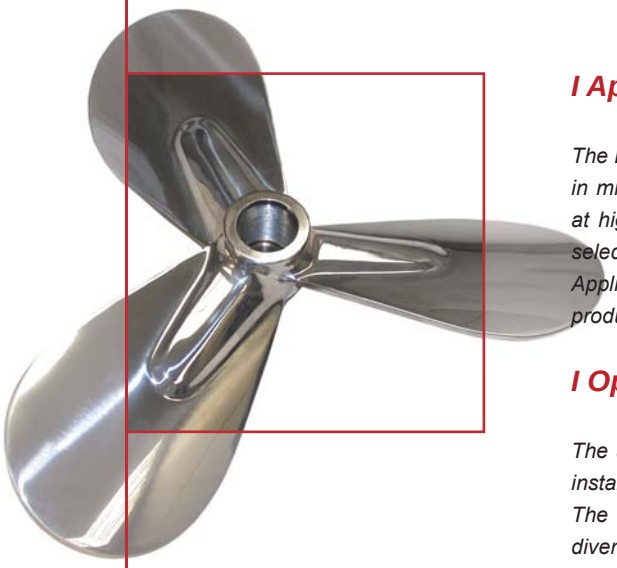


I Application

The BMI series comprises a range of vertical agitators with direct drive. They can be used in mixing, dissolution, dispersion, and maintenance processes requiring strong agitation at high speeds, as well as in the food processing, cosmetics, and chemical industries, selecting the appropriate finish in each case.
Applicable to tanks with capacities of up to 10,000 litres, usually with low viscosity products.

I Operating principle

The agitators are usually installed off-centre to prevent product rotation but can also be installed centred in conjunction with deflector baffles in the tank.
The rotating propeller pushes the product towards the bottom of the tank, where it is diverted generating an upward flow along the tank walls so that the product reaches the surface of liquid. This effect is enhanced if the tank has a rounded base.

I Design and features

Vertical agitator.
Sealing by means of retainer.
Bearing support.
The propeller is fitted and secured to the shaft and the shaft is secured to the half shaft head by means of allen set screws; in the case of sawtooth turbines a one-piece shaft is used.
Motor IEC B5, 1500 rpm, IP55, class F insulation.
Maximum power 4 kW.
Marine propeller (type 10).

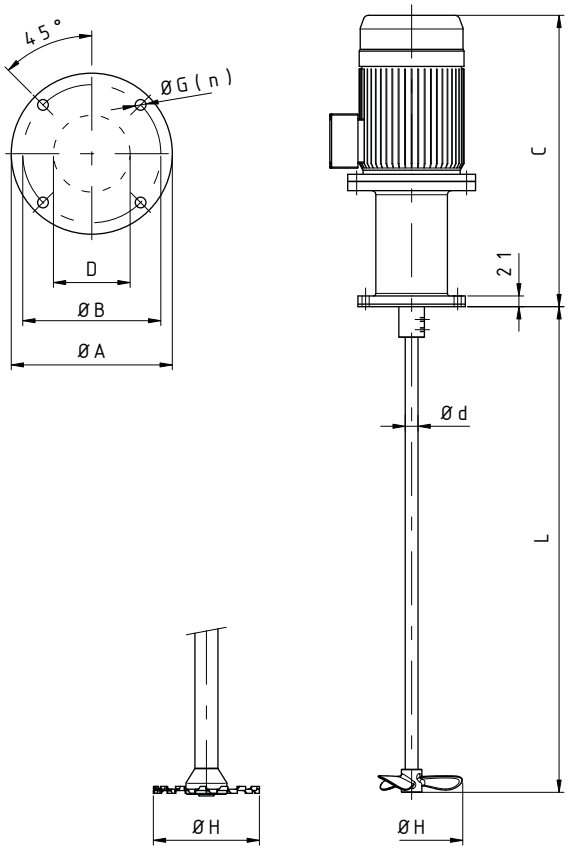
I Materials

Parts in contact with the product	*AISI 316L*
Retainer ring	*NBR*
Bearing support	*Aluminium*
Base plate	*AISI 316L*
Surface finish	*Ra ≤ 1,6µm*

I Options

Sealing by means of single or double mechanical seal depending on application.
FPM retainer ring.
Polymer coated shaft and propeller for corrosive products.
Propeller welded to the shaft and Ra ≤ 0.4 µm and Ra ≤ 0.8 µm surface finish.
Sawtooth turbine (cowles) in AISI 316L.
Motor shroud.
Motors and protections according to requirements.

I Technical specifications and dimensions



Agitator type	Motor power	Speed	Motor frame	Dimensions					Motor		Agitator shaft		Type 10	Type 4
				C	Flange ø A	Flange ø B	Flange DN	Flange ø G(n)	A	L	ø d	$L_{max.}$	Marine propeller ø H	Cowler ø H
	[kW]	[rpm]												
BMI 1.10-4011-1-160	1.1	1450	90	515	210	180	100	14(4)	270	320	20	1400	160	
BMI 1.10-4015-1-175	1.5	1450	90	540					295	345			175	
BMI 1.10-4022-1-200	2.2	1450	100	570					325	385	ø depending on each application		200	
BMI 1.10-4030-1-200	3	1450	100	570					325	385			200	
BMI 1.10-4040-1-225	4	1450	112	595					350	410			225	
BMI 1.10-6007-1-175	0.75	900	90	515					270	320			175	
BMI 1.10-6011-1-200	1.1	900	90	540					295	345			200	
BMI 1.10-6015-1-225	1.5	900	100	570					325	385			225	
BMI 1.4-4022-1-150	2.2	1450	100	570					325	385	45	1500		150
BMI 1.4-4040-1-200	4	1450	112	595					350	410				200