Inline Mixer

ME 4100



I Application

The ME-4100 series of the inline high shear mixers offers a possibility to pump, disperse, homogenize and emulsify products with one and the same equipment.
Numerous chemical, food-processing, pharmaceutical and cosmetics production processes require this system due to the lack of space inside the tanks for vertical or tank bottom mixers. These mixers are especially useful in already existing plants.
They can work with a recirculation tank reaching the best efficiency after several passes of the product through the mixer.

I Operating principle

The casing is similar to a casing of a centrifugal pump, it houses the stator and the rotor. It is characterised by a high shear due to an adjusted tolerance between the rotor and the stator and the high speed of the rotor.
The product is suctioned through the inlet and the rotor pushes it to the stator. Passing through the slots of the stator the product is mechanically sheared, the particles are sheared by the rotor at the speed of more than 20 m/s.
And finally the flow is hydraulically sheared leaving the stator through the slots at a high speed.
If the viscosity of the product is higher than 200cP, it is recommended to put an auxiliary pump at the inlet of the mixer, and if a high discharge pressure is required, it is necessary to assemble another auxiliary pump.



I Design and features

High shear, particle size reduction to less than 100 microns.
Sanitary single mechanical seal.
Slotted head (standard).
Various easily interchangeable working heads.
Completely CIPable design.
Drain port connection (in the casing): clamp DN-3/4".
Standard connections: Clamp ISO-2852.
Close-coupled construction, small baseplate.
Motor shroud.
Motors: IEC B35, IP 55, F-class insulation.

I Materials

Parts in contact with the product	*AISI 316L*
Other stainless steel parts	*AISI 304*
Mechanical seal	*C / SiC / EPDM*
Gaskets	*EPDM*
Surface finish	*Ra ≤ 0.8µm*

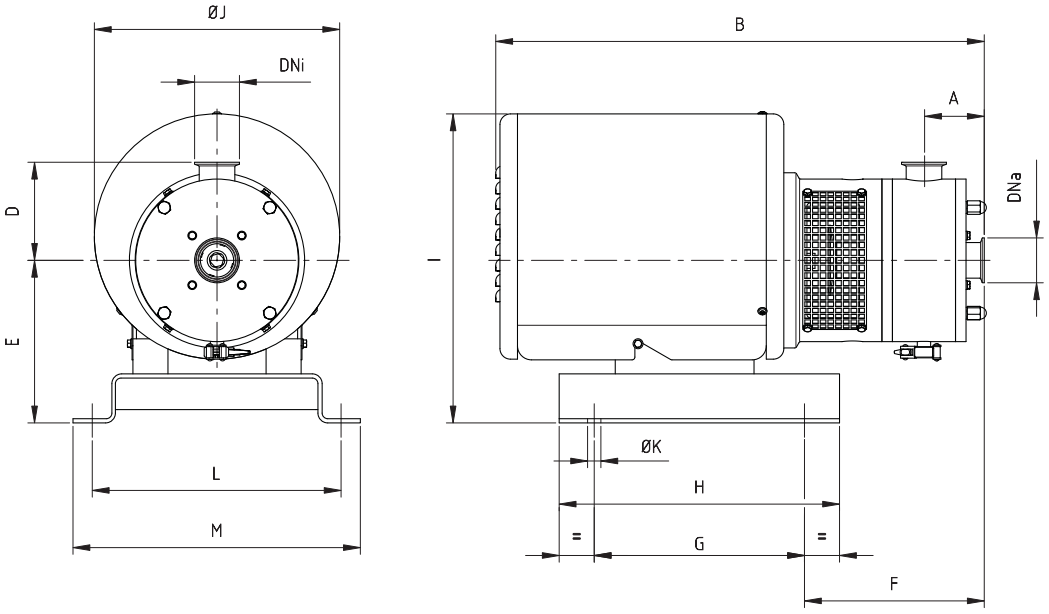


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I Options

Disintegrating head.
Fine screen head.
Cooled or pressurised mechanical seal.
Connections: DIN 11851, SMS, flanges, etc.
Baseplate with antivibration legs.
Trolley with/without control panel.
Mirror polish Ra < 0.5 µm for the pharmaceutical applications.
Other motor protections.
ME-4130 model: option of a bare shaft contsruction.

I General dimensions and selection table



TYPE	DNa	DNi	Dimensiones [mm]												Motor			Flow [m³/h]	
			A	B	D	E	F	G	H	I	ØJ	ØK	L	M	Size	kW	rpm	Design	max.
ME-4101	1 ½"	1 ½"	70	595	114	175	190	230	325	355	290	15	245	285	80	1,1		7	13
ME-4105	2"	2"	86	700	140	232	256	300	400	445	350	19	355	410	112M	4	3000	15	30
ME-4110	2 ½"	2 ½"		850		252	253	350	450	490	400				132S	7,5		20	40
ME-4125	3"	2 ½"	98	1080	175	310	227	600	700	615	500		465	520	160L	18,5		25	50
ME-4130	4"	3"	109	1115	204		269								180M	22	1500	33	65

** Selection data for the products with the viscosity below 50cP.*
Approximate values. The selection can vary depending on the application.
Dimensions with CLAMP connections.
For bigger sizes consult Inoxpa Solutions.

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