User Manual

Original user manual: Cold Press – CP01

Version 1

food technology & life science

Colofon

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1. Safety

All warnings in this document are indicated with the following sign: 

1.1 Important safety information

Information about emergency exits has to be sufficiently present in the working area. The working area must have sufficient light in order to work safely with the Cold Press.

1.2 Safety information

1.2.1 Safety signs

On the Cold Press five safety signs are present. The safety signs are placed on the machine, as can be seen in Figure 1 below.

Warning! It is prohibited to remove the safety signs. In case the signs are removed or detached from the surface, it is mandatory for the user to replace them.

Figure 1. Overview of safety signs

1.2.1.1 Safety sign entrapment

The safety signs to indicate the risk of entrapment are positioned on the pressing plates, see Figure 1 denoted with the blue arrows. The risk of entrapment of body parts or clothing is present between the two product plates.

1.2.1.2 Safety sign electrical voltage

The safety sign indicating electrical voltage is attached at each control panel, denoted with the green arrow. Behind this door, low voltage components are present. The door cannot be opened under any circumstance by unauthorized personnel. Only staff from TOP bv or an electrician is competent to open the doors.

1.2.1.3 Safety sign Do Not Clean with water

The safety sign “Do not clean with water” is located in the motor of the Cold Press, see orange arrow. This means that contact of the motor with water should be avoided.

1.2.1.4 Safety of product

The safety of the product is the full responsibility of the customer. TOP bv and JFPT foodlife cannot be held liable for any safety and quality issues of the product.

1.2.1.5 Safety during maintenance

In case any maintenance is performed on the Cold Press, make sure the padlock is locked in the main switch. This will ensure that no voltage is on the machine.

2. Introduction

The Cold Press is designed to press juice out of fruits and vegetables, resulting in a clear juice without any fibers. This process does not use any heat and therefore the quality of the juice remains excellent.

Goal of the Cold Press
The goal of the Cold Press is to squeeze juice out of fruits and vegetables, resulting in a clear juice with an excellent quality.

Application area
The Cold Press is suitable for fruits and vegetables. Some fruits or vegetables first have to be peeled and large kernels have to be removed. Fruit and vegetables should be smaller than 20 mm x 20 mm x 20 mm. The Cold Press cannot be used for non-food, animal products, nuts and fruits with a woody shell like coconuts.

Environment of the Cold Press
The next demands are made to the environment where the Cold Press will be placed:

- The Cold Press has to be placed in a covered area.
- Temperature between 5 °C and 35 °C.
- Relative humidity of < 90%.
- The Cold Press cannot be placed in a zone or environment where special requirements are prescribed in the context of ATEX or similar requirements.

If the above mentioned requirements are not met, the functionality and quality of the components of the Cold Press can be influenced negatively.

Maintenance of the Cold Press
Maintenance of the low voltage components of the Cold Press can only be done by staff from JFPT foodlife or an electrician that is certified according to NEN3140.

Using the Cold Press
The Cold Press can only be used by personnel that received instruction training for the usage of the machine and has knowledge of the user manual.

3. Description of Cold Press

3.1 Description of the components

The Cold Press consists of two pressing plates and two product plates. The product is pressed in a filter bag between these plates. Above the pressing plates a feeder is located to feed the Cold Press with product. The juice is collected in a juice collection tray and hereafter in a juice bucket. At the left side of the Cold Press a control unit is located. This panel includes a main switch, reset button, emergency button and control switch. Furthermore, the Cold Press includes a speed adjuster to slow down or to fasten the speed of the pressing plates.

3.2 Process

With the Cold Press fruits and vegetables can be pressed and clear juice comes out of the press without any fibers. Fruits and vegetables have to be cut in small pieces and can be put into the Cold Press through the feeder. The fruits and vegetables then fall into the filter bags. By compressing the product in the filter bag by the pressing plates and product plates, the juice is squeezed out of the product. The juice will be collected in a collection tray and thereafter in a juice bucket.

3.3 Facilities

The next facilities are not part of the Cold Press and need to be arranged by the client itself:

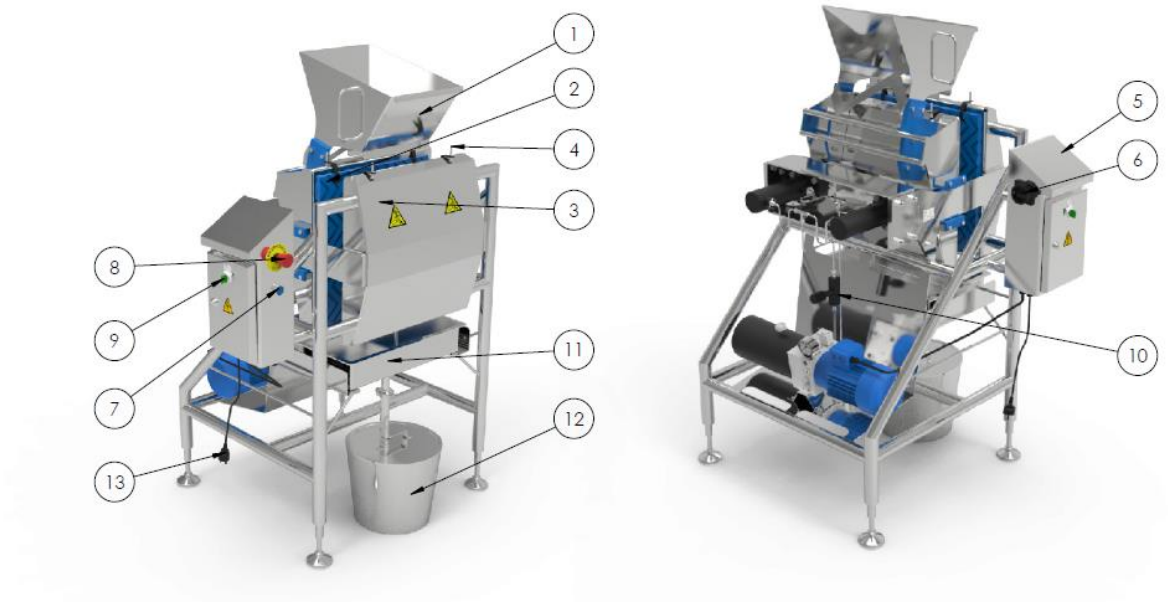
- Electrical connection 16A, 230V.
- Extra juice buckets (one bucket is included).
- When needed: cutting machine, peeling machine.

3.4 Work area machine operator

The Cold Press can be operated at the front side and left side of the machine. All operations for the good and safe usage of the Cold Press can be performed from the ground. Therefore, no actions have been taken to make the operations viable at heights.

4. Explanation of components of the Cold Press

For proper and safe usage of the Cold Press the user instructions need to be followed accurately.



1 = Feeder
2 = Product Plate
3 = Pressing Plate
4 = Suspension pin
5 = Control Unit
6 = Main Switch
7 = Reset Button
8 = Emergency Stop Button
9 = Control Switch
10 = Speed Adjuster
11 = Juice Collection Tray
12 = Juice Bucket
13 = Electric Plug

4.1 Control unit

The control unit includes several switches and buttons. These are described below.

4.1.1 Electrical plug

The electrical plug has three meters of cable length and has a connection of 16A, 230V.

4.1.2 Main switch

The main switch of the Cold Press is located on the left side edge of the control unit. The Cold Press can be switched on by turning the main switch a quarter to “1”. To switch of the power, the main switch should be turned a quarter to “0”, see Figure 2. It is possible to attach a padlock to the main switch. This can be a safety measure during cleaning or maintenance.

Figure 2. Main switch “off”

4.1.3 Emergency stop button

The emergency stop button is located at the right side edge of the control unit. The whole process can be stopped by pushing the emergency stop button. The pressing plates and product plates will stop moving towards one another.

4.1.4 Reset button

The reset button is located at the right side edge of the control unit, below to the emergency stop button. To reset the emergency stop relay, the reset button needs to be pushed. This can only be done if the emergency stop button is pulled out. Push the reset button only when the emergency is gone and work can be resumed safely.

4.1.5 Control switch

The control switch is located on the front side of the control panel. The switch has three different settings:

- 0 → the machine is idle.
- Press → the pressing plates and product plates are moving towards each other and juice is pressed out of the product.
- Release → the pressing plates and product plates are moving away from each other and no juice is pressed out of the product. This setting is used to remove the filter bag and bring the plates back into the idle position.

4.2 Feeder

The feeder is used to feed the Cold Press with fruits and vegetables. Through the feeder, the product will be transported to the filter bags.

4.3 Pressing plates

The pressing plates are the two outside plates of the Cold Press. These plates compress the product plates to squeeze the juice out of the product.

4.4 Product plates

De product plates are the two blue, ribbed plates, see Figure 3. These plates make contact with the filter bag and compress the fruit and vegetables in the filter bag. These plates can be removed for cleaning.

Figure 3. Product plate

4.5 Speed adjuster

The speed adjuster is located at the back of the Cold Press. The turning knob can be used to fasten or to slow down the speed of the pressing plates.

4.6 Collector Tray

The collector tray collects all the juice that is squeezed out of the product. The juice flows through a pipe into the juice bucket.

4.7 Juice Bucket

In the juice bucket 12.5 liters of juice can be collected. The juice bucket can be removed by loosening of the clamp.

5. Assembling of the feeder

The feeder is an optional part of the Cold Press. Therefore, the feeder has to be assembled by the customer. In Figure 4 the assembling of the feeder is shown.

Make sure the feeder is in the middle of the right and left side of the pressing plates.

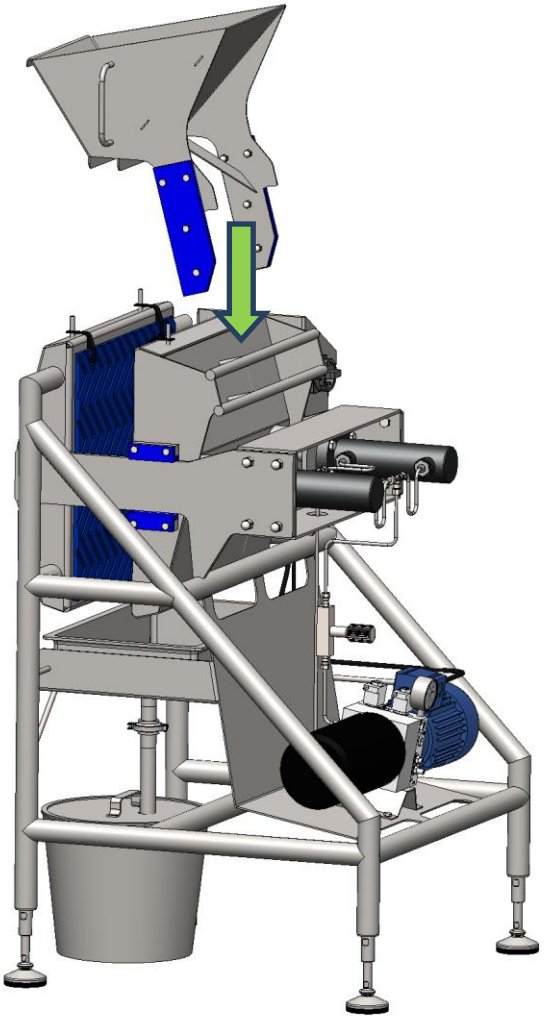


Figure 4. Assembling the feeder.

6. Operation of the Cold Press

In this chapter the production process of fresh, clear juice will be explained step by step.

6.1 Preparation of the product

1. The fruits and vegetables (= product) have to be washed and large solid components, like kernels and thick peels (for example pineapple), have to be removed,
2. The product has to be cut into small pieces. It is also possible to use mashed fruits and vegetables.

6.2 Pressing

1. Turn the main switch on by turning the switch a quarter. The Cold Press is switched on when the switch is in position “1”.
2. The filter bag can be placed into the press by hanging the filter bag on the four suspension pins.
3. The product can be put into the feeder and will then be transported to the filter bag.
4. Fill the filter bag with a minimum of 2 kg and a maximum of 5 kg.
5. When all of the product is put in the filter bag, the control switch can be switched to “Start Pressing”.

Warning: never hold your hands between the pressing plates/ product plates when pressing!

6. The pressing plates and product plates now move towards each other.
7. As soon as the product plates exert pressure on the filter bag, juice will come out of the product.
8. The pressing plates and product plates will continue to move in the direction of each other until the maximum point is reached.
9. In case the speed of the pressing plates has to be slower or faster, the speed adjuster can be used. By turning this adjuster to the left or to the right the speed of the pressing plates will be faster or slower.
10. The juice will come out of the filter bag and will be collected in the collection tray.
11. The juice will be collected in the juice bucket (maximum 12.5 liters).
12. Pressing can be stopped if no more juice comes out of the product. To stop pressing and to open the pressing plates and product plates, the control switch has to be switched to: Release.
13. The plates first have to go apart, and the opening of the plates has to be large enough to take off the filter bag.

Warning: First switch off the Cold Press by switching control switch to: Idle

14. Switch the control switch to: Idle. This will stop the movement of the pressing plates and product plates.
15. Switch off the main switch.
16. Remove the filter bag by removing the bag from the suspension pins.

Warning: Never remove the filter bag in case the main switch is ON. Always switch OFF the main switch before removing the filter bag

17. Remove the juice bucket by loosening the clamp.
18. Switch off the Cold Press by switching the main switch to 0 or start a new run.

7. Maintenance and failure

7.1 Daily maintenance

The daily maintenance of the Cold Press consists of cleaning and visual inspection on defects. Details about the cleaning of the Cold Press are presented in Chapter 7.

7.2 Regular maintenance

It is advised to perform maintenance regularly, preferably once every month. Two control items need to be taken along:

- Check oil volume vessel.
- Check for visible leakings of oil.

7.3 Yearly maintenance

- Substitute slide blocks.
- Maintenance cilinders.

7.4 Failures

Failures of the Cold Press can have different causes. Check whether the failure can be restored. In case you need help, contact JFPT foodlife.

Warning: In case any maintenance is performed on the Cold Press, make sure the padlock is locked in the main switch. This will ensure that no voltage is on the machine.

8. Cleaning

8.1 Cleaning the outside of the Cold Press

Regularly cleaning the Cold Press prevents remnants of products to stick to the Cold Press. A cloth with mild cleaning detergent can be used for cleaning. Pay special attention to the product plates, as remnants can easily remain. Also the juice collection tray and juice buckets need to be cleaned regularly. The product plates, juice collection tray and juice buckets have be removed from the Cold Press before cleaning and cleaned with water.

Warning: Before cleaning the Cold Press, the electricity should be switched off by turning the main switch into the status "OFF".

Warning: Do not clean the Cold Press with water under high pressure.

Warning: Do not clean the electromotor with water.

8.2 Cleaning the inside electrical unit Cold Press

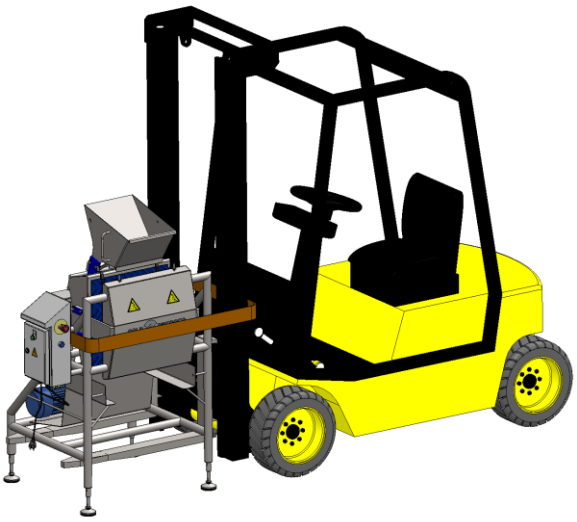
The inside of the control unit can only be cleaned by staff from JFPT foodlife.

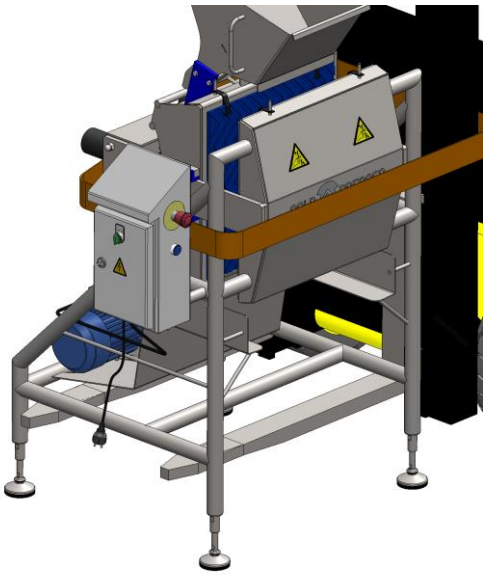
9. Transport

The Cold Press can be moved through usage of a lift truck. Make sure that during transportation the Cold Press is always in a secure and stable state.
When lifting the Cold Press, always lift it up from the right side. This means the side with no control unit.

Warning: Make sure that during transportation of the Cold Press, the Cold Press is in a stable state, and cannot fall down from the lift truck or fork lift. This can cause damage to the surrounding and of the Cold Press itself.

Pick up the Cold Press from the right side and use a clamping strap for fixing the Cold Press to the lift truck.





10. Instruction Training

- Explanation of all components of the Cold Press at the machine
- Explanation connection electricity
- Explanation about start up of the Cold Press
- Explanation operation of the Cold Press during production
- Explanation closing down of the Cold Press
- Explanation dangers of the Cold Press
- Operating production process
- Explanation maintenance of the Cold Press
- Explanation cleaning of the Cold Press

11. General safety rules

11.1 General safety rules

- Before using the Cold Press all relevant instructions need to be fully clear for the user and all local requirements need to be fulfilled.
- It is explicitely not allowed to operate the Cold Press in a wrong way, or to use it for other purposes than described in this manual.
- It is explicitely not allowed to ignore instructions and warnings.
- Do not exceed maximum set levels. Do not completely open or close the speed adjuster.

11.2 Installation

- Use when possible a lift truck or fork lift to move heavy objects. When manual lifting is needed please use shoes with metal fronts.
- The Cold Press needs to be handled with care during moving and unwrapping to prevent damage. When lifting slings are used for moving, make sure they are attached properly to the framework. When a fork lift is used, make sure the forks do not damage the Cold Press.
- Follow the instructions in the manual carefully, and do not make your own solutions for problems. In case of inclarities, do contact TOP bv.
- Use trustfull connections. Make sure all components of the Cold Press are grounded, and that the Cold Press is connected with the correct voltage.
- Potential dangers need to be taken along before the Cold Press is placed at a certain location.
- Leave enough space between the Cold Press and the walls of the surrounding.

11.3 Commissioning

- Make sure all components of the Cold Press are controlled by a competent person before the Cold Press is commissioned.

11.4 Operating

- All staff working with the Cold Press needs to be aware of the risks of the Cold Press. When a new staff member will use the Cold Press, instructions and guidance need to be given.

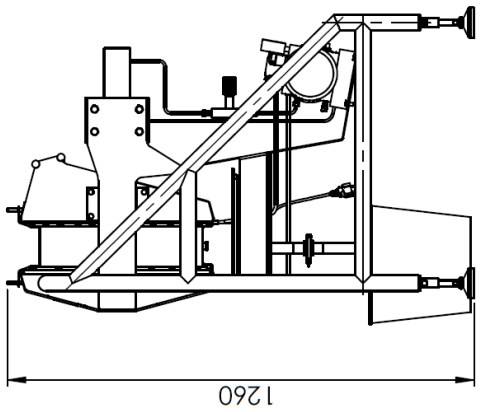
11.5 Maintenance

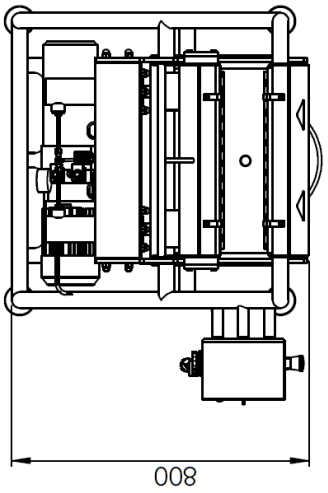
- The electrical part of the Cold Press may never be opened, for any reason. This can only be done by a qualified staff member of TOP bv or JFPT foodlife.
- Poorly maintained material can pose a potential danger. Make sure a competent person is responsible for maintenance and repair activities.
- Under no condition it is allowed to work with equipment that is not in good order. Make sure maintenance is done regularly.
- In case of maintenance to the Cold Press make sure all electricity is disconnected from Cold Press.

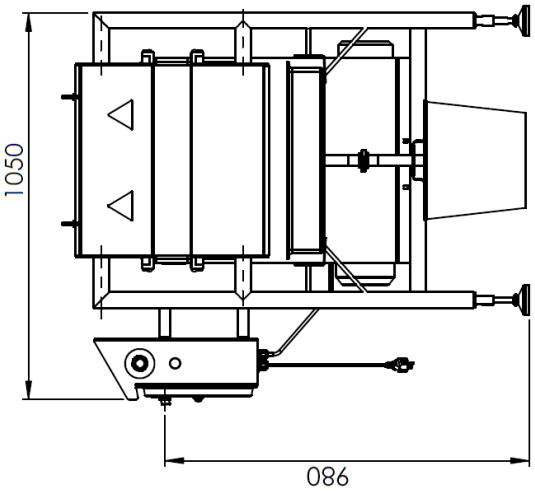
12. Specifications of the Cold Press

SPECIFICATIONS COLD PRESS CP01	
Capacity	Up to 100 l/h
Products	Fruit and vegetables
Input/output	
Input height	1250 mm
Input of the product	At the front of the Cold Press
Output height	600 mm
Output of the juice	In stainless steel bucket by a juice collection tray
Press	
Dimensions (WxLxH)	1050 x 850 x 1260 mm
Weight	200 kg
Material	Stainless steel 304 (1.4301)
Surface treatment	Viwateq surface treatment, most hygienic treatment of SST
Environment temperature	+5°C tot +35°C
Relative Humidity	Up to 90% RH
Electronic enclosure	Rittal HD enclosure
Door sealing	Rittal hygienic seal, blue
IP class	IP66
Adjustable feet	Hygienic design
Pressure of the pressing plates	Up to 180 bar
Used brands	
Electrical components	Siemens/Phoenix contact
Hydraulic components	Bosch rexroth
Connections	
Current connection	230V - 16A – 50Hz
Consumption	1 kW (3kW with grinder)
Options	
Feeder	Easy feeding of product
Grinder	Grinding of product

Dimensions

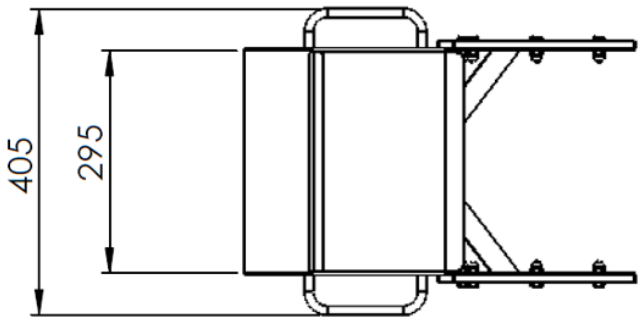


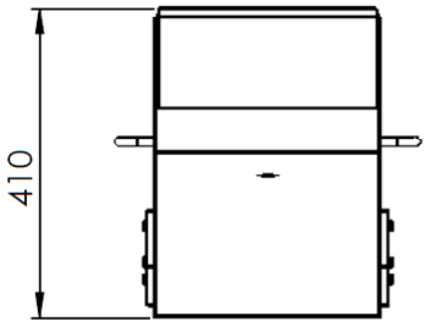


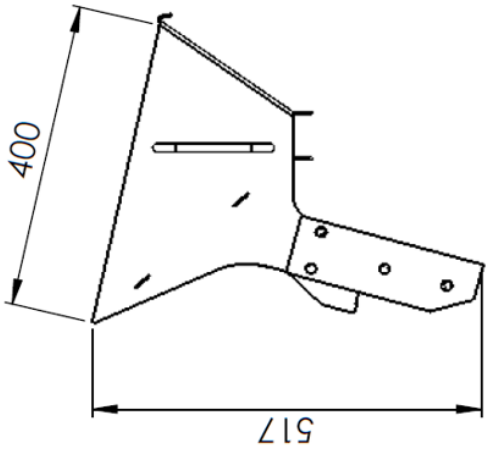


SPECIFICATIONS FEEDER	
Dimensions (WxLxH)	405 x 410 x 517 mm
Weight	8 kg
Material	Stainless steel 304 (1.4301)
Environment temperature	+5°C to +45°C
Relative Humidity	Up to 98% RH
Surface treatment	Viwateq surface treatment, most hygienic treatment of SST
Connections	
Fit on	Cold Press CP01

Dimensions	







13. EG-declaration

Declaration of Conformity

Suppliers Details

Name

TOP B.V.

Address

Agro Business Park 10
6708PW Wageningen
The Netherlands

Product Details

Product Name

The Cold Press

Model Name

CP01

Apicale standard Details

1. Directives:

Machinery directive	(2006/42/EC)
Low voltage directive	(2006/95/EC)

2. Standards:

NEN-EN-ISO 12100 : 2010
NEN-EN-IEC 60204-1 : 2006

Declaration

I hereby declare under our sole responsibility that the product mentioned above to which this declaration relates complies with the above mentioned standards and Directives

Name | Issued Date

W. de Heij / Directeur | Dec 12, 2014

Signature of representative

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