

CiTF) WINETECH  
DIVISION



טוד היין  
Wine's secret

Alien

MADE BY CiTF a French Company located between Cognac and Bordeaux



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### CITF

In 10 years, CITF a French company, has become a major player in the industrial conception industry in the Bordeaux region. We are a partner of choice for all our clients' innovative projects. Based in the Charentes-Cognac basin, CITF has often be solicited by the wine-sector. That's why in 2015, CITF began to develop an automatic system that sorts grapes and waste after harvest named ALIEN. In 4 years, CITF became the world leader of the robotic sorting system in the wine-sector. Following some development stages and numerous tests, during the harvest period in renowned chateau of Bordeaux and in a prestigious winery at the Napa Valley in California, CITF has never stopped to improve ALIEN with some innovative technologies. Nowadays, CITF presents a new generation of ALIEN, more design and even more efficient.

### WINE4U

You are specialized on selling and renting different equipment for wineries... We met each other on our stand at the SIMEI exhibition on November 21<sup>st</sup> and you seems to be interested at first by renting the machine. And secondly by purchasing one ALIEN than you can rent further. We also discussed about the selling price for your other customers. I hope that this presentation and quotations will hold your attention and allow us to have a long-term partnership for the coming years. Enjoy the following datas...and please be kind to adjust what I've understood and offered.

## Who is ALIEN?

### *ALIEN is an optical robot to sort grapes and waste after harvest*

The grape sorting after the harvest is an essential stage of your wine-making process. Usually done by hand, this stage needs operators. It is a physically difficult task for operators who cannot maintain a regular production rate and an optimal quality sorting.

With our innovative technology, ALIEN, you **save time, efficiency and rentability!**

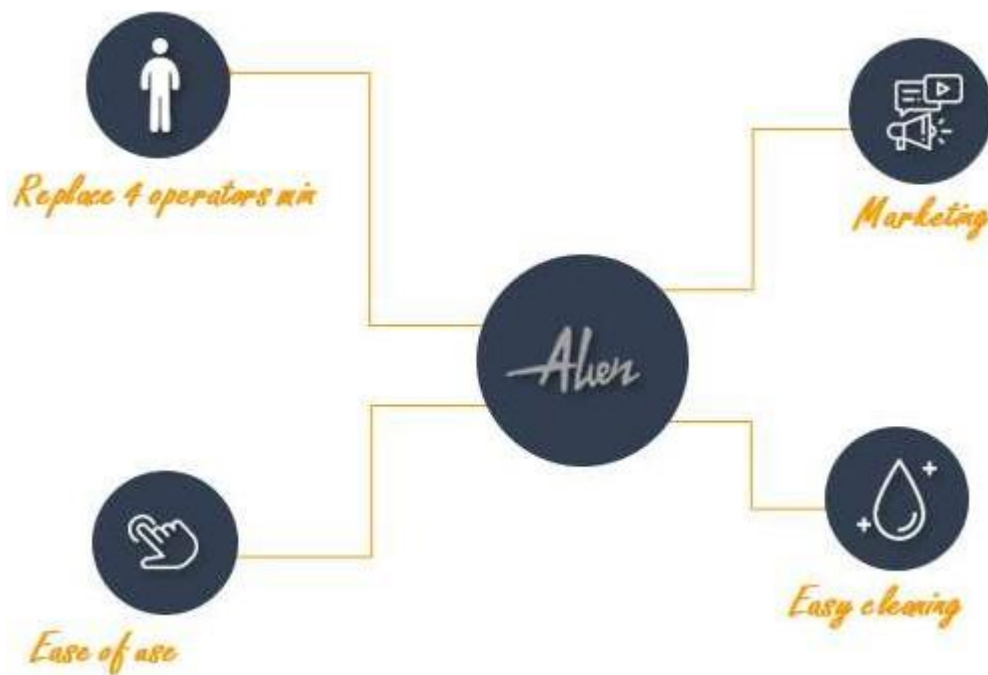
Equipped with a high-speed image recognition **robotic system**, ALIEN removes the harvest waste after the grapes destemming.

Thanks to a **continuous sorting** and a **production rate regularity**, ALIEN intercepts up to 400 elements (stalks, pink berries, branches...) per minute and sorts up to 8 tons per hour.

This innovative solution, easy to use with his **touchscreen interface**, will reduce losses with its **high precision sort**.

In case you already have a sorted machine in your process, ALIEN can operate after for an optimal finishing touch.

Beyond its technologic advantages, ALIEN will be a real **marketing advantage** who will seduce your clients.





## ALIEN in operation during the harvest

[https://www.youtube.com/watch?time\\_continue=5&v=cY9R9igdiFw&feature=emb\\_logo](https://www.youtube.com/watch?time_continue=5&v=cY9R9igdiFw&feature=emb_logo)



Corporate name : SAS Conception Industrielle et Technologies Futures  
SIRET number : 517 562 849 00011 – Capital : 787 650 €

## Implantation

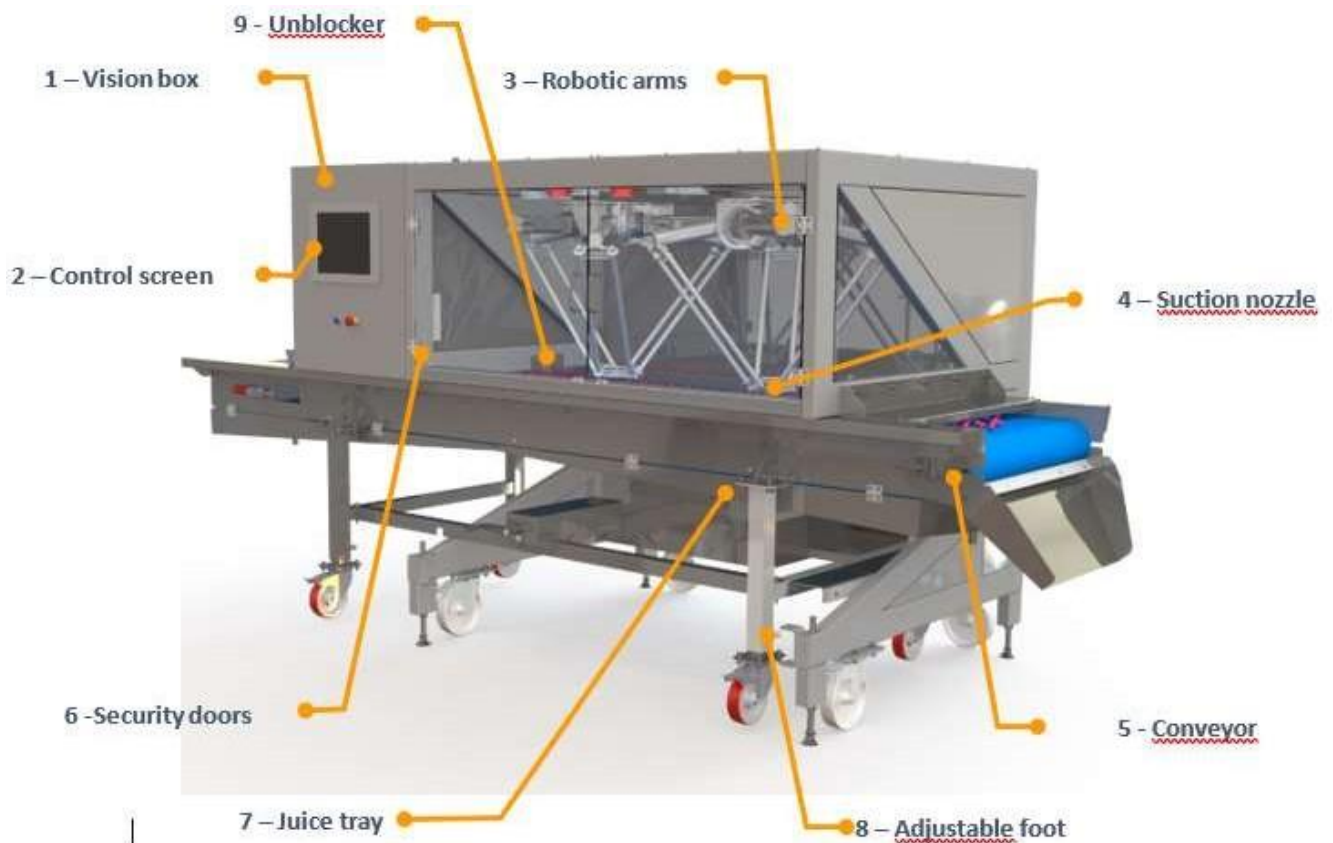
ALIEN implants itself in your harvest reception line. It can be implant after a shaking table or it can complete other sorting system.

## Benefits of ALIEN

- Up to 400 MOG removed per minute
- Up to 8 tons of grapes sorted per hour
- Continuous sorting and production rate regularity
- Touch UI for easy adjusting
- Reduction of difficult working conditions for human workers
- Quick and easy cleaning (less than 30min)
- Visible work
- "Amazes" visitors during castle visits



## Identification and components of the equipment



## **1 – Vision box**

**This vision box is made of 2 elements :**

- High speed 21 MP color camera. Focal length of the 16mm lens
- The photos taken by the camera are analyzed in a few milliseconds by the controller and the coordinates of the negative elements are classified in a table and sent to the robot controller
- Lighting

The vision box is composed of 2 curved LED strips that illuminate continuously. The design of the box and the orientation of the lights are designed to ensure a diffuse and homogeneous light over the entire surface of the camera field.

## **2 – Control screen**

The user interface is a 15" touchscreen HMI that is resistant to water splashes. It allows the adjustment of different machine parameters such as conveyor speed, vision programs, etc.

## **3 – Robotic arms**

The robotic arms are DELTA type robots from Schneider. Their 400 mm radius of action is sufficient to cover the useful width of the conveyor, which is 760 mm. The first robot takes care of the entire left side of the conveyor and everything at the bottom. The second, is in charge in the right part and what is close to the window side.

The information sent by the camera controller regarding the positions of the negative elements is analyzed in order to prioritize and optimize the robots' trajectories.

## **4 – Suction nozzle**

The suction nozzles are connected to flexible hoses capable of withstanding the acceleration and speed of the robots. The nozzles are about 20mm in diameter, and are positioned about 15mm from the conveyor belt. This is sufficient to suck up most of the berries and stalks.

## **5 - Conveyor**

The conveyor is motorized by a motorized roller with integrated encoder. It allows the transport of the berries from the product entry to the sorted product exit. It is an element that can be separated from the rest of the machine to facilitate cleaning. When it is not under the machine in its reference position, a safety device prevents the robots from starting. Two guides on the right side of the conveyor ensure precise reference to the machine frames.

## **6 – Security doors**

The machine frame consists of 2 safety doors protecting the operators and all other persons in the vicinity of the machine. If the doors are opened, the conveyor continues to rotate but the robots are stopped immediately.

## **7 – Juice tray**

2 juice containers positioned under the conveyor allow the recovery of juices from the conveyor belt. Free choice for the château to manage the recovered juices as it wishes. Hinged they can be easily tilted during the cleaning phase.



### 8 – Adjustable foot

The conveyor feet are placed on a hydraulic cylinder and operated by a hand pump. This makes it easier to adjust and adapt to the sloping floors of the castles. The height positioning allows the conveyor to be brought in and out from underneath the machine.

### 9 - Unblocker

In case of elements too large for the suction nozzle, a sensor instructs the robot to come and position itself on the unblocker which aims to push the element into the nozzle. It is also possible to manually order this action to the robot, by pressing the associated button on the HMI.

### 10 - Tank

The vacuum cleaner tank has a capacity of 100L and allows to store all the vacuumed elements.

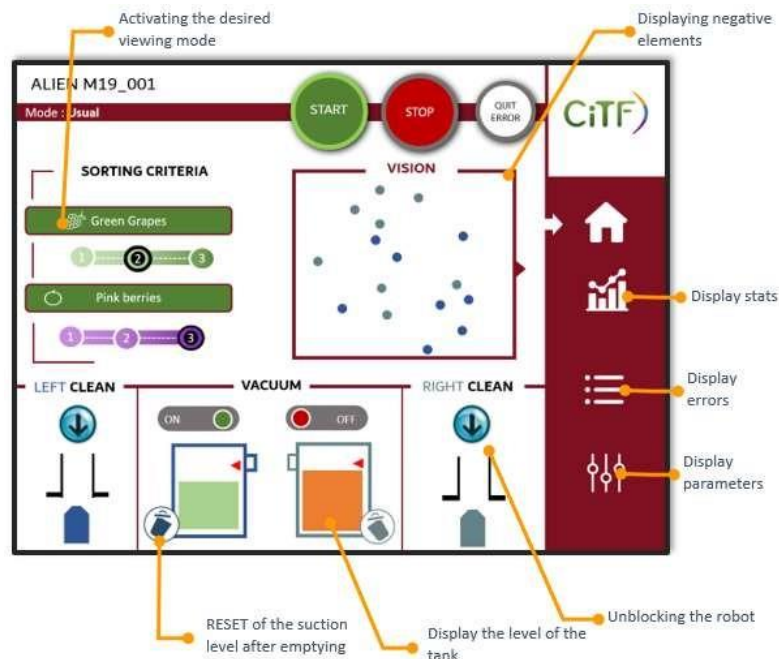
### ALIEN connections

The ALIEN machine is connected to the 400V network and requires 2 sockets.

- ➔ 1 : For the machine + the conveyor
- ➔ 1 : For the 2 vacuum cleaners
- ➔ The machine does not need to be connected to the pneumatic or water network.

### ALIEN is composed of 4 ways of interaction

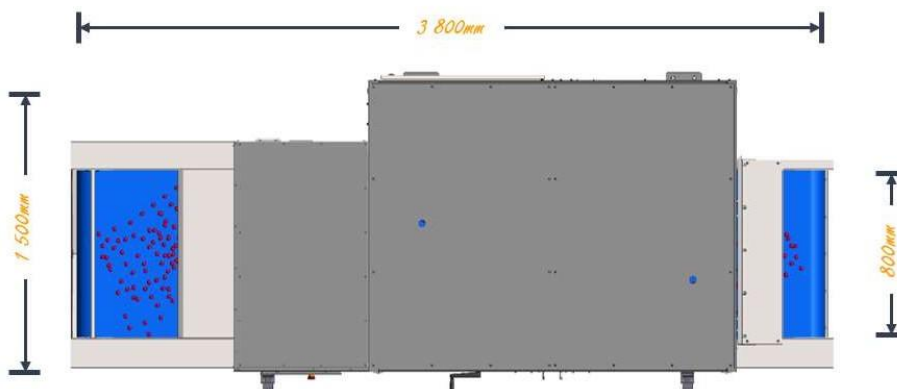
- ➔ The reset button
- ➔ The emergency stop button
- ➔ The HMI
- ➔ The main switch
- ➔ The machine is configured and started up via the screen shown below



## Characteristics and dimensions



*Upper view :*



## Warranty

### Duration:

12 months after date of final acceptance

### Applicability:

The warranty applies for the whole duration mentioned above and covers the supply of parts as well as the intervention of one of our technicians to repair the equipment. Warranty

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applies only under normal conditions of use of the equipment.  
It does not apply to damage caused by collision, overvoltage,  
etc It does not apply to defects resulting from modifications  
carried out without our  
consent.