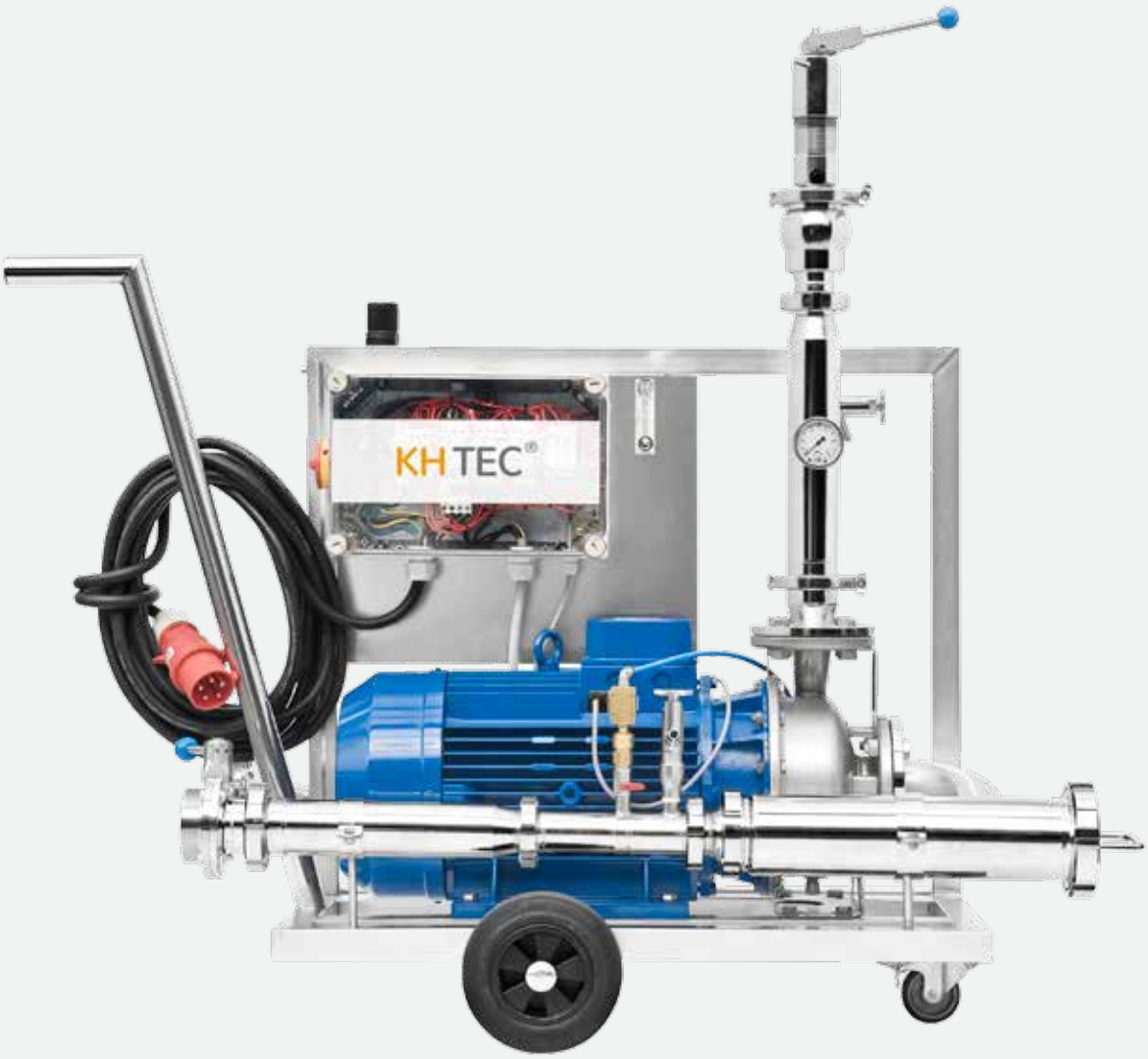
PARTNER IN STAINLESS STEEL

KH TEC®

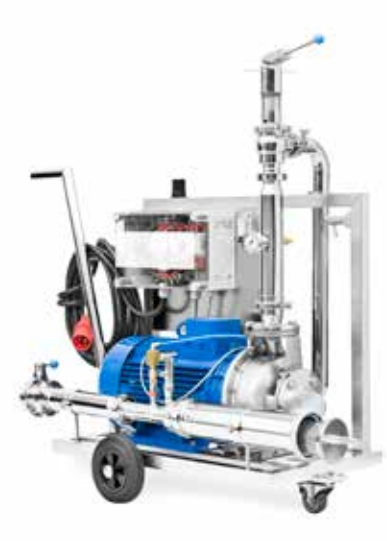


mobile | user-friendly | innovative

Flotation Systems

with Rotary Pumps and Progressive Cavity Pumps

FOOD BEVERAGE WINE



Flotation ECO 30.000

FLOTATION SYSTEMS FOR MUST PRECLARIFICATION

Due to the gradually increasing degree of mechanisation of grape harvest and grape sorting, ultrafine must preclarification has gained importance.
The flotation process allows for the best continuous clarification procedure. Unlike conventional sedimentation, with this method, must is pressurized and saturated with gas or air and subsequently depressurized to standard pressure. As a result, fine gas bubbles are released from dissolved air, binding deposits from must and pulling them to the surface. A compact layer of lees is formed at the must surface. Thus, the flotation process is reverse sedimentation.
By adding gelatine with a high amount of bloom, the layer of lees will gain an enormous firmness. This means that the clarified must and the depot of lees are sharply separated and must can clearly be removed, even after more than 12 hours. Compared to sedimentation (which often requires external cooling), the flotation process stands out due to the fact that time and energy can be saved and that a faster procedure minimises the risk of primary fermentation.

FLOTATION WITH FRESH AIR IN A ONE-TANK-CIRCULATION PROCEDURE

Compared to the original method of using a compressor, flotation with aspirated ambient air proves to be a very efficient procedure. This serves to reduce unwanted phenols and to increase the wine‘s quality at the same time. For the production of grape juice, the system can smoothly be adapted to operation with nitrogen.
The one-tank circulation procedure enables flotation as well as removal of clarified must in only one step. The required amount of bentonite and coal as well as gelatine with a high amount of bloom has to be added beforehand; those substances are inducted via a specific metering valve.

ADVANTAGES OF MUST PRECLARIFICATION BY MEANS OF FLOTATION

- Fast and continuous must processing
- Reduction of free phenols
- Enables clarification of red, heated must
- Low acquisition and energy costs
- No risk of primary fermentation due to fast processing
- Excellent purity of wines
- Easy and simple operation

Comparison of juice after (left)
and before flotation process (right)

SOLUTIONS FOR SMALL AND MEDIUM-SIZED COMPANIES

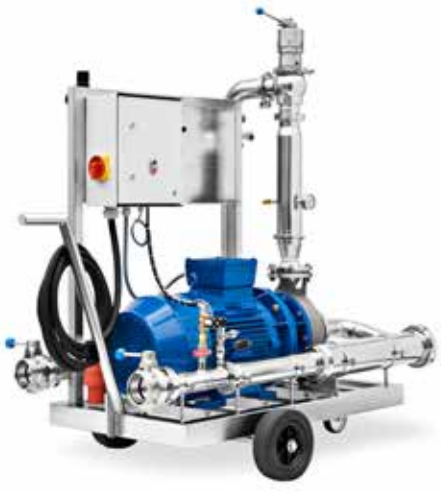
The K+H flotation system type ECO Spar was especially designed for smaller and medium-sized companies.
For many years, operators in smaller companies have been convinced by its good value for money as well as its easy operation.
In particular for the flotation system type ECO Spar, a flotation sieve grate with supporting frame was designed. It allows to separate solid substances such as pips and skins from the flotating must.

SPECIFICATIONS OF VARIOUS MODELS

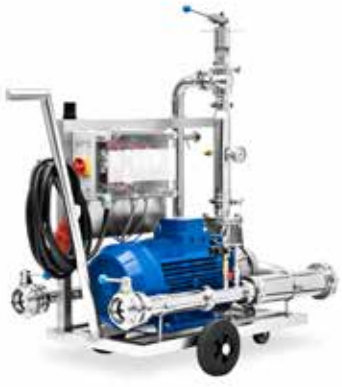
System type	Pump type	Performance/hour	Energy demand
ECO Mini Spar	rotary pump	800–1,500 Liter	1,5 kW
ECO Spar 3.000	rotary pump	2,500–5,000 Liter	3 kW
ECO Spar 3.700	rotary pump	4,000–10,000 Liter	3,7 kW
ECO 15.000	rotary pump	12,000–20,000 Liter	5,5 kW
ECO 20.000	rotary pump	20,000–25,000 Liter	11 kW
ECO 30.000	rotary pump	30,000–40,000 Liter	15 kW
ECO 60.000	rotary pump	50,000–120,000 Liter	30 kW
ESP 5.000 Spar	progressive cavity pump with frequency converter	4,000–8,000 Liter	3 kW
ESP 10.000	progressive cavity pump with frequency converter	5,000–10,000 Liter	3 kW
ESP 15.000	progressive cavity pump with frequency converter	5,000–16,000 Liter	5,5 kW
ESP 20.000	progressive cavity pump with frequency converter	6,000–20,000 Liter	5,5 kW
ESP 30.000	progressive cavity pump with frequency converter	30,000–35,000 Liter	7,5 kW

CAUTION:
The ESP-type series is in all sizes fitted with a standard frequency converter to control pumping rotation speed. Progressive cavity pumps can in any case be used in wineries without having to install the flotation kit.

Flotation system of ECO series



ECO 60.000



ECO 30.000

ECO Spar 3.700

ECO MiniSpar

KH TEC®

KH TEC GmbH	KH vessel TEC GmbH	KH process TEC GmbH

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