



# USER MANUAL



## HG Quick Skin

**HG**  
HEDENSTED  
GRUPPEN

## HG Quick Skin

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# 1 Safety

## Read the manual

The machine operator must read this manual carefully and receive training in the machine's functions before starting to work with it.

Failure to follow operating instructions could result in physical injury or damage to the equipment. Safety labels should be clearly visible to the operator and must be replaced if missing, damaged, or illegible.

## Pictograms explanation

### WARNING! High voltage



Before opening the electrical panel, make sure to disconnect the power supply and set it in the <OFF> position to prevent unintentional reconnection. After disconnecting the power supply, wait for ten minutes before working on the components on the electrical panel as the frequency converters accumulate high voltage. Only authorised personnel is permitted to open the electrical panel.

### WARNING! Ear protectors required



Both the operator and anyone in the immediate vicinity of the machine must wear ear protectors as the noise it generates exceeds normally permissive level. The noise level at the operator's station has been measured at above 70 dB.

### WARNING! Crushing risk



Do not touch the moving parts of the machine. There is a risk of serious injury if either your fingers or items of clothing come into contact with these parts.

## 1.1 Use

- ◆ The machine may only be used in industrial contexts for mink processing, i.e. with the purpose of removing the skin from the mink body.
- ◆ Operators must be over 18 years of age, in good health with normal mobility and physical attributes.
- ◆ It is essential that operators are in a good, ergonomically correct sitting position when using the machine.

## 1.2 Training

- ◆ Before starting to work with the machine, operators must read the instructions in this manual carefully and familiarize themselves with the correct operating procedure in consultation with an experienced instructor, if appropriate.

- ◆ These instructions should emphasise:

- 1) The need to be careful, thorough and focused when working with the machine.
- 2) Ensuring that the operator maintains a good overview of the area around the machine.

- ◆ The operator is responsible for any and all accidents and/or dangerous situations that may arise in respect to other people

The most common causes of accidents are:

- 1) Lack of concentration.
- 2) Operators who are insufficiently familiar with the machine.

## 1.3 Positioning, spatial requirements, etc.

- ◆ The machine must be positioned indoors on a flat, solid surface.
- ◆ When working with the machine, the area must be illuminated by flicker- and glare-free lights of at least 300 lux
- ◆ Cables and hoses used to supply the machine must be laid out so that they do not constitute a risk – away from walking areas, above head height or in appropriate cable trays on the floor, for example.
- ◆ The area around the machine must be kept neat and tidy to prevent accidents that involve tripping and falling.

## 1.4 Ergonomics

- ◆ The operator must sit comfortably at the machine – not too low in relation to where the animal is to be positioned in the leg clamp. Avoid raising your shoulders when placing the animal in the machine. Adjust the pedals so that your feet rest comfortably on the plates. Angling the footplates slightly forward can prevent your legs from 'sleeping' and eliminate the problem of tensing up.
- ◆ Make sure that animals, sawdust and other work tools are within easy reach. As the operator, you should not have to lift animals from a surface that is farther away than you can reach comfortably by straightening your elbow, i.e. without moving your body. On no condition should you have to twist your back while working.

## 1.5 Preparation

- ◆ When operating the machine, do not wear loose clothing and do not let your hair hang loose if it is long. This may constitute the risk of your hair or clothes being caught in the machine or entangled in its rotating parts. In addition, make sure to wear footwear with a firmly gripping sole to prevent the risk of slipping.
- ◆ Always keep grease, oil and other such materials for maintaining the machine in containers approved for the purpose. Store these materials out of reach of children and non-authorised persons.

## 1.6 Noise level

- ◆ As the noise level is above the normally permitted limit, operators and people in the vicinity of the machine must wear ear protectors while the machine's head cutter is operating.

## 1.7 Maintenance

Inspect the machine every day to check for visible faults and defects. Also make sure to check whether any guides and other moving parts have become affected by fat, blood, sawdust or other substances.

Visually inspect the machine to check the following:

- ◆ that there are no leaks in the compressed air systems (hoses, etc.),
- ◆ that all bolts, nuts, etc. are securely tightened,
- ◆ that all guides and carriages are intact and appropriately lubricated,
- ◆ that all chains are intact, correctly tensioned and appropriately lubricated.

See Section 6 of this manual for details of how to maintain the machine otherwise.

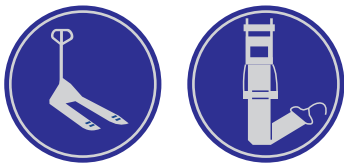
## 1.8 Dismantling/Disposal

When the time comes to dispose of the machine, contact your local dealer to ensure that the machine is dismantled and disposed of in the most environmentally appropriate manner.

## 2 Transport and manoeuvring

Always use a pallet truck or a forklift to transport/lift the machine and always lift it when both forks are fully under the load of the machine.

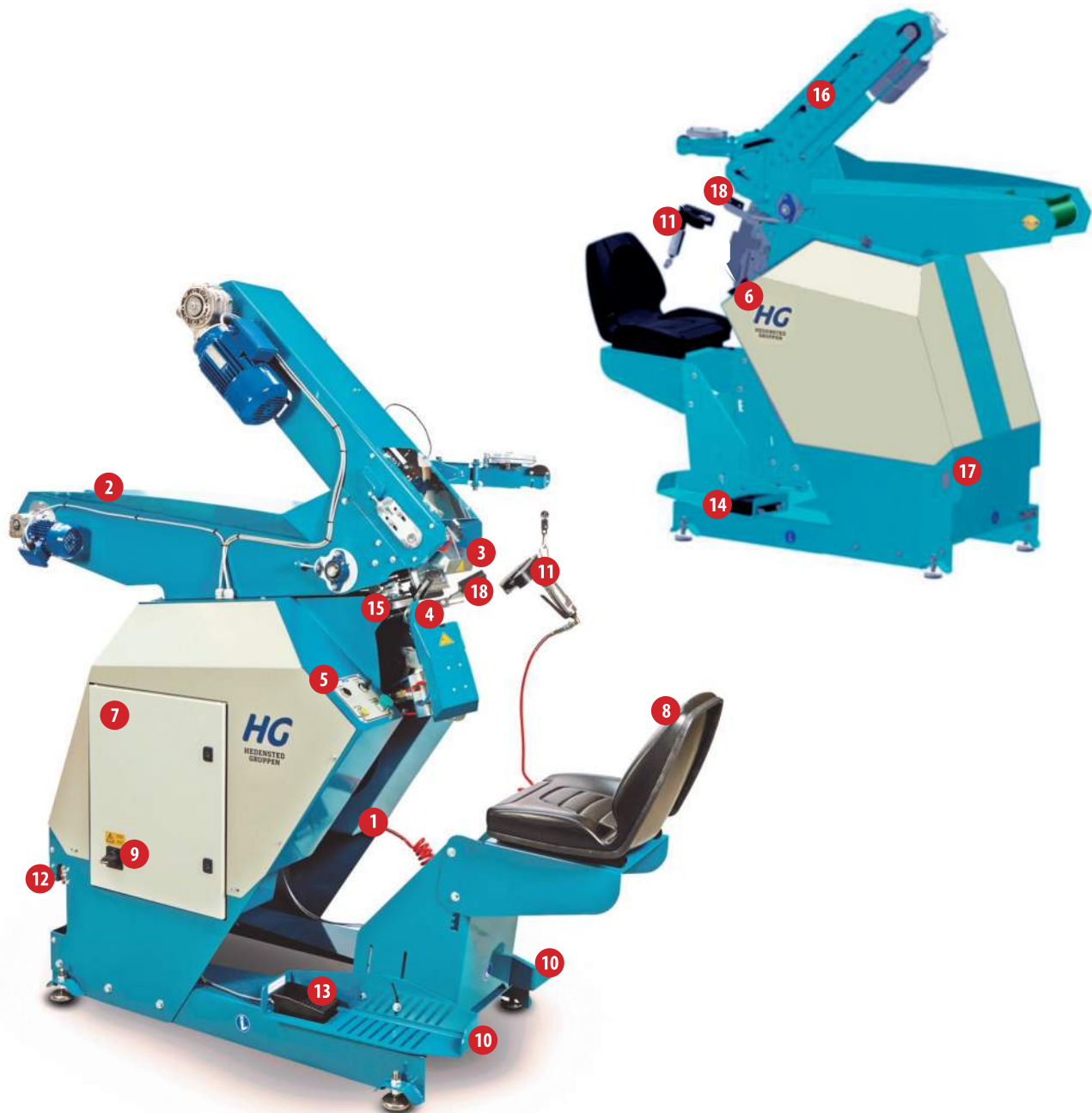
If the machine needs to be secured for transport, run straps across the base of the machine at the points indicated. Do not run straps across the conveyor belt, the body puller or the seat, as this may damage these parts. Do not attempt to use a crane to lift the machine.



**WARNING!** Do not attempt to move the machine using equipment that is not suited to the purpose.



## 3 The machine's functional units



- |   |                                 |
|---|---------------------------------|
| 1 Air supply connection for head cutter | 10 Footplates                   |
| 2 Conveyor belt for bodies              | 11 Head cutter                  |
| 3 Leg clamps                            | 12 Air connection/fine filter   |
| 4 Tail and leg skin clamp               | 13 Leg clamp pedal              |
| 6 Right-hand panel                      | 14 Skin and body pullers pedals |
| 5 Left-hand panel                       | 15 Body clamp                   |
| 7 Electrical panel                      | 16 Length adjustment            |
| 8 Seat                                  | 17 Mist lubricator              |
| 9 Main switch                           | 18 Skin support clamp           |

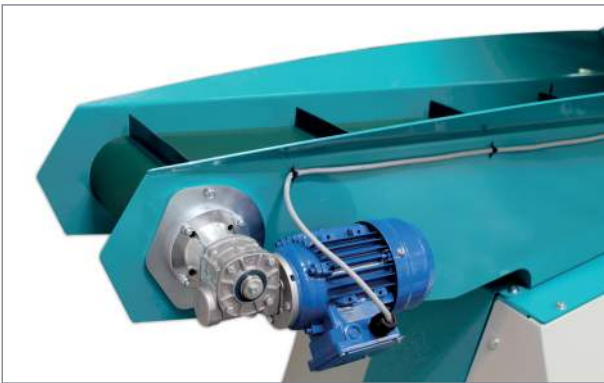


## 3.1 Air supply connection for head cutter



The connection can be positioned on the right- or left-hand side, as required. However, moving it from one side to the other requires remodelling other parts of the machine.

## 3.2 Conveyor belt for bodies



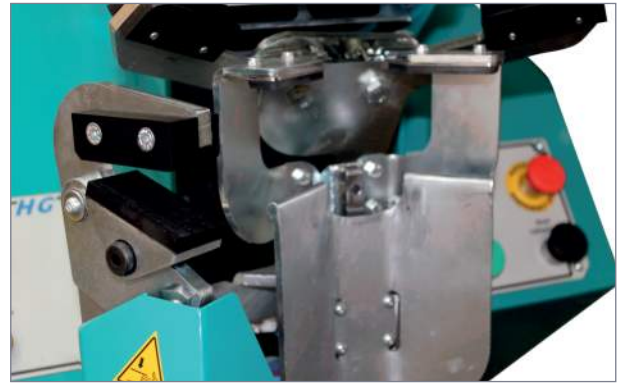
Position the end of the conveyor belt above the container or the conveyor used to dispose of the cadavers.

## 3.3 Leg clamp



This is to place the mink's hind legs once the skin has been loosened on the HG Combi Cut or a different cutting machine used to loosen the hind legs from the skin.

## 3.4 Tail and leg skin clamp



Place the tail section of the skin in the tail clamp. Make sure that no other body parts are between the jaws when the clamp is closed, as this will result in an unsuccessful pull. The leg skin clamp automatically captures the skin from the legs when the tail clamp is pulled up and over. Make sure that the clamp does not catch too much of the belly skin, as this risks tearing open the belly of the body/cadaver.

To open the clamp, simultaneously press the tail clamp button and the reverse button on the left-hand panel (3.5). To close it again, press only the tail clamp button itself.

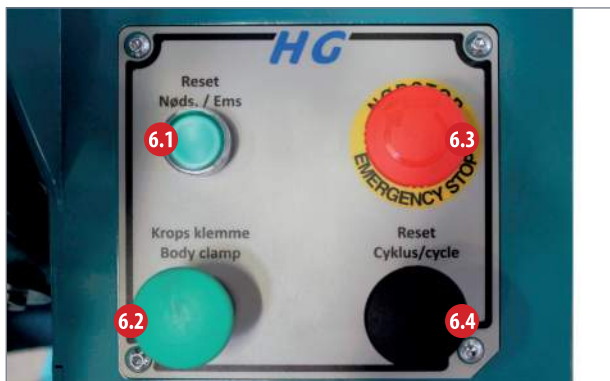
## 3.5 Left-hand panel



- 5.1 If the tail skin falls out or is positioned incorrectly, the tail clamp button can be used to open the tail and skin support clamps. To do this, activate the tail clamp button and the yellow reverse button (5.2) at the same time. To close the clamp again, activate the tail clamp button only. To close the support clamp, activate the button once again.
- 5.2 Use the reverse button to run the skin and body pull functions backwards – if the animal is not centered in the body clamp, for example, or if the body or skin falls out of the clamps.
- 5.3 Use the potentiometer to adjust the speed of the skin pull.
- 5.4 The body clamp button must be activated together with 6.2 (right-hand panel) to activate the clamp when the animal is to be gripped at its shoulders.

# FUNCTION

## 3.6 Right-hand panel



- 6.1 'Reset emergency stop' button restarts the machine after the emergency stop button has been activated. The button functions are activated if the clamp fails as a backup.
- 6.2 The body clamp button must be activated together with 5.4 (left-hand panel) to activate the clamp when the animal is to be gripped at its shoulders.
- 6.3 Emergency stop
- 6.4 'Reset cycle' button restarts the machine cycle and returns to the starting position once the skin has been removed from the animal. The button can also be activated in the middle of the cycle to restart it.

## 3.7 Electrical panel



To open the electrical panel, use the plastic key supplied with the machine.

**WARNING!** Before opening the electrical panel, make sure to disconnect the power supply and lock it in the <OFF> position to prevent unintentional reconnection. After disconnecting the power supply, wait at least ten minutes before working on the components in the electrical panel because the frequency converters accumulate high voltage. This panel must never be opened by non-authorised staff as the consequences could be fatal. The motor protection units are located in the electrical panel. If a red button is 'on', the motor has been cut out. Press the black button if the motor protection switch has cut out the motor.

## 3.8 Seat



To adjust the height of the seat, loosen the bolts on the seat bracket. To move it backwards and forwards, pull the seat rail bars. To find the most ergonomic work position, adjust the seat so that your elbows are as close to your body as possible and you do not have to raise your shoulders when placing an animal in the machine.

## 3.9 Main switch



The main switch must be <ON> before the machine can be used.

**WARNING!** You MUST disconnect and lock the main switch in its <OFF> position before starting any maintenance work.

## 3.10 Footplates



It is possible to adjust the height and angle of both right- and left-hand footplates. To do this, loosen the bolts and find the most ergonomic sitting position.



## 3.11 Head cutter



Use the head cutter to cut the skin free around the head.

**WARNING!** The head cutter features rotating blades, so read the user manual carefully before use.

## 3.12 Air supply connection



Connect the air supply here and make sure the pressure is at least 7 bar. Check regularly to make sure the fine filter is clean and that the machine receives air at a pressure of at least 7 bar. The maximum permitted pressure is 9.5 bar. Pressures higher than this may damage the machine valves.

## 3.13 Leg clamp pedal



The pedal on the right-hand side activates the leg clamp used to secure the mink legs. Hold the pedal down until the skin-puller arm has passed the operator's knee. The pedal can then be released. If it is released earlier, the machine will stop.

## 3.14 Skin and body pull pedals



The pedals on the right-hand side control the skin and body pullers. They can be activated separately or simultaneously.

## 3.15 Body clamp



The body clamp secures the mink's body when the skin is pulled down over the head and cut free. To activate the clamp, use the two green buttons on the right- and left-hand panels. The clamp must be activated when the cadaver shoulders are placed in the clamp.

## 3.16 Adjusting the length sensor



This sensor is used to define the length of the first pull before the machine starts to pull slowly. The sensor can be adjusted to ensure the machine runs slowly when it reaches the animal's shoulders. Move the sensor up if you are working with large animals, and move it down if you are working with small ones.

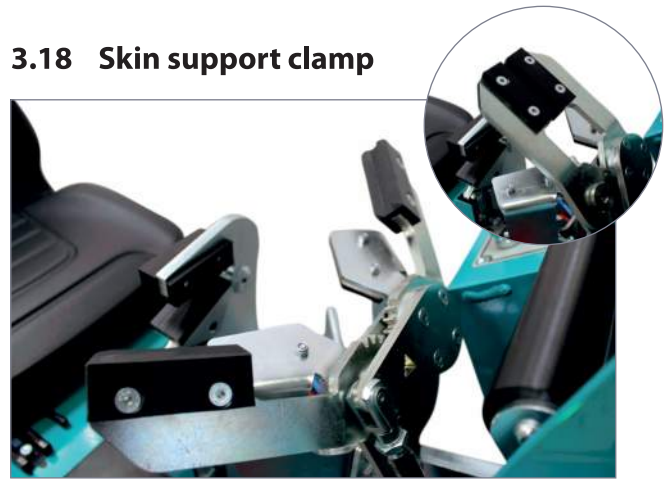
## 3.17 Mist lubricator



The mist lubricator ensures that the head cutter is lubricated properly, runs optimally and lasts longer. Remember to fill the mist lubricator container regularly with mist lubrication oil.

HG item no. **476560**

## 3.18 Skin support clamp



The skin support clamp helps to pull the skin when it has to be pulled down over the mink's shoulders. The clamp closes when the length sensor (3.16) is activated.

The clamp can be opened by pressing the tail clamp button and the reverse button at the same time.

The clamp closes again when the tail clamp button is pressed for the second time.

## 4 Set-up and connection

*HG recommends that one of the company's trained fitters should set up the machine so as to ensure optimal flow and process conditions.*

### 4.1 Set-up

The machine must be positioned indoors on a flat, solid floor.

The ceiling height must be at least 225 cm.

In accordance with standard EN 12465-1:2002 the operating area must be illuminated with at least 300 lux.

### 4.2 Connection

#### Electricity

Connect the machine to a 3 x 400 volt power supply with neutral (N) and earth (PE) conductors, fused with min. 16A. The connection is to feature a CEE plug or a supply separator that can be disconnected safely during maintenance procedures and/or repairs to the machine.

#### Air

The machine requires compressor pressure of at least 7 bar. Use a type Cejn 320 quick-release coupling to connect the air supply. To avoid stoppages, make sure that the air supplied to the machine is free from water, dirt and rust from old pipes.

The maximum permitted compressor pressure is 9.5 bar. Pressures higher than this may damage the machine valves.

#### **WARNING!**

Do not leave air hoses and electricity cables lying unsecured on the floor, as this constitutes a risk of physical injury.

## 5 Operating the machine

*In emergency situations, use the emergency stop button on the right-hand panel to stop the machine.*

- 1 Grasp the hip on the animal with one or two hands, so you have control of the legs, and so the skin from the legs hangs down over the hand / fingers.



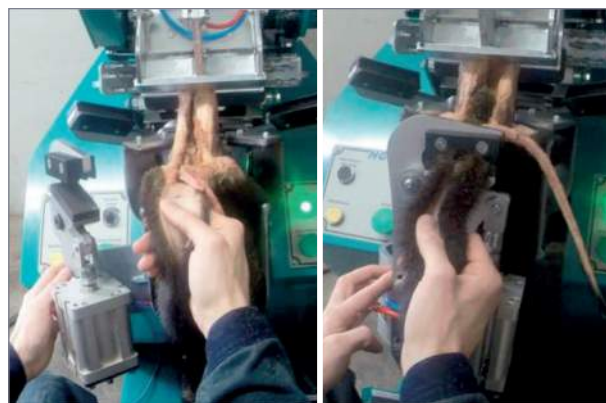
- 2 Place the animal so that the legs are in leg clamp, so that the leather side of the pelt is up against the rubber from the leg skin clamp.



- 3 The leg clamp is closed by pressing the left pedal and holding it down. If the legs are not placed properly in the clamp, release the pedal and the clamp opens again.



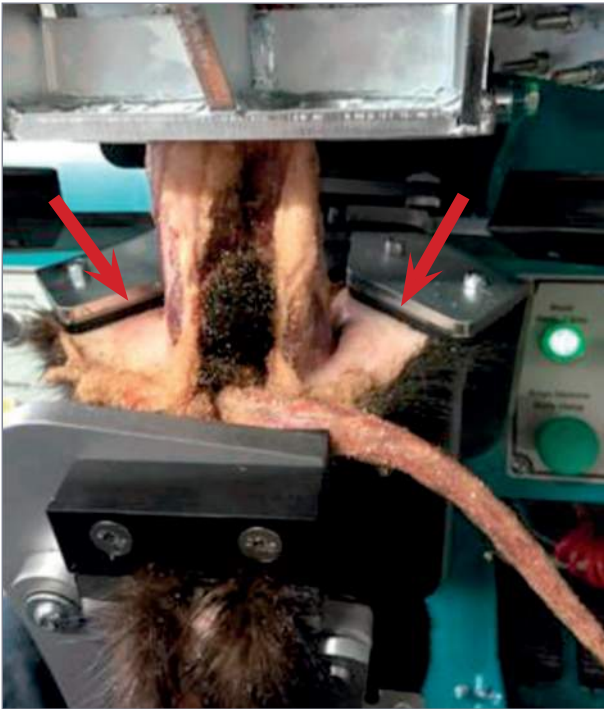
- 4 The leg clamp is now shut, let the animal hang loose in the leg clamp (the left pedal is still held down). Grab the tail skin from the animal with one hand, while the second hand pushes the tail clamp over the animal. While the tail skin is put in the clamp, the clamp closes automatically when it is pushed over the animal (watch out that your fingers do not get the clamp). The tail from the body may not get in the





# BEFORE STARTING

- 5 The leg skin clamp closes with tail clamp and will grab the leg skin where the skin is not caught. When the tail clamp is pushed aside, the clamps open again. The leg skin clamp only needs to get hold of a little part of the leg skin on each side for the pull to succeed.

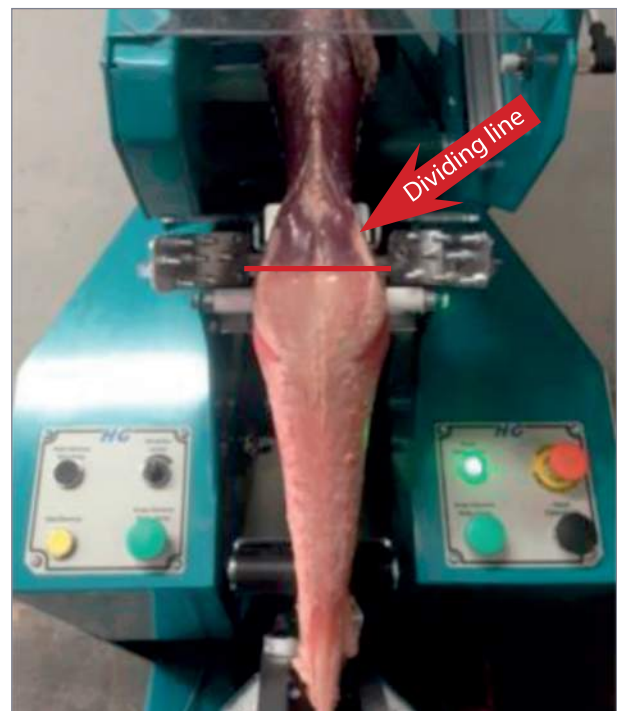


- 6 When the slow pull is activated the adjusting is done by moving the sensor on the side of the body cover. The sensor is activated when the leg clamp runs up past the sensor. The sensor makes the machine pull slowly. The support of the clamp for the skin closes and the leg skin clamp opens. Adjust the sensor so that it will slow down just before the skin is pulled off to the shoulders of the animal.



- 7 By stepping on both pedals simultaneously, the skin and body will now be pulled apart. Pull until the shoulders are pulled free and the dividing line is in the center of the shoulder clamp.

If the dividing line is not in the center, you can adjust it by pressing the pedal for skin pull or body pull, or if they are extended too far, you can reverse the process by holding down the yellow button (Reverse) and then pressing either the pedal for skin pull or body pull.



- 8 If the dividing line is not in the center of the clamp after the pull, then you can either increase or decrease the fur pull speed.

If the dividing line is under the clamp you must decrease the fur pull speed.

If the dividing line is above the clamp you must increase the fur pull speed.





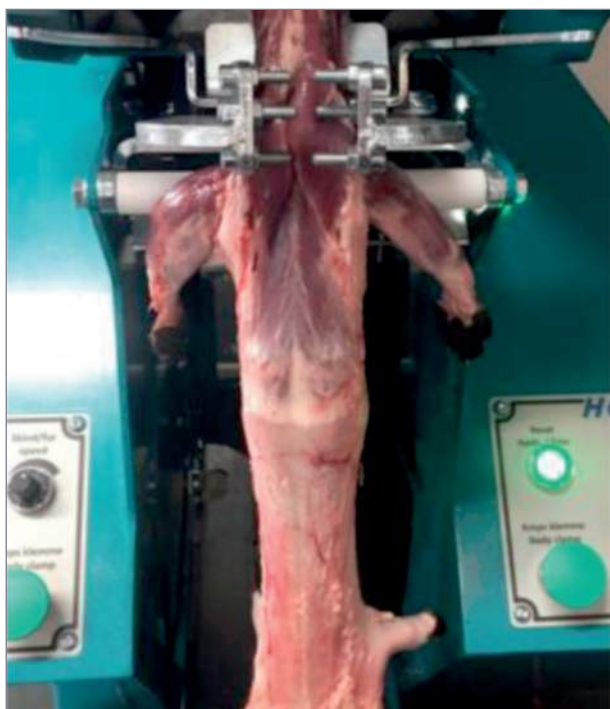
# BEFORE STARTING

- 9 The body clamp is activated by pressing the two green buttons on the right and the left panel. The clamp can be opened by pressing the buttons again.

If the bottom row "spikes" close on the fur as in the picture, there will be no damage to the fur provided that they are rounded as originally.



- 10 Continue pressing on the pedal for fur pull until the skin is pulled down over the shoulders to the head.



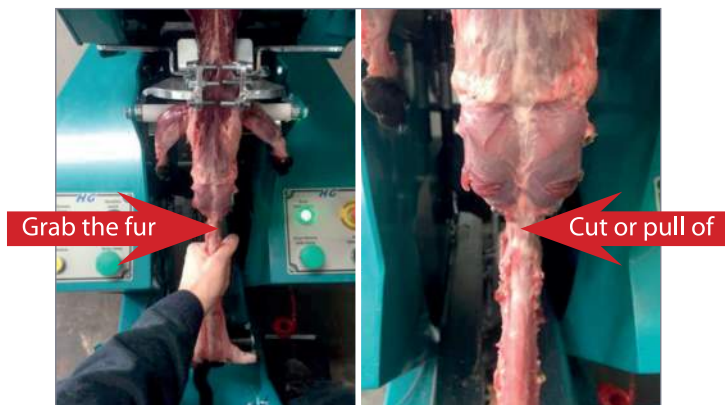
- 11 Use the decapitator to cut the fur free from the neck of the mink, make the first cut about 10mm above the dividing line by the ears.



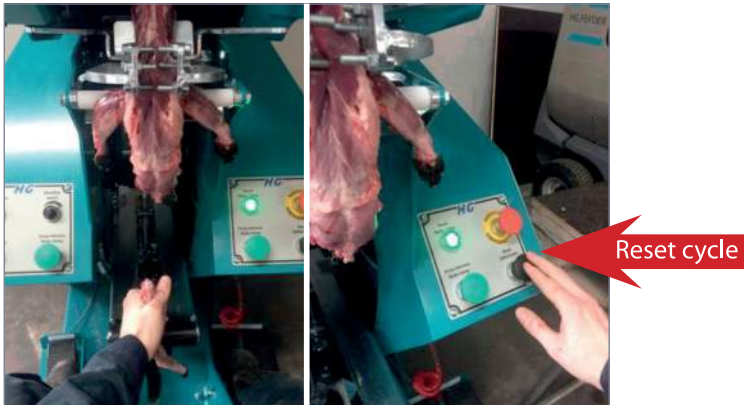
Press the fur pull pedal and pull it down to the eyes and apply a cut by the eyes.



Press the fur pull pedal again and pull it down to the nose. Put a cut in the jaw and nose to get the skin off the body, hold the skin with one hand so the fur does not fall onto the bottom of the machine.



When the fur is free from the body, press the black button called 'reset cycle'. Then the machine will let go of the fur, pull the body away, go back to the start position and be ready for the next mink.



## 5.1 Emergency stop cycle

If an emergency stop situation arises, for example an object becomes caught in the machine's safety edges, you can usually deal with the problem by reversing the machine operation. Keep the green <Reset emergency stop> button depressed and activate the pull pedals. The machine can only reverse a short distance.

After the object has been removed, you can run the machine back once all the emergency stop and clamp rails have been deactivated and the green <Reset emergency stop> button is illuminated.

## 6 Maintenance and cleaning

**WARNING!** You MUST disconnect and lock the main switch in its <OFF> position before starting any kind of maintenance work.

### Normal cleaning



After finishing work, check the machine for foreign objects that may have been caught in it. Use a compressed air pistol to remove wool and dirt from the machine parts. Use compressed air to remove any dirt from the motors' radiator fins. Use a vacuum cleaner to remove dust and wool from the floor around the machine. Regularly check the surfaces of the fan/motors for dust and other impurities. If the layer of dust is more than 0.5 mm thick, it must be removed.

**NB** Always wear a dust mask, protective goggles and ear protectors when using compressed air to clean the machine.

### Lubricating bearings and guides

Grease the machine bearings. There are four flange bearings to lubricate. There are also two sets of guide rails and carriages on the machine that need to be lubricated.

### Tightening chains

The machine is fitted with two chains. Make sure that both chains are sufficiently taut.

### Consumables



For lubricating bearings with nipples we recommend grease type Q8 Rembrandt EP 2,

HG item no. **476570**

For lubricating the guides, we recommend using guide oil,

HG item no. **476590**

For lubricating the head cutter, make sure to fill the mist lubricator container with mist lubricant:

HG item no. **476560**

### Protection devices

It is only permitted to remove any of the protection devices on the machine in connection with repairs or service procedures. This must only be done by appropriately trained personnel.

### Storage

When you have finished using the machine for the season, it is important to clean it thoroughly and make sure that it is properly lubricated.

Grease the lubrication nipples.

Lubricate the guides with guide oil.

## 7 Troubleshooting

Problem	Possible cause	Solution
Machine does not start.	Emergency stop activated, no power supply.	Check all emergency stops, incl. clamp rails and power connection.
Conveyor belt runs the wrong way.	The phases in the plug are in the incorrect order.	Reverse the order of the phases in the machine plug.
The clamp rails are activated when the machine runs back to the start position.	Defective sensor. The sensor is positioned incorrectly on either skin or body pull.	Check the skin and shoulder pull sensors. If they are not defective, adjust them.
The skin clamps do not close when the tail clamp is turned in.	Defective reed sensor on the 'tail clamp turn in' cylinder.	Replace the reed sensor.
Skin puller does not work.	Defective or hanging switch in pedal.	Replace switch unit.
Body puller does not work.	Defective or hanging switch in pedal.	Replace switch unit.
Leg clamp does not close.	Defective or hanging switch in pedal.	Replace switch unit.
Reset cycle: body clamp opens, but the machine does not return to start position.	Defective reed sensor on body clamp cylinder.	Replace reed sensor if defective, or secure it if loose.
The body pull drops off slightly when the machine returns to the start.	Brake relay tripped.	Press the appropriate relay in the electrical panel.
HPFI relay trips when the machine is switched on.	Short circuit. Insufficient power to the machine.	Contact your local electrician to check the supply.

## 8 Technical data

### HG Quick Skin

Dimension and weight	
Width	80 cm
Length	216 cm
Height	220 cm
Weight	500 kg

Electricity	
Voltage	3 x 400 V + N + PE
Fuses	16 A
Connection	16A CEE
PLC control	230 V AC + 24 V DC

Compressed air	
Air pressure	Min. 7 bar, Max. 9.5 bar
Connection	Cejn 320 quick-release coupling



## 9 Warranty conditions

### Warranty period

HG provides a 12-month warranty, as from the date of delivery.

### The warranty covers

- ◆ Components that have to be repaired or replaced on account of material defect or manufacturing error.

The warranty does **not** cover wearing parts and consumables such as:

- ◆ Knives, belts and rubber parts.

### The manufacturer's warranty shall be terminated in the event that:

- ◆ The machine is used incorrectly.
- ◆ The machine is used without the operator complying with the information in the instruction manual and safety regulations.
- ◆ The machine is not maintained according to the instructions supplied, or obsolete parts are used.
- ◆ The machine is used after a fault or defect has been identified, and the resulting repair is more expensive than the cost of repairing the original fault.

### The owner's own insurance should cover:

- ◆ Fire, break-in, theft and vandalism
- ◆ Water and frost damage
- ◆ Damage caused by the weather

These are not covered by the manufacturer's warranty.

### Approval of claims for compensation

Approval from the manufacturer of claims for compensation is conditional upon the defective part(s) being presented to the manufacturer or the manufacturer's representative within two weeks of the damage being identified. The right of ownership to the damaged part(s) shall be transferred to the supplier of the new part(s).

### Only components can be replaced under the warranty, which therefore does not cover:

- ◆ Freight costs.
- ◆ Costs in connection with waiting time, the machine owner's working hours and travel expenses.
- ◆ Loss of earnings and other consequential expenses.

### Other information

Before repairs under warranty are carried out, the manufacturer must be contacted to agree on the procedure. If the repair work has been initiated or completed, the cost of same cannot be claimed against the warranty.

The present warranty conditions can only be amended through a separate agreement.

## WARRANTY CERTIFICATE

**Version**

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**Type/Chassis no.**

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**Model/year**

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**Delivery date**

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**Seller/fitter**

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Company

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Address

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Signature

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**First owner**

---

**Address**

---

**Tel.**

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**Second owner**

---

**Address**

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**Tel.**

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**SPECIAL CONDITIONS**

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Warranty certificate to be completed by an HG fitter/sales consultant.

## 10 EU Declaration of conformity

Hedensted Gruppen A/S  
Vejlevej 15  
DK-8722 Hedensted  
Tel. (+45) 75 89 12 44  
Fax (+45) 75 89 11 80  
[www.hedensted-gruppen.dk](http://www.hedensted-gruppen.dk)

Hereby declares that:

HG Quick Skin  
HG item no. 206330

**conforms with:**

- The Machinery Directive 2006/42/EC
- The Low Voltage Directive 73/23/EEC
- The ROHS Directive 2011/65/EU

**under application of the following harmonising standards:**

- DS/EN 12100-1:2005
- DS/EN 13857:2008
- DS/EN 60439-3

Hedensted, 15 October 2014



Jens Jørgen Madsen  
Direktør



**HG**  
**HEDENSTED  
GRUPPEN**

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