SWEETY JETMIX

60, 130, 180 TTi

Gelato pasteuriser with micronisation function

ENG

WHAT IT IS AND WHAT IT DOES

SWEETY JETMIX TTi is Valmar's patented solution that enables gelato mixture micronisation, enhancing the traditional functions of pasteurisation, ageing, and storage within the SWEETY T&Ti range.

SWEETY JETMIX TTi ensures an advanced level of mixture treatment, producing gelato with superior texture and stability, even in formulations with high fat content. It is available in 60, 130, and 180-litre models.

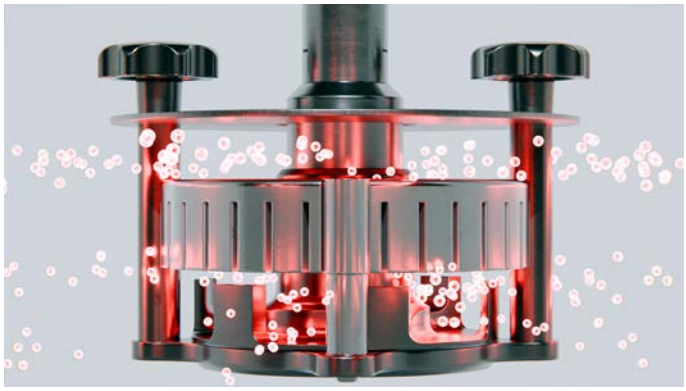
GENERAL FEATURES

The **SWEETY JETMIX TTi** has been designed for laboratories of all sizes seeking to elevate the quality of their gelato base, both in standard formulations and in recipes with medium to high fat percentages.
Micronisation is a super-emulsification process through which the gelato mixture achieves a finer and more uniform structure, improving creaminess, stability, and the overall sensory quality of the final product.
The exclusive **Valmar JETMIX** patented system integrates this technology directly into the pasteurisation cycle through a **single all-in-one stirrer.** This highly practical solution delivers the benefits of micronisation without the need for bulky external optional equipment.
The versatility of the **SWEETY JETMIX TTi** also allows it to be used as a conventional pasteuriser.

PATENTED MULTIFUNCTION STIRRER

Patented multifunction system stirrer, practical, easy to clean, and compliant with HACCP standards.

The intelligent stirring management allows the **Sweety JetMix TTi** to act on the microstructure of the mixture at the most effective moment, protecting it from mechanical stress and improving fineness, resulting in a more stable and high-performance base.



1. Initial mixing – gentle action
At the start of the cycle, the mixer operates in gentle stirring mode, ensuring uniform blending of ingredients without air incorporation or foam formation, preserving the structure of the mixture.

2. Micronisation – high-energy action
Once optimal temperatures are reached, the system automatically switches to micronisation mode.
The stirrer increases shear energy and peripheral speed, generating intense action that reduces the size of fat globules and suspended particles.
The result is a finer and more uniform particle size distribution, with a homogeneous and stable microstructure.

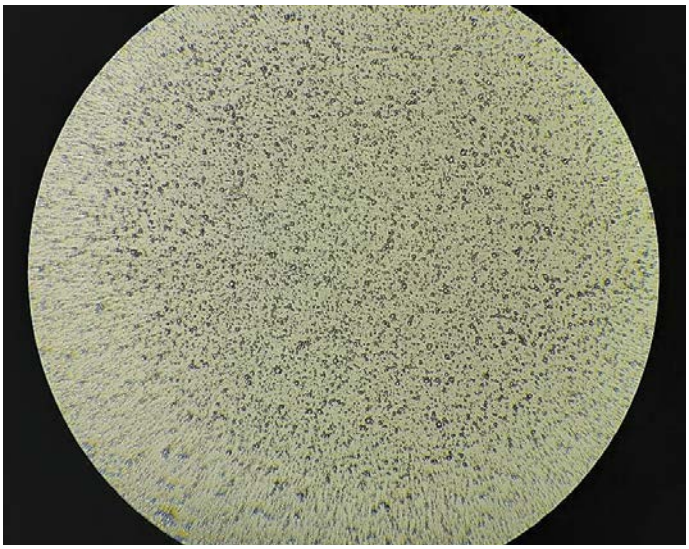
3. Ageing – return to gentle action
During the ageing phase, the stirrer returns to gentle mode, ensuring controlled and constant stirring without foam formation—ideal for maintaining long-term stability and balance of the mixture.

EFFICIENCY AND PERFORMANCE

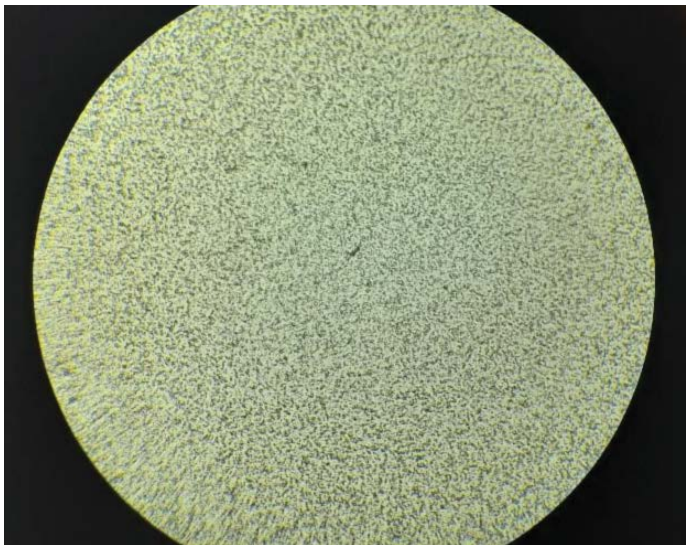
A graduated, all-in-one stirrer combining stirring and micronisation functions.

Large-diameter micronisation cap. Combined with rotational speed—modulated by an inverter with a power rating of 3 kW—it ensures high peripheral shear speed, resulting in effective micronisation and homogeneous dispersion of fat globules in dairy mixes, as well as high refinement of fruit fibres used in sorbet or fruit gelato production.

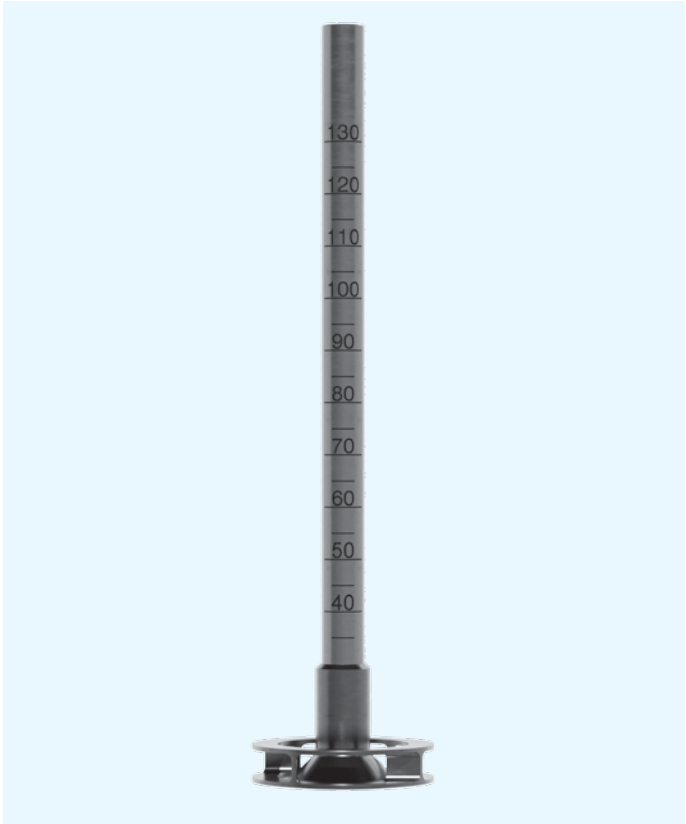
Laser diffraction analyses conducted in an internationally accredited certified laboratory on high-fat mix samples showed that the Sweety JetMix 60 T&Ti reduces fat globules to an average size of 1.3 µm.



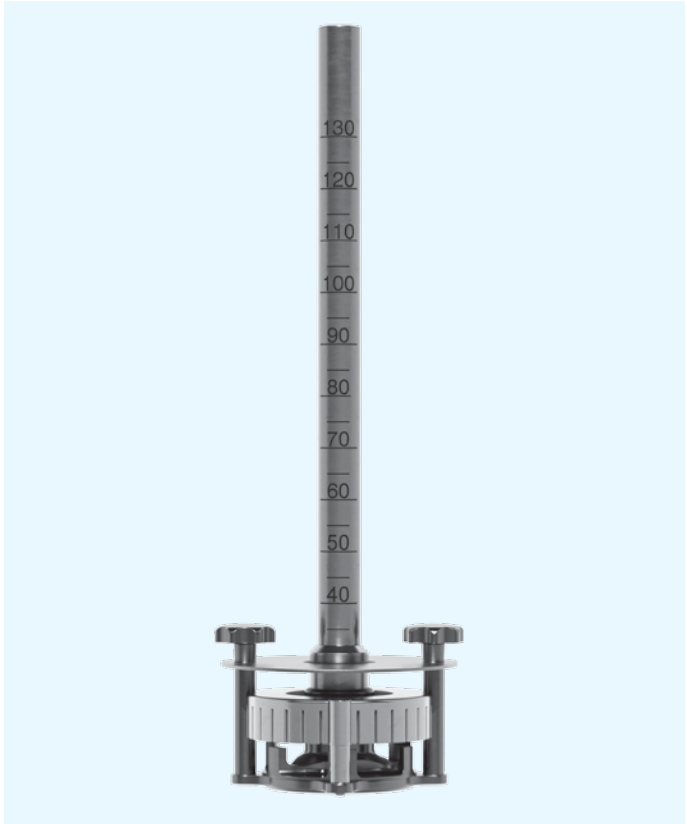
Non-micronised mix



Micronised mix with the **SWEETY JETMIX TTi**



Standard Stirrer. Average particle size 4.9 µm



JetMix Stirrer. Average particle size 1.3 µm

For comparison, pasteurisation with the Sweety TTi already achieves an average particle size of 4.9 µm, a very high quality value for a conventional process.
JetMix technology pushes this result even further, achieving a significantly finer, more homogeneous, and more stable microstructure, resulting in smoother texture and superior creaminess.

TOUCH & TYPE

Control panel equipped with touchscreen and push-button console (type).

TANK

Rectangular monoblock stainless steel tank with inclined bottom and rounded corners for easy draining and cleaning.

LID

Tank lid with servo-assisted automatic closing system.

DISPENSING TAP

Mixture dispensing tap with automatic backflow system returning the mix into the tank after drawing, and an automatic rinse function.

SOFTWARE AND PLC

PLC programmable logic control operation, enabling customisation and automation of the production process according to operator requirements.

HEATING AND COOLING

Water bath heating and cooling system for uniform temperature distribution inside the tank, preventing burning or freezing of the mix on the walls and allowing operation with a minimum batch size equal to 30% of total pasteurisation capacity.

HYGIENE

Automatic washing program with dedicated optional stirrer**.
** Optional feature

All components in contact with the mix are made from food-grade materials, easily removable, and sanitisable according to HACCP standards.
All parts are dishwasher-safe.

AUTOMATIC WATER FLOW METER

Automatic flow meter with adjustable water quantity setting, for sugar syrup production or ingredient reconstitution.

SUPPORT PLATFORM

Easily removable and washable stainless steel bucket support tray, designed to prevent the container from coming into direct contact with the floor**.
** Optional feature

PROGRAMMABLE PASTEURISATION AND MICRONISATION TEMPERATURES

In addition to managing classic pasteurisation cycles, the software allows customisation of processes by programming desired temperature profiles.
The same approach applies to the micronisation function, enabling even more precise mixture treatment control.

ECS SYSTEM – EASY CONNECT SOLUTION

The ECS** – Easy Connect Solution – system allows remote monitoring of process parameters, cycle status verification, data collection and storage, and remote intervention in case of alarms or anomalies.
It ensures faster and more effective service through diagnostics, maintenance, and software updates even without operator presence, and provides full production data traceability in compliance with quality standards and HACCP hygiene regulations.

** Optional feature

ERGONOMICS

Control panel operable in standing position.
Components are easily accessible for disassembly and reassembly.

SAVINGS AND EFFICIENCY

The multifunction stirrer for all processing phases integrates tasks typically handled by separate components, offering advantages in cost, operational speed, and ease of management.
Compact, space-saving design that maintains the same dimensions as the standard model, delivering superior technology without requiring additional laboratory space.
Mixer motor with permanent magnet controlled by inverter, optimising energy consumption and ensuring higher mechanical conversion efficiency compared to traditional motors.

Valmar Self-Clean washing system with reduced water consumption and shorter cleaning cycles.

SAFETY

Automatic stirrer stop via an integrated safety device if the lid is opened during operation.

Double lid with dedicated ingredient loading opening, allowing operation with the stirrer in motion in compliance with CE safety standards.

Electrical and water blackout monitoring to prevent contamination risks or non-compliant products, ensuring the hygienic safety of the mix.

Temperature and thermal cycle monitoring managed by PLC, with automatic prevention of overheating or wall freezing.

SUSTAINABILITY

Energy efficiency is ensured by high-efficiency motors and inverters, reducing operating costs and carbon footprint.
More rational resource use through reduced water consumption in washing cycles.
Long-lasting AISI stainless steel structure with corrosion-resistant, fully recyclable components.
Design focused on minimising the number and replacement of parts over time, reducing maintenance-related environmental impact.
Cycle optimisation to reduce processing time, raw material waste, and overall energy consumption.

With 28 standard programs already included in the standard Sweety model, and with 10 new standard JETMIX programs with micronization, plus the possibility to upgrade and expand the programs.

DIMENSIONS AND WEIGHT

MODEL	Dimensions (mm)			Weight, water condenser included (kg)	
	W Width	D Depth	H Height	Net	Gross
SWEETY 60 TTi JETMIX	350	983	1046+100	195	213
SWEETY 130 TTi JETMIX	521	983	1046+100	231	249
SWEETY 180 TTi JETMIX	649	983	1046+100	250	272

DOUBLE LID

STIRRER

OUTPUT SYSTEM

TECHNICAL FEATURES

MODEL	Tank capacity Litres		Stirrer motor speed	Power supply*			Rated power	Fuse	Water average consumption per cycle****	Condensing unit		
	Min	Max		Volt	Hz	Ph	Kw	A	Litres			
SWEETY 60 TTi JETMIX	20	60	9	400	50	3	10	16	280	Water	Air **	Mixed air + water ***
SWEETY 130 TTi JETMIX	40	125	9	400	50	3	15	25	380	Water	Air **	Mixed air + water ***
SWEETY 180 TTi JETMIX	60	175	9	400	50	3	18	32	430	Water	Air remote	/

* Other voltages and frequency available with additional charge.
** Built-in air condensing unit available with additional charge.
N.B. weights and dimensions of machines equipped with optional equipment are different from those in the table.
*** Built-in mixed air + water condensing unit available with additional charge.
N.B. weights and dimensions of machines equipped with optional equipment are different from those in the table.
**** Water consumption can vary according to water and gelato temperature at the end of the batch freezing process.
Any model is available with remote compressor + air condenser with additional charge.
N.B. weights and dimensions of machines equipped with optional equipment are different from those in the table.

NOTE:
Production rates can change according to the ingredients used and to the stirring mode selected.
All specifications mentioned must be considered approximate. Valmar reserves the right to modify, without notice, all parts deemed necessary.

Agent /Dealer

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