

User manual



Separator Models: SA, SM

Index

1 INTRODUCTION.....	3
2 INSTALLATION	4
2.1. STARTING	4
2.2. CONNECTING TO THE POWER SUPPLY	5
3 USE	6
3.1 DESCRIPTION AND OPERATION MODE	6
3.1.1 SEPARATOR STRUCTURE	6
3.2 STARTING THE MACHINE	7
3.2.1 SETTING THE WIDTH OF THE SPACE BETWEEN THE ROLLERS	7
3.2.2 SETTING PRODUCT POURING	9
3.2.3 SETTING THE SLOPE OF THE SEPARATOR.....	9
3.3 DESCRIPTION OF THE OPERATOR PANEL.....	10
3.4 WORKING WITH THE MACHINE	10
3.5 CLEANING AND MAINTENANCE.....	12
3.6 RESPONSIBILITIES OF THE PRODUCER	13
4 TROUBLESHOOTING	14
5 SAFETY REGULATIONS	14
6 RATING PLATE	16
7 DIAGRAM INDEX	16
8 TECHNICAL DRAWINGS.....	17

Any variation, modification or inspection indicated in this user manual can only be carried out by qualified experts.

Each device produced by Virginio Nastri is made in compliance with the current PN-EN 13850; PN-EN 12100; PN-EN 60204-1; PN-EN ISO 13857 standards and norms, and the 2006/42/EC, 2006/95/EC, 2004/108/EC directives.

1 INTRODUCTION

To guarantee that the apparatus works for a long time and without problems, we suggest reading this user manual carefully. The dedicated staff must fully understand how the device works, its possible options and what happens after an option is varied.

THE SEPARATOR WAS DESIGNED AND PRODUCED TO WORK EXCLUSIVELY WITH DRY PRODUCTS.

All use and maintenance interventions can be carried out easily by the operator. To obtain maximum efficiency, we recommend reading this user manual step by step.

The machine is covered by guarantee for 12 months by the producer under the rigorous condition of respecting the recommendations given in this user manual.

The machine cannot be installed in corrosive and/or explosive environments.

Virginio Nastri, being the producer, is not liable for any fault and/or damage caused if the user is negligent, does not respect the recommendations given in this manual, or resulting from mechanical damage to the apparatus.

Virginio Nastri, being the producer, is not liable for any fault/damage deriving from any independent modifications made by the user or third parties, and even from the use of unauthorised/non-original accessories.

Only replace the elements or accessories with their original parts.

ORIGINAL SPARE PARTS ARE AVAILABLE FROM:

VIRGINIO NASTRI S.r.l.
Via Seconda Strada, 161 - Z.I. - 36071 ARZIGNANO (VI) ITALY

Caution: This user manual describes and deals with machine particulars -
users must become familiar with them.

The design, name, and aspects described in the user manual belong to Virginio Nastri.

VARIATION IN THE PLACE WHERE THE MACHINE IS USED - CHANGE OF OWNERSHIP

In the event that the device is moved, Virginio Nastri must be informed of the new address in order to send any modification made to this user manual and guarantee technical assistance for the device.

Virginio Nastri **is not responsible for events that can occur as a result of incorrect machine use, namely use that does not comply with the user manual.**

2 INSTALLATION

2.1. STARTING

After receiving the machine, remove it from its packaging and check if the machine and equipment comply with the order. After removal, become familiar with this manual and continue according to these recommendations:

- 1- The machine can only be connected and started by qualified experts.
- 2- Make sure that the supplied power voltage complies with the voltage required by the machine.
- 3- Make sure that all the mobile parts that were dismantled for transport are mounted in the correct position.

Observe all norms regarding safety and health in the workplace. All the operations described in this user manual **MUST** be followed.

The separator can only work if positioned on a flat and stable surface.

2.2. CONNECTING TO THE POWER SUPPLY

Before connecting the machine to the power supply, make sure that it complies with machine requirements (the power parameters are indicated on the rating plate).

The separator must ONLY AND EXCLUSIVELY be connected TO THE GROUND (PLUG WITH GROUND "PIN") TO ENSURE DISCONNECTION BY THE RESIDUAL-CURRENT DEVICE.

THE ELECTRIC SYSTEM MUST ANSWER THE REQUIREMENTS OF DIRECTIVE A 64-8/1-7 (1992).

**REMEMBER! The machine can be connected
ONLY TO THE GROUND OF THE POWER SUPPLY.**

The machine must be kept in a place that does not allow unqualified people or those who do not work with it to approach it.

All machine adjustments and repairs can only be carried out by an authorised assistance service or qualified experts.

In the event that the machine is not used, it must be protected from being switched on casually, as well as from mechanical damage. The machine must be completely disconnected from the power source - remove the mains from the socket.

Before switching on, make sure that none of the mechanisms has locked and that no damage can be seen.

REMEMBER! BEFORE SWITCHING ON

Do not connect or switch on the machine if you are not sure that all the elements have been installed correctly and you do not know what consequences their incorrect installation can lead to.

CAUTION! Make sure that:

- there are no unqualified people near the machine
- there are no elements, excluding those that are essential for working, close to the machine
- after the machine has been switched on it should not work noisily or emit any unpleasant sounds. In the event that this occurs, switch off the machine immediately and call the technical assistance service.

3 USE

3.1 DESCRIPTION AND OPERATION MODE

The separator is used to separate elements made of plastic material. It cannot be used for other purposes.

3.1.1 Separator structure

The machine structure is shown in the diagram:

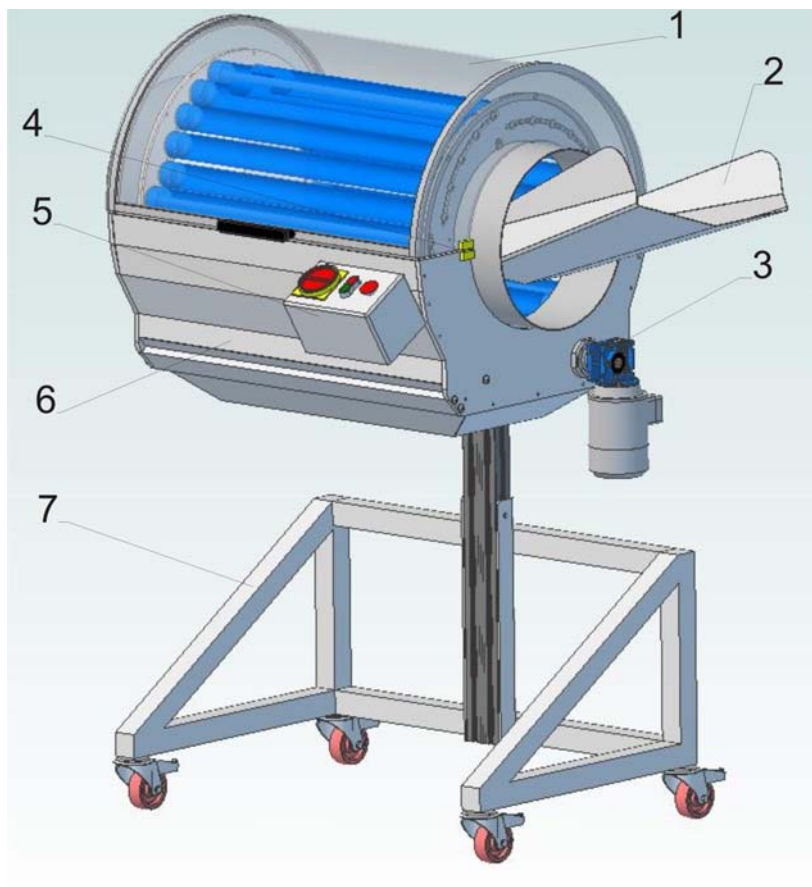


Diagram 1: Separator structure

Machine description:

1. Semi-closed casing protected by limit switches
2. Channel for pouring in the product (chute)
3. Propulsion by a 3x400V motor with MUI25 transmission
4. Limit switch (magnetic) for the semi-closed casing
5. Control panel
6. Aluminium container integrated with chute for the products that have passed through the spaces in the drum
7. Moving frame on wheels with brakes.

3.2 STARTING THE MACHINE

The separator was designed in a way that makes it intuitive and user-friendly.

All the operations are carried out through the control panel, which hangs on the structure of the separator.

The machine must be positioned near a power supply line and on a flat surface before starting to use it.

To switch on the machine, connect it to the GROUND OF THE MAINS, WITH PROTECTION GUARANTEED BY THE RESIDUAL CURRENT DEVICE. In order to work, the machine needs a **three-phase power supply of 3 x 400V**.

Set the following settings before starting the separator:

1. Set the width of the space between the rollers.
2. Set product pouring
3. Set the angle of the separator.

3.2.1 Setting the width of the space between the rollers

Before connecting the machine, the correct space width between the rollers must be set.

The width can be set by measuring the object that the machine has to separate.

In the next step, select a suitable sample that corresponds to the width of the set space and use the sample to determine the distance between the rollers. Remember that the space must be slightly larger than the product to be separated.

Example: if the product to be separated, and which must pass through the rollers, measures 8 mm, a sample of diameter 10 mm must be selected, and used to determine the space between the rollers.

3.2.1.a SM

It is obligatory to set the same space width at both ends of the roller. After being set, each roller must be locked in position using the fixing screws on both sides of the roller (shown in diagram 2a):

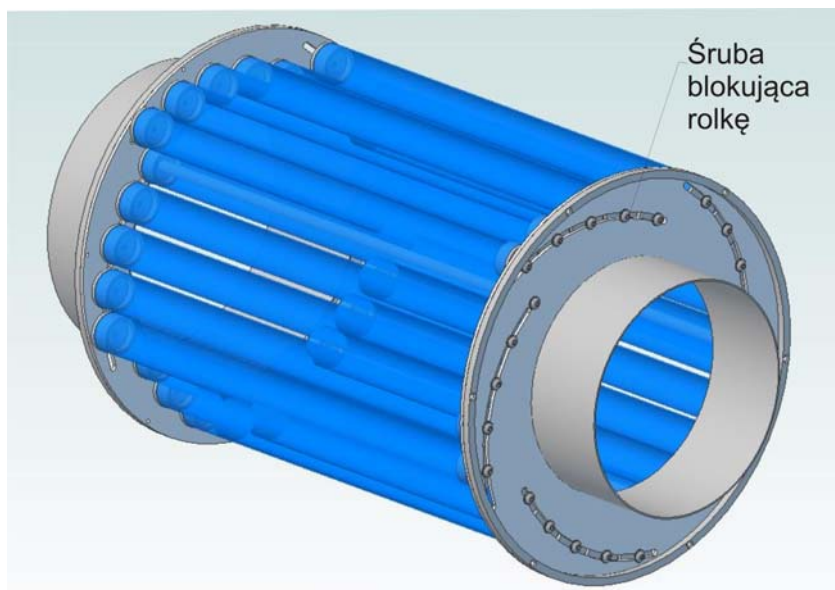


Diagram 2a: Setting the space width SM

3.2.1.b SA

To set the space size, loosen the grub screw (drawing 2b), then slide it along the slot or rotate one of the two rollers to adjust the space. After adjusting the space, fix the grub screw tightly to prevent it from moving during operation.

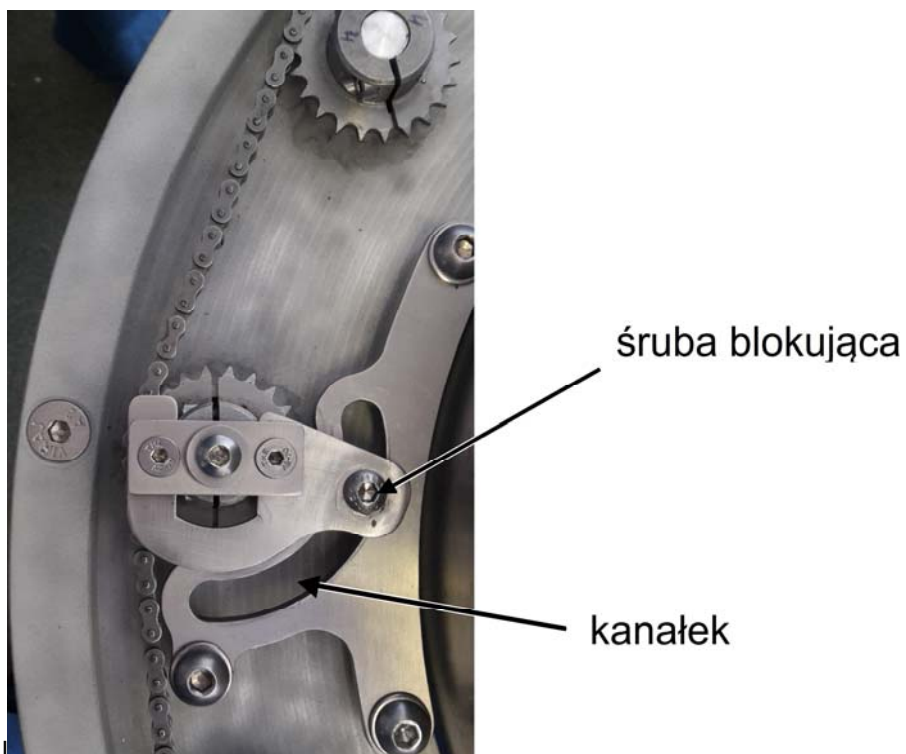


Diagram 3b: Setting the space width SP500A

3.2.2 Setting product pouring

After setting the space between the rollers correctly, product pouring must be set so that the plastic material falls onto the edge of the drum after being loaded. Only this type of setting guarantees correct product separation.

Remember that setting the chute in a way that makes the product fall further away, for example at half the length of the drum, can cause insufficient product separation.

3.2.3 Setting the slope of the separator

For the machine to work properly, the angle of the separator must be adjusted - the greater the angle, the faster the products will lower the drum. The inclination level must be determined empirically by observing the work of the machine.

The angle of inclination depends on the largeness, shape and dimensions of the products to be separated.

The diagram shows how to adjust the angle of inclination of the separator:

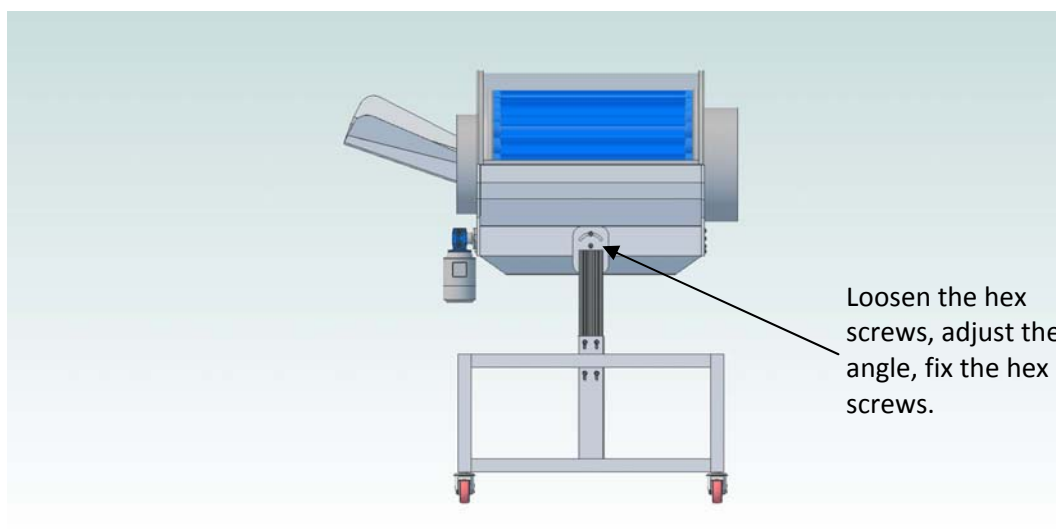
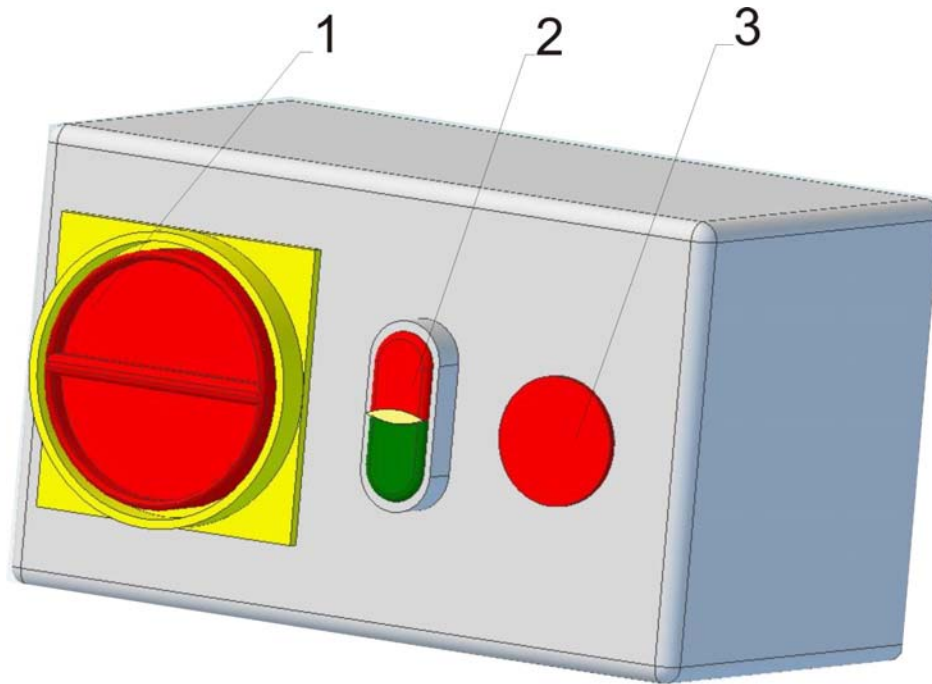


Diagram 4: Setting the angle of inclination of the separator

3.3 DESCRIPTION OF THE OPERATOR PANEL

The operator panel is used to control the machine.



1. MAIN SWITCH - Use this switch to start the machine. It has two possible positions: 1- on and 0- off.
2. START – Green push-button that starts the machine after the main switch (1) has been turned to 1.
STOP - Red push-button that stops the machine.
It does not switch the machine off. The machine switches off when the main switch (1) is positioned at 0.
WORK SIGNALLING LIGHT - signals that the START push-button has been pressed.
3. EMERGENCY STOP – Safety push-button that immediately stops the machine as it is working.

3.4 WORKING WITH THE MACHINE

The machine is equipped with a lid open sensor. If the lid is open, the machine does not start even if the main switch (1) is at 1 and the START push-button (2) has been pressed.

View of the machine with lid open:



Diagram 5: View of the machine with lid open

View of the machine with lid closed:



Diagram 6: View of the machine with lid closed

Carry out these operations to start the machine:

1. Connect the machine to the correct power supply.

Information on the compliant power supply can be found on the rating plate.

2. Close the machine lid, as shown in diagram 5.
3. Position the main switch (1) at 1 to activate the machine.
4. Press the green START push-button (2)

CAUTION:

For maximum operator and machine safety while working, the machine is equipped with the following protective devices:

1. Lifting the lid while working causes the machine to stop as if the operator had pressed the red STOP push-button.
2. The main switch is a contemporaneous guard against motor overcharging.
The main switch disconnects the power supply if the motor breaks down.
3. The machine switches off if the power supply is interrupted.
When the electricity has returned, press the green START push-button (2) to start the machine again.
The machine is protected against automatic starting.

3.5 CLEANING AND MAINTENANCE

Regular and full cleaning prevents breakdowns, lengthens the life of the machine and guarantees an optimal level of health.

The machine must be cleaned daily when it has stopped being used. Use a damp cloth. Do not clean the synthetic rollers with detergents. Doing this can damage the rollers and create an excessive accumulation of electrostatic discharges.

In the event that the rollers become damaged, replace them with new ones.

CAUTION: Do not touch the rollers with sharp and/or pointed objects. Doing this can damage the rollers, cause the machine to work wrongly and render the guarantee null and void.

Only use BIODEGRADABLE cleansers to clean.

The separator structure and its installed mechanisms make this machine safe for the operator, but while washing and cleaning it **DISCONNECT IT** from the power source.

As long as the machine is being used, carry out the following inspections:

DAILY:

- Inspect and clean all the connections, and change any worn pieces.

- The machine must be kept clean.
- Check the machine, listening to hear if it makes strange noises as it works, or if its elements are loose or are not receiving vibrations (transmission and motor). To do this, switch the machine off for a few seconds.
- When finished working, clean the rollers.

YEARLY:

- Once a year the machine must be inspected to make sure that all the mechanisms work correctly and that there is no danger for the user.
- In the event that repairs, maintenance or other operations have to be carried out, contact and use the technical assistance service authorised by Virginio Nastri.

3.6 RESPONSIBILITIES OF THE PRODUCER

The producer is not responsible if:

- the machine is not used according to its destination of use or is used by people who are not qualified and people without specific qualifications.
- The machine is installed in a place and manner that do not comply with the indications given in this user manual.
- The machine is connected to the power supply that has parameters different from those indicated by the producer (consult the rating plate on the machine).
- The machine has not been inspected and the recommended spare parts have not been used or, given the circumstances, a necessary inspection was not carried out.
- The user has independently made modifications to the machine, or third parties have done so without receiving permission from the machine producer.
- Non-original spare parts were used.
- The user did not respect the recommendations given in the user manual.
- After storms, electric installation overvoltage, earthquake and other unpredictable circumstances caused by natural calamities, if the machine was connected to the power line and no previous inspections were made.

All dedicated machine operators must be qualified on SAFETY AND HEALTH IN THE WORKPLACE and on machine use. These people must have the basic knowledge that is contained in this user manual.

4 TROUBLESHOOTING

All faults and the resulting repairs must be carried out as indicated below.

The list that follows can help identify the causes of damage and indicate a suitable solution. Other problems/faults, excluding those described, can occur. They are very rare, but they must not be excluded from this list.

PROBLEM	CAUSE	SOLUTION
The machine does not work, even though it is connected to the power supply.	No current in the power line.	Take current to the power line.
	The power cable is damaged.	Change the power cable.
The machine switches off/the installation short circuits.	The motor has overheated	Contact a qualified electrician.
	Installation short circuit.	Contact a qualified electrician.
The machine is not turning in the right direction. It should be turning clockwise.	The supply phases are wrongly connected.	Invert the phase order on the power plug.
The machine does not work even though the connection to the power line is correct and after the START push-button has been pressed.	The machine lid is open.	Close the machine lid.

5 SAFETY REGULATIONS

Virginio Nastri is not liable for any damage and/or injury caused if the recommendations given in this manual are not respected, and/or caused as a result of evident negligence by the operators and a lack of attention during installation, use, or while carrying out maintenance and repairs on the machine.

The machine user is responsible for respecting the regulations on SAFETY AND HEALTH IN THE WORKPLACE.

CAUTION! REMEMBER!

- ✓ Before starting to clean, carry out maintenance on or repair the machine, **always** disconnect the power.
- ✓ Do not use the machine if all the subgroups are not connected.
- ✓ Make sure that the voltage, power and frequency parameters indicated on the rating plate are compatible with the power line parameters.
- ✓ Never place hands and other parts of the body inside the machine.
- ✓ Make sure the electrical ground connection is regular.
- ✓ Read the user manual before starting to use the machine.
- ✓ The user manual must always be kept close to the device, within the reach of the user.
- ✓ Make sure the machine is not damaged before starting it.
- ✓ When the machine is not being used, switch it off using the main switch.
- ✓ While working on the machine do not wear loose clothing, jewellery, do not leave long hair loose and do not allow elements to hang freely from your clothes; all these things can enter the machine.
- ✓ Replace the power cable IMMEDIATELY if it is damaged.
- ✓ Do not remain on the power cable, and do not allow it to be crushed.
- ✓ Position the machine in a place where no-one can trip on the power cable.
- ✓ Do not place the machine near evacuation routes and in front of emergency exits.
- ✓ Allow free access to the machine on all sides.
- ✓ Do not close the machine inside cabinets or boxes.
- ✓ Do not use the machine in explosive areas.
- ✓ Do not wet the machine with water and do not place it in humid areas where it and its subgroups can become humid.
- ✓ Place the machine on a clean, flat and stable surface.
- ✓ Remember to clean the machine daily.
- ✓ Keep the machine and all its sub-groups clean.
- ✓ Guarantee suitable lighting in the work station close to the machine..
- ✓ Respect the inspection frequencies given in the user manual.
- ✓ Do not carry out repairs that should be done by qualified experts.
- ✓ When the machine is exhausted, it should be returned for new treatment and recycling.
- ✓ The majority of the elements are of stainless steel - they can be scrapped.

**THE PRODUCER IS NOT LIABLE FOR ANY DAMAGE AND/OR INJURIES
RESULTING FROM MODIFICATIONS MADE TO THE MACHINE WITHOUT
HAVING OBTAINED PRIOR WRITTEN AUTHORISATION FROM THE
PRODUCER.**

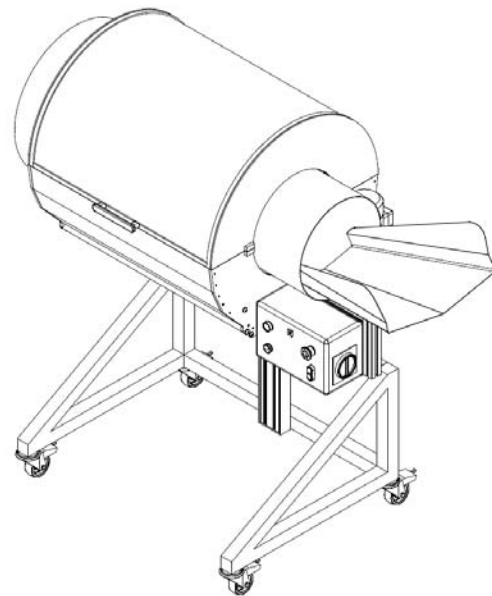
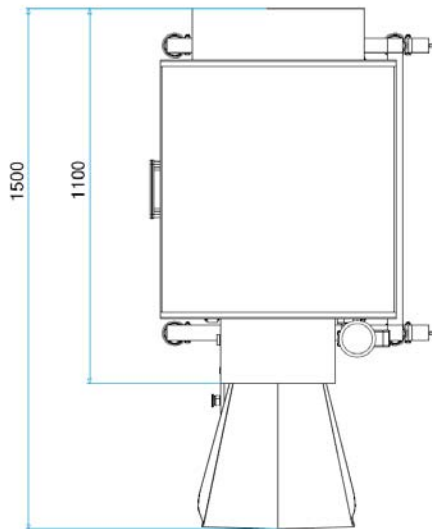
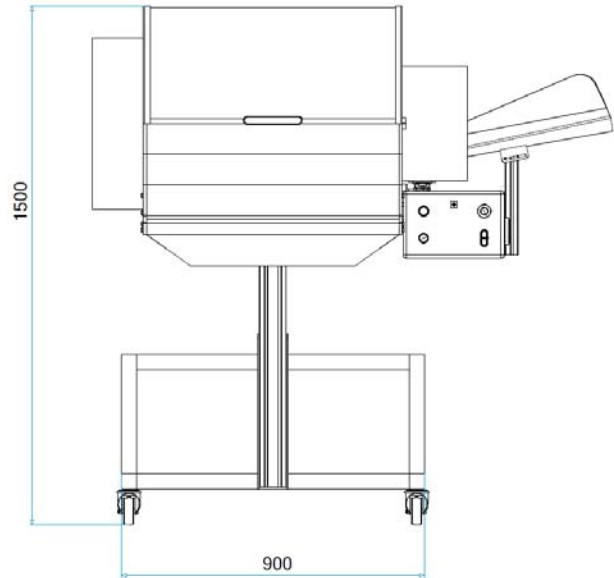
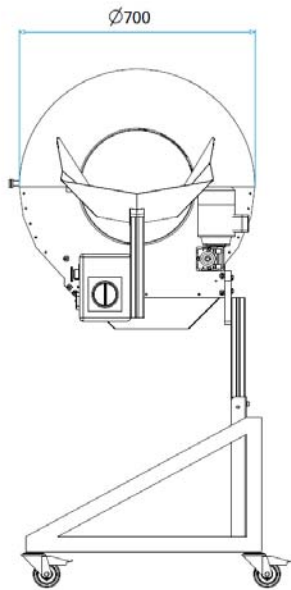
6 RATING PLATE

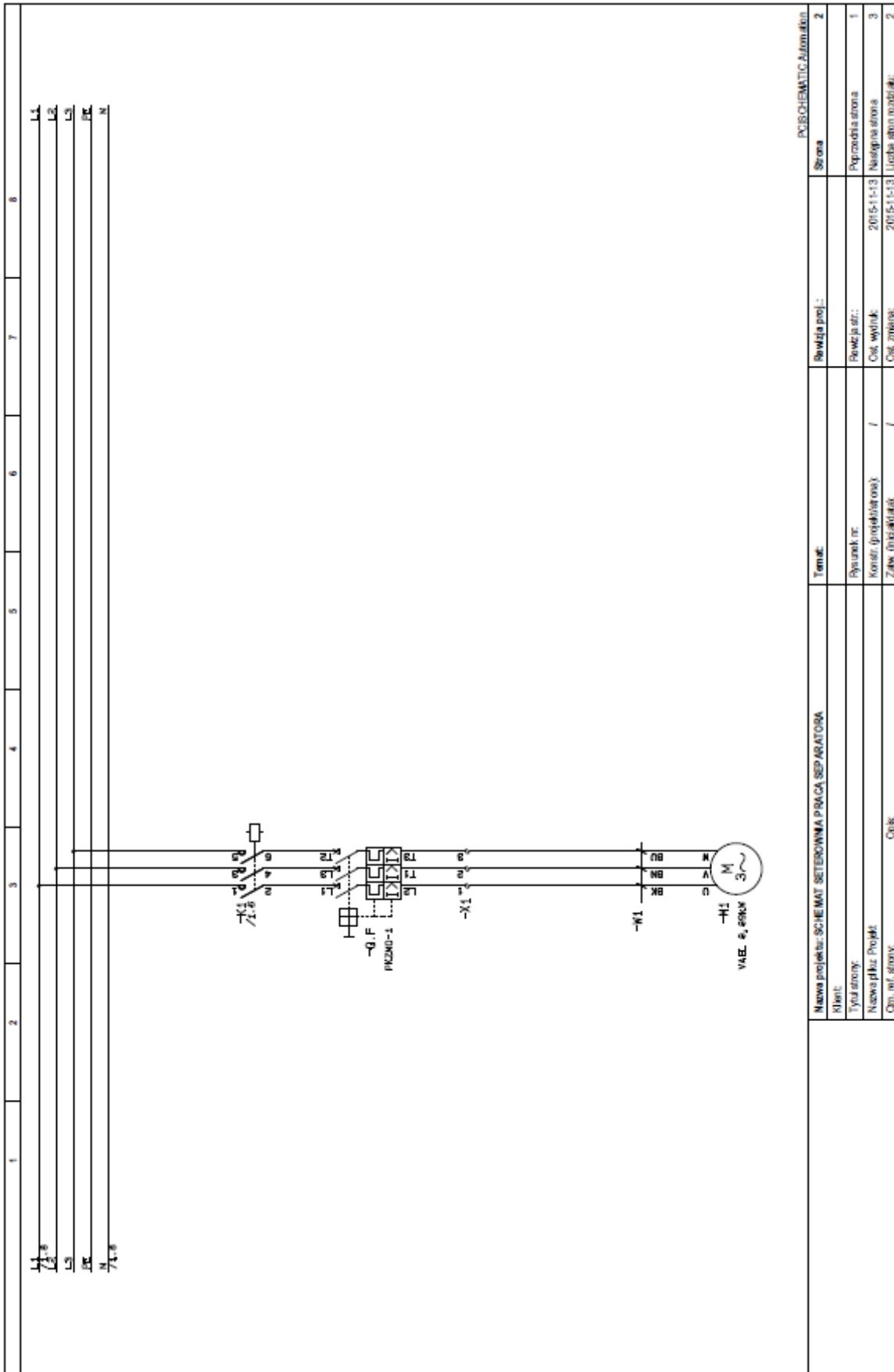
The rating plate is located at the back of the machine.

7 DIAGRAM INDEX

Diagram 1: Separator structure.....	6
Diagram 2a: Setting the space width SP500M	8
Diagram 3b: Setting the space width SP500A	8
Diagram 4: Setting the angle of inclination of the separator.....	9
Diagram 5: View of the machine with lid open	11
Diagram 6: View of the machine with lid closed	11

8 TECHNICAL DRAWINGS





NOME PROIEZIONE: SCHEMATI SERTOROWNA PIRACA SEPARATORA		PISCEMATI: Automation	
Nazwa projekcji:	SCHEMATY SERTOROWNA PIRACA SEPARATORA	Strona:	2
Klient:		Projektant:	
Typ instalacji:		Opis instalacji:	
Nazwa placu Projekt:		2015-11-13	1
Opis instalacji:		2015-11-13	2