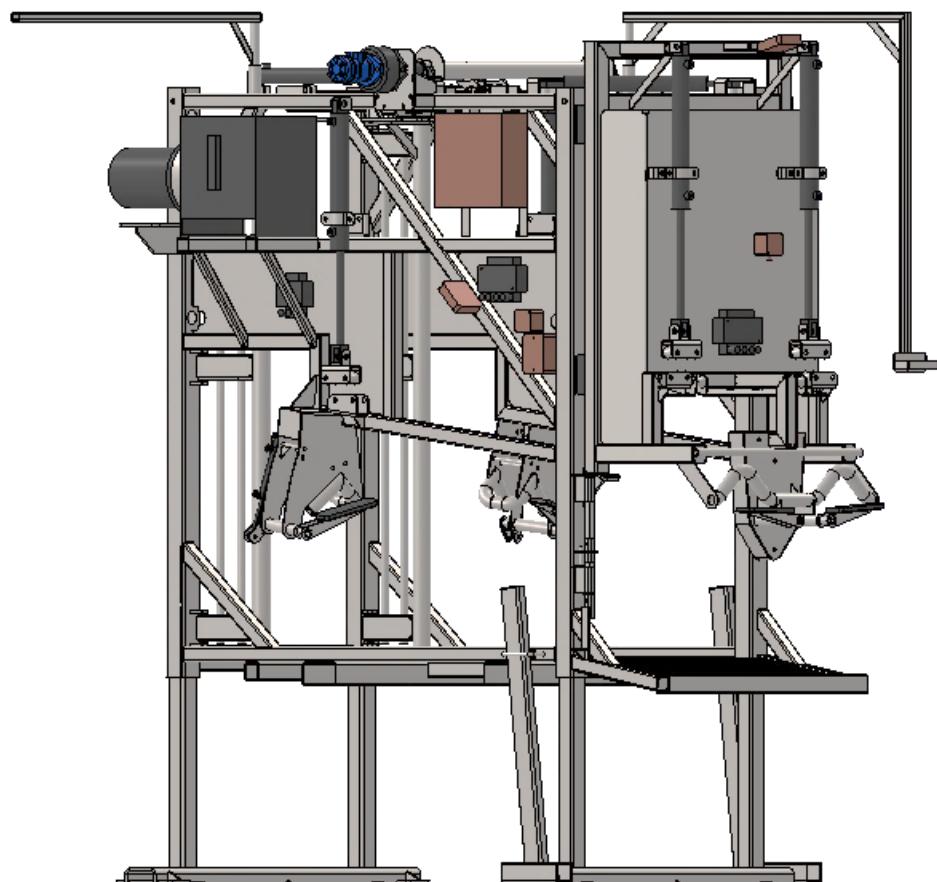


# *Hydraulic Hoof Trimming Chute*

0604510



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## 1 Technical specifications and tolerances

This machine is only intended for trimming hooves of cows and young cattle older than 1 year. This machine ensures that the claws are lifted and fixed in a stable way before they are trimmed manually. The detailed machine operation is described in section "Operation".

 *This machine may only be used within the specification and tolerance limits described in this manual. If the machine is used outside these specifications, the supplier can no longer take responsibility for this machine.*

 *Do not use this machine for purposes other than those for which it was made by the supplier. This can lead to damage and danger to the user and his environment.*

Specifications	
Machine connection	5-core 400Volt 50Hz 3~+N+ PE Mounted on a swivelling high-voltage power conductor
Noise	< 70 dB(A) with the exception of trimming with a grinding disc
Year of manufacture	See nameplate.
Weight	~ 920 kg
Lift height	60 cm
Power outlet	3x 230V fixed on chute 1x 230V movable around the chute on grinder holder
lighting	3x 24Volt lamp.

## 2 Safety

 *The machine is built based on the latest state of the art and recognised technical rules regarding safety. Nevertheless, its use may pose a risk to the body and life of the user or animals. During use, it may also cause damage to the machine or other goods.*

### 2.1 Regulations

1. Operation and maintenance of this machine must be carried out by qualified personnel taking into account the warnings on the machine and the user manual. Keep children and other (unauthorized) persons away from this machine during operation, maintenance and storage.
2. This machine is only suitable for processing and environmental conditions as mentioned in section "Specifications and Tolerances" of this manual. Any other use is not permitted by the supplier and may put the user, animals and/or environment at risk.
3. It is forbidden to modify this machine without the supplier's prior written approval.
4. This machine is suitable for outdoor use. Electrical components are only splash-proof. Keep this machine away from rain and moisture.
5. A maximum of 1 person may work on/with this machine at the same time.
6. Keep hands, hair, loose clothing and/or jewellery away from moving parts of the machine. Wear suitable clothing without loose parts. Wear slip-resistant safety shoes.
7. Prescribed intervals for periodic checks and maintenance or those specified in the user manual must be adhered to.
8. Only have the machine serviced and repaired by qualified and skilled personnel and only use original supplier's replacement parts.
9. In addition to the user manual, generally applicable statutory and other binding regulations with regard to accident prevention and environmental protection must be observed. This also includes, for example, regulations on handling of personal protective equipment.
10. If a machine part is damaged or no longer operates in the prescribed manner, work must be interrupted immediately. Resumption is only allowed after the machine part has been repaired or replaced and inspected. If the machine does not function properly, consult your supplier.
11. Machine and/or parts must be disposed of in accordance with local laws and regulations.

12. After the last cow has been trimmed, the machine must always be depressurized before storing it away. To do this, move all functions up and down after the hydraulic pump has been switched off until the function stops moving

## 2.2 Safety devices on the machine

Valves are equipped with a spring return closed middle position. Only these valves may be used with this machine.

The machine has an emergency button.

## 2.3 Explanation of pictograms and symbols

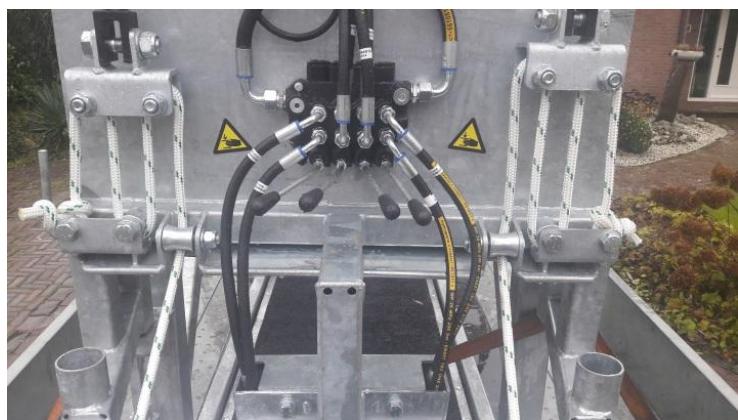
Pictogram	Meaning
	Read and understand this manual before putting the machine into operation and/or performing maintenance.
	Wear safety shoes during all work with or on this machine.
	Wear protective clothing during all work with or on this machine.
	Warning. Important points of attention and/or instructions concerning safety and/or damage prevention are marked with this warning sign.
	Crushing hazard.

## 2.4 Location of pictograms

Pictograms present:

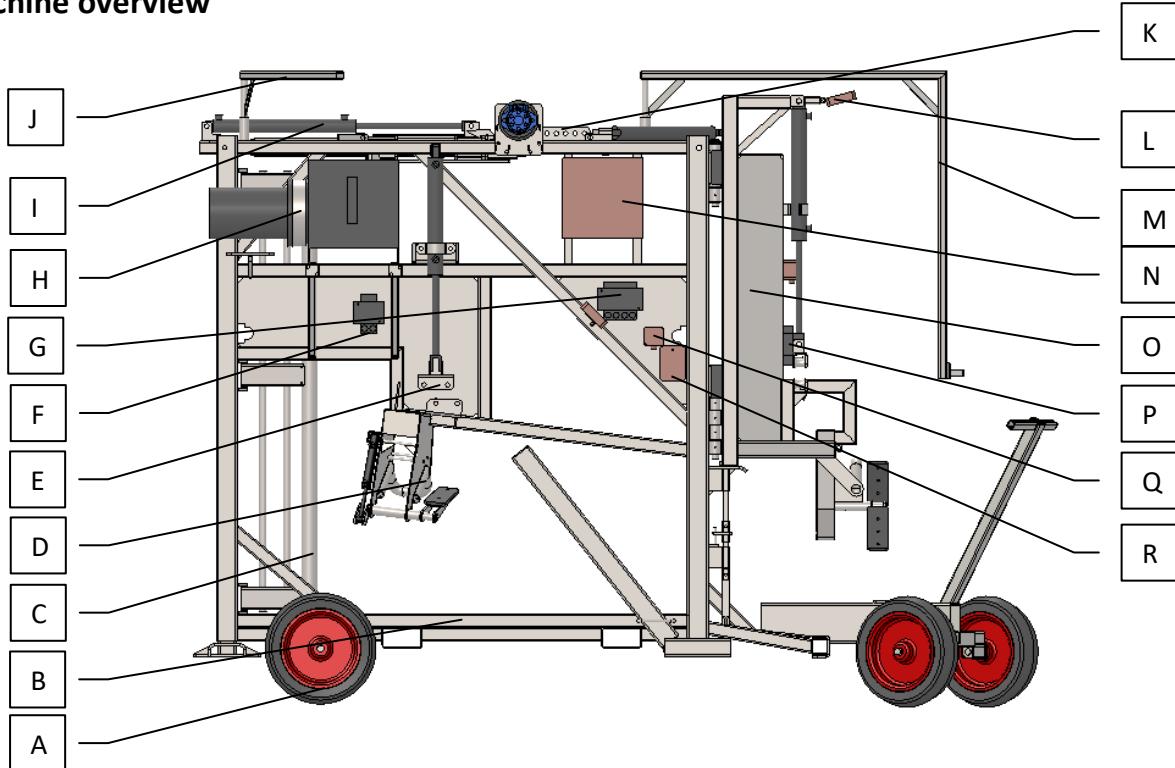
5x Crushing hazard

4x By the leg winches



### 3 Description of the machine

#### 3.1 Machine overview



- A. Transport wheel (option)
- B. Walking surface for cow
- C. Front door
- D. Leg support for front legs
- E. Leg winch
- F. Valve block
  - a. Left front Leg winch
  - b. Front left swing gate
- G. Valve block
  - a. Left front door operation
  - b. 2<sup>nd</sup> from left belly girth operation
  - c. 2<sup>nd</sup> from right lift operation
  - d. Right rear door operation
- H. Hydraulic unit
- I. Front door cylinder
- J. Rotating power current conductor (power)
- K. Hoisting hook attachment
- L. Lighting 12Watt
- M. Rotating grinding toll holder
- N. Electric box
- O. Back door
- P. Valve block
  - a. Swing gate left rear
  - b. Leg winch left rear
  - c. Leg winch Right rear
  - d. Swing gate Right rear
- Q. Power outlet
- R. On/off button

### 3.2 Options

Depending on the intensity of use and customer requirements, this machine can be equipped with various options. Please consult your sales advisor.

Options	Code	Specifications
Wheel set	A100	40 Kg
Attachment door with gates	A200	96 Kg
Loose fence catch cage	A300	27 Kg 200x110 cm
Coupling frame fence set	A400	33 Kg w*h 92x200 cm
Fence end leg	A500	12 kg

### 3.3 Operation

This machine is only intended for trimming hooves of cows and young cattle older than 1 year. This machine ensures that the claws are lifted and fixed in a stable way before they are trimmed manually.

### 3.4 Workstations at the machine

There are workstations at this machine around the chute. There is a crushing hazard at these workplaces.

### 3.5 Controls

The actuators are controlled by means of a hydraulic power. The operation of actuators on the hoof trimming chute takes place by manually operated hydraulic valves with a spring return closed middle position.

## 4 Transport



*Follow all the instructions as described in this manual, in particular the safety chapter.*

Report damage during or immediately after delivery to the carrier and the supplier. Take all necessary measures to prevent further damage.

The machine must be placed on a level surface with sufficient load-bearing capacity. The minimum permitted load-bearing capacity per surface area is 2.5 tons/  $10cm^2$ . Keep unauthorized persons and children away. In case of a floor grille, always turn 90° in relation to the grilles. As a result, the pressure points of the chute are distributed over several grids.



*This machine is suitable for outdoor use. Electrical components are only splash-proof. Keep this machine away from rain and moisture.*

The machine is equipped with pick-up sleeves and a hoisting hook, or the machine can be driven with the option of transport wheels. When using your own machine to transport the chute. Make sure it has enough lifting capacity and counterweight to move the chute.

Before working with the machine, the transport wheels must be removed.

Mode of operation:

1. Drive the machine to the desired location (option).
  - a. Make sure that the machine is only driven over and placed on a concrete surface.
  
2. Connect the machine to the power supply.
3. Start the machine and raise the walking surface of the machine until the wheels come off the ground.
  
4. Remove the transport wheels (3 pieces) from the machine.
5. Lower the walking surface again.

In case of a private transport vehicle. Always disconnect it before the chute is electrically connected or moved.



## 5 Operation



*Follow all the instructions as described in this manual, in particular the safety chapter.*

*Keep hands, hair, loose clothing and/or jewellery away from moving parts of the machine. Wear suitable clothing without loose parts. Wear slip-resistant safety shoes.*



*The procedure below is imperative and failure to follow it may result in danger to the cow's welfare and to the operator.*

Mode of operation:

1. Connect the machine to the power supply.  
(Make sure the electric motor turns in the right direction. If this is not the case, the direction of rotation in the plug can be turned with a screwdriver.)
2. Lower the walking surface down to the ground.



*Make sure that you and bystanders do not get trapped during hydraulic movements.*

3. Slide the attachment port out of the frame, and lock it again by inserting the bolts (option).
4. Connect extra drift fences to make it easier to drive the cow into the chute (option).
5. Lower both belly girths to the walking surface.



*Make sure at all times that the grinder holder is not behind the rear door, but on one of the two sides.*



6. Open the rear door.
  - a. When opening the rear door, the lock of the rear door must be disengaged with the foot.
  - b. Check that the front door is in the catch position. This can be done hydraulically by first opening the front door all the way towards the inside (eject cylinder), after which the cylinder has to be retracted completely. After this, the door is ready in the catch position



7. Drive the cow into the chute.



8. Close the rear door. The rear door may under no circumstances be used to push a cow.
9. Move both belly girths upwards until the cow stands on its toes.





*Both belly girths must be pulled up behind the front legs and in front of the hind legs. If this is not the case, first try to manoeuvre the cow so that it gets into the correct position. If this is not possible, the girth straps can be loosened with a quick release fastener, after which the straps can be put and clicked back into place again. Make sure you don't get kicked during this operation*

10. Lift up the trimming chute to a suitable working height. The chute can be stopped at any height, up to a maximum difference in height of 60 centimetres.



11. Fasten the leg strap around the cow's ankle



*Make sure that the noose is fastened at the bottom of the hoof and above the claws. Thread the rope tightly around the leg. The steel of the leg winches has a rounding, make sure it goes along with the hoof.*



12. Move the leg winch cylinder upwards until the cow's leg is tight against the stop. The system is secured when it pulls the leg tight enough. But don't pull too hard to break the leg. From Yearlings to older healthy cows.



*Release the rope before starting the leg winch.*



13. To keep the hooves still, a leg support can be folded under the hooves. So this is not necessary.



14. Fasten the other 3 legs of the cow in the same way.



*All 4 legs can be pulled up at the same time (not necessary) as long as the girth straps are pulled up correctly.*

15. Trim all legs.



*If the hind legs are already trimmed and you lower them, leave the leg straps around the legs if the front legs still need to be trimmed, to avoid being kicked by the cow. Always remember that the cow can kick you around the entire chute.*



16. Move the leg support down.

17. Move the leg cylinder downwards until the cow's leg is on the walking surface.

18. Loosen the leg straps around the cow's legs.

19. After loosening the leg, pull up the leg straps again.



*Make sure that the hook does not injure the cow while it is being rolled up.*



20. Release the other 3 legs of the cow in the same way.

21. Lower the trimming chute down until it is completely on the ground.

22. Lower both belly girths to the walking surface.

23. Open the front door,



*make sure that the front legs are not trapped between the front door and the frame.*

24. Let the cow walk out.

25. Put the front door back in its catch position.

## 6 Maintenance



*Follow all the instructions as described in this manual, in particular the safety chapter.*



*Maintenance of this machine must be carried out by qualified personnel by taking into account the warnings on the machine and the user manual.*



*Keep hands, hair, loose clothing and/or jewellery away from moving parts of the machine. Wear suitable clothing without loose parts. Wear non-slip work shoes.*

### 6.1 Preventive maintenance

The following maintenance instructions are based on **normal** use (700 cows per year). In the event of more intensive use or use under extreme conditions, maintenance should be carried out at shorter intervals. In case of less than normal use, maintenance must still be followed according to the instructions below.

Item	1x per...	Comments
Machine	Day	Check that moving parts function correctly and do not pinch and/or break or damage parts in such a way as to impair operation. Have damaged parts repaired before use. In case of rust formation, this should be removed.
Machine	Day	Cleaning. Clean the machine with a high pressure syringe at low

Item	1x per...	Comments
		pressure. Do not point the lance at pictograms, electrical components, hydraulic components or greased parts.
Ropes	Day	Check the ropes/hooks for cracks etc. Replace immediately if worn or detached.
Hydraulic system	Day	Check for leakage In case of leakage, immediately put the machine out of operation. Work may only be resumed after proper repair. Check hoses for dehydration, or abrasions.
Pictograms	Week	Check readability and replace if necessary, for location see chapter 2.4
Oil	Week	Check the oil level on the hydraulic unit and top up if necessary. Always ensure that the oil level is above the sight glass when the chute is on the ground. The oil label must carry number <b>46</b> , always choose a more expensive brand of oil, this preserves the components considerably.
Grease nipples	Month	Grease with bearing grease. (total 10x, 2x lower girth, 4x rear door hinge, 4x leg support).
Change oil in multi-plate brake	1 year	The laminated brake prevents the girth axle from rotating. It is equipped with a magnetic plug. This must be cleaned after draining the oil, after which the brake can be filled from above with 4cl of oil (hydraulic oil with number 46 on the label). See the level gauges on the side of the brake.
Return filter	2 year	The return filter must either be replaced after +-1500 cows, or within 2 years. It is mounted in the tank lid.
Hydraulic hoses	1 year	preventive replacement of hoses due to drying out. Standards for the replacement hose are SAE 100 R2 AT / EN 857-2SC DIN 20022SN ISO 11237-1

## 6.2 Error list

Problem	Possible cause	Action/solution
No power at hydraulic circuit.	Pump turns the wrong way.	Change the phase, this can easily be done by twisting the two pins in the plug with a screwdriver (see photo in chapter 5 Operation)
Pump does not start up	Socket has a 4 core cable Main switch not operated Thermal protection enabled Circuit breaker off	Check with a voltmeter whether there is voltage at numbers 1 2 3 in the electric box (5 core is necessary). Set main switch to the correct position Open the electric box, check that the motor safety switch is vertical, check that the circuit breaker is switched on upwards. In case of repeated failure, contact the dealer.
No power sockets/ no lighting	Circuit breaker off	Check that the circuit breaker is switched on upwards (red symbol). In case of repeated failure, contact the dealer.

## 6.3 Spare parts

Only original spare parts and accessories may be used with the machine.

The supplier advises you to keep certain parts in stock in connection with wear and tear and/or any expected machine downtime when re-ordering the parts in question.

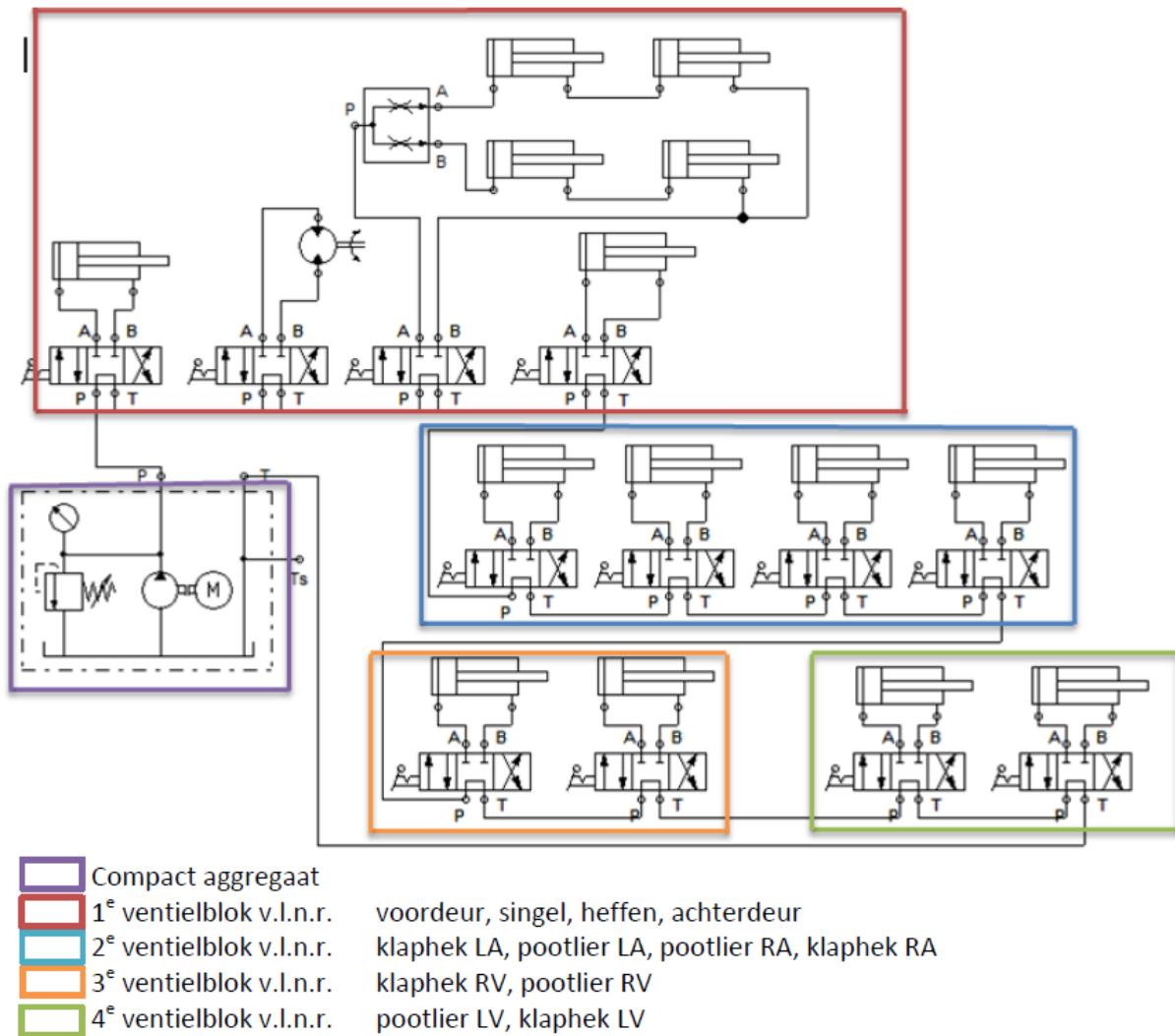
When ordering (spare) parts from the supplier, the following information must be provided: Part, desired length (if applicable) and desired number of pieces, for the hydraulic hoses the unique number assigned by the manufacturer can be passed on.

## 6.4 Customer service and advice

Our technical department will answer any other questions about machine repair and maintenance and replacement parts. We will be happy to advise you on the purchase, use and adjustment of products and accessories.

## 7 Parts specifications

### 7.1 Hydraulic diagram

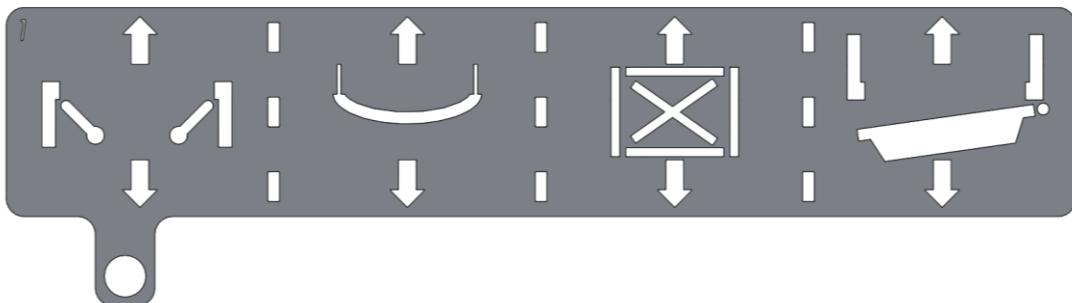


In the picture above you can see the hydraulic diagram of the hoof trimming chute. Each hose is labelled and numbered by the supplier. With this code the exact replacement parts can be ordered from the supplier. Maximum working pressures are pre-set and sealed by the supplier. It is forbidden to break this seal, or to change these working pressures.

## 7.2 Valve control function

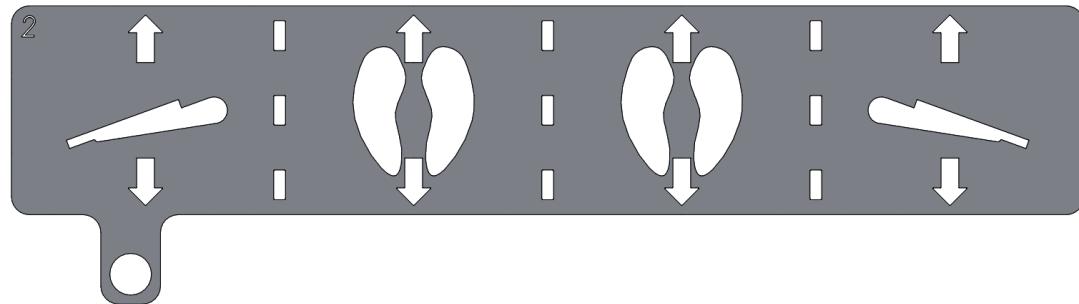
Valve 1 can be recognized by the 1 engraved in the upper left corner of the plate.

Front door      girth      lift function      Rear door



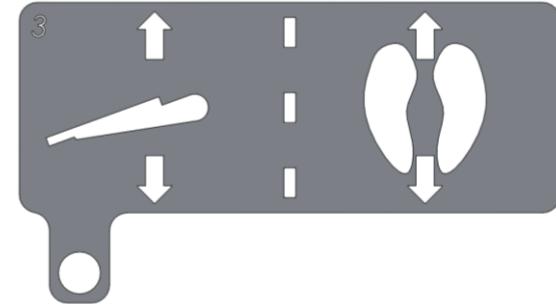
Valve 2 can be recognized by the 2 engraved in the upper left corner of the plate.

Swing gate left rear      Leg winch left rear      Leg winch right rear      Swing gate right rear



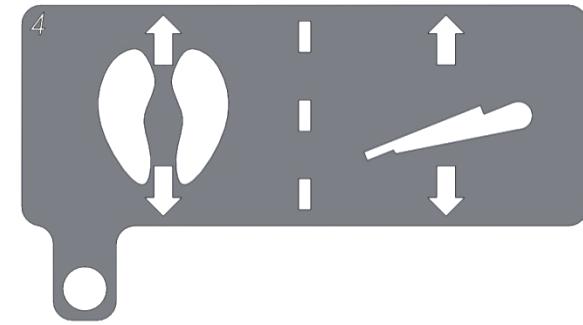
Valve 3 can be recognized by the 3 engraved in the upper left corner of the plate.

Swing gate right front      Leg winch right front

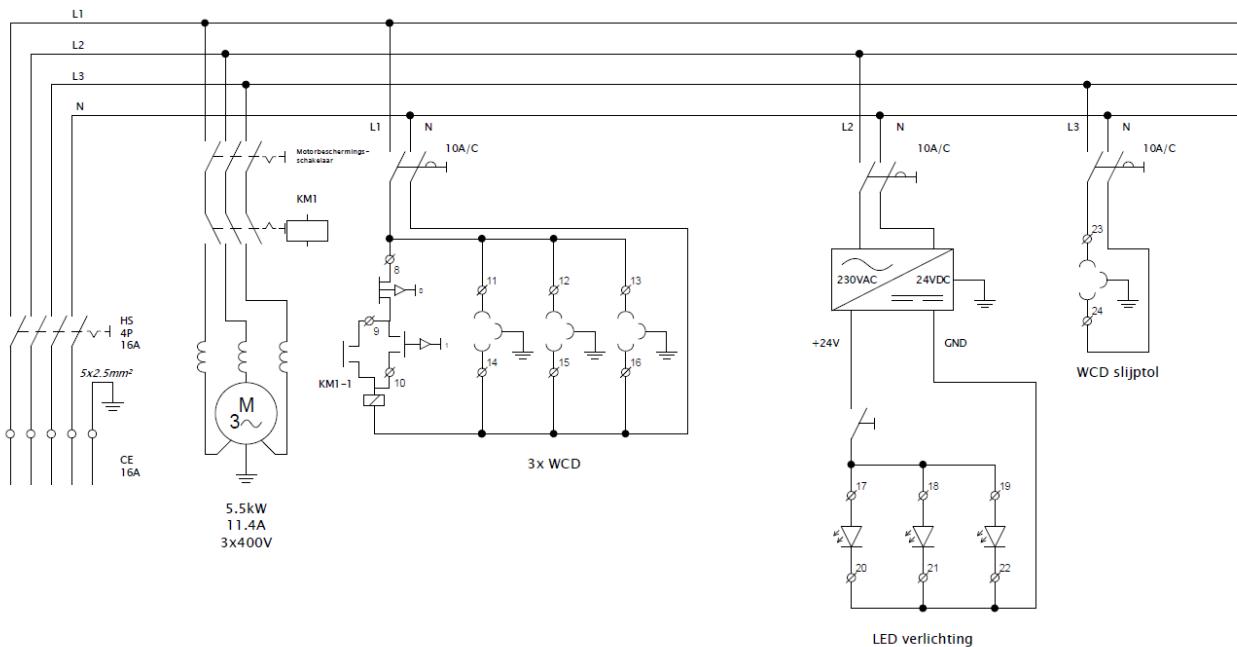


Valve 4 can be recognized by the 4 engraved in the upper left corner of the plate.

Leg winch left front      Folding gate left front



## 7.3 Electric diagram



In the picture above you can see the electrical diagram. The names of the abbreviations are as follows

11.4A - 11.4 Amp setting motor protection switch

M - Electric motor 5 Kilowatt

10A - 10 Amp circuit breaker

KM1- contact takeover (magnetic switch)

On off - on off switch (Electric motor)

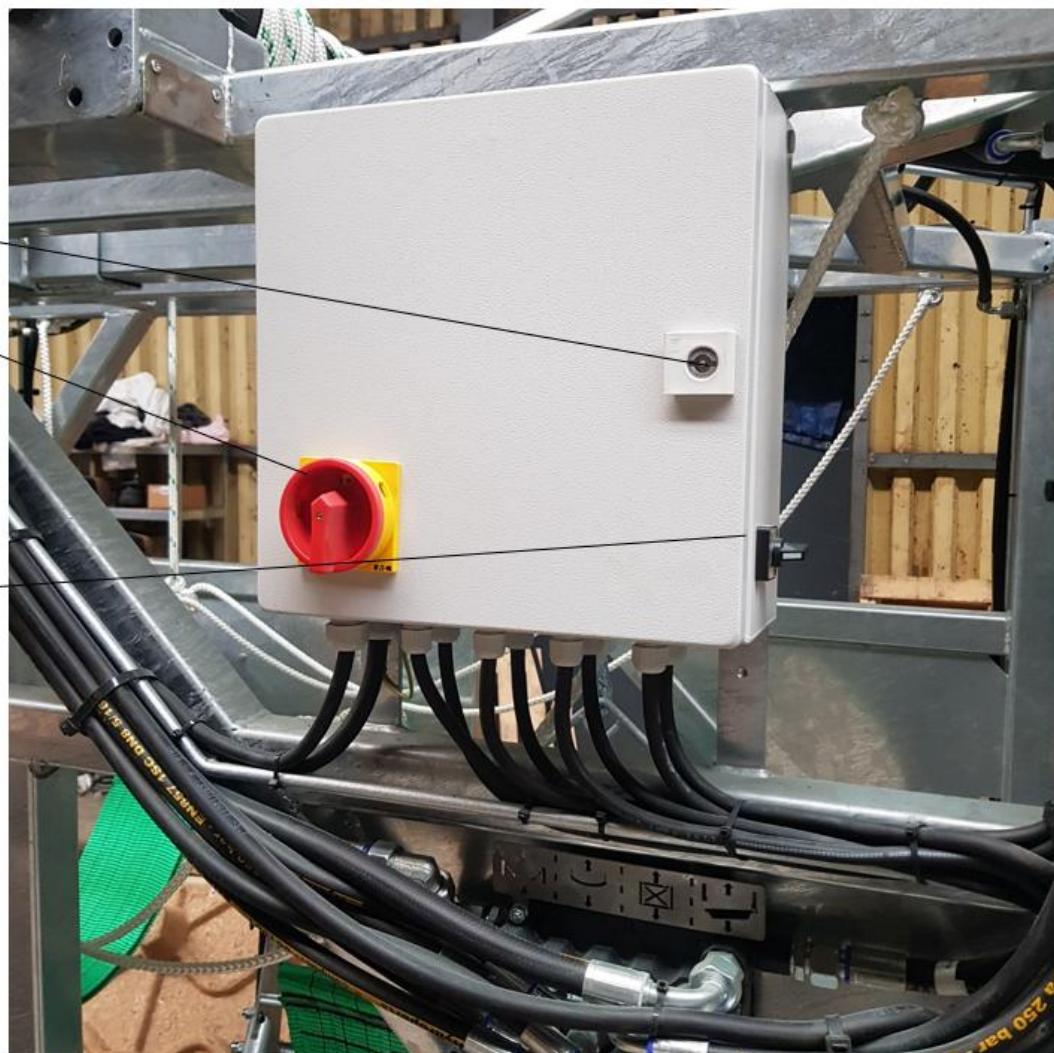
WCD - Wall outlet

230/24 - Power supply 230Volt to 24Volt

L - Work light

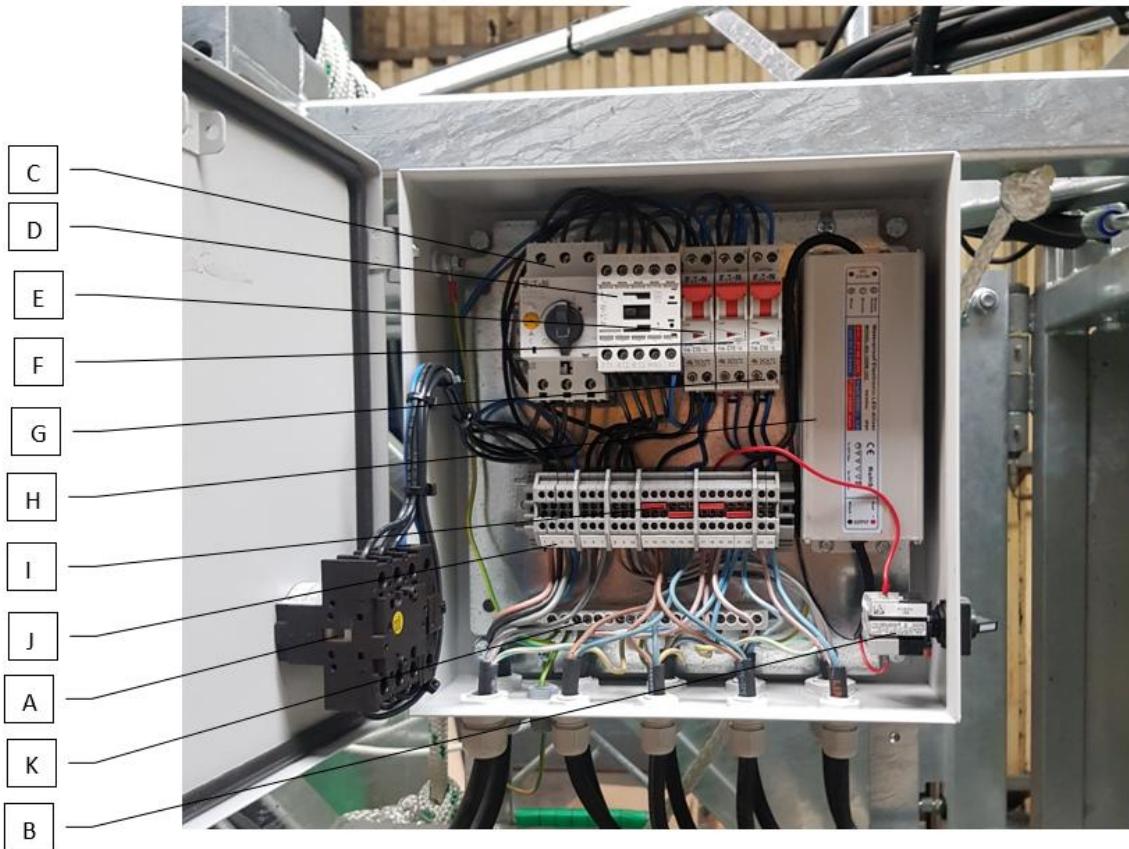
WCD sharpening tool - Power supply sharpening tool on swivel tool holder

## 7.4 Outside electrical box



- A. Main switch, 2 positions machine is de-energized in 0 position
- B. Light switch 2 positions on or off
- C. Lock door of Electrical box

## 7.5 Inside electrical switchgear box



- A. Inside of the main switch
- B. Inside of the light switch
- C. Motor protection switch
- D. Magnetic switch
- E. <sup>1st</sup> circuit breaker (Electric motor socket outlets)
- F. <sup>2nd</sup> circuit breaker (12 Volt power supply)
- G. <sup>3rd</sup> Circuit breaker (Socket rotatable grinder holder)
- H. Power supply 12 Volts for the lamps
- I. Connecting bridges
- J. Numbering as follows:
  - a. 1-4 380Volt power cable to chute  $5x2.5mm^2$
  - b. 5-7 380Volt power supply Electric motor pump  $4x1.5mm^2$
  - c. 8-10 Start/stop Electric Motor  $4x1.5mm^2$ .
  - d. 11-16 230Volt 3x wall socket (WCD) on box  $3x1.5mm^2$   
11&14 WCD right side 12&15 WCD rear door 13&16 WCD left side
  - e. 17-22 12Volt 3x work light 12Volt  $2x1.5mm^2$   
17&20 lamp right side 18&21 lamp rear door 19&22 lamp left side
  - f. 23-24 230Volt power supply grinder  $3x1.5mm^2$
- K. Earthing rail, 1x earthed at the top in Electro box 1x on the frame of the trimming chute.

## **7.6 Wear part specifications**

The ropes, leg bands, girth bands and carabiner hooks have been specially tested on a pull bench. They meet the forces that can arise during use. If degradation occurs due to wear and tear or improper use, these components must be replaced immediately with original supplier replacement parts. This is necessary when the steel parts are bent open or the ropes and straps are torn and/or unravelled.

The rubber mat that is fitted as standard does not necessarily have to be in the hoof trimming chute. However, it is strongly advised to replace it when cracking or similar defects occur. This mat cannot prevent a cow from slipping when entering or leaving the cubicle. But it reduces this chance considerably!

## 8 Disposal of machine or machine parts



*Follow all the instructions as described in this manual, in particular the safety chapter.*

Perform the following steps when getting rid of the machine:

1. Disable the machine and shut it down electrically and hydraulically.
2. Drain and remove all consumables.
3. Scrap the machine according to local regulations.

EC declaration of conformity for machinery (Directive 2006/42/EC, Annex II A.)

CE