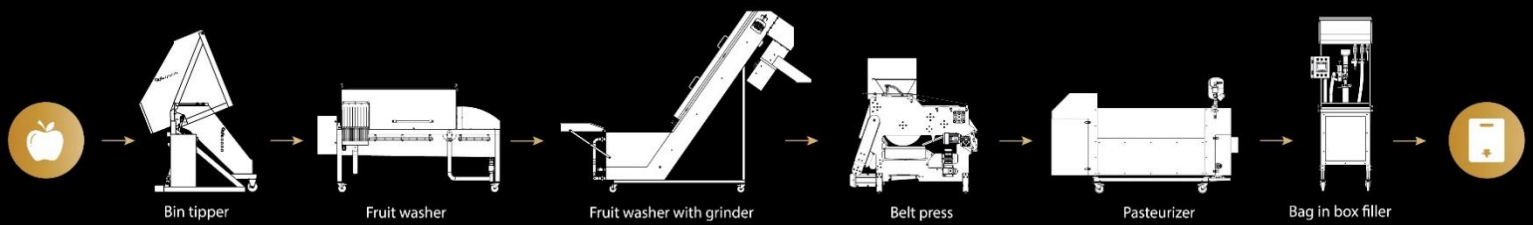


# PROFRUIT MACHINERY

## Official Manual & Instruction Document

### Destoning & Pulping Machine

# DESTONE



## INFORMATION ABOUT MANUFACTURER

**Manufacturer:** UAB ProFruit Machinery

**Representator:** director Pijus Lopata

**Address:** Razes g. 27, Peskojai v., LT-92385 Klaipėda county, Lithuania

**Company code:** 305202037

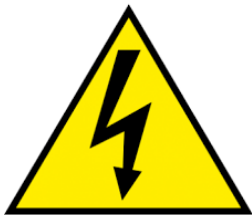
**VAT code:** LT100012484812

**E-mail address:** [info@pro-fruit.com](mailto:info@pro-fruit.com)

**Website:** [www.pro-fruit.com](http://www.pro-fruit.com)

## Warning signs

There are special warning and prohibition signs put on the machines which are meant to inform the user about danger and keep everyone – people and machinery – safe at all situations. The meaning of each sign is described below.



**Control console.  
required  
High voltage**



**Headset required**



**Work shoes**



**The risk of limb injury.**

**It is mandatory to remain alert and protect the limbs.**



**The risk of limb injury.**

**Moving parts of the machine.**



**Hot surface.**  
**Risk of getting burned.**



**Warning. Sharp parts of machine**  
**Risk of limb injury.**

### GENERAL REQUIREMENTS

General instructions:

- Ambient air temperature +8...+35° C.
- Relative humidity (when temperature +25 °C) until 70%.
- Atmospheric pressure, kPa 84-107.
- The Law on Occupational Safety and Health of the Republic of Lithuania, the General Provisions and Safety Instructions for the Use of Work Equipment and the Laws on Occupational Safety and Health of the European Union must be observed while using the machine.

## Destoning & Pulping Machine DESTONE

DESTONE is designed to separate fruit and berry pulp from the stone and press the pulp into mash for further processing.

The inside of a destoning pulping machine consists of a screw, that is mounted in the middle, and sieve, that is attached to the sides of the machine. After the fruits or berries are loaded into the destoning and pulping machine, the screw fastly rotates the product and this way presses it through the sieve. This way machine presses clear fruit or berry puree through the sieve without any stones and peel. Stones, seeds and peel leave the machine through a special outlet. The puree comes out of machine through a separate outlet.

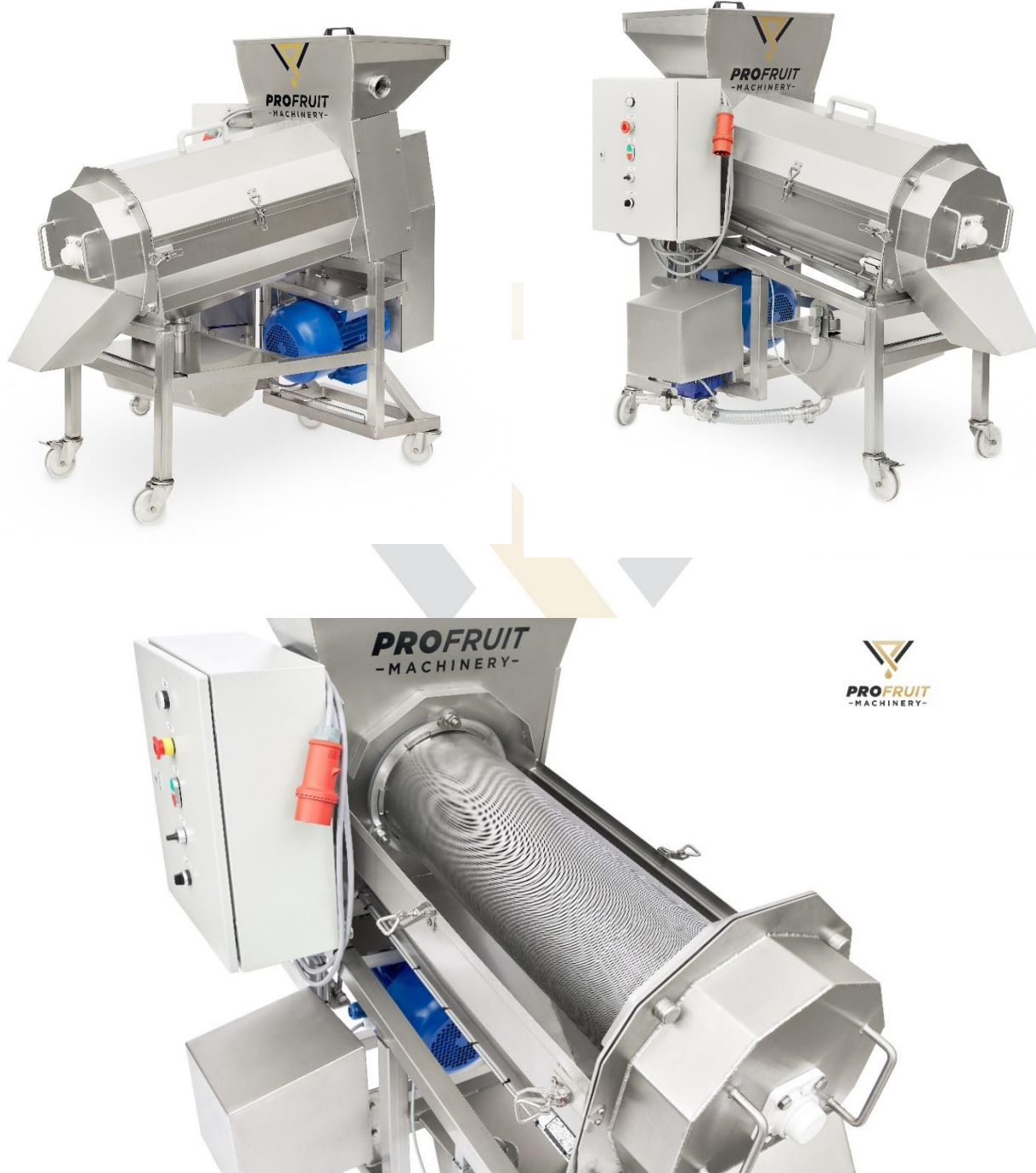
Available different capacities: 500 kg/h, 1000 kg/h, 2000 kg/h.

- For further processing and thinner puree, the pulping process can be repeated with another sieve or puree can be further loaded into the 2<sup>nd</sup> destoner or pneumatic or belt press.
- Destoning and pulping machine is entirely made of stainless steel.
- The machine comes with one integrated sieve. The client can order additional sieves depending on the need.
- The machine has adjustable pivoting wheels.
- The machine functions automatically.
- Easy to clean with no closed or inaccessible spaces, all parts are easy to assemble.

- **Attention! It is mandatory to wash off the device before starting it for the first time.**

It is important to eliminate any manufacturing residues and the dust which has built up on the surface, taking care not to wet the electrical parts and keeping the power supply cable disconnected.

## Machinery specifications and drawing



**MAIN COMPONENTS OF THE MACHINE**



1.	Inlet hopper
2.	Safety grid of the inlet hopper
3.	Destoning basket
4.	Stone outlet
5.	Basket cover
6.	Control panel
7.	Belt protection
8.	Pulp outlet bath
9.	Impeller pump

### Assembly, connection and installation of the machine

Steps to accomplish in order to start working with the machine

- Thoroughly wash off the machine.
- Connect power cable to the three-phase connection.

### The main instruction of central control box



- Control the switch No. 1 to turn the machine on or off. Horizontal position (0) means the machine is off, vertical position (I) means the machine is on.
- The button No. 2 (24VDC) is lit when the machine operates normally.
- To start or stop the machine adjust the buttons Nr. 3– green stands for START, red – for STOP.
- To choose automatic/manual work mode, adjust the switch No. 6. (WORK MODE MANUAL – 0 – AUTO)
- The speed of the rotation of blade paddles can be changed using adjusting wheel No. 5.
- In case of emergency or in need of immediate stop press a button EMERGENCY STOP No. 2. To turn this button off you need to pull the button.

### **Instructions for using the machine**

- Turn the power switch No. 1 into the working mode – vertical position (I).
- Choose the desired working mode with switch No. 6.
- To start the work, press the START button No. 4
- Adjust the desirable speed with adjusting wheel No. 5.
- Supply the fruit/berries into the inlet hopper.

### **3. SAFETY REGULATIONS**

THE NON-OBSERVANCE OF THESE REGULATIONS MAY CAUSE ACCIDENTS TO PERSONNEL AND DAMAGE TO THE MACHINE.

Before commencing any operation on the machine read the instructions in the manual, supplementing the regulations specified herein with those required by current legislation on safety and accident prevention.

The moving parts of the machine can cause serious injury – operators should therefore pay the utmost attention when the machine is running. In addition, placing the machine in a damp area may be a source of accidental electric discharge caused by the electrical contacts of the motor.

ProFruit Machinery therefore declines all responsibility in the case of:

- use of unsuitable electrical systems for operating the machine



- use of the machine in unsuitable environmental conditions
- failure to observe the installation, use and servicing instructions contained herein
- use of the machine by unauthorized, unqualified staff
- unauthorized modifications to the machine.

The machine has been designed specifically for the purpose indicated in the manual. ProFruit Machinery declines all responsibility for any use of the machine other than that for which it has been designed.

#### **4. WARNINGS**

- The machine supplied must be used exclusively for processing the product described in this manual.
- Do not commence assembly of the Destoner or start it up before reading this manual.
- Do not turn on the Destoner if the machine is vibrating abnormally or if the protective guards supplied have not been attached.
- Do not perform servicing, dismantling or cleaning operations before the machine has come to a complete standstill and the electricity supply has been turned off for several minutes.
- Do not turn on the machine if the electric motors or frame are cracked. Check the tightness of the various components before each shift and if necessary, tighten any loosened nuts or bolts.
- Check that the voltage of the circuit which the motor control panel is connected to corresponds with that of the motor cables.
- Do not try to operate an overheated motor but leave it to cool down to room temperature.
- Allow only experienced personnel to start up, clean or service the machine.
- Do not start up the motors if the rotating elements do not turn freely.
- Use harnesses to raise the machine and make sure that these are suitable for the weight to be lifted.
- Wash the machine with non-toxic products designed for use with food stuffs.

- This manual must stay with the machine at all times, any reproduction of the same, even partial, is strictly forbidden.

## 5. SAFETY GUARDS AND ACCIDENT PREVENTION

### 5.1. GENERAL REMARKS

The machine is designed so that the moving parts of the transmission gears and motor are protected by casings for the purpose, preventing direct contact. The machine is also provided with a safety grid (2) which must be attached to prevent unintentional contact of the rotating part (shaft) with limbs or tools, but to allow transit of the product.



Do not put your arms or any tools inside the machine when it is on.

The employer, or head of the company using the machine, must make sure that all personnel responsible for using the DESTONER have been informed of the safety regulations relative to use of the machine and must provide all the information necessary for safe use of the machine.

Specifically, they must check that:

- the machine has not been tampered with or modified
- the machine is used for the purpose specified in this manual
- the machine complies with its original configuration
- the safety regulations foreseen by current legislation and those indicated specifically herein are observed.

From an analysis of the risks (conducted in conformity with the Machinery Directive 98/37 EC) connected with use of the stemmer it emerged that the main risks are as follows:



Do not remove safety devices-Do not repair or adjust while in movement. Protective gloves obligatory. Protective footwear obligatory.

Crushing and/or shearing of upper limbs	Destoning shaft Transmission organs	Do not remove the safety guards Stop the machine or disconnect the plug from the mains when cleaning or servicing. Do not repair when the machine is on.
Crushing of lower limbs	Falling of the machine	Use protective footwear Make sure the machine is stable especially as regards
Electrocution following contact with live parts.  Fire Hazard	Electric motor	Check that the mains voltage is compatible with the specifications on the motor data plate Check the condition of the electrical cables Protect the motor from damp Only allow qualified personnel to perform repairs of the electrical system

## 5.2. ELECTRIC EMERGENCY STOP BUTTON

The machine is provided with an emergency stop button which immediately cuts off the electricity supply to the motor, and a thermic protection to avoid overloading of the engine

## 5.3 STICKERS ON THE MACHINE

**Adhere strictly to the decals on the machine, especially those that relate to security**

The stickers on the machine are an integral part of the machine itself, and possibly damaged and unreadable must be requested at the dealer or to ProFruit Machinery and replaced.



Fig n°10 stop of the machine, and disconnect from the main



Fig 11 read carefully the manual before start the machine



Left - prohibition maintenance with machine on

Right - Prohibition harm inside with machine on

## 6. INSTALATION

### 6.1. PRELIMINARY INSPECTION

The destoner is supplied in a package containing: no.1 instruction manual; no. 1 fully assembled destoner with power supply cable and plug. The safety grid is installed inside the hopper. The safety sensor is installed on the stone outlet, so there won't be any possibility of risk if the stone outlet is removed.

After unpacking the machine check that it is in good condition, if necessary, informing the manufacturer of any evident defects. Notify ProFruit Machinery in writing of any defects found within a fortnight of receiving the machine.



Check that the machine corresponds to the order specifications.

**When moving the machine, observe safety regulations on the movement of goods. If using automatic hoisting devices, check that the weights are correctly balanced.**

**If the machine is to be moved, make sure that after moving the pads are balanced.**

## **6.2. POSITIONING**

When positioning the destoner consider the aspects mentioned above in relation to the choice of site.

The height at which the destoner should be placed should be such as to prevent the operator from accessing the rotating shaft with his/her hands or arms.



**To such purpose remember that it is OBLIGATORY to fit the safety grid inside the loading hopper. That grid is an integral part of the machine, and standard accessory to ensure safety of the same.**

## **7. WASHING AND CLEANING THE MACHINE FIRST INSTALLATION.**

Wash the machine thoroughly to eliminate any manufacturing residues and the dust which has built up on the surface, taking care not to wet the electrical parts and keeping the power supply cable disconnected.

Following is described the opening system

Unhook the rear protection with two levers on the side and remove the 4 knobs to remove the stone outlet cover.

Remove the sieve. Loose the bolts of the sieve and remove it.

The machine is completely open and accessible for cleaning. It is possible remove also the lower collection tank and unscrew the pump connection to have a better washing.

After cleaning, reinsert the sieve and tighten with bolts. Then install the stone outlet, and the cover.

Once the machine has been washed, check the electrical parts. If the electrical parts do get wet, dry them fully before starting up the machine.

## **8. ELECTRICAL WIRING**

Before connecting the plug of the motor to the mains, check that the voltage of the motor corresponds with that of the mains.



**The electrical safety of the machine is only ensured if it is connected to an efficient earthing system, wired according to current electrical legislation.**

Inspection and any installation of appropriate electrical components must be performed by qualified personnel.

The use of multiple sockets or adaptors is not recommended; should use of the same be indispensable use only products corresponding to current safety legislation, observing the capacity limit in terms of current and maximum power. Use a cable of 1.5mm section for extension leads of up to 20 m, and 2.5 mm for longer leads.



## **9. STARTING UP AND STOPPING**

**Before starting up the user should make sure that there are no impediments obstructing movement of the mechanical parts and, above all, make sure that nobody is in the vicinity of the parts about to move; specifically that nobody has their hands, arms or other parts of the body near the stone outlet or inside the machine.**

Check, in addition, that the voltage of the motor corresponds with the mains. Check that all the safety guards are correctly installed on the machine.

Check that the emergency stop button works properly.

**After installing the safety box, in the case of three-phase 380V powered machines, start the machine and check through the hopper, if the direction of rotation of the shaft is clockwise. Otherwise, stop the machine, unplug it from the main, and invert two phases of the electrical connection from the cable side of the connection to the main.**

Install a collection tank for the stones below the stone outlet, in order to avoid these are thrown away by the machine.

Then install a collection tank for the fruit pulp under the outlet fitting, or order loading hopper with pump (optional).

If this preliminary inspection should reveal problems or prove negative, stop the machine, disconnect the plug from the mains, notify the department chief, the supplier company, if applicable or ProFruit Machinery.

Should this preliminary inspection be successful, proceed as follows:

- press the start button on the control panel, select working mode manual/auto and set the paddles speed and the machine will start.
- load the ripe fruit
- the machine will begin to destone the fruit. The stone will fall from the stone outlet, and the pulp will exit from the connection fitting or, if ordered, into the loading hopper with pump.
- to stop the machine, press the stop button or red emergency button.
- to start the machine, release the emergency button and start up the machine again.

Should work need to be done on the inside of the machine body (obstructions or foreign bodies) proceed as follows:

1. turn off the machine and disconnect the power supply cable
2. use a tool to remove the foreign body and, if necessary, open the machine
3. close any parts opened and repeat the steps described for start-up.



**Do not put your hands, feet or tools in the machine when it is moving!**

## **10. WASHING AND SERVICING**

After using the machine and in any case at the end of the day's work, **remember to disconnect the electricity supply by turning off the mains switch and removing the plug from the socket.** This operation is essential to prevent accidental start-up of the machine which could cause damage to the machine itself or injury to persons.

After disconnecting the machine from the electricity supply, wash it to remove any processing residues, taking care not to wet the electrical parts.

***To wash the machine thoroughly, open it and remove the internal basket.***

*For washing, use warm water pressure and neutral detergent suitable for contact with food.*

After washing, if the machine is to remain inactive for a long period, lubricate as follows:

- grease the chains and moving parts
- lubricate the gears, bearing supports and Teflon supports
- lubricate the conveyor screw, paddle shaft.
- Unscrew the pump casing and remove the water from the impeller.

*The correct performance of the servicing as above makes the components subject to wear last longer. To improve maintenance operations, we recommend recording the date and type of operation performed.*



**All servicing must be performed by qualified, authorized personnel or directly by ProFruit Machinery use lubricants suitable for coming contact with foodstuffs.**

The electric motor may in no case be dismantled. In case of need contact the supplier or ProFruit Machinery.

Should repair operations be necessary to use original spare parts ordered from the retailer or directly from the manufacturer.



**The use of non-original spare parts without authorization from ProFruit Machinery will lead to lapsing of the warranty and of the Declaration of Conformity of the machine.**

## 11. TROUBLESHOOTING

<i>PROBLEM</i>	<i>SOLUTION</i>
The machine has difficulty starting	<p>Check that the power supply voltage is correct</p> <p>Do not use extension leads of insufficient diameter which may cause drops in voltage.</p> <p>Check the tightness of the transmission belt using the regulator.</p>



The machine will not start	<p>Check that the machine is plugged in.</p> <p>Check that the circuit breaker switch is on and correct setting. Check the emergency stop button</p> <p>Check if safety sensor button is pressed on the stone outlet cover.</p>
Stone are with pulp	<p>Check the tightness of the transmission belt</p> <p>Check the shaft and adjust the distance between the paddle plate and the sieve</p> <p>Reduce the quantity of the loading fruit, try to supply the fruit continuously.</p> <p>Make sure the fruit you are working is ripe or heated before processing.</p>
Noisy destoner basket, or the machine jerks	<p>Check the distance between the destoning shaft and the basket</p> <p>Check the gear transmission alignment inside the machine</p> <p>Check gear transmission wear</p>

**Available screen: •**

**From 0,6 mm till 2 mm holes- to achieve puree from small, seeded berries, or already one stage destoned pulp.**

- **3 mm holes – for crushed pome fruits, like apples, pears, guavas to achieve puree.**
- **3 or 5 mm holes – for cherries and small plums.**
- **8 mm holes – for bigger plumps, apricots, peaches.**
- **10 mm diameter sieve: Mango and similar**

## 12. TECHNICAL FEATURES

The data plate on the machine shows the identification details of the manufacturer and of the machine.

	DESTONE 500	DESTONE 1000	DESTONE 2000
Measurements LxDxH mm	1216x762x1187	1588x822x1381	2132x997x1435
Weight	140kg	220 kg	320 kg
Hourly production kg/h	500	1000	2000
Electric motor threephase	4 kw	5,5 Kw	7,5 Kw
Motor speed	1500 rpm	1500 rpm	1500 rpm
Electric voltage and Functioning temperature	3/N/PE ~ 400V 50Hz 4C°- 85 C°	3/N/PE ~ 400V 50Hz 4C°- 85 C°	3/N/PE ~ 400V 4C°- 85 C°

Noise: Leq weighted A 78.9-83.8 db. (measured in an outdoor environment in normal working conditions, according to the method indicated in UNI EN ISO 11202) below the limits foreseen by 2006/42 EEC legislation (<85dB)

## 13. WARRANTY



Equipment is covered by 36-month warranty. A warranty period for bearings, engines and other bought parts are 12 months.

The warranty does not cover transport of the machine, which is the purchaser's responsibility, and lapses in the event of use not in compliance with the instructions of this manual.

Repairs do not include transport which is the purchaser's responsibility.

Defects dependent on the following are excluded from the warranty and will entail the cessation of any obligation:

- incorrect installation
- tampering with the machine
- inexperience, lack of servicing, untimely notification of defects
- failure to observe the provisions of this instruction manual.
- repairs by personnel not authorized by ProFruit Machinery.
- transport damage which cannot be traced to manufacturing or packaging defects

- installation and use in electrical systems other than those indicated in the manual and on the data plate on the motor
- transports costs and risks in the case of forwarding the machine to authorized servicing centers
- consumables and ordinary servicing costs present in this manual.

The warranty does not extend to cover compensation of damages to persons and or things deriving from use of our product, even if in the case of the breakage or defect.

Failure to honor the agreed terms of payment will entail immediate lapsing of the warranty. Any complaints should be notified by the purchaser within 10 days of purchase, in writing, to ProFruit Machinery.

Retention of ownership: as provided for by articles 1523-1524 and following of the civil code, the transfer of ownership of the goods on sale will be after complete payment of the agreed sum.