



Microlab 400: THE PERFECT HOMOGENIZER FOR ICE CREAM SMALL BATCH PRODUCTION

The homogenizers play a primary role in the industrial production of the ice cream, but they are often too expensive, far oversized and not so easy to be used when it comes to non-industrial small batch duties.

With a flow rate of 400 l/h and a working pressure of 120 Bar our MICROLAB 400 perfectly suits the small batch applications. It could be used in both ways: with a single pasteurizer (recirculation duty) or with two pasteurizers (in line installation between the two pasteurizers).

The objective of the homogenizing process is a positive effect on the ice cream's taste and flavour, furthermore **it make the ice cream more creamy and with a less cold feeling.** The ice cream, thanks to the homogenizing process, will benefit of a longer overrun, a higher storage stability, a better dissolution and an increased digestibility.

How the MICROLAB 400 works


The pumping pistons push the product through the homogenizing valve at a pressure of 120 Bar.

Into the homogenizing valve, due to a quick increase of the speed (up to a 9.300 cm/sec), a strong cavitation and due to the friction among the cells, the product is subject to a micronization process which reduces the average diameter of the solid fat particles to a few micrometers in diameter (< 0.0035 mm). The micronization process removes the fat cell's external coating, increases the area in contact with the emulsifiers, favours the water-oil phase, makes the ice cream texture more soft and gives a dry taste which makes the ice cream a quality product.

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 English version





Technical Features		
Flow rate	l/h	400
Working pressure	bar	120
Pumping pistons	No.	2
Net weight	kg	120
Dimensions	cm	45x49x75



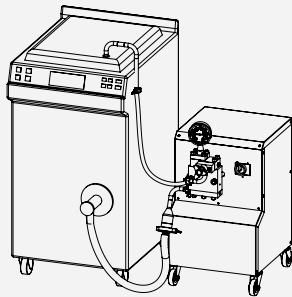
Included equipment:

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

Optional equipment:

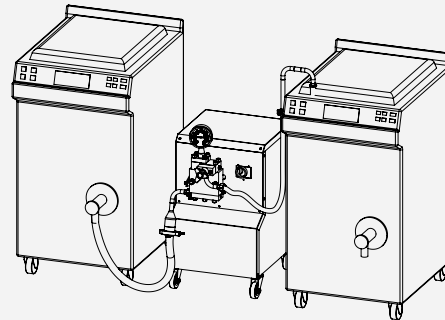
Food grade hose c/w fittings.

Use of the MICROLAB 400 with a single pasteurizer (recirculation duty)



Once the product in the pasteurizer reaches the temperature of 50°C and the sugar has been fully solubilized, the homogenizer starts recirculating the batch in a loop (5 times approx), to make sure the ice cream is fully homogenized. The 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).

Use of the MICROLAB 400 with two pasteurizers (in line installation)



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.

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