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# PREFACE

This user’s manual is for Mink scraping machine 1-beam

**CONTENT OF THIS DOCUMENT**

This user’s manual contains important recommendations and information about the scraping machines’ different state of use: transportation, installation, taking into use, usage, service and maintenance and recycling.

**THIS USER’S MANUAL IS A PART OF THE PRODUCT**

Read this user’s manual before you start using the machine, the instructions in this document must be followed to ensure a trouble-free and safe operation of the machine and to be able to make warranty claims. Keep this document close to the scraping machine.

Always give the user’s manual to each subsequent owner and user.

The manufacturer shall not accept liability for any damages or malfunctioning caused by non-adherence to these documents.
DECLARATION OF CONFORMITY

EU DECLARATION OF CONFORMITY

Beskrivelse: Jasopels rotating fleshing machine 1-beam

Manufacturer: Oy Erco-Mek Ab
Tel.: +358 6 344 77 17
Address: Långmossvägen 260, 65450 SOLF, Finland

WE HEREBY DECLARE AT OUR FULL RESPONSIBILITY THAT THE FOLLOWING PRODUCT:
Name: Minkskrapmaskin 1-stock
REFERRED TO IN THIS DECLARATION, IS COMPLIANT WITH THE FOLLOWING STANDARDS OR
OTHER REQUIREMENTS PROVIDED IN NORMATIVE DOCUMENTS:
• 2006/42/EC Machine directive, basic information on safety provisions
• 2006/95/EC Low voltage directive (LVD)

THE FOLLOWING STANDARDS OF CONFORMITY HAVE BEEN APPLIED:
• EN ISO 12100:2010 Machine safety, general design principles
• EN 60204-1 Machine safety, electric devices of machinery

Signature:  
Solf, 3rd March 2016

Dick Sdderbacka, Managing Director

Updated: November 24, 2016
SAFETY INSTRUCTIONS

Basic safety instructions
The fleshing machine is designed according to the state of the art and is reliable in operation once distributed. However risk may still arise during utilization, risk of personal injury to operator and bystanders and damage on the machine or other property.

Don’t connect electrical power or compressed air to the machine before you have read the user’s guide.

Only a qualified electrician who adheres to local regulations is allowed to make electrical connections to the machine, or open the electrical box or control panel.
Always keep this document close to the scraping machine.
Local safety regulations must always be followed.

INTENDED USE
The scraping machine is intended for indoor use in dry conditions and indoor temperature. Flammable material should not be placed close to electrical motors or the electrical boxes. Use the machine only for scraping and fine polishing both broken and fine mink skins.

UNINTENDED USE
Use of the scraping machine for anything other than its intended purpose is not permitted. The machine is not intended for use under impact or for shock loads.

PERSONNEL QUALIFICATION
Authorize only qualified personnel with the activities described in this user’s guide.
Operators have to be instructed in operating and cleaning the machine and follow the safety guidelines.
The operating company must ensure that the personnel follows locally applicable regulations and rules during their work with regard to safety and dangers.

DANGERS
Only a professional person that knows the instructions for use, service and safety can use the machine. The person responsible for the machine should know the construction and function of it and how to ensure a safe use of the machine. For startup of a new machine we recommend that you use a startup expert.
Maintenance or service must only be executed by authorized and qualified person in accordance with the applicable regulations. Disconnect electrical power and compressed air from the machine before service and maintenance.
Before starting the machine the operator must ensure that no bystanders are allowed near the machine.
The machine should be unplugged from electricity and compressed air when not in use for a longer period of time.
Never use the machine if parts are damaged or missing, or if it has some other defects.
Operators must use appropriate equipment. Long hair should be covered by a hairnet. Do not use jewellery (for example rings, bracelets or necklaces). Do not use loose-fitting clothes. Wear safety footwear. Wear safety goggles and ear protection.
The floor must always be kept clean to avoid accidents due to slippery floor.
The machine has moving and rotating parts. Do not touch the moving or rotating parts, and make sure no bystanders are close enough to touch the machine when power is on.
Structural safety devices cannot be switched off or in some other way disconnected.
Operators must be over 18 years old, and legally competent.
Do not leave the machine unattended when power is on.
Do not use the machine when under the influence of alcohol or other intoxicants.
EMERGENCY STOP
The emergency stop is located on top of the control panel. The emergency stop shuts down electrical power and compressed air from the electrical box, note that incoming electrical power is still in the electrical box.
If emergency stop is activated you must first locate and take care of the hazard that has occurred and repair the machine if needed. Twist the emergency stop button so it goes to standby position and reset the machine on the reset button. Emergency stop can only be used in case of risk for persons

TECHNICAL DATA

SCRAPING MACHINE TECHNICAL DATA:
- Length: 2500 mm
- Width: 750 mm
- Height: 1200 mm
- Weight: 240 kg
- Electrical connection: 1x240 VAC 50Hz
- Fuse connection: 1x16A
- Electrical motor power: see electrical wiring diagram
- Safety class: IP54
- Compressed air: 6 Bar 20l/min

Material: frame S355, beam fiberglass
Color: RAL 6034 / 5015

TYPE PLATE
The type plate is located under the lower frame beam.
TRANSPORT AND LIFTING

Transport-related tasks should only be carried out by qualified and authorized persons.
Lift the scraping machine with forklift, place the forklift’s forks through the beams on the machine as the picture shows. Ensure that the machine does not fall off the forks with an approved strap.
Cover the machine from rain and water during transportation and storage.

INSTALLATION

Place the machine on a flat concrete floor, when placing the machine you need to consider all accessories that you need to fit around the machine. Around the machine you need about 0.8-1.5m free space for working, cleaning and service.
Only a qualified electrician who adheres to local regulations is allowed open the electrical box.
Compressed air connection is located on the right hand side of the electrical box on the footing.

Bolt the machine to the floor with 3 pcs M10x100mm anchor bolt. Connect the machine to 1-phase wall-socket (16A) and compressed air.
Connect hoses from the "properties" fat suction system to the machine.
GENERALLY
Only a professional person that knows the instructions for use, service and safety can use the machine. Operators have to be instructed in operating and cleaning the machine. Never use the machine if parts are damaged or missing, or if it has some other defects.

MACHINE MODIFICATIONS
Users are not permitted to carry out alterations and modifications on the machine or bypass any safety equipment. In case the software or construction of machine is changed without the manufacturer’s permit, said manufacturer is not responsible for damage of the machine and/or surrounding equipment or injuries.

SETTINGS
Adjust the impellers suction head. By opening the screws (6) 4pcs the suction head can be turn.

DISTANCE BETWEEN INDUCTIVE SENSOR AND THE BEAM
Adjustment for the inductive sensor (7) is done by the screws (8) on the left side of the suction head. Suitable distance between inductive sensor and the beam is about 40mm.
**Adjusting the wagon’s slip coupling**
Take away the cover plate on the opposite side of the wagon. Adjust the slip coupling by opening the locking nut (9) and adjust on screw (10) how deep it goes in the roller chain.

**WAGON ROLLER CHAIN LOCKING CYLINDER**
The cylinder (11) is pushing on the slip coupling arm (12) for unlocking the wagon from the roller chain so the wagon can be moved by hand. The arm can also be pushed down directly by hand.

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The position of the limit switch can be adjusted.
Pressure regulator and pressure gauge for adjusting the scraping pressure.
Adjust scraping cylinder speed on the one-way flow control valves.
DIRECTION OF USE

SCRAPING, GENERALLY
Working principle for scraping on the scraping machine.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>The user opens the beam locking mechanism and puts the skin on the beam</td>
</tr>
<tr>
<td>Phase 2</td>
<td>The user selects automatic or manual scraping functions</td>
</tr>
<tr>
<td>Phase 3</td>
<td>The user fine polish the skin, from excess remains that is left on the skin, if needed</td>
</tr>
<tr>
<td>Phase 4</td>
<td>The user puts sawdust on the skin by hand</td>
</tr>
<tr>
<td>Phase 5</td>
<td>The user removes the skin from the beam</td>
</tr>
<tr>
<td>Phase 6</td>
<td>The user cleans the beam with sawdust and put a new skin on the beam</td>
</tr>
</tbody>
</table>

When starting the machine after it is connect to 1-phase wall-socket and compressed air the user checks that the emergency stop (M1) is in upper position. Before starting the machine the operator must ensure that no bystanders are allowed near the machine.

SKIN ON THE BEAM
Open the beam locking mechanism by lifting the lock lever and tilt the locking mechanism sideways. Put the skin on the beam so the tail is towards the skin clamp. Nose is fastened on axle peg that is in the center of the beam. The mink head is squeezed between the beam locking mechanism and the beam. Tighten the skin on the beam and fasten the clamp in the tail.
AUTOMATIC OR MANUAL SCRAPING FUNCTIONS
Selects automatic or manual scraping functions on the control pane with button (M6).

Manual scraping function:
When manual scraping function is selected and start button (J3 or M7) is activated the scraping impeller starts rotating. The wagons locking to the roller chain is detached and the wagon can be mowed by hand. The beam is rotated by hand. The user can change the direction for the cutting impeller by holding down button (J1). The machine stops either when the inductive sensor (7) detects clamp (2) or when the operator presses stop button (M4).

Automatic scraping function:
When automatic scraping function is selected and start button (J3 or M7) is activated the scraping impeller starts rotating, the wagon starts moving, the beam starts rotating and scraping pressure turns on. If the user grabs the joystick and holds down button (J2) the machine changes to manual scraping function, if the user also presses and holds down button (J1) the direction for the cutting impeller changes. Immediately when the user releases the joystick the machine goes back to automatic and continues scraping the skin. The machine stops either when the inductive sensor (7) detects clamp (2) or when the user presses stop button (M4). When the machine stops the wagon stays at the position it was in (easier to change skin), bring the wagon to home position by hand.

SCRAPING
1. If the reset button (M3) is lighted press once on it
2. Select with button (M6) automatic or manual, the light in the beam is simultaneously lit, the machine is now waiting for start command.
3. Start scraping by pressing either start button (M7) on the control panel or (J3) on the joystick.
4. Adjust beam rotation speed on (M2)
5. Adjust wagon speed on (M5)
6. The machine stops either when the inductive sensor (7) detects clamp (2) or when the user presses stop button (M4).
7. When the machine stops the wagon stays at the position it was in (easier to change skin), bring the wagon to home position by hand.
8. When ending the workday shut down the machine on button (M6) set it on 0

REMOVE THE SKIN FROM THE BEAM
Open the beam locking mechanism by lifting the lock lever and tilt the locking mechanism sideways. Open the tail clamp and bring it back gently to the beams widest part. Remove the skin from the beam and clean the beam with sawdust.

FINISHING SCRAPING
It is important to clean the machine every day.
- Remove fat and rests of sawdust from the machine.
- Clean the beam with dry sawdust.
- Flush the fat suction hose with hot water.

HINT
Remove big lumps of fat, that can easily be done by hand.
Adjust scraping pressure according to the result (pressure gauge readings are not so important)
Aim for high wagon speed, high speed needs higher scraping pressure. Low wagon speed needs lower scraping pressure so it does not burn the skin.
New impeller needs less scraping pressure.
TROUBLESHOOTING

Troubleshooting must only be executed by authorized and qualified person in accordance with the applicable regulations. Only a qualified electrician who adheres to local regulations is allowed to open the electrical box or control panel.

THE MACHINE DOES NOT START
• Check that the machine is turned on, button (M6).
• Check that the emergency stop isn’t activated.
• Check that there is no problem with the power supply.
• Check the fuses.
• Check that there is no problem with the compressed air supply.

THE SCRAPING IMPELLER MACHINE DOES NOT START
• Check that the scraping impeller turns by hand power with help of a screwdriver.
• Check the frequency controls, fuses and buttons.

THE BEAM DOES NOT ROTATE
• Check that the automatic scraping function is selected, button (M6).
• Check that there is no problem with the power supply.
• Check the frequency control, fuses.
• Check the electrical motor and roller chain.
• The beam’s rotation force is weak, adjust the frequency control.

THE WAGON DOES NOT MOVE
• Check that the automatic scraping function is selected, button (M6).
• Check that there is no problem with the power supply.
• Check the frequency control, fuses.
• Check the slip coupling
• Check the electrical motor, gearbox and roller chain.

MAINTENANCE AND SERVICE

GENERALLY
Disconnect electrical power and compressed air from the machine before service and maintenance. Use personal safety equipment (see chapter on dangers) whenever working with the machine!

To ensure a trouble free and long life span the machine should get regularly maintenance and service. Check also wear of parts that has not been taken up in the scheduled service.

Maintenance or service must only be executed by authorized and qualified person in accordance with the applicable regulations. Only a qualified electrician who adheres to local regulations is allowed to open the electrical box or control panel. Safety equipment should be tested at least once a month.
CLEANING, CHECKING AND LUBRICATING
Every operating day:
Remove sawdust and fat from inside and under the machine.
Clean the area around the machine from sawdust and fat.
Check the scraping impeller and its holder.
Once a month:
Lubricate all the bearings.
Check pipes, hoses, electrical cables and the machine’s functionality overall.
Damaged parts must immediately be changed.

SAFETY EQUIPMENT TESTING
The emergency stop shuts down electrical power and compressed air from the electrical box, note that incoming electrical power is still in the electrical box.
If emergency stop is activated you must first locate and take care of the hazard that has occurred and repair the machine if needed. Twist the emergency stop button so it goes to standby position and reset the machine on the reset button. Emergency stop should only be used in case of risk for persons. Check if the emergency stop works by pressing the emergency button while the machine is running, the machine should stop immediately.

CHANGING SCRAPING IMPELLERS
Disconnect electrical power and compressed air to the machine.
Change the scraping impellers by first removing the suction head, remove bolts (6) 4pcs, make a marking with a pen around the suction head, then it is easier to get it back in the same position. Lift the suction head away, remove the bolt and the washer from the center of the impeller head, slide out the impellers (8pcs). Impeller can be turned once, after that you need to put in new ones.

CORD SYSTEM
Disconnect electrical power and compressed air to the machine.
Change the clamp by pulling out the cord, untie the knot inside the clamp, change clamp and knot the new one in place. If you need to change the pulling spring or the cord you need to remove the whole system from the beam. First take the covers away from the machine, untie the clamp, remove the fastening screws for the cord system in the beams gable and pull out the cord system. Change the broken part and reassemble the machine.
**BEAMS LIGHT TUBE**
Disconnect electrical power and compressed air to the machine. Beams light tube is changed in the following way. First take the covers away from the machine, open the set screw and pull out the pipe in which the light tube is fastened. Change the light tube and reassemble the machine.

**BEAM ROTATION ROLLER CHAIN**
Disconnect electrical power and compressed air to the machine. Beams rotation roller chain is tensed in the following way. First take away the cover from the wagon side, open the fastening screws for the electrical motor and pull the motor so that the roller chain gets more tense. Reassemble the machine.

**WAGONS ROLLER CHAIN**
Wagons roller chain is tensed in the following way. Tighten the screws that come out through the frame beam in the front of the machine.

**ADJUSTING PARALLELITY BETWEEN THE BEAM AND THE LINEAR UNIT**
Disconnect electrical power and compressed air to the machine. Adjustment is done in the following way: when the wagon is in home position, pull the wagon by hand against the beam so that the impeller almost touches the beam. Adjust the stopper so the impeller stops as described. Then move the wagon sideways about 800mm and by hand pull the impeller towards the beam, here the distance should be the same as in the home position. This can be adjusted on the bearings (UCP-207) under the covers, open the fastening screws for the bearings, move the beam to the wanted position and tighten the screws. When doing this the beam's position must be fixed in the front, locking mechanism closed.
IN THE END OF THE SEASON
Carefully clean the machine and check the machine and its components, and do maintenance. Lubri-cate all the bearings. Order spare parts in advance, we encourage you to order enough parts in order to avoid long unnecessary stops during the season.

TAKING OUT OF USE AND RECYCLING

TAKING OUT OF USE
Non-professional handling can lead to damage or injuries.
Taking out of use-related tasks should only be carried out by qualified and professionals.
Disconnect electrical power and compressed air to the machine, ensure the machine from starting. Re-move all motor cables and electrical boxes from power.

RECYCLING
The operating company is responsible for the proper recycling for the machine. In doing so, industry-specific and local legislation must be followed for the machine and its components recycling.
Electrical documentation for

ROTATING FLESHING MACHINE 1-BEAM
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<th>Beskrivning</th>
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<th>U3</th>
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<td></td>
<td></td>
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<tr>
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### Physical inputs

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### Physical outputs

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### Configurable functions

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<td>Auxiliary relays</td>
<td>---</td>
<td>No</td>
<td>No parameters</td>
<td>(11/6) (18/1)</td>
<td>Skrapmotor back</td>
</tr>
</tbody>
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