



ENGLISH

H.P. Homogenizers
& Plunger Pumps

The industrial homogenizer that revolutionises ice cream production



TECHNICAL DATA SHEET MODELS:

MICROLAB 400



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MICROLAB 400

Ice cream homogenizers, in the production of "industrial ice cream", play a fundamental role in ensuring the success of the final product. However, until now, using this machinery in artisan ice cream parlours has often been challenging due to issues related to costs, size, complexity of use, and a lack of optimal performance study.

At FBF Italia, we have tackled these challenges, developing a high-performing and quality ice cream homogenizer, able to meet your customised needs.

OPERATING PRINCIPLE

The mixture is sucked by the pumping pistons of the industrial homogenizer and sent at high pressure to the homogenising valve. Upon exiting, the product undergoes micronisation of its components due to forces such as: sudden acceleration developing speeds of about 9,300 cm/sec, violent cavitation, and friction between the particles themselves. Our industrial machine for ice cream, Microlab 400, allows achieving fat globules with a size smaller than 3.5 µm (0.0035 mm). This micronisation strips the fat globules of their surface coating and increases their surface exposed to the work of emulsifiers, first stabilising the water-oil phase and then giving the ice cream an even softer texture and a dry sensation characteristic of good ice cream.

USE OF THE MICROLAB 400 WITH A SINGLE PASTEURIZER

- Once the product in the pasteurizer reaches the temperature of 50°C and the sugar has been fully solubilized, homogenizer starts recirculating the batch in a loop (5 times approx), to make sure the ice cream is fully homogenized
- Recommended process time is calculated by the following formula: batch size in litre divided by 1.33 (i.e a batch of 30 litres will required 23 minutes of recirculation process)

INCLUDED EQUIPMENT

- Suction filter, lubricant oil, set of seal kit, O&MM



USE OF THE MICROLAB 400 WITH TWO PASTEURIZERS

- When the product in the first pasteurizer reaches the pasteurization temperature of 85-90°C, then the homogenizer transfers the product into the second pasteurizer to accomplish the cooling duty

OPTIONAL EQUIPMENT

- Food grade hose c/w fittings

TECHNICAL FEATURES

Homogenizer	Engine	Capacity (50/60 Hz)	Working pressure	Plungers	Dimensions	Net weight
Model	(kW)	(l/h)	(bar)	(nr.)	(cm)	(kg)
MICROLAB 400	2,2	400	120	2	45x49x77	120



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