



Alfa Laval Thermal conditioning module

Flash thermal conditioning of olive paste during olive oil extraction



Introduction

The Thermal conditioning module for olive oil ensures accurate temperature control of the olive paste.

Application

The Thermal conditioning module is installed just after the crusher or de-stoner in the olive paste preparation and oil extraction process. It is suitable for all types of olive oil production – batch as well as continuous – and can easily be incorporated into new oil mills. It is also ideal for retrofitting into existing extraction lines, requiring only simple modifications of existing installations.

Benefits

- High olive oil quality in terms of phenol content and volatile compounds, both responsible for taste, health and sensory quality as well as oxidative stability.
- Innovative paste conditioning method, with instant heat transfer and absolute temperature control.
- Fast enzyme activation, due to simultaneous paste heating, reduces mixing time before decanter extraction by up to 50% compared to a traditional malaxer.
- Control of enzyme activity by cooling paste temperature in accordance with climate conditions.
- No heating system needed during mixing resulting in a simpler, cheaper installation.

Design

Designed for installation in the olive oil extraction process between the crusher and malaxers, the pre-assembled

Thermal conditioning module only requires an inlet connection for the paste from the crusher pump and an outlet connection to the malaxers.

The module is ready to be connected to any existing sources of hot or cold water present in the mill.

A full wiring and control panel equipped with an easy-to-use thermoregulation is included.

Different sizes of modules are available, depending on process capacity: extra small (XS), small (S), medium (M), large (L) and extra large (XL).

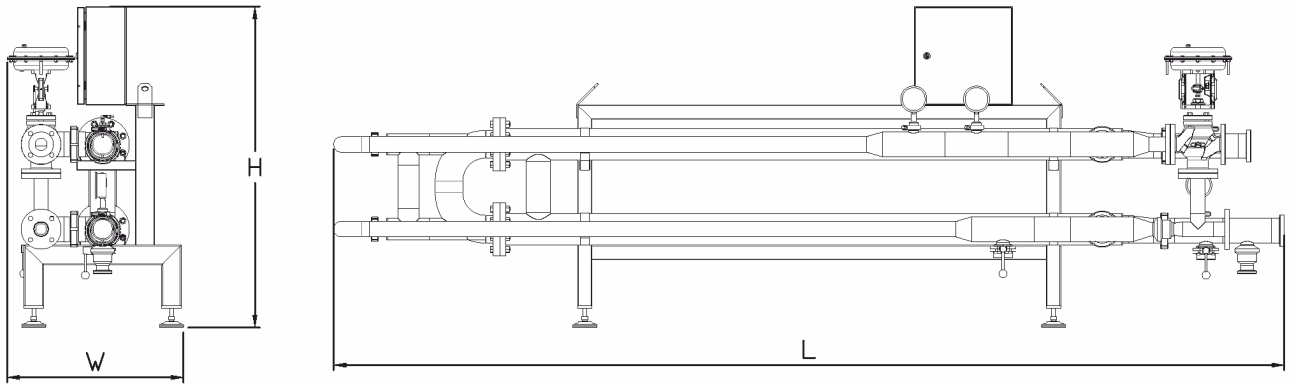
Working principle

Olive oil paste from the crusher is pumped into the Thermal conditioning module where a tubular heat exchanger ViscoLine™ instantly heats the paste to the required temperature.

The conditioned paste is pumped directly from the Thermal conditioning module to a malaxer, where mixing and final oil extraction take place with a short holding time before separation and clarification.

An automatic system controls the paste temperature at the outlet of the Thermal conditioning module. A PID-driven modulating three-way valve adjusts the recirculation of hot or cold water in accordance with the energy required.

Dimensional drawing



Technical data	XS module	S module	M module	L module
Tare weight (kg/lbs)	175/386	215/474	300/661	500/1,102
Δ Temperature (°C heating/°C cooling)	10/6	10/6	10/6	10/6
Required calories (Kw)	12	23	35	52
Required frigories (Kw)	6	17	23	35
Maximum pressure drop (bar)	6-10	6-10	6-10	6-10
Length (L) (mm/inches)	3,550/140	3,625/143	3,934/155	3,953/156
Width (W) (mm/inches)	650/26	650/26	650/26	1,223/48
Height (H) (mm/inches)	1,326/52	1,326/52	1,326/52	1,426/56

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