

# DINAMIX SMX

## Side Entry Agitator



### OPERATING PRINCIPLE

Side entry agitators DINAMIX SMX are used for the homogenization of liquids stored in large volume tanks. They are powered by means of a geared motor and are installed inclined in the lower part of the shell of the tank. The rotation of the propeller creates a flow that pushes the product towards the bottom of the tank, making it rise to the surface of the liquid through the tank wall on the opposite side of the agitator. This effect is favoured if the closure has a dished head. Likewise, the agitator is installed off-centre with respect to the tank to favour a circular flow in the radial plane. In this way, a complete homogenization of the product is ensured.

### APPLICATIONS

Lateral agitators are an economical and effective solution for storage tanks in the food, pharmaceutical and cosmetic industries.

The most important application is the maintenance and homogenization in large volume tanks of low viscosity products such as wine, oil, milk, beer, alcohol, etc.

### DESIGN AND FEATURES

- Robust and hygienic construction.
- Standardised EN 1092 PN 10 flange.
- Stainless steel lantern to facilitate the inspection and maintenance of the mechanical seal.
- Hygienic design to avoid dead and difficult access spots to easy cleaning.
- High-efficiency impeller fixed to the shaft through a threaded hygienic connection.
- Different types of IE3 gear motors with food grade oil.
- Electric motor, 3 ph, IP55, 1500 rpm.

### CONFIGURABLE ELEMENTS

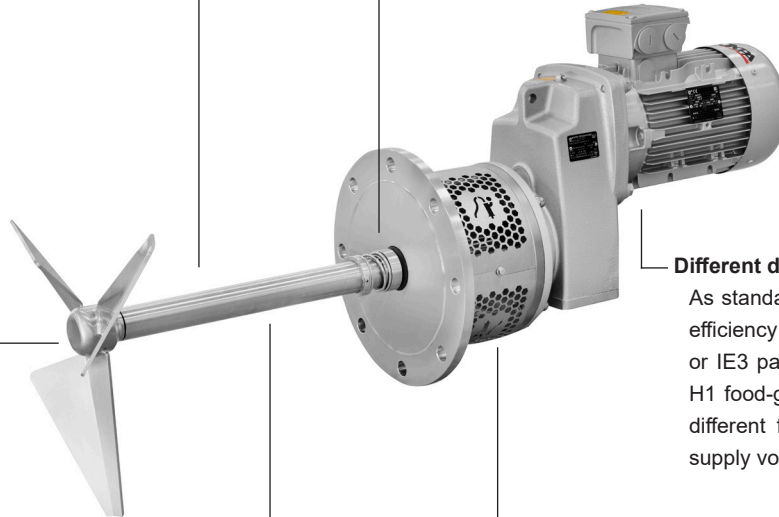
The agitator has a modular design and is fully configurable with different options of motors, sealing system, surface finish, elastomeric materials and, in addition, the possibility of ATEX certification.

**Surface finish**

Standard surface finish is  $Ra \leq 0,8 \mu m$ .  
Also available with  $Ra \leq 0,4 \mu m$  surface finish for pharmaceutical applications.

**Sealing system**

As standard with a single mechanical seal.  
Optional hygienic system. Available with different sealing systems on request.

**Different drives**

As standard, available with high-efficiency IE3 worm gear drives or IE3 parallel shaft drives. With H1 food-grade oil. Available with different frequencies and power supply voltages.

**Impeller**

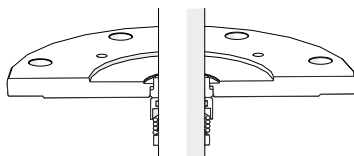
High-efficiency design. Hygienic construction: completely welded and connected to the shaft with a view O-ring for easy cleaning.

**Lantern**

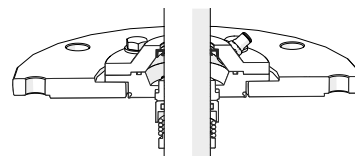
Made in stainless steel. Possibility assembly without the lantern.

**Explosive atmospheres**

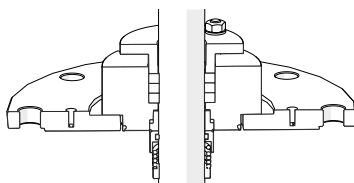
ATEX certificate option for work in explosive atmospheres using certified garmotors and mechanical seals..

**SEALING SYSTEM OPTIONS**

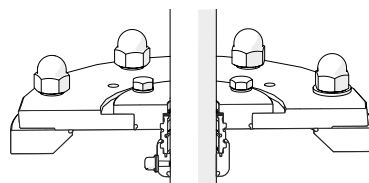
Mechanical seal



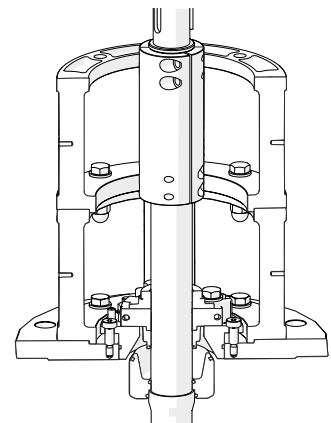
Quenched mechanical seal



Mechanical seal with safety gland packing



Hygienic mechanical seal for CIP and SIP



Shut-off: system to change the mechanical seal without disassembling the agitator and emptying the tank.

## OPTIONS

Agitator without the lantern.  
 SiC/SiC mechanical seal.  
 Gaskets: FPM.  
 Motor with shroud.  
 Hygienic design.  
 ATEX certification.

## TECHNICAL SPECIFICATIONS

### Materials

Parts in contact with the product	1.4404 (AISI 316L)
Other steel parts	1.4307 (AISI 304L)
Mechanical seal	C/SiC
Mechanical seal gasket	EPDM
Surface finish	Ra ≤ 0,8 μm

### Operating limits

Working pressure	-1 to 10 bar
Working temperature	5°C to 130°C

### Agitators with worm gear drive

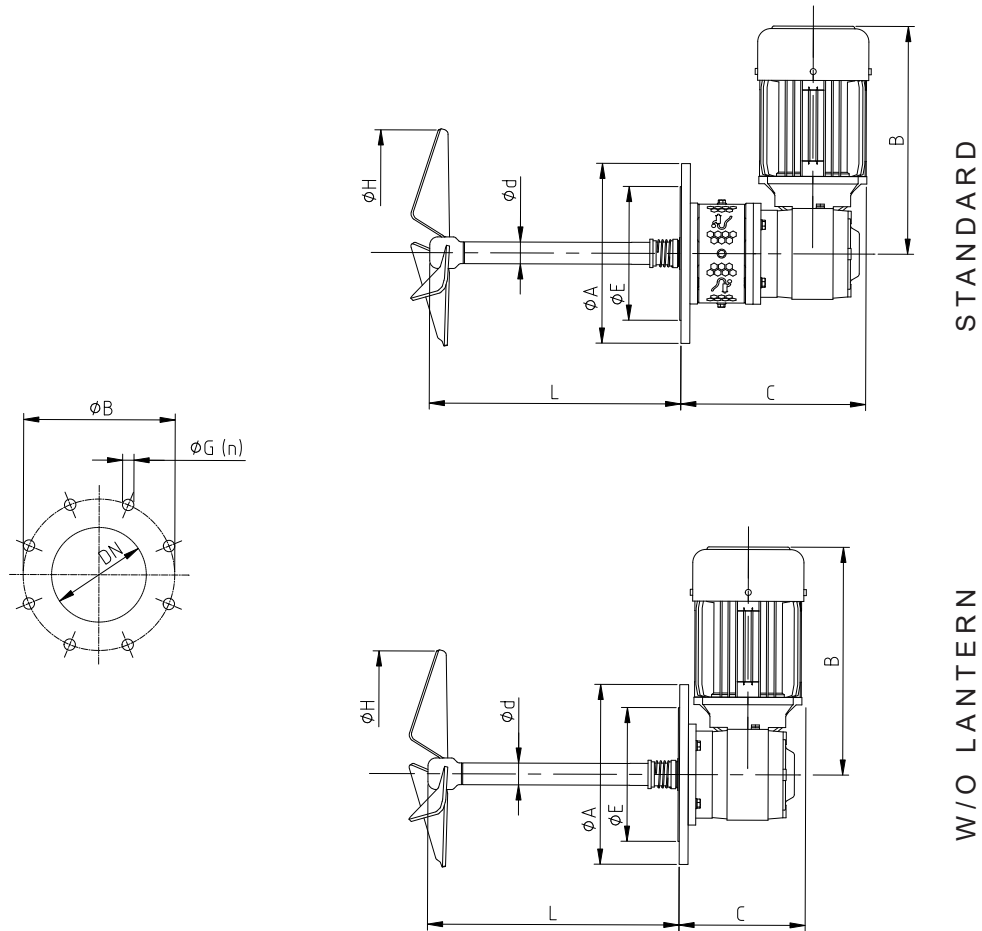
	Flow [m³/h]	Tank [m³]	Speed [rpm]	Power [kW]	Support
SMX-1/W 1.16-27001-250	155	5 - 10	270	0,18	1
SMX-1/W 1.16-27002-300	270	10 - 20	270	0,25	
SMX-2/W 1.16-19005-400	435	20 - 40	190	0,55	2
SMX-2/W 1.16-28007-400	645	40 - 70	280	0,75	
SMX-2/W 1.16-19011-500	855	70 - 100	190	1,1	

### Agitators with parallel shaft drive

	Flow [m³/h]	Tank [m³]	Speed [rpm]	Power [kW]	Support
SMX-2/P 1.16-29007-400	675	20 - 70	290	0,75	2
SMX-2/P 1.16-22015-500	1000	70 - 110	220	1,5	
SMX-2/P 1.16-28030-500	1300	110 - 150	280	3	
SMX-2/P 1.16-36040-500	1650	150 - 200	360	4	
SMX-3/P 1.16-32075-600	2500	200 - 400	320	7,5	3
SMX-4/P 1.16-210110-800	3800	400 - 800	210	11	4
SMX-5/P 1.16-280220-800	5200	800 - 1200	280	22	5

## DIMENSIONS

### Agitators with worm gear drive



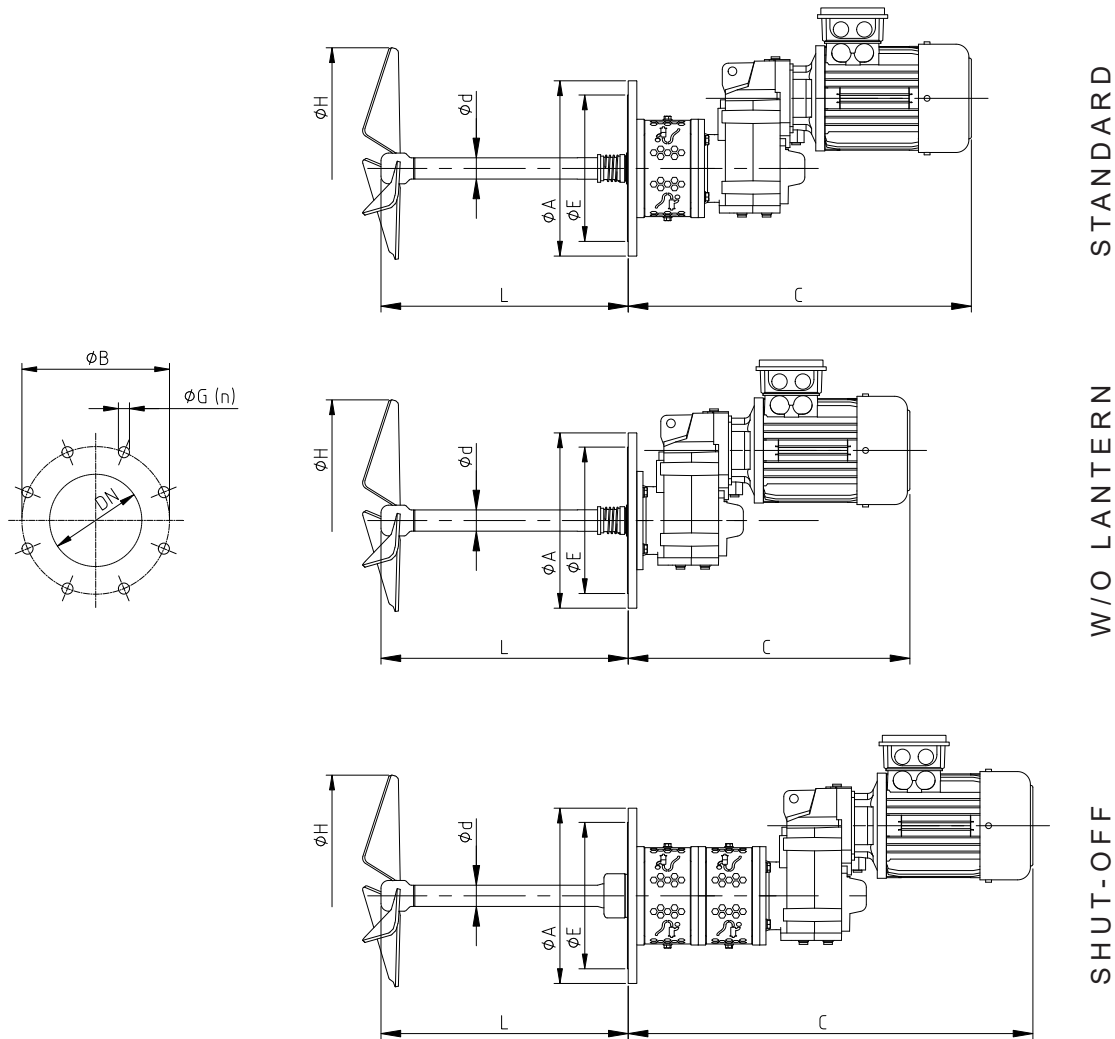
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	kW	Flange			Shaft			H	Standard	W/O Lantern
		ØDN	ØA	ØB	ØE	ØG(n)	Ød		L	C
SMX-1/W 1.16-27001-250	0,18	100	220	180	158	18(8)	25	400	250	203
SMX-1/W 1.16-27002-300	0,25								300	212
SMX-2/W 1.16-19005-400	0,55	150	285	240	212	22(8)	35	500	400	243
SMX-2/W 1.16-28007-400	0,75								343	243
SMX-2/W 1.16-19011-500	1,1								500	248

Dimensions in mm

	kW	Weight [kg]	
		Standard	W/O Lantern
SMX-1/W 1.16-27001-250	0,18	16	14
SMX-1/W 1.16-27002-300	0,25	16	14
SMX-2/W 1.16-19005-400	0,55	31	28
SMX-2/W 1.16-28007-400	0,75	32	29
SMX-2/W 1.16-19011-500	1,1	37	34

## Agitators with parallel shaft drive



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	kW	Flange				Shaft		H	Standard	W/O Lantern	Shut-off
		ØDN	ØA	ØB	ØE	ØG(n)	Ød		L	C	
SMX-2/P 1.16-29007-400	0,75	150	285	240	212	22(8)	35	400	400	400	-
SMX-2/P 1.16-22015-500	1,5								560	460	-
SMX-2/P 1.16-28030-500	3								635	515	755
SMX-2/P 1.16-36040-500	4								685	565	805
SMX-3/P 1.16-32075-600	7,5	200	340	295	268	22(8)	45	600	800	-	950
SMX-4/P 1.16-210110-800	11	250	395	350	320	22(12)	55		900	-	1065
SMX-5/P 1.16-280220-800	22	350	505	460	430	22(16)	65		750	1085	-

Dimensions in mm

	kW	Weight [kg]		
		Standard	W/O Lantern	Shut-off
SMX-2/P 1.16-29007-400	0,75	33	30	-
SMX-2/P 1.16-22015-500	1,5	42	39	-
SMX-2/P 1.16-28030-500	3	63	57	74
SMX-2/P 1.16-36040-500	4	71	65	82
SMX-3/P 1.16-32075-600	7,5	140	-	165
SMX-4/P 1.16-210110-800	11	209	-	240
SMX-5/P 1.16-280220-800	22	351	-	394