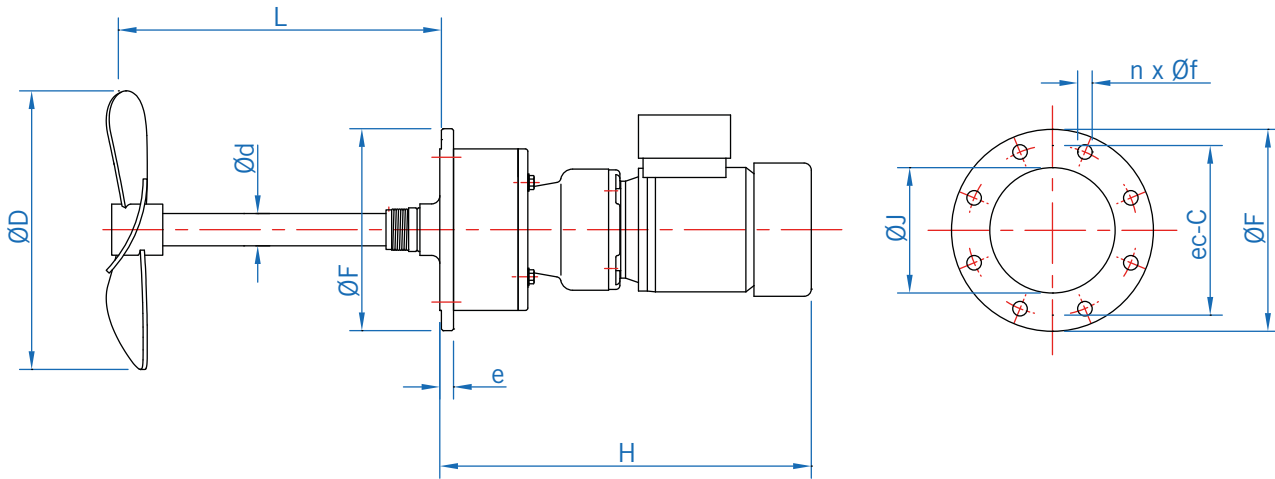
$H=(2/2.5) \times D$



INSTALLATION PARAMETERS

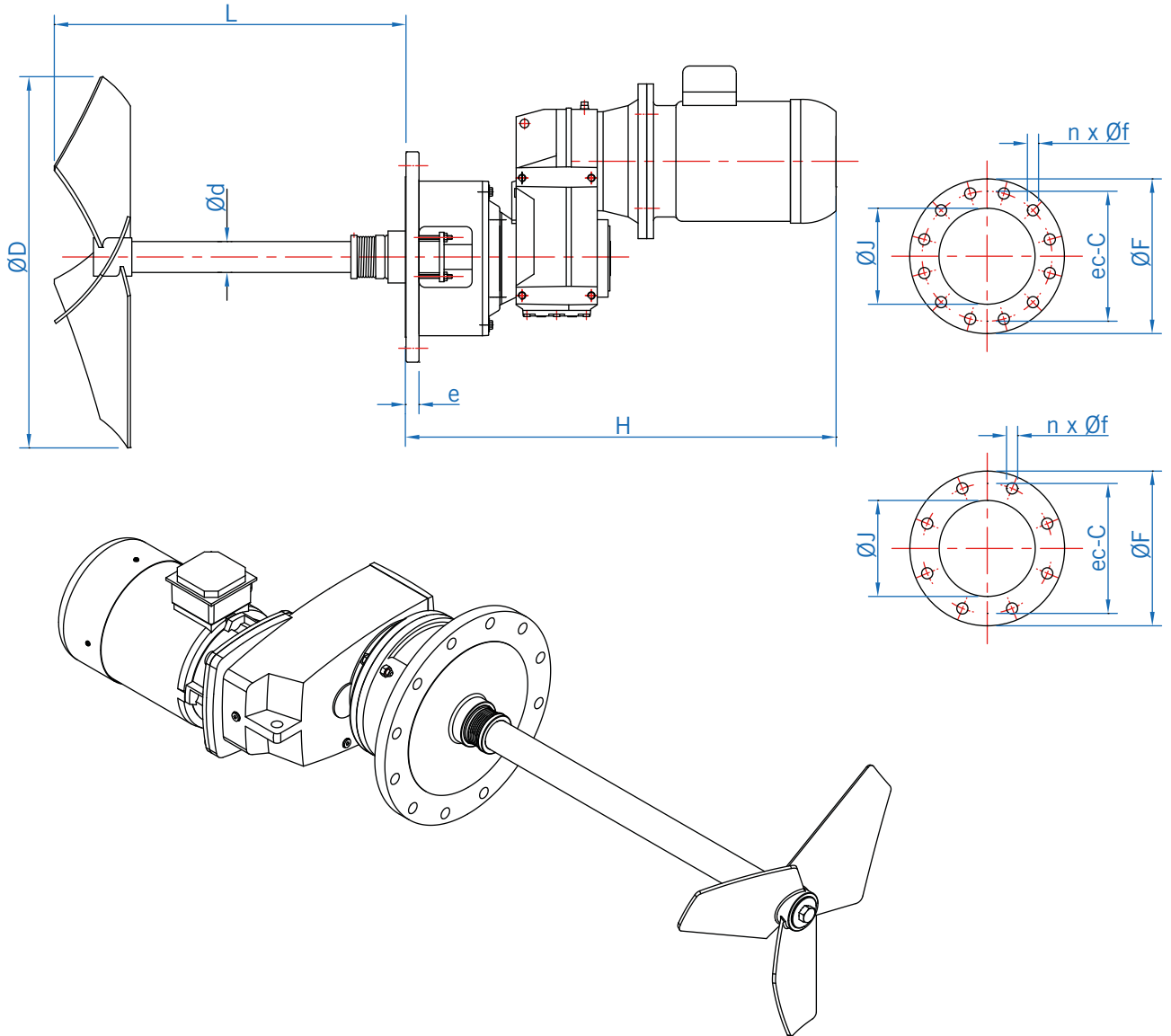
A/L	2	1	0.5	0.3	0.25	0.2	0.16
β°	5	15	20	35	45	55	65
μ°	15	12	10	8	5	2	0

## DIMENSIONS OF THE LECOR MODEL



MODEL	OVERALL DIMENSIONS							ANCHOR FLANGE according to DIN 2576 PN10				
	Power (kW)	d	D	e	H	L	DN	C	f	F	J	n
<b>LECOR 0.37-135/300</b>	0.37	40	300	22	463	500	150	240	22	285	169	8
<b>LECOR 0.55-200/300</b>	0.55	40	300	22	463	500	150	240	22	285	169	8
<b>LECOR 0.75-200/400</b>	0.75	40	400	22	480	500	150	240	22	285	169	8
<b>LECOR 1.1-250/400</b>	1.1	40	400	22	525	500	150	240	22	285	169	8
<b>LECOR 1.5-200/500</b>	1.5	40	500	22	525	500	150	240	22	285	169	8
<b>LECOR 2.2-250/500</b>	2.2	40	500	22	555	500	150	240	22	285	169	8
<b>LECOR 3-200/600</b>	3	50	600	24	670	500	200	350	22	340	220	8
<b>LECOR 4-200/650</b>	4	60	650	26	725	600	250	400	22	395	274	12

DIMENSIONS OF THE LMRE MODEL



MODEL	OVERALL DIMENSIONS							ANCHOR FLANGE according to DIN 2576 PN10				
	Power (kW)	d	D	e	H	L	DN	C	f	F	J	n
LMRE 0.37-300/250	0.37	35	250	22	472	400	125	210	18	250	140.5	8
LMRE 0.55-300/275	0.55	35	275	22	494	400	125	210	18	250	140.5	8
LMRE 0.75-300/300	0.75	40	300	22	524	500	150	240	22	285	169	8
LMRE 1.1-300/325	1.1	40	325	22	665	500	150	240	22	285	169	8
LMRE 1.5-300/350	1.5	40	350	22	675	500	150	240	22	285	169	8
LMRE 2.2-300/400	2.2	40	400	24	627	500	200	295	22	340	220	8
LMRE 3-300/450	3	50	450	24	757	500	200	295	22	340	220	8
LMRE 4-300/500	4	50	500	24	805	500	200	295	22	340	220	8
LMRE 5.5-300/500	5.5	50	500	24	876	500	200	295	22	340	220	8
LMRE 7.5-300/600	7.5	50	600	24	885	600	200	295	22	340	220	8
LMRE 9.2-300/600	9.2	60	600	26	905	600	250	350	22	395	274	12
LMRE 11-300/650	11	60	650	26	1010	600	250	350	22	395	274	12
LMRE 15-300/700	15	70	700	26	1075	700	300	400	22	445	325	12
LMRE 18.5-300/700	18.5	70	700	26	1200	700	300	400	22	445	325	12
LMRE 22-300/800	22	70	800	26	1235	700	300	400	22	445	325	12

LECOR / LMRE

## Lateral agitators food industry



LECOR and LMRE lateral agitators are highly suitable for maintaining and mixing products stored in medium and large volume tanks. The design of the LECOR and LMRE allows a high level of homogenisation of the mixture, which is why they are extensively used in the foodstuff industry, especially in the dairy sector.

These models are installed in the lowest part of the vessel with different distances to the bottom, and slanted in line with the characteristics of the tank (shape and size). Moreover, these agitators are fitted with two systems of shaft sealing. On the inner part, where the shaft is in contact with the product, there is a mechanical seal, whilst

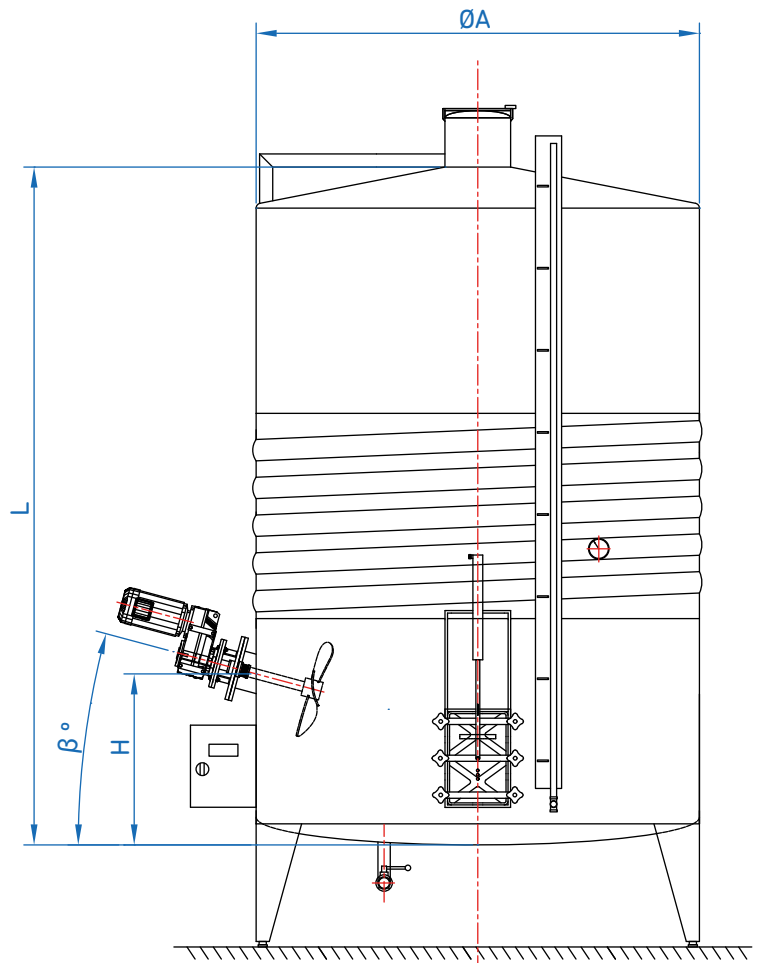
the external part is fitted with a stuffing box. All these properties together provide effective sealing and a high degree of hygiene, two conditions which are essential in the foodstuff industry.

LECOR and LMRE agitators work at low turnovers per minute, providing soft treatment of the milk and an optimal circulation ratio for maximum heat exchange. These are the main reasons why these agitators are very useful for cooling and keeping milk at low temperatures inside isothermal vessels. Moreover, the types of propellers used avoid protein lysis, keeping the milk properties and improving the production of derivative dairy products.

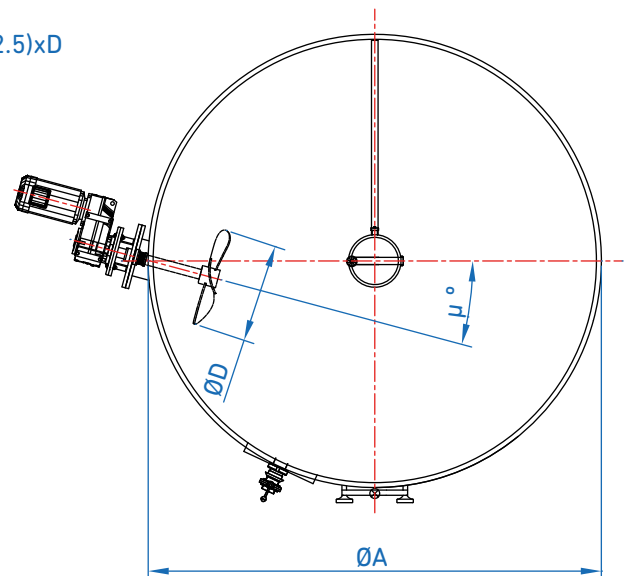


Apart from milk cooling and maintenance, these units are used for:

- Dissolution of products like sugar syrup, yeast, fats, powdered foods, thickeners, etc.
- Product homogenisation (wines, liquors, spices and flavourings in brines, vegetable oils, fats, etc.)
- Heat exchanges
- Dilutions (whey, concentrates)
- Product/suspension maintenance (soft drinks, orange, clementine, lemon juices, etc.)
- Mixing flavours, additives, preservatives, etc.



$$H=(2/2.5)\times D$$



### CHARACTERISTICS

DIN 2576 anchor flange  
 Level of finish: Foodstuff / Sanitary  
 Gearbox with high performance helicoidal gears  
 Single mechanical seal sealing system  
 GAMMA/MARINE propeller  
 Simplicity of parts

### MATERIALS

Shaft and propeller manufactured in stainless steel AISI 316L  
 Mechanical seal C/C/N

### OPTIONS

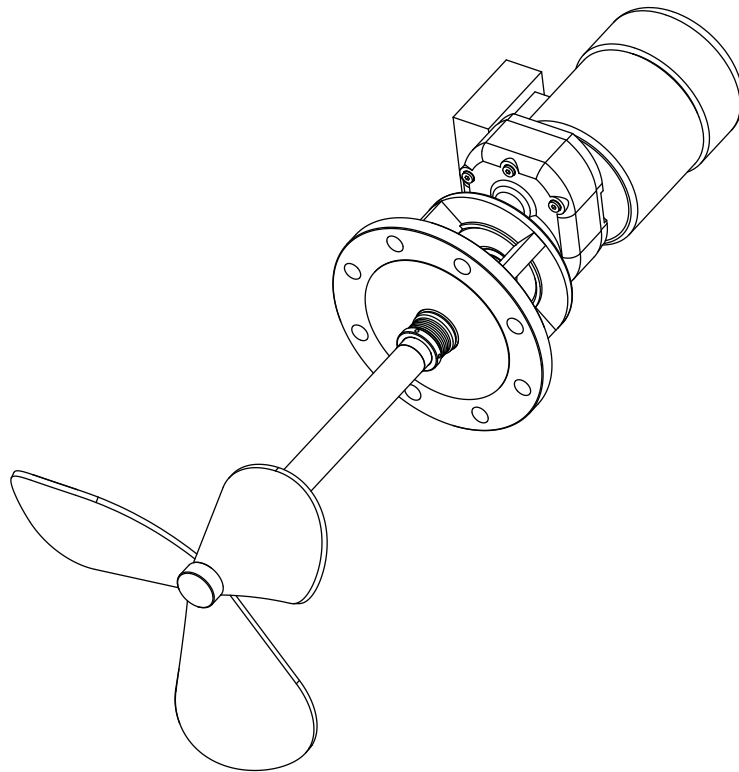
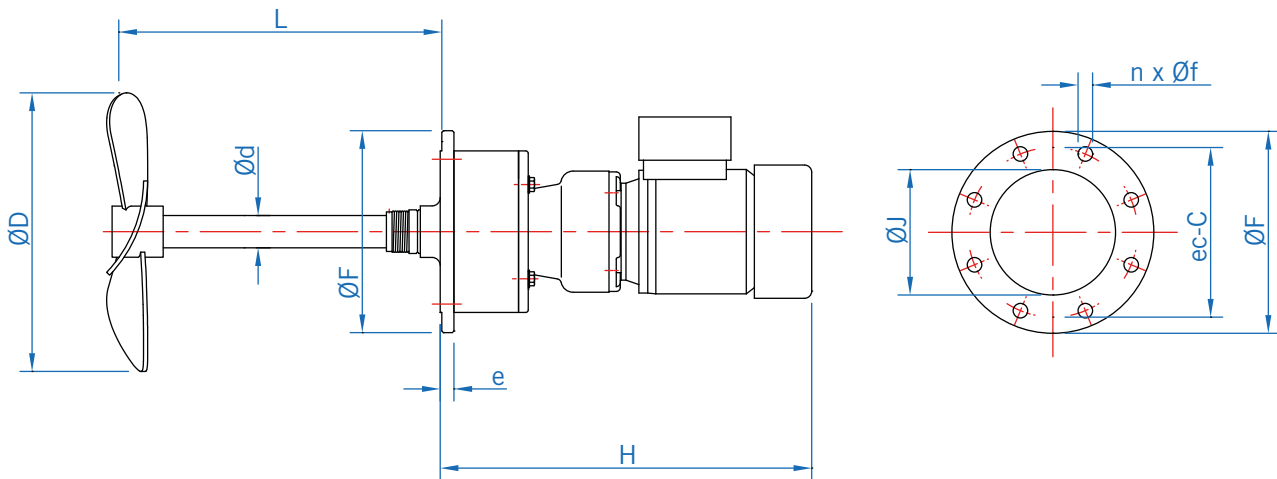
Control panel  
 Safety stuffing box  
 Mechanical seal S/S/V or dual  
 Shaft and propeller covering against corrosion and wearing up  
 Motor cover  
 Other materials  
 Big flow GAMMA propeller  
 Other anchor systems  
 Mechanical or frequency converter  
 Other shaft lengths

### INSTALLATION PARAMETERS

A/L	2	1	0.5	0.3	0.25	0.2	0.16
β°	5	15	20	35	45	55	65
μ°	15	12	10	8	5	2	0

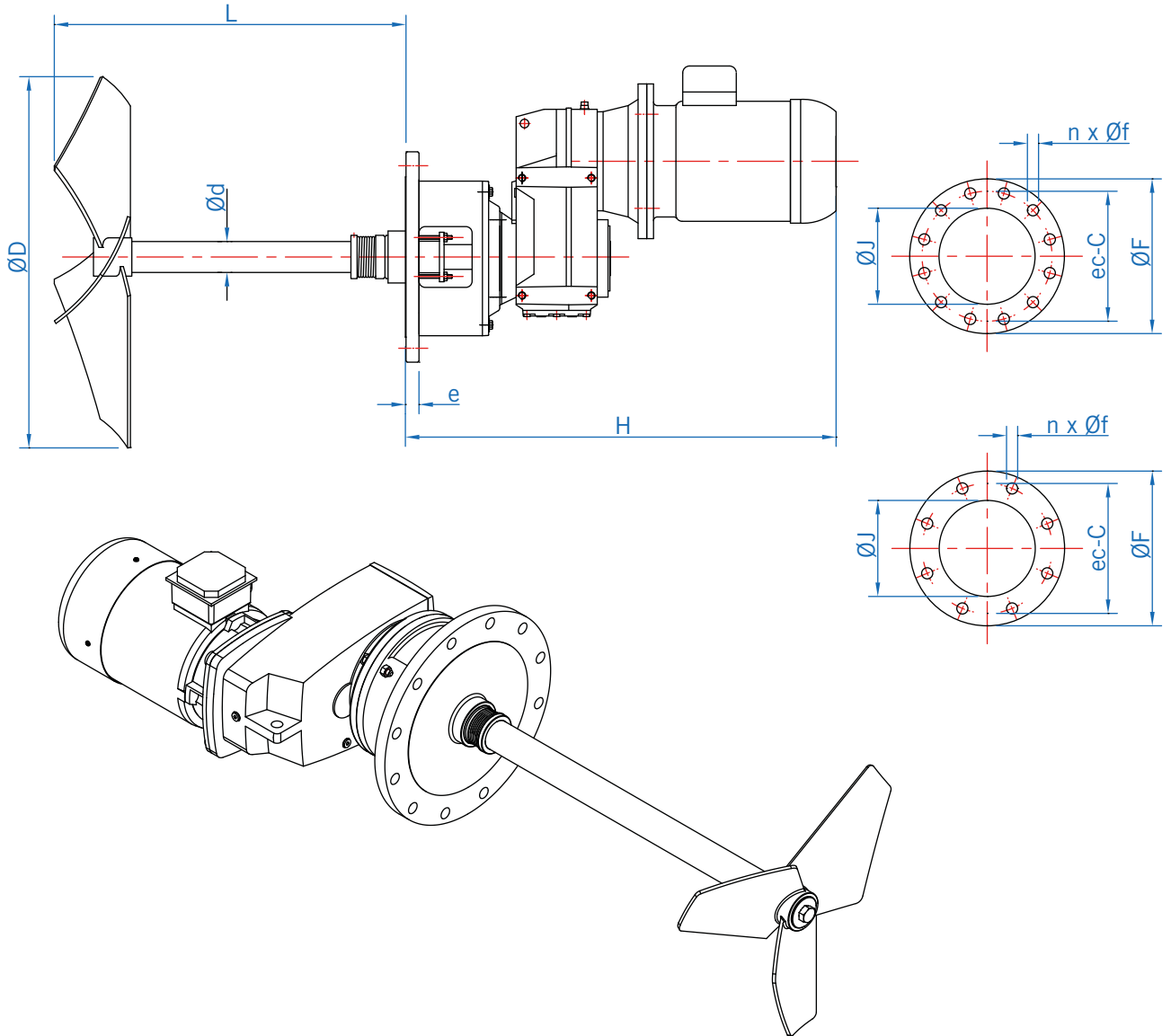


## DIMENSIONS OF THE LECOR MODEL



MODEL	OVERALL DIMENSIONS						ANCHOR FLANGE according to DIN 2576 PN10					
	Power (kW)	d	D	e	H	L	DN	C	f	F	J	n
<b>LECOR 0.37-135/300</b>	0.37	40	300	22	463	500	150	240	22	285	169	8
<b>LECOR 0.55-200/300</b>	0.55	40	300	22	463	500	150	240	22	285	169	8
<b>LECOR 0.75-200/400</b>	0.75	40	400	22	480	500	150	240	22	285	169	8
<b>LECOR 1.1-250/400</b>	1.1	40	400	22	525	500	150	240	22	285	169	8
<b>LECOR 1.5-200/500</b>	1.5	40	500	22	525	500	150	240	22	285	169	8
<b>LECOR 2.2-250/500</b>	2.2	40	500	22	555	500	150	240	22	285	169	8
<b>LECOR 3-200/600</b>	3	50	600	24	670	500	200	350	22	340	220	8
<b>LECOR 4-200/650</b>	4	60	650	26	725	600	250	400	22	395	274	12

DIMENSIONS OF THE LMRE MODEL



MODEL	OVERALL DIMENSIONS						ANCHOR FLANGE according to DIN 2576 PN10I					
	Power (kW)	d	D	e	H	L	DN	C	f	F	J	n
LMRE 0.37-300/250	0.37	35	250	22	472	400	125	210	18	250	140.5	8
LMRE 0.55-300/275	0.55	35	275	22	494	400	125	210	18	250	140.5	8
LMRE 0.75-300/300	0.75	40	300	22	524	500	150	240	22	285	169	8
LMRE 1.1-300/325	1.1	40	325	22	665	500	150	240	22	285	169	8
LMRE 1.5-300/350	1.5	40	350	22	675	500	150	240	22	285	169	8
LMRE 2.2-300/400	2.2	40	400	24	627	500	200	295	22	340	220	8
LMRE 3-300/450	3	50	450	24	757	500	200	295	22	340	220	8
LMRE 4-300/500	4	50	500	24	805	500	200	295	22	340	220	8
LMRE 5.5-300/500	5.5	50	500	24	876	500	200	295	22	340	220	8
LMRE 7.5-300/600	7.5	50	600	24	885	600	200	295	22	340	220	8
LMRE 9.2-300/600	9.2	60	600	26	905	600	250	350	22	395	274	12
LMRE 11-300/650	11	60	650	26	1010	600	250	350	22	395	274	12
LMRE 15-300/700	15	70	700	26	1075	700	300	400	22	445	325	12
LMRE 18.5-300/700	18.5	70	700	26	1200	700	300	400	22	445	325	12
LMRE 22-300/800	22	70	800	26	1235	700	300	400	22	445	325	12

**TURBINE**

**Vertical mixer**



The TURBINE model has been designed to mix products which need a low degree of shearing in applications requiring a homogenous result.

The high turning speed of the turbine generates the suction necessary to start the circulation of the liquid inside the vessel. Once drawn towards the turbine, part of the product is subjected to radial flow generated by shearing. The rest of the product is directed towards the bottom of the vessel, following the circulation generated by the axial flow.

The characteristics of this mixer prevent turnover of tank content before homogenising, mixing or dissolving. The design of the grooved body helps the pumping capacity of the mixer, achieving effective mixes in small and medium volumes without using baffles. Moreover, the anchoring system and mechanical sealing system means these units can be installed in nitrogen vessels with positive pressures and/or vacuum.

As a result, these units are ideal for homogenising, dispersing, suspending, mixing, crystallising and dissolving, and to improve heat exchange in the chemical, food, pharmaceutical and cosmetic industries.

Some examples of applications in which they can work are: preparation of mayonnaise, sauces, pickles, dissolving powdered food, additives, thickeners, preservatives, homogenisations, cosmetic creams, gels, etc.

**MODELS**

- TURBINE 0.25 – 50**
- TURBINE 0.75 – 150**
- TURBINE 2.2 – 500**
- TURBINE 4 – 1000**
- TURBINE 7.5 – 1500**
- TURBINE 11 – 2000**

**CHARACTERISTICS**

- Mechanical seal W/W/V
- IEC anchor flange
- VORTEX turbine
- Slotted channel body
- Level of finish: Sanitary

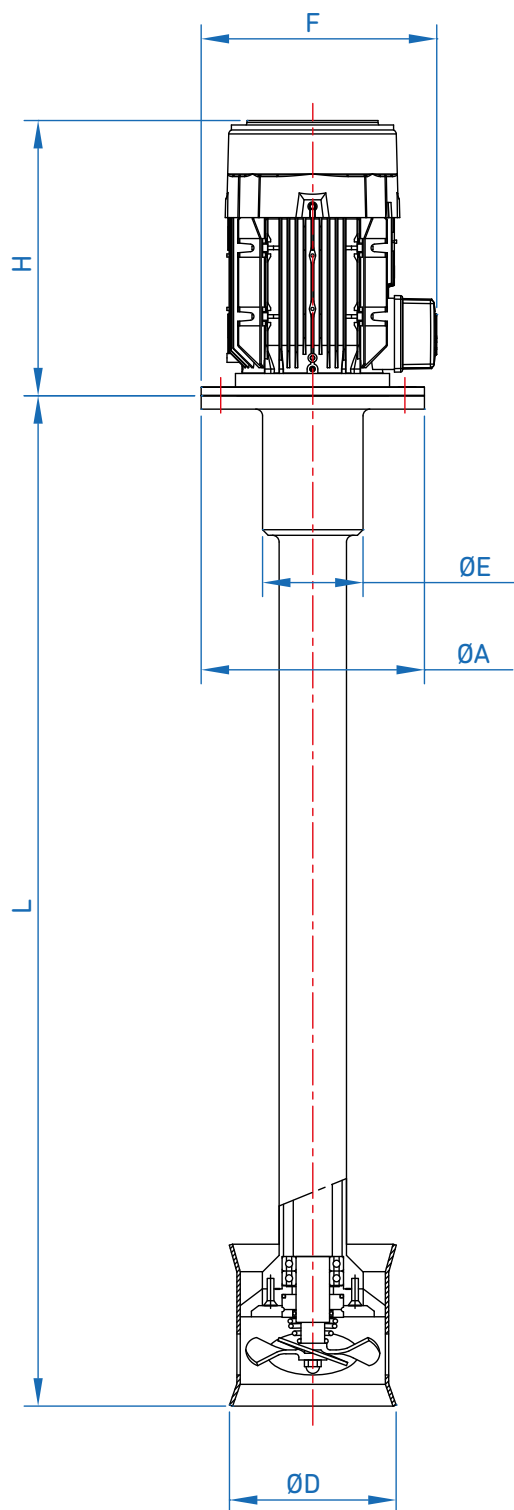
**MATERIALS**

- Shaft and propeller in stainless steel AISI 316
- Non-waterproof parts in stainless steel AISI 304

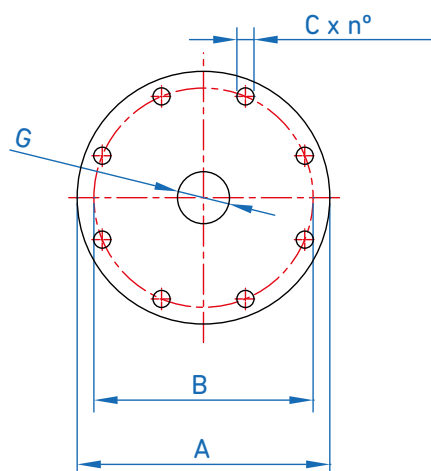
**OPTIONS**

- Control panel
- Frequency variator
- Motor cover
- Elevation system
- Other anchor flanges
- Pneumatic actuator
- Headpiece and turbine in other materials

## DIMENSIONS OF THE TURBINE MODEL

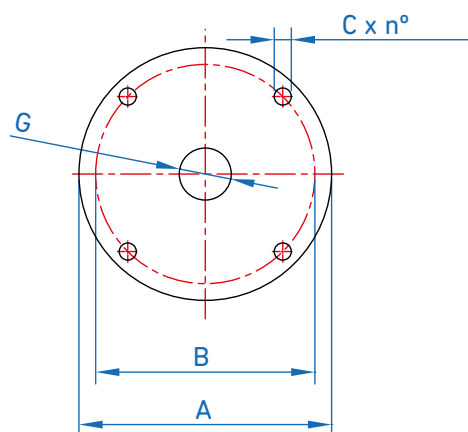


### DIN 2576 PN10 FLANGE AGITATOR BASE



OVERALL DIMENSIONS						
MODEL		A	B	C	n°	G
<b>TURBINE 0.25 - 50</b>	DN125	250	210	18	8x45°	142
<b>TURBINE 0.75 - 150</b>	DN150	285	240	18	8x45°	170
<b>TURBINE 1.5 - 500</b>	DN150	285	240	18	8x45°	170
<b>TURBINE 4 - 1000</b>	DN200	340	295	22	8x45°	221
<b>TURBINE 7.5 - 1500</b>	DN250	395	350	22	12x30°	276
<b>TURBINE 11 - 2000</b>	DN300	445	400	22	12x30°	260

### IEC FLANGE AGITATOR BASE

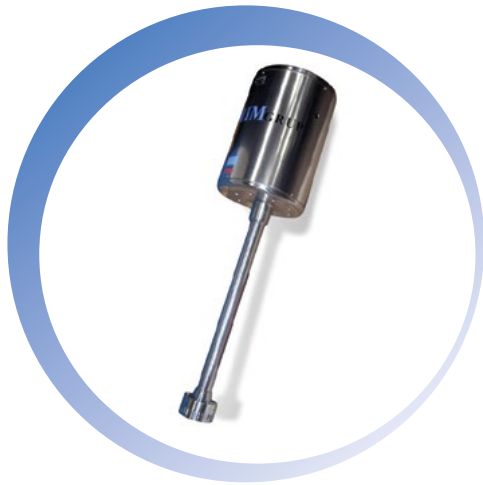


OVERALL DIMENSIONS						
MODEL	P (kW)	H	F	ØE	ØD	L
<b>TURBINE 0.25 - 50</b>	0.25	191	233	50	60	500
<b>TURBINE 0.75 - 150</b>	0.75	226	256	84	89	650
<b>TURBINE 1.5 - 500</b>	1.5	260	272	84	115	650
<b>TURBINE 4 - 1000</b>	4	333	307	84	141	800
<b>TURBINE 7.5 - 1500</b>	7.5	470	408	120	168	1000
<b>TURBINE 11 - 2000</b>	11	474	433	160	205	1200

OVERALL DIMENSIONS						
MODEL	FLANGE	A	B	C	n°	G
<b>TURBINE 0.25 - 50</b>	IEC 160	160	130	9	4x90°	110
<b>TURBINE 0.75 - 150</b>	IEC 200	200	165	11	4x90°	130
<b>TURBINE 1.5 - 500</b>	IEC 200	200	165	11	4x90°	130
<b>TURBINE 4 - 1000</b>	IEC 250	250	215	14	4x90°	180
<b>TURBINE 7.5 - 1500</b>	IEC 300	300	265	14	4x90°	230
<b>TURBINE 11 - 2000</b>	IEC 350	350	300	18	4x90°	250

**EMV**

**Mixer**



EMV --- 1 stage and EMVT --- 2 stages mixers have been designed to obtain emulsions and dispersions which require a high degree of shearing. The functions of these systems mean they can work with high viscosity products (up to 20,000 cP) and obtain a completely homogenous result.

The sealing system allows work to be carried out in non-atmospheric conditions (overpressure and/or vacuum) without using a cooled external mechanical seal. The design of the headpiece and the rotor ensures a high degree of sanitisation which, together with the simplicity of the parts, makes maintenance easier.

EMVT --- mixers have been developed for products which are difficult to mix, since the headpiece design adapts to each application, improving performance and optimising operating time.

**WORKING PRINCIPLE**

The rotation of the impeller generates a radial impulsion of the product towards the headpiece slots, resulting in shearing and crushing. Once the product passes the stator orifices, it is projected and dispersed towards the mix, resulting in fluid circulation inside the vessel. Thus, as the product is dispersed, new material is introduced in the headpiece to produce a completely homogeneous mix.

It is important to emphasise that the circulation rate generated can dissolve large amounts of powder and is highly suitable for the chemical, food, cosmetics and pharmaceutical industries. Some of the EMV mixer applications are:

- Mixing of mayonnaise, creams, sauces, etc.
- Dissolving of sugars, salts, resins, gases, etc.
- Homogenisation of bulk containers (IBCs)
- Dissolving of powders, gums, thickeners, etc.

**MODELS**

- EMV(T) 0.55 – 50**
- EMV(T) 1.5 – 150**
- EMV(T) 2.2 – 250**
- EMV(T) 4 – 500**
- EMV(T) 7.5 – 1500**
- EMV(T) 11 – 2500**
- EMV(T) 18.5 – 7000**

**CARACTERISTICS**

- DIN 2576 Anchor flange
- IEC Motor flange
- Adjustable headpiece and turbine design
- Easy assembly/dismounting
- Single mechanical seal
- High degree of hygiene

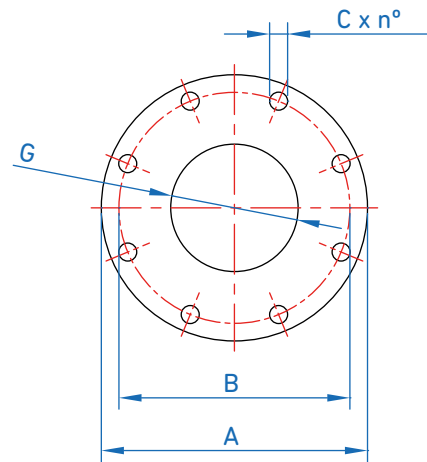
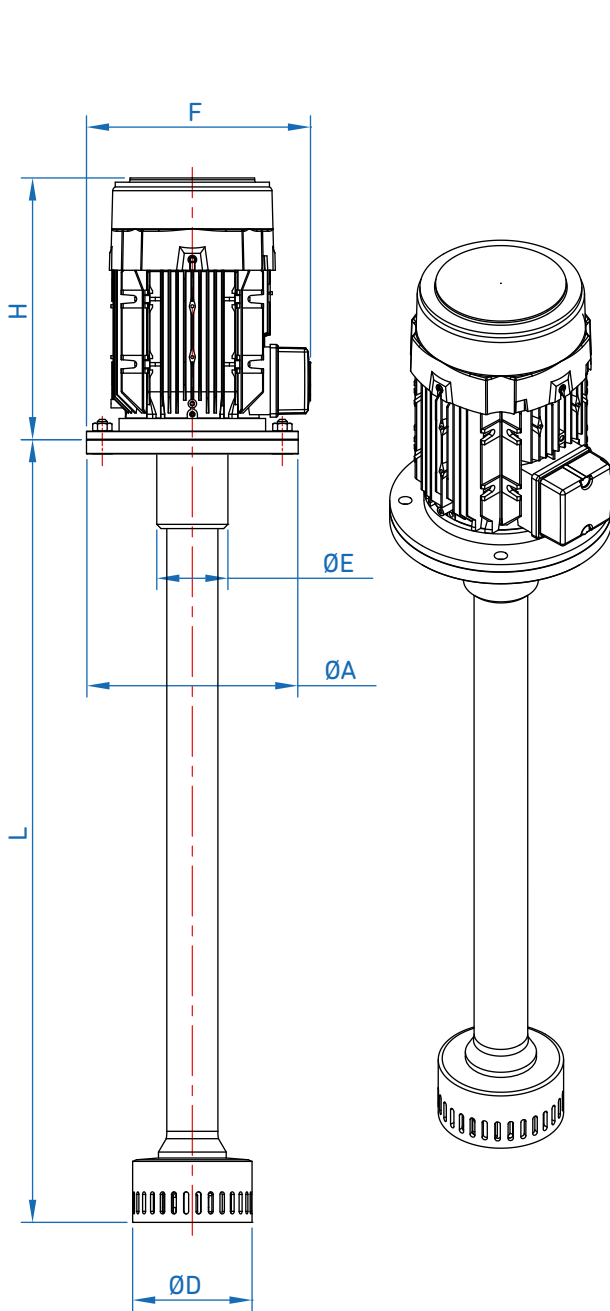
**MATERIALS**

The parts in contact with the product are made from AISI 316L

**OPTIONS**

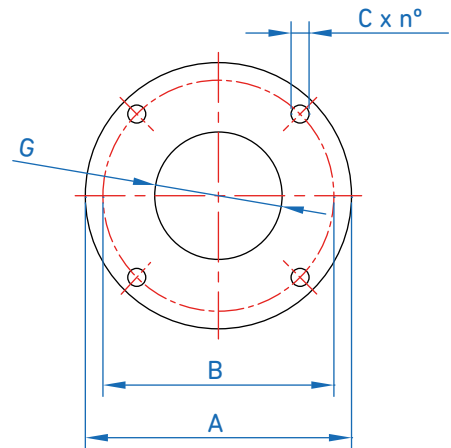
- Control panel
- Frequency variator
- Manual/automatic elevation system
- Other connections
- Other materials: Hastelloy, AISI 904L, etc.
- Motor cover

DIN 2576 FLANGE MIXER BASE



OVERALL DIMENSIONS						
MODEL	A	B	C	n°	G	
EMV 0.55-50	DN50	Ø165	125	18	4x90°	61
EMV 1.5-150	DN80	Ø200	160	18	8x45°	90
EMV 2.2-250	DN80	Ø200	160	18	8x45°	90
EMV 4-500	DN150	Ø285	240	22	8x45°	170
EMV 7.5-1500	DN200	Ø340	295	22	8x45°	221
EMV 11-2500	DN250	Ø395	350	22	12x30°	276
EMV 18.5-10000	DN300	Ø445	400	22	12x30°	260

IEC FLANGE MIXER BASE



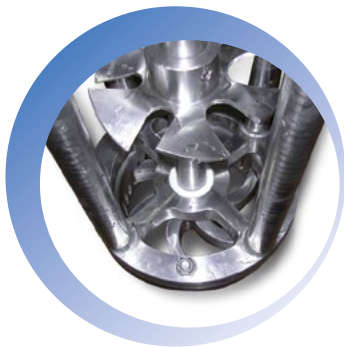
OVERALL DIMENSIONS						
MODEL	P (kW)	H	F	ØE	ØD	L
EMV 0.55-50	0.55	210	192	50	60	500
EMV 1.5-150	1.5	260	227	84	89	650
EMV 2.2-250	2.2	260	227	84	115	650
EMV 4-500	4	333	280	84	141	800
EMV 7.5-1500	7.5	470	359	120	168	1000
EMV 11-2500	11	474	408	160	205	1200
EMV 18.5-10000	18.5	474	433	200	220	1400

OVERALL DIMENSIONS						
MODEL	A	B	C	n°	G	
EMV 0.55-50	IEC 160	160	130	9	4x90°	110
EMV 1.5-150	IEC 200	200	165	11	4x90°	130
EMV 2.2-250	IEC 200	200	165	11	4x90°	130
EMV 4-500	IEC 250	250	215	14	4x90°	180
EMV 7.5-1500	IEC 300	300	265	14	4x90°	230
EMV 11-2500	IEC 300	300	265	14	4x90°	230
EMV 18.5-10000	IEC 350	350	300	18	4x90°	250



**EM**

## Vertical mixer



EM---vertical mixers provide high shear rates in emulsions and dispersions due to their head and turbine design. The vertical mixer produces a completely homogenized product, without lumps, in medium (5000 litres) and small volume applications. Furthermore, because of the careful treatment they provide, these mixers are very useful for keeping the compound properties of products which are already homogenised.

Moreover, with the EM design, the maintenance tasks are eased and the highest hygiene conditions ensured. The head configuration changes in accordance with the kind of product and its requirements, with sieved, slotted and perforated configurations available. These features mean EM mixers can reduce particle size, destroy coagulations and quickly dissolve solids in liquids. Some vertical mixer applications are:

- Emulsion of products in the food, cosmetic and pharmaceuticals industries (mayonnaise, creams, sauces, etc.)
- Dissolution of sugars, salts, resins, gases, etc.
- Suspensions, dispersions and dilutions
- Mixing of solids (powder or crystals) in liquids
- Homogenizations

### MODELS

- EM 1.5-150**
- EM 4-500**
- EM 7.5-1500**
- EM 11-2500**
- EM 18.5-5000**

### CHARACTERISTICS

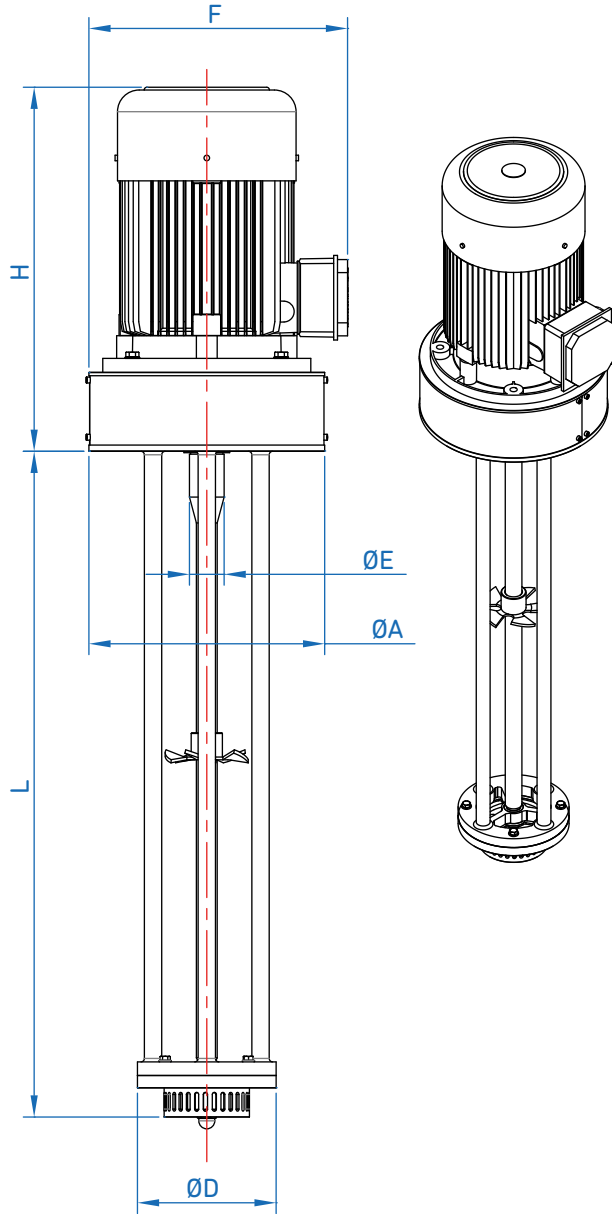
- Anchor flange DIN 2576
- Adjustable head and propeller configuration
- High degree of hygiene
- Interchangeable heads

### MATERIALS

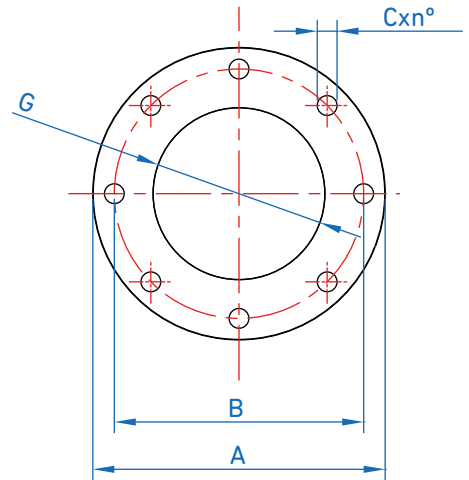
- The parts in contact with the product are made from stainless steel AISI 316
- Level of finish: Foodstuff / Sanitary

### OPTIONS

- Other anchor flanges
- Mechanical seal
- Control panel
- Manual/automatic elevation system
- Central agitator
- Turbines and diffusors in other materials

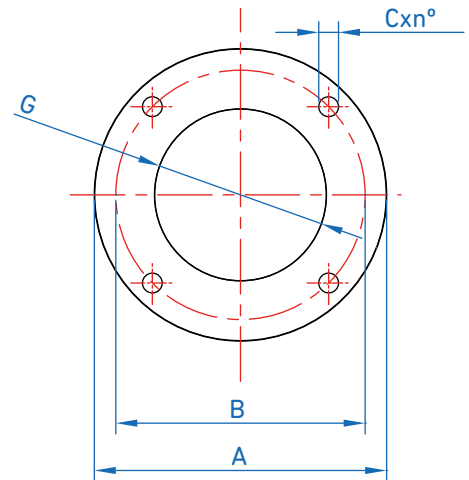


MIXER BASE DIN 2576 FLANGE



OVERALL DIMENSIONS						
MODEL	A	B	C	n°	G	
EM 4-500	DN125	Ø250	210	18	8x45°	170
EM 7.5-1500	DN200	Ø340	295	22	8x45°	221
EM 11-2500	DN250	Ø395	350	22	12x30°	276
EM 18.5-5000	DN300	Ø445	400	22	12x30°	290

MIXER BASE IEC FLANGE

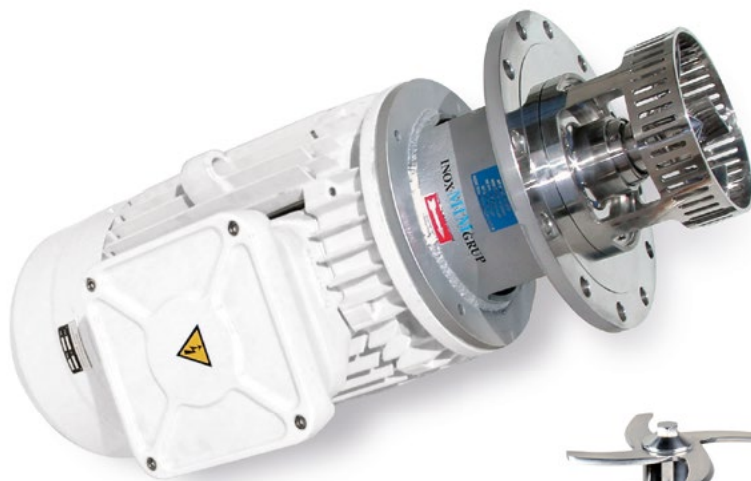


OVERALL DIMENSIONS						
MODEL	A	B	C	n°	G	
EM 1.5-150	IEC 200	200	165	11	4x90°	130
EM 4-500	IEC 250	250	215	14	4x90°	180
EM 7.5-1500	IEC 300	300	265	14	4x90°	230
EM 11-2500	IEC 300	300	265	14	4x90°	230

OVERALL DIMENSIONS							
MODEL	Pot (kW)	H	F	ØE	ØD	L	(kg)
EM 1.5-150	1.5	260	254	84	113	800-650-500	26
EM 4-500	4	333	262	84	165	1000-800-600	59
EM 7.5-1500	7.5	470	380	120	200	1250-1000-750	111
EM 11-2500	11	474	408	160	220	1500-1200	144
EM 18.5-5000	18.5	474	433	200	285	1700-1400	275

**EMF**

# Bottom entry mixer



INOXMIM has designed a wide range of bottom entry mixers which meet all requirements in product dispersing, mixing, homogenising and crushing processes.

EMF --- mixers are installed in the bottom of the vessel and carry out highly efficient dissolving of the heaviest particles of the product. When turning, the turbine generates the suction required to draw the fluid towards the centre of the headpiece, where centrifugal force directs it toward the outside of the rotor. Once the space between the turbine and the stator is reached, the product is subjected to high pressure which leads to crushing. It then passes through the high turning speed headpiece orifices, generating a very high shearing strain which leads to dispersion, emulsification and homogenisation of the mix, as this process is repeated continuously.

This high level of shearing, combined with the different types of headpieces (perforated, slotted or sieved), generates the ideal particle size for stable emulsions and homogeneous mixes. These units can be used in an agitator system fitted with an anchor impeller for high viscosity products, or can work alone if the product has low viscosity. All these features make these units essential in sectors as demanding as the food, pharmaceutical and cosmetics industries.

### MODELS

- EMF 0.75-50**
- EMF 1.5-100**
- EMF 4-500**
- EMF 7.5-1500**
- EMF 11-2.500**
- EMF 15-5.000**
- EMF 18.5-10000**

### CHARACTERISTICS

- DIN 2576 PN10 Anchor flange
- Adjustable head and turbine design
- High degree of hygiene
- Interchangeable heads: slotted, sieved or perforated
- Easy assembly/dismounting
- Double mechanical seal

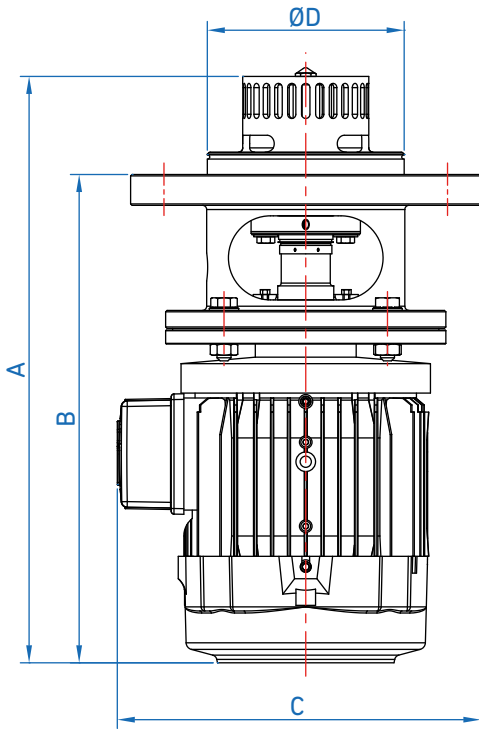
### MATERIALS

- Parts in contact with the product in stainless steel AISI 316
- Level of finish: Foodstuff / Sanitary

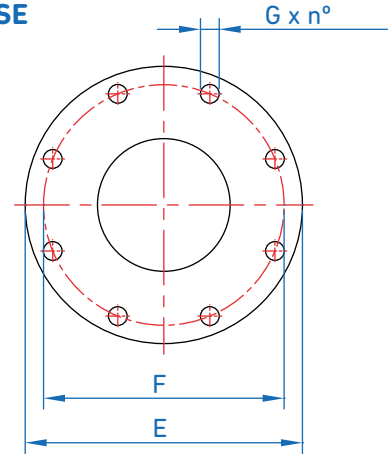
### OPTIONS

- Single mechanical seal with safety stuffing
- Control panel
- Speed variator
- Diffuser and turbine in other materials
- Motor cover
- Cooling unit for the seal system
- Multi-turbine

DIMENSIONS AND CHARACTERISTICS OF THE EMF MODEL



DIN 2576 PN10 FLANGE MIXER BASE



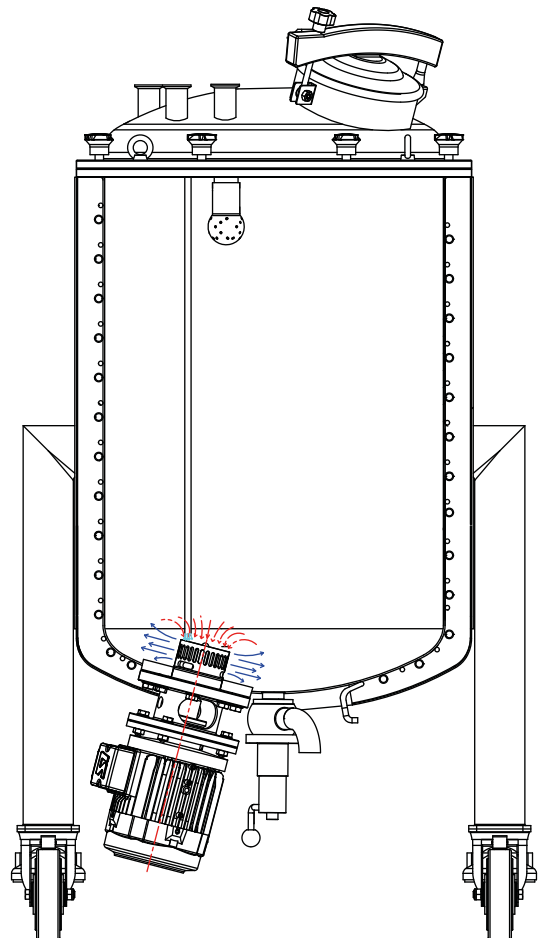
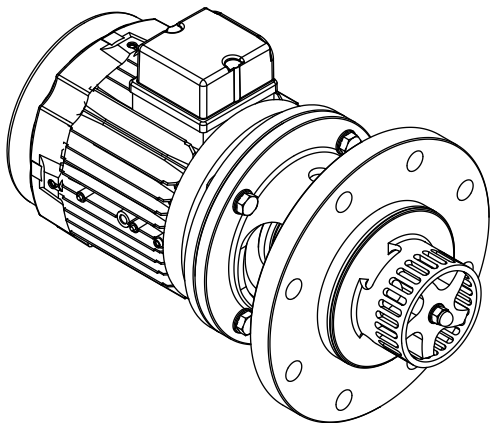
OVERALL DIMENSIONS

MODEL	E	F	G	n°	
EMF 0.75-50	DN80	Ø200	160	18	8x45°
EMF 1.5-100	DN125	Ø250	210	18	8x45°
EMF 4-500	DN125	Ø250	210	18	8x45°
EMF 7.5-1500	DN150	Ø285	240	22	8x45°
EMF 11-2500	DN200	Ø340	294	22	8x45°
EMF 15-5000	DN250	Ø395	350	22	12x30°
EMF 18.5-10000	DN250	Ø395	350	22	12x30°

OVERALL DIMENSIONS

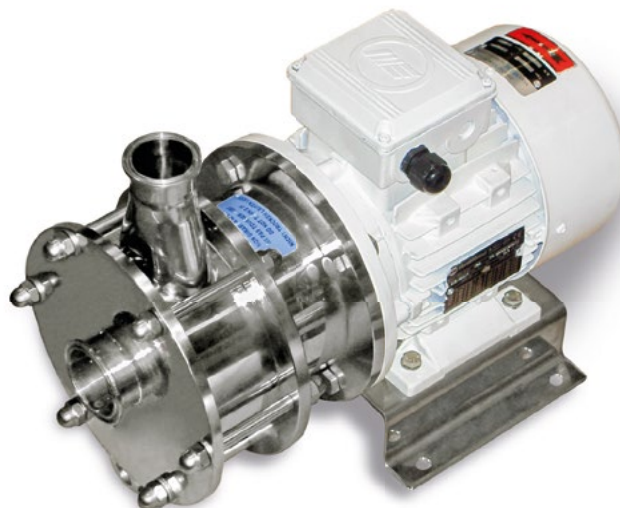
MODEL	Pot. (kW)	A	B	C	ØD	(kg)
EMF 0.75-50	0.75	377	311	225	89	21
EMF 1.5-100	1.5	445	366	235	89	29
EMF 4-500	4	535	454	265	140	46
EMF 7.5-1500	7.5	711	618	312	169	76
EMF 11-2500	11	730	630	357	220	110
EMF 15-5000	15	765	642	385	274	131
EMF 18.5-10000	18.5	765	645	433	274	149

\*For higher models, please ask



**EML / EMLT**

**Inline mixer**



EML -- -- inline mixers provide high emulsion grades and are able to pump the product thanks to their slotted head and propeller design. These mixers achieve a completely homogenised, lump-free product and prevent oxidation. With the careful treatment they provide, they are highly recommended for handling and decanting already homogenised products, thanks to their ability to maintain the properties of the product whilst pumping.

EML mixers are designed for optimal hygiene and straightforward maintenance. The head configuration changes in accordance with the kind of product and its requirements, with sieved, slotted and perforated configurations available.

EMLT inline mixers have multi-slotted heads designed specifically for each application, given the influence of the different products on the performance of the equipment. EMLT mixers can provide the highest levels of homogenisation in products with high viscosity, distant densities or which are difficult to mix, avoiding phase separation.

EML and EMLT inline mixers are widely used in:

- Dissolutions, dispersions or mixing of solids (powders or crystals) in liquids.
- Emulsion, dilutions or liquids mixing
- Milling
- Mixing gases with liquids

**MODELS**

- EML 1.5-3000**
- EML 4-3000**
- EML 7.5-3000**
- EML 11-3000**
- EML 15-3000**
- EML 22-3000**
- EML 30-3000**

**CHARACTERISTICS**

- Single or dual cartridge mechanical seal
- Adjustable head and propeller configuration
- DIN 11851 connections
- Adjustable discharge direction
- High degree of hygiene
- External protection against environmental oxidation

**MATERIALS**

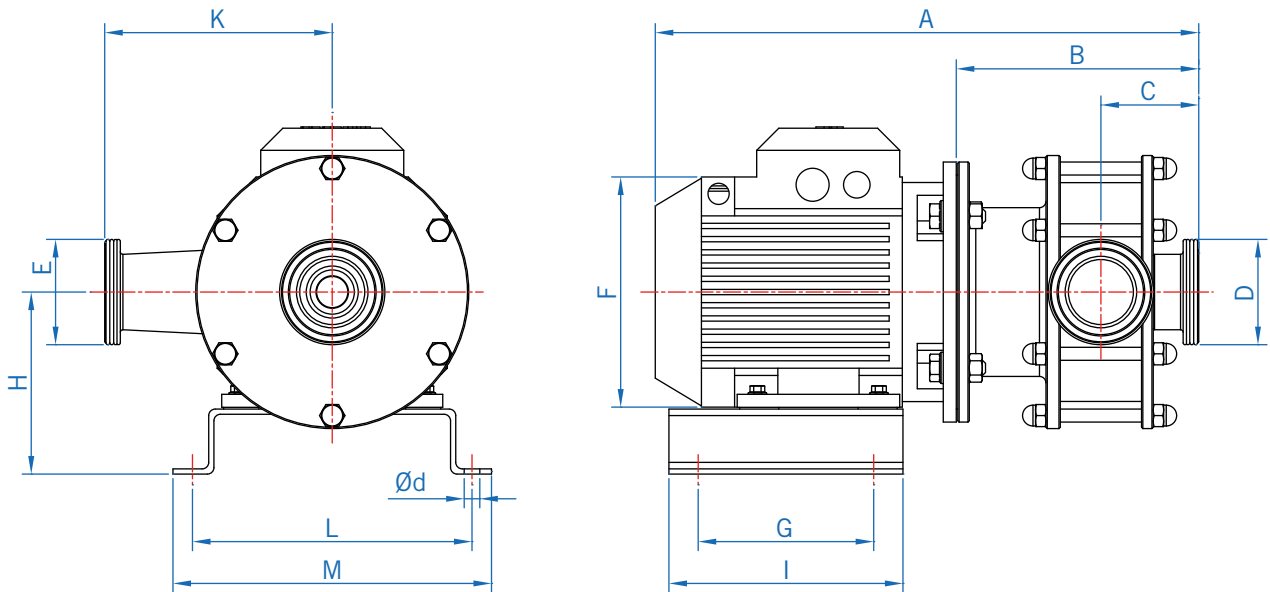
- The parts in contact with the product are made from stainless steel AISI 316
- Level of finish: Industrial / Foodstuff / Sanitary
- EPDM / Viton / Encapsulated PTFE gaskets

**OPTIONS**

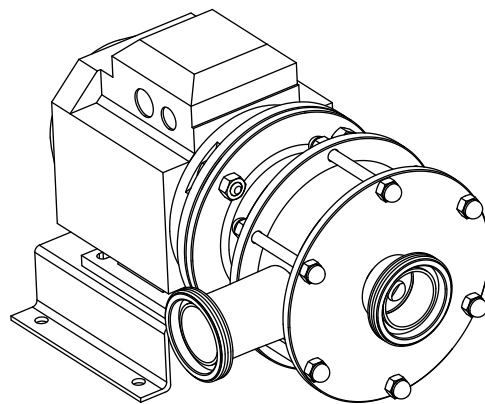
- Multi-slotted head (EMLT)
- Other connections: CLAMP, SMS, DIN 2576, DIN 11856, etc.
- Body drain
- Control panel
- Frequency converter
- Suction positive displacement pump
- Covering
- Other materials
- Thermosiphon (for the seal cooling system)
- Trolley, platform



## DIMENSIONS OF THE EML MODEL



MODEL	Power (kW)	A	B	C	D	E	F	G	H	I	K	L	M	d
<b>EML 1.5-3000</b>	1.5	424	186.5	75	DN50	DN40	180	135	140	180	175	215	245	10
<b>EML 4-3000</b>	4	545	218	82.5	DN65	DN50	220	200	172	240	195	275	310	12
<b>EML 7.5-3000</b>	7.5	675	248	93	DN80	DN65	253	300	192	400	210	335	370	12
<b>EML 11-3000</b>	11	725	280	93	DN80	DN65	265	400	220	500	210	375	410	14
<b>EML 15-3000</b>	15	860	365	160	DN80	DN65	264	400	220	500	225	375	410	14
<b>EML 22-3000</b>	22	860	365	160	DN100	DN80	310	450	240	550	265.5	375	410	18
<b>EML 30-3000</b>	30	1025	405	170.5	DN100	DN80	347.5	540	260	650	300	475	440	18





**MICRO**

**Micronizer**



MICRO mixing equipment is specially designed to provide high shear rates and to produce a completely emulsified product.

These mixer-homogenisers are widely used for emulsifying in several food, cosmetic and pharmaceutical processes. Thanks to its special design, the high rotor speed –up to 33 m/s– and the dual sealing system, it provides excellent results in high viscosity emulsions.

**OPERATING PRINCIPLE**

The reactive flows through a multi-tooth rotor comprising several rows of teeth and concentric channels which adjust perfectly to the machined opposite in the static diffuser. Suction is done from the centre and the product is dispersed by the turbine at high-speed through the channels, causing impacts against the sharp edges of the accurately machined inner parts. The high quality of the mixture is achieved thanks to careful mechanical adjustment, high speed and highly robust mechanical parts.

**CHARACTERISTICS**

- Particle size below 10 microns
- High degree of hygiene
- Bearing support to absorb radial and axial loads
- Rotational speed of 5000 rpm
- Cooled dual mechanical seal
- CLAMP connections
- Drain system
- Level of finish: Sanitary
- External protection against environmental oxidation

**MATERIALS**

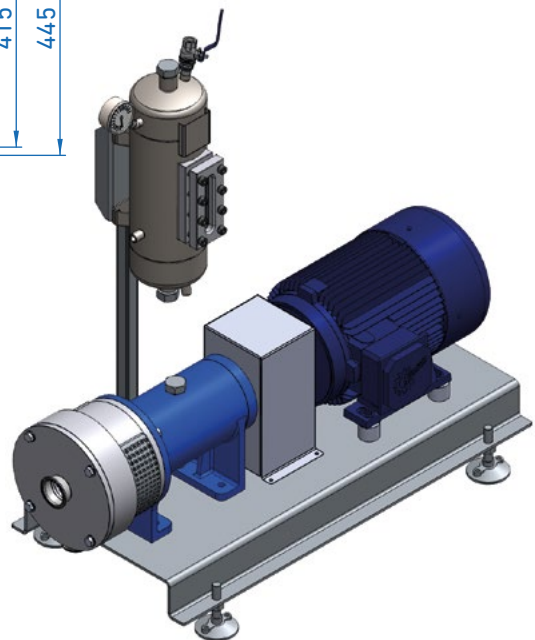
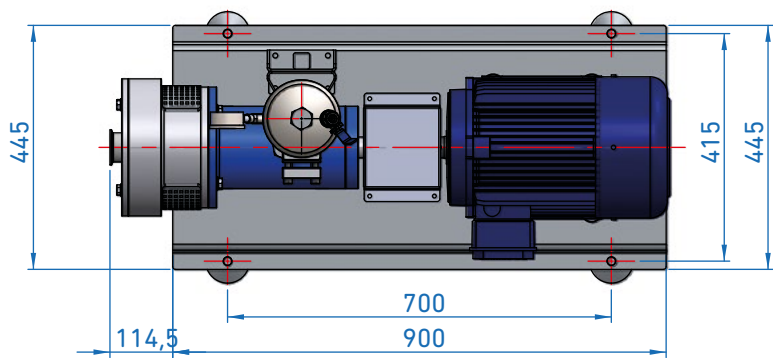
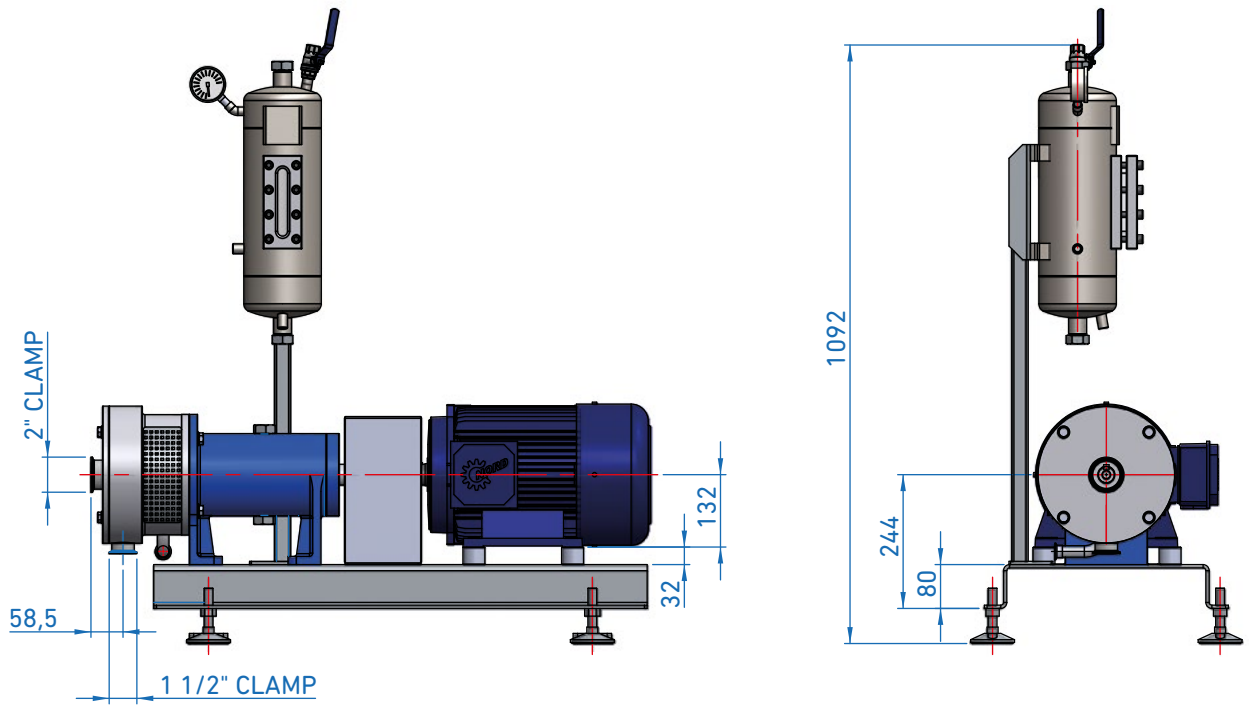
- Parts in contact with the product in stainless steel AISI 316L
- EPDM watertight gaskets
- Mechanical seal with silicon carbide

**OPTIONS**

- Control panel
- Frequency converter
- Suction positive displacement pump
- Other connections: DIN 11851, DIN 11856, SMS, etc.
- Watertight gaskets in other materials
- Motor covering
- Trolley, platform

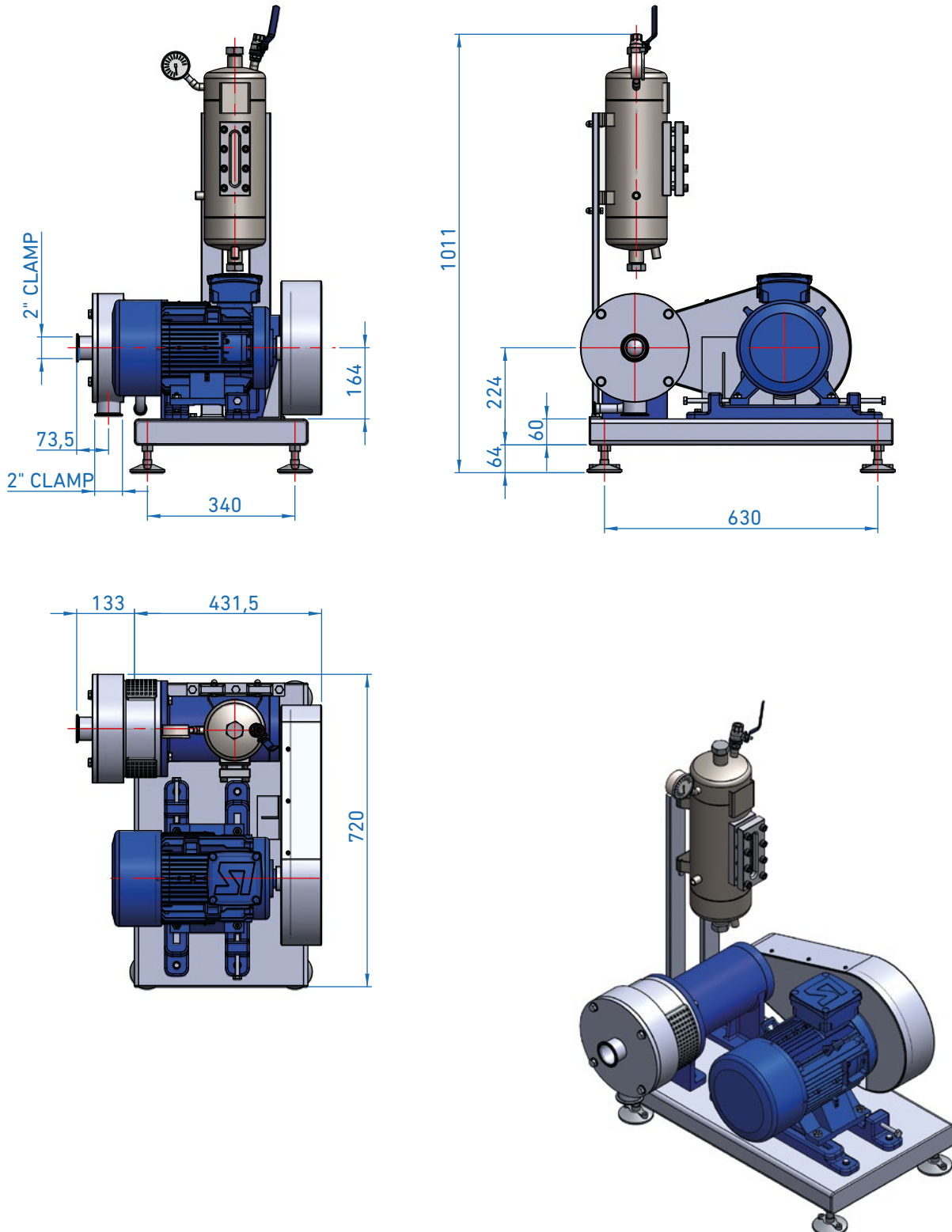
## DIMENSIONS AND CHARACTERISTICS OF THE MICRO MODEL

MODEL	Motor (kW)	Max. Speed (rpm)	Ø Suction	Ø Discharge	Particles size (microns)
<b>MICRO 4-3000</b>	4	4000	2" CLAMP	1 1/2" CLAMP	<50
<b>MICRO 7.5-3000</b>	7.5	4000	2" CLAMP	2" CLAMP	<15



## DIMENSIONS AND CHARACTERISTICS OF THE MICRO MODEL

MODEL	Motor (kW)	Max. Speed (rpm)	Ø Suction	Ø Discharge	Particles size (microns)
<b>MICRO 11-5000</b>	11	5000	2" CLAMP	2" CLAMP	<10



**EMTB**

**EMTB Y**

**EMTB V**

## Solid-liquid mixer



EMTB solid-liquid mixers, with the optimised design of the blade and suction system, produce completely homogenised mixtures of powders or granulated products with liquids. The simplicity of the parts and the connections system facilitate maintenance tasks and ensure highly hygienic operation conditions.

The main fluid is pumped and carried through the mixing chamber, creating the suction required in order to add the solid, which is mixed violently to produce dissolution. Once all the powder is added, the regulation valve is closed and, after several circulations, a completely homogenised mixture is obtained. This solid incorporation system prevents product moistening, thickening and solidification, thus avoiding any operation problems resulting from the appearance of agglomerations in the load.

EMTB performance makes them ideal for working in the foodstuff, cosmetic and pharmaceuticals industries. Some examples of operations where EMTB mixers are used are as follows:

- Brine preparation
- Reconstitution of powdered milk
- Syrup production
- Dissolution of bentonite, thickeners, sugar, etc.
- Incorporation of preservatives, additives, agrochemical products, lime, etc.

### MODELS

**EMTB 2.2 - 3000**

**EMTB 4 - 3000**

**EMTB 7.5 - 3000**

### CARACTERISTICS

Single mechanical seal S/S/EPDM

Level of finish: Sanitary

High hygiene degree

Quick dismantling with clamp connections

Manual butterfly valve

External protection against environmental oxidation

### MATERIALS

The parts in contact with the product are made from polished stainless steel AISI 316L

Platform and cover in AISI 304

EPDM gaskets

### OPTIONS

Pneumatic actuator valve

Ball valve

Level probes

Gaskets in other materials

Dual mechanical seal

Centrifugal feeder pump

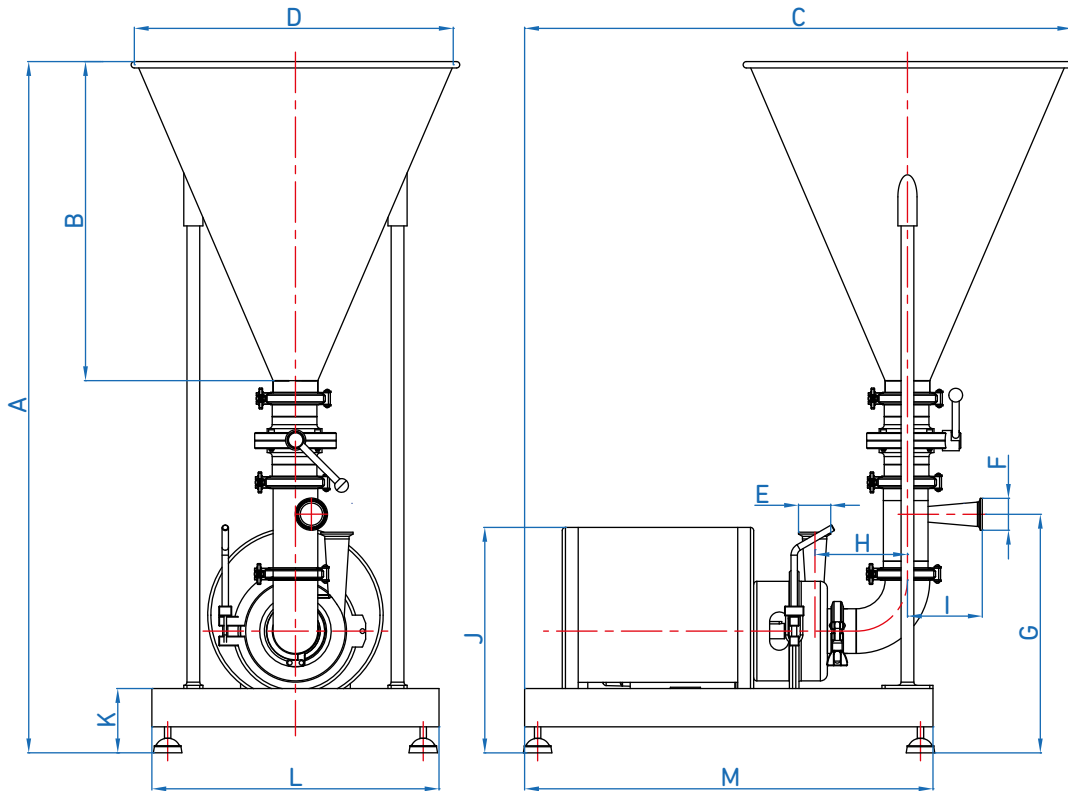
Positive displacement feeder pump

Vibrators

Control panel

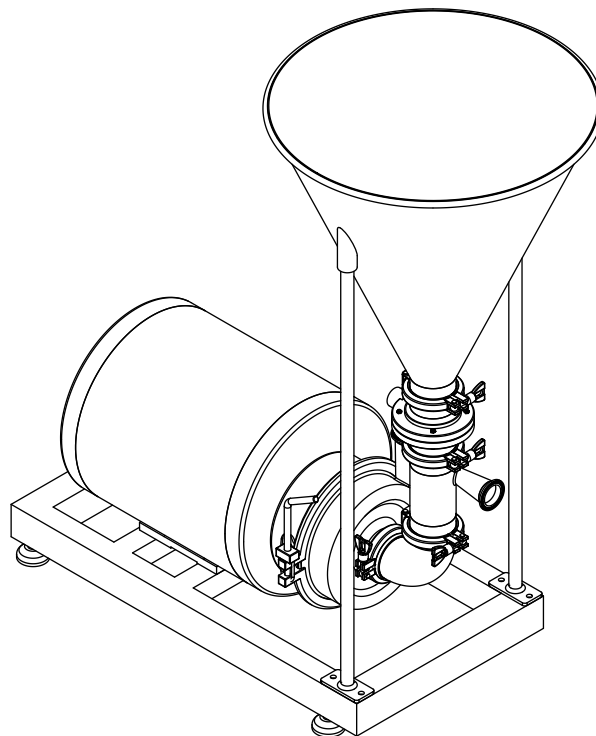
Trolley, platform

## DIMENSIONS OF THE EMTB H MODEL

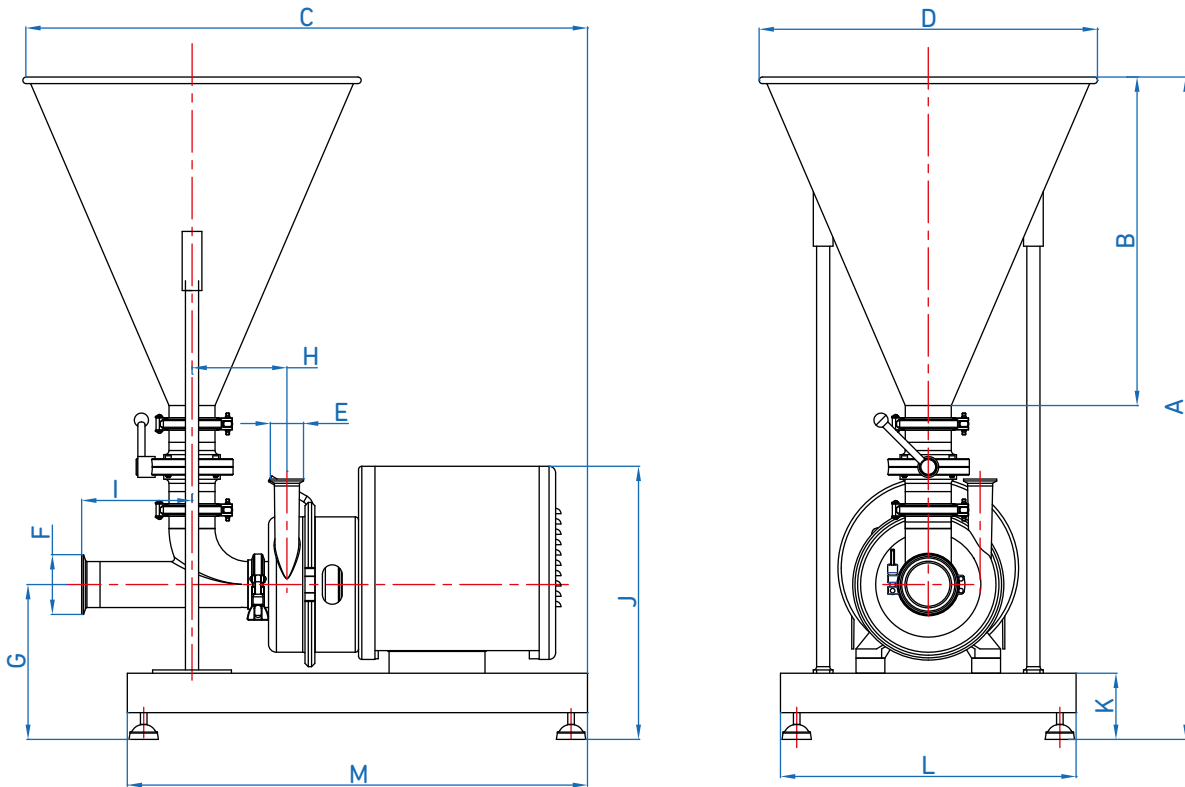


### OVERALL DIMENSIONS

MODEL	Pow. (kW)	A	B	C	D	E	F	G	H	I	J	K	L	M
<b>EMTB 2.2-3000</b>	2.2	1078	500	954	500	DN40	DN40	395	145	120	350	110	400	640
<b>EMTB 4-3000</b>	4	1100	500	954	500	DN50	DN40	417	145	120	410	110	400	640
<b>EMTB 7.5-3000</b>	7.5	1328	500	1158	700	DN65	DN50	636	124	120	575	160	500	1000

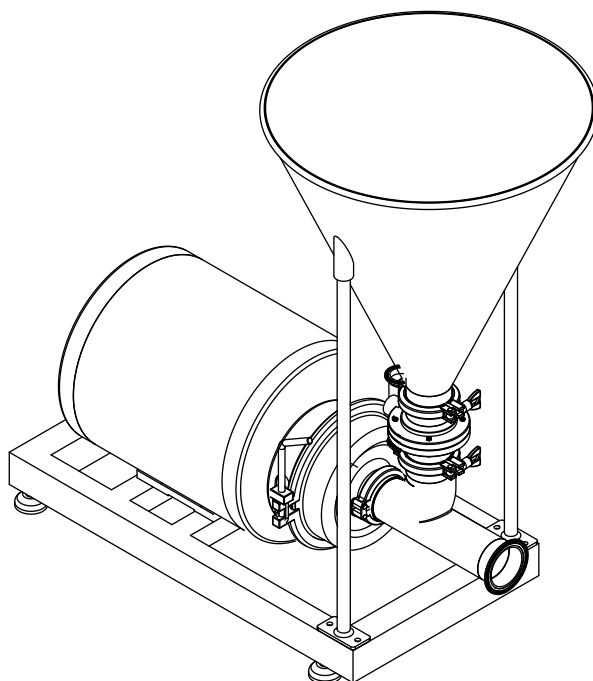


## DIMENSIONS OF THE EMTB Y MODEL



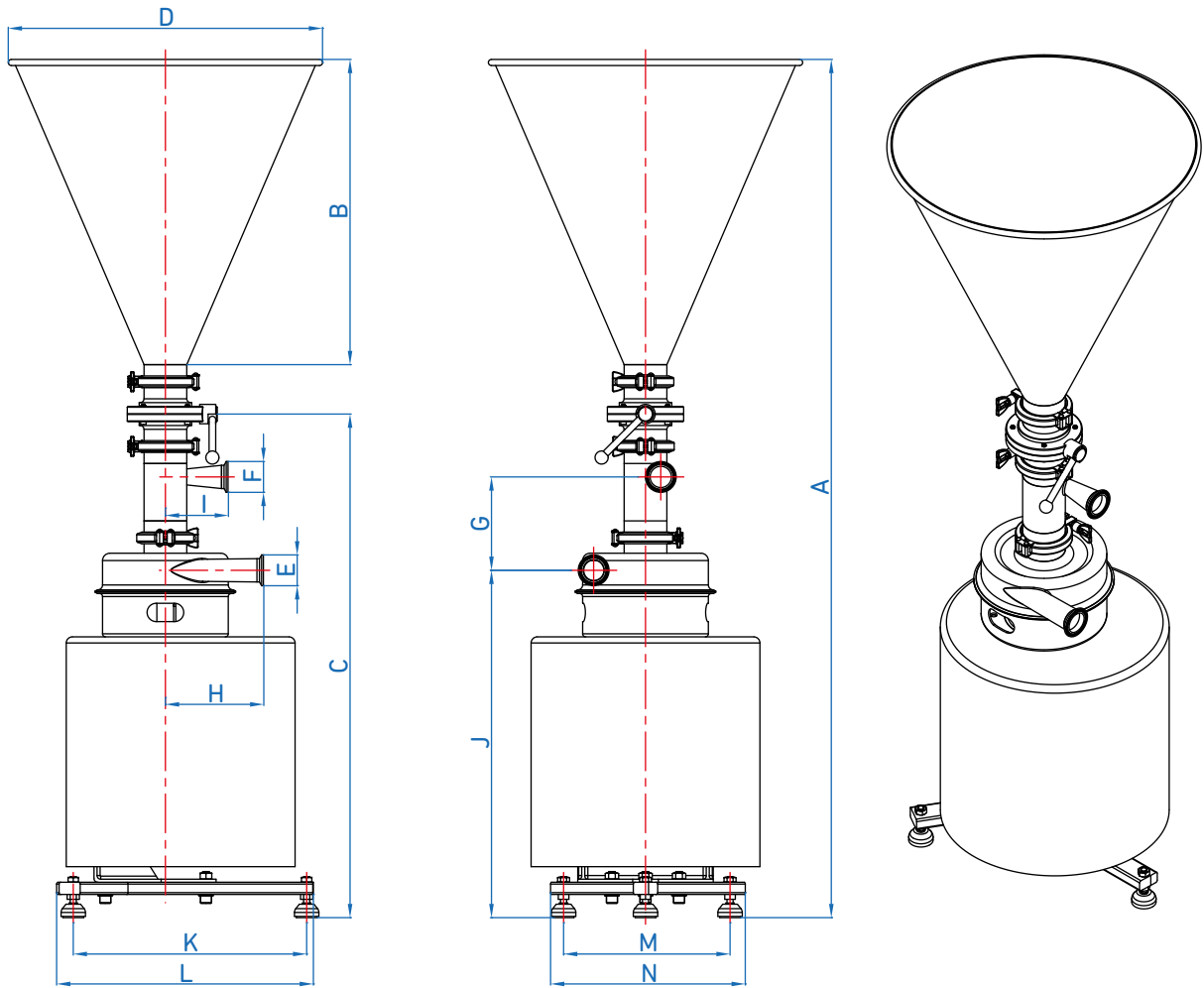
### OVERALL DIMENSIONS

MODEL	Pow (kW)	A	B	C	D	E	F	G	H	I	J	K	L	M
<b>EMTB Y 2.2-3000</b>	2.2	980	500	955	500	DN50	DN40	395	145	120	350	110	400	640
<b>EMTB Y 4-3000</b>	4	1000	500	955	500	DN65	DN50	417	145	120	410	110	400	640
<b>EMTB Y 7.5-3000</b>	7.5	1050	500	1160	700	DN80	DN65	636	270	170	575	160	500	1000





DIMENSIONS OF THE EMTB V MODEL



OVERALL DIMENSIONS

MODEL	Pow. (kW)	A	B	C	D	E	F	G	H	I	J	K	L	M	N
<b>EMTB V 2.2-3000</b>	2.2	1370	500	795.5	500	DN50	DN40	138	145	120	521	380	420	273	320
<b>EMTB V 4-3000</b>	4	1430.5	500	836	500	DN50	DN40	141	179.5	120	579	380	420	273	320

**EMTE**

# Solid-liquid emulsifier



Solid-liquid emulsifiers EMTE with its rotor stator system optimized design altogether with its suction system, give homogenous mixtures of liquids with powders and granulated products. The simplicity of the parts and the connections ensure highly hygienic operation conditions.

The operating principle of this system is found in the suction generated by the quick circulation of the fluid through the feeder thanks to the Ventury effect, making powder suction easier. The mix enters the central part of the impeller and once inside, is dispersed through the diffuser orifices, where it is crushed and dispersed to obtain a completely homogeneous product. This way, the dissolution procedure is optimized achieving homogenous product with or without product recirculation.

Once it has been completely homogenized by rotor-stator system, the reverse turbine impeller provides the impulsion pressure necessary to pump the product towards the next unit, and also generates the suction necessary during operation.

The solid incorporation system prevents product moistening, thickening and solidification, thus avoiding any operation problems resulting from the appearance of agglomerations in the load.

Their performance makes them ideal for working in the foodstuff, cosmetics and pharmaceuticals industries. Some examples of operations where EMTE mixers are used are as follows:

- Dissolving of sugar in foodstuffs (wine, syrup, condensed milk, ice cream, etc.)
- Preparation/reconstitution of powdered milk
- Brine preparation
- Syrup production
- Dissolving of bentonites, tannins, thickeners, active carbon, etc.
- Incorporation of additives, colourants, flavourers, agrochemical products, lime, etc.

**MODELS**

- EMTE 4 - 3000**
- EMTE 7.5 - 3000**
- EMTE 15 - 3000**
- EMTE 18.5 - 3000**

**CHARACTERISTICS**

- Dual cartridge mechanical seal
- High degree of hygiene
- Quick dismantling with CLAMP connections
- Manual butterfly valve
- External protection against environmental oxidation
- Assembled over a transportable table
- Mechanical seal cooling system through thermosiphon vessel
- Control panel
- Level of finish: mate exterior (sandblasted) / inner polish (chemical polished + brushed)

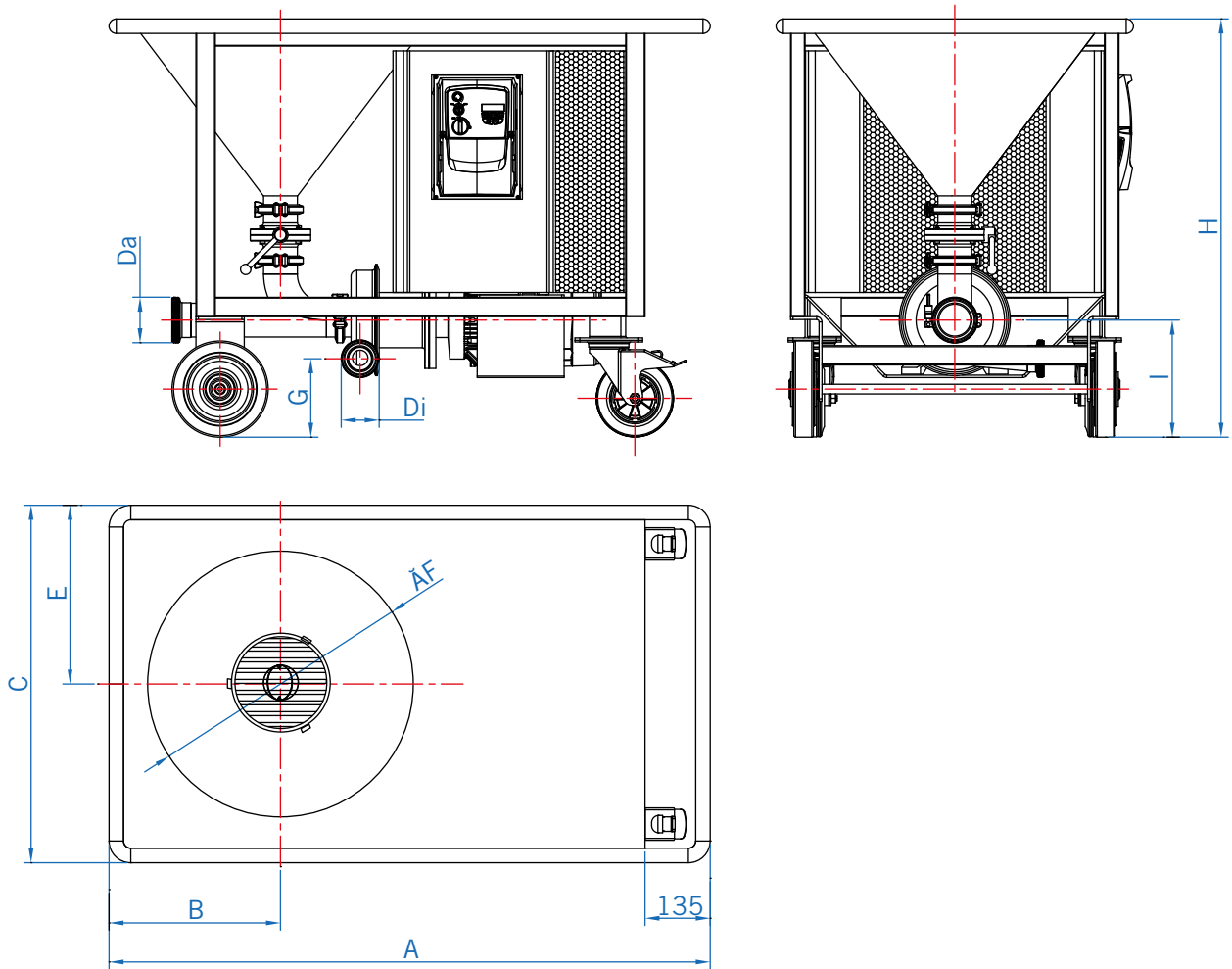
**MATERIALS**

- The parts in contact with the product are made from stainless steel AISI 316L
- Table and structure in AISI 304
- EPDM gaskets

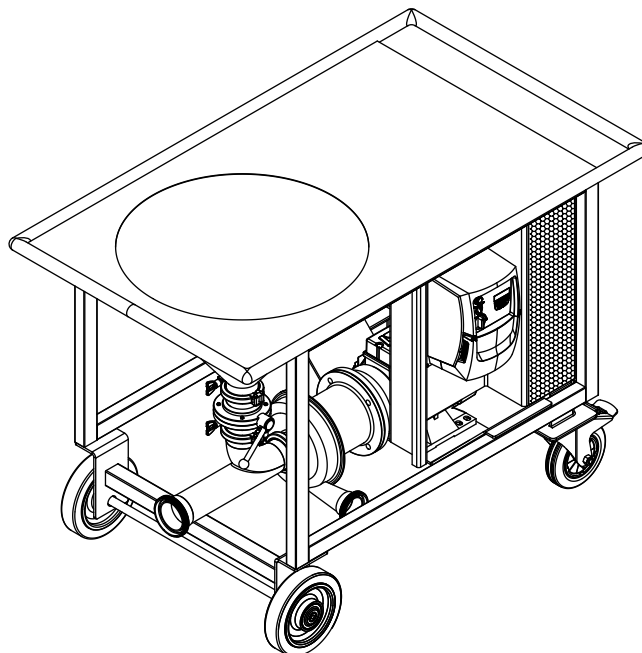
**OPTIONS**

- Pneumatic or electric actuator valve
- Ball valve, knife valve, etc.
- Frequency converter
- Solid presence probes
- Liquid presence probes
- Multi-stages head
- Gaskets alternative materials: Viton, Silicone, PTFE encapsulated, ..
- Centrifugal feeding pump
- Positive displacement feeding pump
- Drainage connection on emulsifier body
- Vibrator
- Sanitary level of finish Ra < 0,6 µm
- Other connections: DIN 11851, SMS, DIN 11856, DIN 2576, etc.
- Turbine and diffuser in other materials: Hastelloy, AISI 904L, etc.

## DIMENSIONS OF EMTE MODEL



GENERAL DIMENSIONS											
MODEL	Power (kW)	A	B	C	Da	Di	E	F	G	H	I
<b>EMTE 4-3000</b>	4	1245	355	740	65	50	370	550	165	865	245
<b>EMTE 7.5-3000</b>	7.5	1475	450	860	80	65	430	650	185	975	285
<b>EMTE 15-3000</b>	15	1780	475	1050	100	80	525	650	185	1220	400
<b>EMTE 18.5-3000</b>	18.5	1780	475	1050	100	80	525	650	185	1220	400



## SUPPORT PIECES AND ELEVATORS



### AUTOMATIC

Automatic elevation system

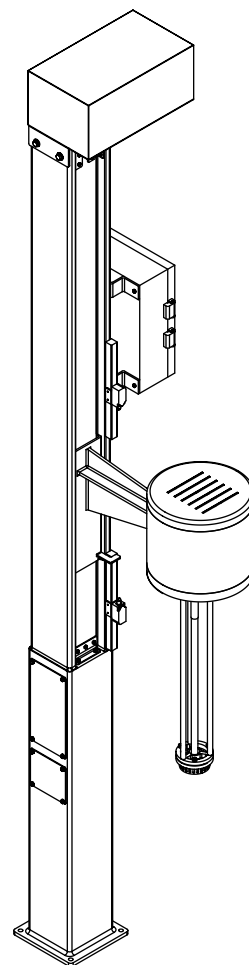
INOXMIM develops customised mobile agitating and lifting systems in order to achieve a high degree of homogenisation at all vessel levels, whether medium or large volume. These lifting systems reduce the power and number of impellers necessary by optimising the agitating process and facilitating the operation, maintenance and cleaning of the facility.

The lifting system facilitates serial agitating in small vessels with a single unit. A manual (using counterweights), semi-automatic or automatic system is selected in line with the requirements of each application.

These systems can be fitted with limit switch sensors, remote control, control panel, electric or pneumatic motor, covering, etc.

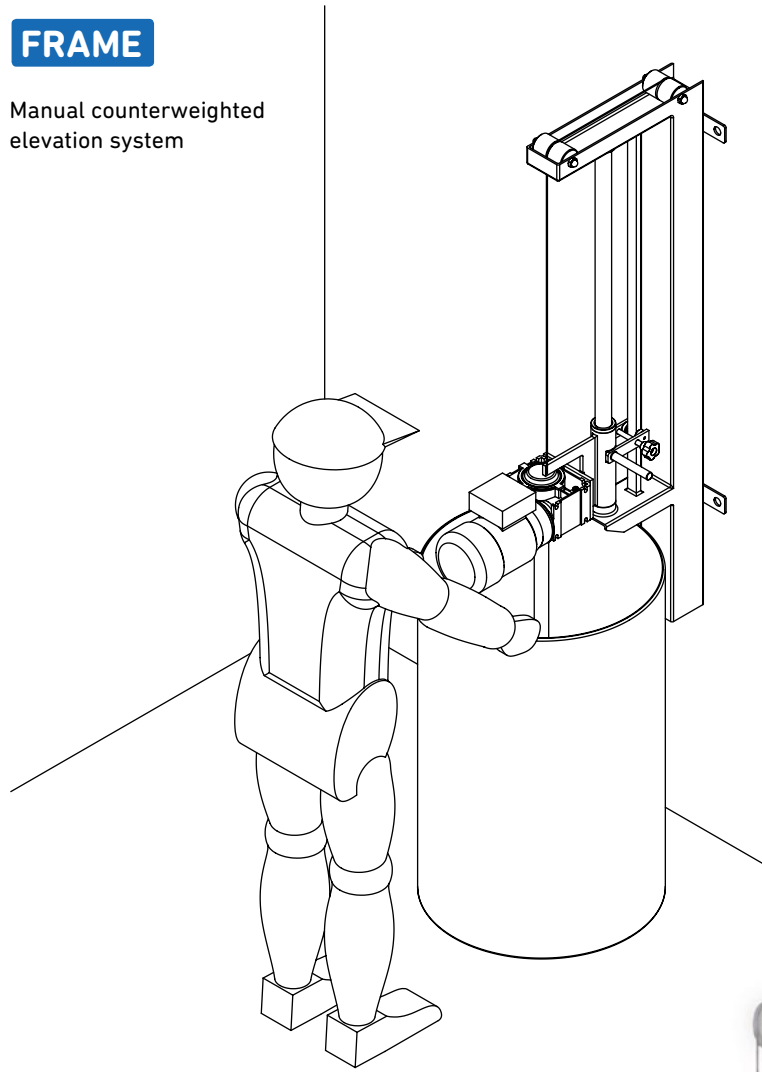


Sanitary automatic system



## FRAME

Manual counterweighted elevation system



## RUNNER

Manual hygienic system



Our knowledge and experience in the different industry sectors allow us to meet customer requirements within industrial limitations, offering full reassurance in all projects developed.

For every process, **AGITMIM** Agitation and Mixture Department selects the drive design type to guarantee optimal performance at minimum cost for every application. Several impeller models provide a solution to different agitation problems.

## INOXMIMGRUP, SL

### INOXMIM

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