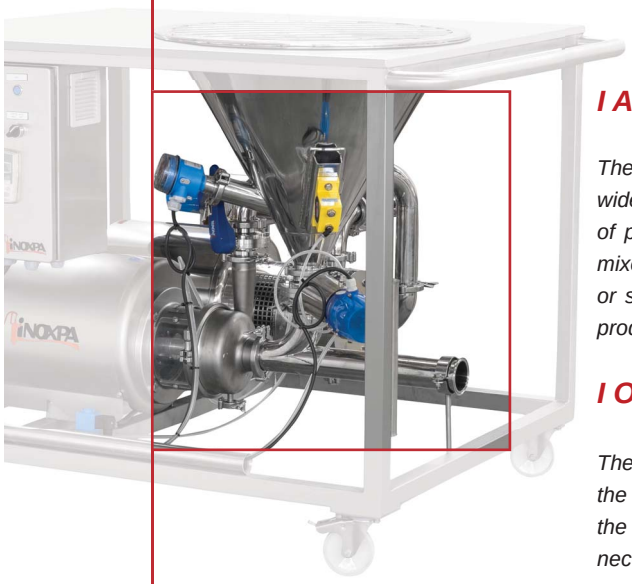
Table Blender

MM-1 / MM-2 / MM-3



I Application

The table blender is used to dissolve solid/powder products in recirculated liquids. It has a wide range of applications, for example, preparation of pharmaceutical syrops or dissolution of pectin in glucose for marmelade production. Every model has an option with an in-line mixer for a complete dissolution of possible lumps. The typical applications are reconstitution or stabilization of milk in the production of dairy products, and dissolution of sugar for the production of syrup in the beverage industries.

I Operating principle

The table blender is a compact unit, it consists of a centrifugal pump with a venturi system at the suction side and a hopper with a butterfly valve at the upper part to add solid product to the pumped liquid. In this blender, the suction and ventury system are set horizontally. If necessary, an in-line mixer can be installed after the centrifugal pump to reduce the size of possible lumps.
The venturi system and the suction of the pump create depression at the base of the hopper. When the valve of the hopper opens, the solids are drawn from the hopper and are totally dissolved when they pass through the casing of the pump.
To achieve the best possible dissolution, it is recommended to recirculate the product (batch production) till all the solid/powder product is suctioned and then, when the solid product is completely incorporated into the liquid product, continue recirculating the product for a while. In some cases, it can be used in-line depending on the solid product to add and the required level of dissolution.

I Design and features

Very simple and versatile equipment for a fast and homogeneous mixing of a wide range of solid products without any contact with atmosphere.
IE2 electric motors in compliance with EC Regulation 640/2009.
Hygienic design.
ISO 2852 Clamp connections for easy assembly/disassembly.
Cleaning and disinfection without disassembling the unit.
Complete mixing with recirculation.
Manually actuated butterfly valve for hopper.
Optional in-line mixer for total dissolution of possible lumps in the end product.
A table for bags at adequate height facilitates manual feeding.
St.St. control panel with Stop/Start button and motor protection.
Skid with wheels: 2 rotating + 2 fixed with brakes.
Clamp drain port for total drainage of the skid.

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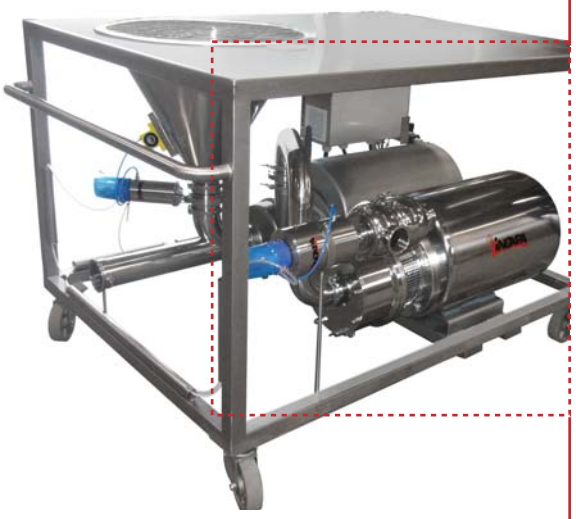

I Materials

Parts in contact with the product	*AISI 316L*
Other metal parts	*AISI 304*
Gaskets	*EPDM according to FDA*
Mechanical seal	*SiC / SiC / EPDM*
Internal surface finish and hopper	*bright polish, Ra ≤ 0.8 µm*
Frame surface finish and upper base	*mat finish*

I Options

Cooled double mechanical seal.
Solenoid valve for the seal cooling system.
Gaskets: FPM or PTFE.
Connections: DIN, SMS.
Vibrator for hopper.
Frequency converter fo the centrifugal pump.
Pneumatically actuated valve + low level sensor for solids.
Upper level sensor for solids.
St.St.control panel for the vibrator, level sensors, frequency converter and automated valve.
Grid for hopper.
Sunken grid for hopper.

I Tecnhical specifications

Type	Centrifugal pump		In-line mixer		Working flow (m^3/h)	Powder intake* (kg/h)				Hopper capacity (L)
	Model	Power (kW)	Model	Power (kW)		Sugar up to 25°brix	Sugar up to 50°brix	Milk powder 20%	Thickener up to 400 cP	
MM-1	HCP 50-150	3	-	-	25	1650	1350	950	300	45
MM-1M			ME-4105	4						
MM-2	HCP 50-190	7.5	-	-	40	3700	2400	3300	450	45
MM-2M			ME-4110	7.5						
MM-3	HCP 80-205	18.5	-	-	95	12800	8900	9200	600	75
MM-3M			ME-4125	18.5						

** Results obtained with water at approximately 20 °C.*
The recommended working temperature is below 65 °C.

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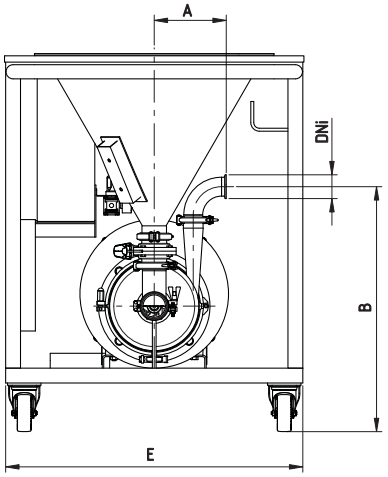
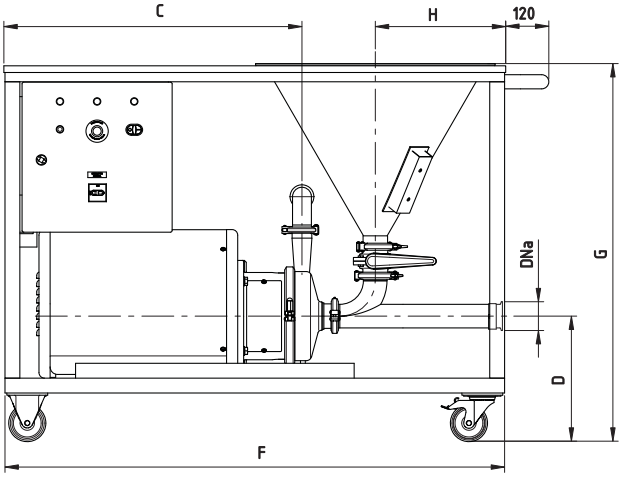
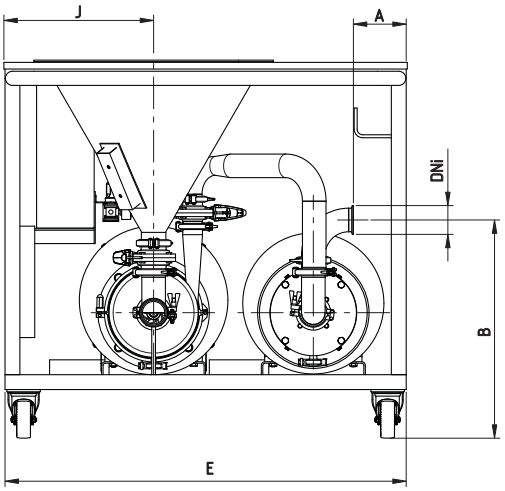
I Dimensions

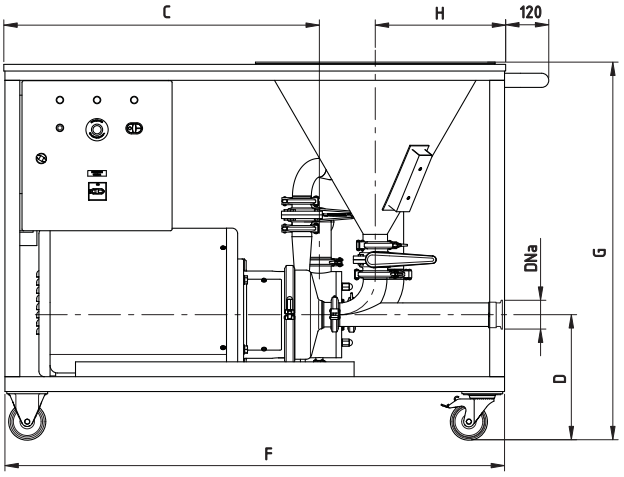




Type	DNa (*)	DNi (*)	A	B	C	D	E	F	G	H	Weight [kg]
MM-1	2 ½"	2"	161	603	648	320	770	1190	1000	352	130
MM-2	2 ½"	2"	194	660	802	337	800	1345	1017		185
MM-3	4"	3"	240	801	1055	422	950	1780	1228	455	355

(*) Clamp connections





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MM-1M	2 ½"	2"	133	564	701	320	1000	1190	1000	352	387	220
MM-2M	2 ½"	2 ½"	137	588	849	337	1080	1345	1017		407	305
MM-3M	4"	3"	176	725	1089	422	1330	1780	1228	455	479	630

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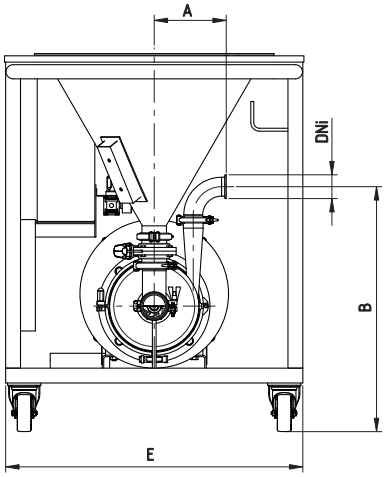

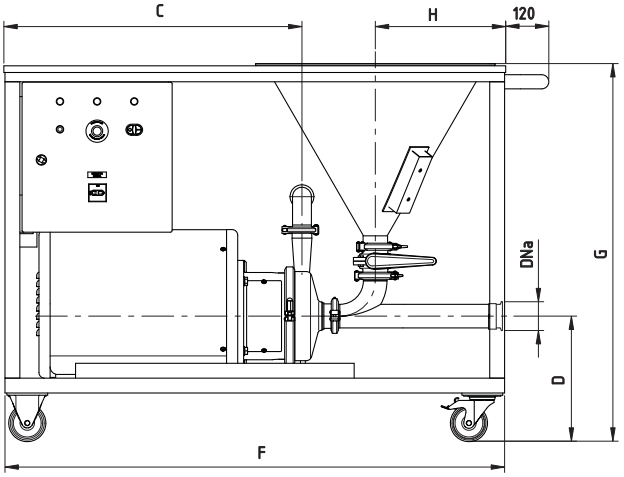

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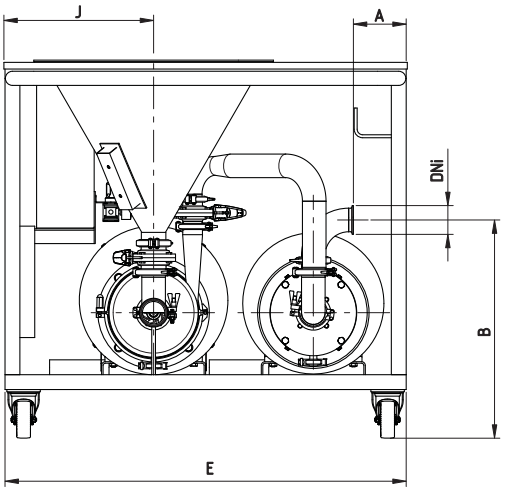

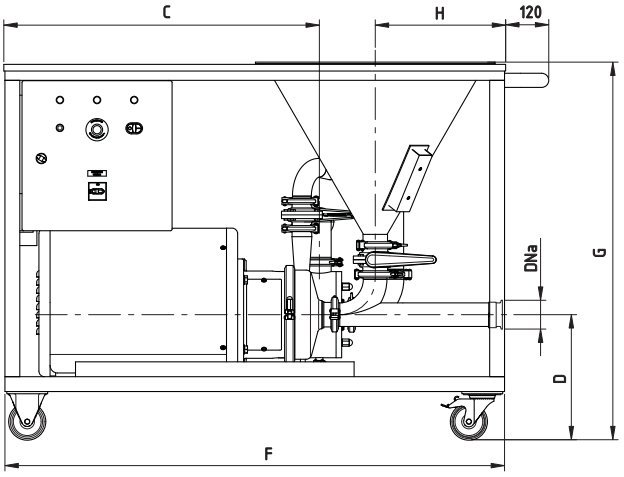

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