NESCHEN
LAMINATORS

NESCHEN ECOLAM 1650 LAMINATOR FOR LARGE FORMATS

OPERATING INSTRUCTIONS Rev. 06-2023

REV. 06-2023

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1. INTRODUCTION

Dear customers,

We are pleased that you have chosen a laminator from Neschen and hope that you will increase your productivity with this machine. This electrically driven device is equipped with rotating rollers and moving components, so it is essential to comply with occupational safety principles.

Before commissioning the Neschen laminator, the user (company) must ensure that all operators of the unit, maintenance personnel and their supervisors have familiarized themselves with these operating instructions. Furthermore, it must be ensured that the generally binding regulations for occupational safety and accident prevention of the user's respective country are known. The operating instructions must be available to the employees using the laminator at all times. Improper operation may result in damage that is not covered by the product warranty.

These operating instructions contain the technical specifications of the laminator, as well as information on commissioning and operation. The important information on work safety and maintenance is to be considered as part of the laminator. Employees in production should be familiarized with and understand the information in these operating instructions. In particular, information concerning safety measures must be observed. To ensure a satisfactory level of knowledge, refresher training should be carried out regularly after familiarization.

If you do not understand any of the information in these operating instructions, please contact the responsible salesperson. We recommend that you make a copy of these operating instructions and keep the original in a safe place in case the copy is lost or damaged. Follow the safety instructions while working on the machine to avoid your own injuries or injuries to bystanders or damage to other equipment.

We assure you that we are attentive and careful in the production of the Neschen laminator, and we are convinced that, provided that all the guidelines have been followed, you will have a lot of pleasure with your machine.

2. APPLICATION

- The Neschen laminator for large formats is suitable for mounting lamination and carrier films on large format prints, plates, panels and similar products up to a width of 1650 mm
- Although the laminator is designed for large formats, it can also be used for smaller formats starting from A5 size
- The design of the laminator allows unlimited length of laminated prints
- When processing larger formats (larger than A0 or corresponding to the maximum working width of the machine), the assistance of another person is required
- The flexible use and easy handling of the Neschen Laminator allows working with sheets and rolls. The user selects the appropriate laminating technique, for example sheet lamination or lamination from roll or roll to roll
- Any modifications to the laminator without the manufacturer's approval exempts the seller from liability for any damage or injury!
- If features of the laminator permit use for other purposes not listed herein, the user shall consult such applications with the seller
- Follow the safety instructions while working on the machine to avoid injuries to yourself or others
- Notes that require special consideration are marked with the following safety symbol in these operating instructions:

3. DESCRIPTION OF THE MAIN PARTS OF THE NESCHEN LAMINATOR

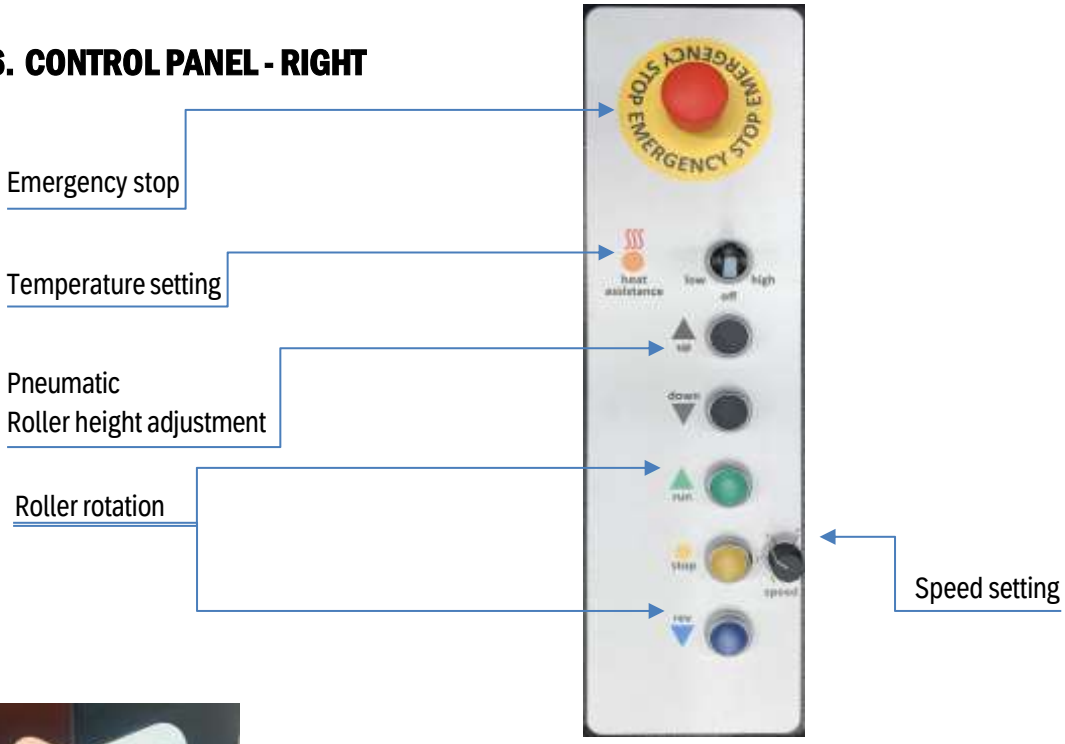
4. CONTROL PANEL – LEFT

5. MAIN SWITCH – POSITIONS

Light OFF - the laminator is switched off

Light ON - the laminator is switched on

6. CONTROL PANEL - RIGHT



Pressure setting

The upper roller can move up and down, with distances from 0 to 40 mm.

Note: the height adjustment only works if the rotation direction, forward or backward, has not been selected (the direction button is not lit). The height adjustment is controlled by the following keys:

▼ down - the upper roller moves downwards. The button must be pressed and held down. When the button is released, the roller moves up immediately. If the upper roller touches the material or the lower roller, it stops automatically.

▲ up - the upper roller moves upwards. Once the roller reaches the highest level of 40 mm, it stops automatically and can then only be moved down. The button have to held down to move the roller up.

Roll rotation - the lower roll is driven by an electric motor. This is continuously adjustable in the range 0 to 4 m/min.

Rotary knob for rotation - potentiometer for speed control. The desired speed is set in meters per minute.

▲ **run** - roller rotation in forward direction - the rotation direction is indicated by the corresponding key

light. The Neschen laminators have a modern, intelligent start function, which allows the laminator to start slowly and evenly until the speed set by the rotary knob is reached. The speed is not based on the load.
Note: If the roller speed is set to 0, the laminator will not start, but will wait until the operator sets a speed other than 0.

If the machine has a foot switch and this is activated, the machine moves in the direction of travel at a speed of 1 m/min with a signal tone. Light barriers are automatically disengaged when the foot switch is in use.

▼ **rev** - setting the rollers in backward motion (same functions as in forward motion).

⬣ **stop** - stops the rotation and the running direction. If the light barrier is interrupted while the machine is running, a signal sounds and the machine stops.
Note: If the operator wants to change the direction of rotation while the machine is running, he must first press the stop button and can then select the desired direction of rotation.

The machine is equipped with **heat support**. You can choose from the following settings.

Off - knob in middle position
40 °C - knob to the left
50 °C - knob to the right

As a standard pressure setting for single-sided coatings (print and film), 1.5 bar (+/- 0.5 bar) should be used.

7. SILICONE PAPER AND LAMINATED PRINTS

Shaft rotation - the shafts for realease liner and laminated prints (end products) are driven by electric motors. The machine synchronizes their revolutions with the rotation speed of the main rollers. The resistance on all shafts can be changed by turning the brake. The tighter the brake, the greater the resistance of the shafts and vice versa.

8. FUSES AND FOOTSWITCH CONNECTION

The Neschen laminators have three fuses. Their parameters and replacement are described in section 16. MAINTENANCE AND REPAIR.

9. ROLLER HOLDER

Laminating and printing materials are rolled on a paper tube with an inner diameter of 76.2 mm. The shafts of the Neschen laminator are designed for these tubes.

If the material is unrolled too loosely or too tightly, the braking force can be regulated by tightening or loosening the brake on the right side of the machine. Tightening the brake increases the braking force and loosening it decreases it.

The resistance of the shaft can be adjusted by regulating the coupling on the right side if silicone paper is not wound or is wound too tightly or too loosely.

10.APPLYING A ROLL OF MATERIAL TO THE SHAFT

1. Remove the shaft from the laminator. Shafts are attached to the right side of the laminator. Turn the carrier until the lock is released. The positions for material located under the feed table are secured with a rotary lock. The lock must be released before removing the shaft. First remove the end of the shaft that is on the side of the lock.
2. Load the roll of material onto the shaft. Heavy rolls should be loaded by two people.
3. Reattach the shaft to the machine by following the procedure from point 1 in reverse order.

11. OCCUPATIONAL SAFETY

SAFETY DEVICES ON THE NESCHEN LAMINATOR:

- Emergency STOP switch
- Light barriers

WHEN USING THE NESCHEN LAMINATOR, IT IS ESSENTIAL TO OBSERVE THE FOLLOWING:

- Do not use the laminator if there is a design or mechanical fault
- Do not use the laminator under the influence of alcohol, drugs or medication, as your responsiveness and attention may be impaired
- Do not switch on the laminator if unauthorized persons are within the danger zone
- Remove the waste from the hazardous area while the laminator is in operation
- Do not touch moving parts

- Always remain at the control panel while the laminator is in operation
- Do not remove safety devices from the laminator and do not interfere with their operation
- Do not carry out any maintenance or cleaning work while the machine is running
- Always observe the safety instructions - see under 12. SAFETY INSTRUCTIONS

12. SAFETY INSTRUCTIONS

Rotating or moving parts of the laminator and electrical parts can cause serious and even fatal injuries. Assembly, wiring and commissioning as well as maintenance and repairs should only be carried out by qualified and appropriately trained personnel.

- The laminator may only be operated by mentally and physically healthy persons over the age of 18 who have been intensively trained (and tested) and are authorized to operate the laminator
- Demanding repairs and work on the electrical system may only be carried out by qualified personnel or the manufacturer
- Operators and maintenance personnel must be familiar with the contents of the operating instructions
- Adjustments, maintenance, and cleaning of the laminator must be carried out when the machine is not in operation. The main switch is turned off and the machine is disconnected from the power supply.
- Start the laminator only when the covers are in place
- Never touch moving parts on the laminator
- Attach safety instructions - pictograms - to the laminator in a clearly legible manner.
- Work only with good lighting
- Before starting work, check the safety devices on the laminator and ensure that they are functioning correctly
- Do not work on the laminator when tired
- Damaged parts on the laminator may only be replaced by authorized personnel. Only use original parts
- Turn off the laminator in case of strong vibration, noise or other unusual signs and inform the supervisor
- Do not wear loose clothing (e.g. tie) or long hair to prevent them from getting caught between the rollers of the laminator
- Always stand firmly on the floor when working on the laminator

- Special care after switching on the laminator and starting the rollers
- Switch off the device immediately and inform the supervisor if damage to the insulation, a burning smell or a loud noise occurs during work on the laminator, the machine jerks after switching on, individual parts on the electrics are overheated, sparks occur or current is felt to be passing through
- If such hazards occur or if danger to the operator arises, switch off the laminator by actuating the emergency STOP switch.
- If someone recognizes that the operator of the laminator is in danger, the person can press the emergency STOP switch
- After finishing work on the laminator, lift the upper roller, switch off the laminator and disconnect the power supply

13. SAFETY INSTRUCTIONS ON THE NESCHEN LAMINATOR

The pictograms must be clearly legible on the laminator at all times. Damaged pictograms must be replaced. Pictograms and their meaning. Safety pictograms on the laminator indicate risks, as do the warnings in these operating instructions.

The operator must read the safety instructions.

Disconnect the laminator from the power supply before carrying out repairs, adjustments, cleaning and maintenance.

Close all covers correctly before commissioning .

Do not touch any moving parts on the laminator.

Danger of burns from hot components.

14. FIRE PROTECTION

Since the laminator is not equipped with fire extinguishers at the factory, the user must ensure that fire extinguishers are available in the appropriate building.

- Never extinguish a burning or energized laminator with a water or foam extinguisher. There is a risk of electric shock!
- Never extinguish burning electrical parts with a water extinguisher!
- Recommended fire extinguishers: powder extinguisher, snow extinguisher and halon extinguisher.
- In case of fire, follow the instructions for the corresponding workplace

15. DISPOSAL OF THE MACHINE OR INDIVIDUAL PARTS

- For the disposal of the laminator at the end of its service life, follow the applicable environmental protection guidelines and use available recycling options
- Separate plastic parts and send them for recycling
- Separate and sort metal parts and dispose of them as scrap metal

16. MAINTENANCE AND REPAIR

MAINTENANCE

- Neschen laminators are stable and durable and require little maintenance. For trouble-free use and a long service life, the following should be observed:
- Use isopropyl alcohol to clean the roller surfaces. Clean other surfaces with a diluted cleaning solution and a damp cloth. Never use solvents or abrasives
- Before any cleaning or maintenance, disconnect the laminator from the mains supply
- Protect the roller surfaces from damage by sharp objects (cutting knives, scissors, sharp edges, penetration of solids, tools, etc.) and dust. With flawless roller surfaces, the laminator will run for many years without problems
- Do not press the rollers against each other unnecessarily to avoid pressure marks

REPAIRS

Disconnect the laminator from the mains before any repair.

Blown fuse - replace fuse:

The laminator has fuses for three circuits: 2 × 9V and 1 × 230V. The fuses are located on the main board of the laminator on the right side and on the heating plate on the left side. Always replace blown fuses.

Contact the seller if a more serious problem occurs!

Spare parts supplied:

- Fuse T2L250V, one unit
- Fuse T500mAL250V, 2 units

17. WARRANTY CONDITIONS

- The manufacturer grants a warranty period of 12 months from the date of sale for Neschen products
- The completed Installation Acceptance document must be sent to Neschen
- Contact your seller for detailed information on warranty conditions
- Damage to the product due to improper handling or failure to comply with the operating instructions is not considered a product defect
- Furthermore, mechanical damage, falling over, impact, transport damage, etc., caused by unauthorized interference with the electrical or mechanical parts or foreign objects inside the product are not considered product defects
- Normal wear and tear due to the use of the machine is also not considered a product defect
- Please address product liability claims directly to your seller