English

Valetudo Horse Products

User manual

Valetudo Horse Products BV

FeedingMaster Pro

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Original operating instructions.

Dear customer,

Congratulations on your purchase of the FeedingMaster Pro! We are confident that you and your horse will enjoy the FeedingMaster. It is our goal to develop the most innovative products that promote the well-being of the horse and that of the owner, caretaker or rider.

We want to help you get the most out of your new FeedingMaster and use it safely. This manual explains how to do this, so please read the manual carefully. Please keep this manual carefully.

Pay extra attention to the chapter "Safety instructions" and to sentences preceded by one of the following words:

WARNING: If the indicated instructions are not followed, there is a risk of serious injury to you or your horse.

REMARK: Useful information to help you get the most out of your FeedingMaster, additions to special editions or additions to optional extensions.

We would like to see you satisfied. On our website www.VHProducts.eu you will find various instructional videos and tips that answer the most frequently asked questions. If you cannot find an answer to your question, feel free to contact us at Service@VHProducts.eu. We will do our best to answer your question within 24 hours.

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1. Safety Instructions

All users of the FeedingMaster must be aware of the risks associated with its use and must know all safety precautions to prevent accidents and injury to horses or human beings.

The following important safety precautions must be observed when working with the FeedingMaster:

- The FeedingMaster should be shaded between 10 am and 4 pm.
- The FeedingMaster must not be mounted under obstacles.
- The FeedingMaster may only be connected to a grounded power outlet.
- The FeedingMaster may only be mounted on a stable wall or wall.
- The FeedingMaster must be placed on a dry, flat and hard surface.
- The distance between the FeedingMaster and a side wall is EITHER less than 50 mm OR more than 500 mm.
- The entire electrical installation must be out of reach of your horse or provided with proper protection.
- The FeedingMaster can start automatically, keep your distance from the drive unit.
- The FeedingMaster may only be used with hay with a maximum moisture content of 25%.
- Remove wet rained hay from the FeedingMaster within 24 hours.
- Only use hay that is free of foreign materials.
- Never allow your horse to use the FeedingMaster with anything on its head, such as a halter, bridle or grazing mask.
- Never let your horse use the FeedingMaster with a long loose mane or a long braid.

(Continued safety instructions)

- Never let your horse use the FeedingMaster without a grid.
- Never let horses with a hoof width less than 7 cm use the FeedingMaster.
- Horses are flight animals and can react unpredictably to the FeedingMaster.
- The FeedingMaster can only be used by horses and for the purpose for which the FeedingMaster was designed.
- Never make any adjustments to the FeedingMaster other than described in this user manual.

The FeedingMaster has been developed to imitate the natural nutritional intake of your horse as closely as possible. The FeedingMaster is absolutely no substitute for 24-hour access to a pasture, horses also need exercise and social contacts in addition to hay.

The average values and settings do not apply to each individual horse. Every horse is different and will have to be viewed individually. So, keep a close eye on your horse and be alerted to changes in behavior and condition. If necessary, ask your vet or a nutritionist for advice on what might work best for your horse.

Horses are and remain flight animals, all changes and movements can lead to a sudden attempt to flee. Be aware that placing a FeedingMaster in the horse box and activating the FeedingMaster can lead to flight behavior with danger for horses and people. So, keep a close eye on your horse during the introduction and remove the FeedingMaster if your horse cannot get used to the presence of the FeedingMaster.

Horses are and remain living creatures, each with their own behavior. Deprivation of the hay can lead to aggressive behavior aimed at the FeedingMaster or the environment. The FeedingMaster has been developed to be as safe as possible, but anything can break with danger to horses and people. So, keep a close eye on your horse during the use of the FeedingMaster and remove the FeedingMaster if the horse shows persistent aggressive behavior.

2. Limited Warranty and Liability

We make every effort to ensure that our products are of the highest quality and meet service standards. We warrant the first purchaser of the FeedingMaster that each product will be free from defects in material and workmanship for a limited period of 12 months from the date of the invoice unless otherwise specified.

This warranty does not apply to defects or physical damage caused by direct or indirect misuse, neglect, accident, alterations not made by us or lack of maintenance. This warranty also does not apply to cosmetic defects or physical wear and tear of protective layers that do not adversely affect the functioning of the FeedingMaster.

Horses are flight animals and can react unpredictably to the FeedingMaster. In no event shall we be responsible for any death or injury to person or horse, special or consequential damages caused using the FeedingMaster such as (but not limited to) wear/damage to teeth, colic, cuts, bruises, broken bones or behavioral disorders.

We do not guarantee that the FeedingMaster can prevent or solve all gastrointestinal disorders. The FeedingMaster is only a tool that enables you to optimally care for your horse. You always remain responsible for your feed policy and the choice whether you continue to use the FeedingMaster based on the reactions of your horse.

3. Introduction

3.1 Dry matter

Hay such as hay consists of 2 parts: water and dry matter (the food). Depending on the breed, an adult horse needs about 1.5% of its weight in food. A horse of 500 kg therefore needs (500/100)*1.5=7.5 kg of food in normal circumstances. Normally in this case means that the horse can walk around on a pasture with grass almost all day long. If a horse is also ridden, this is not enough. Additional supplements like pellets can be added to the horse's diet that contain a very high percentage of nutrients.

Grass contains much more water than hay, about 75% is water and 25% is food. So, a horse that only eats grass must eat more kilograms to absorb the same amount of food as a horse that only eats hay.

To obtain the calculated 7.5 kg of feed, a horse must therefore eat (100/25)*7.5=30 kg of grass per 24 hours. Hay consists of approximately 10% water and 90% food. In this case, the horse receives all its nutrition when it eats one (100/90)*7.5=8.5 kg of hay.

3.2 Grass versus hay

While grazing on a pasture, horses cut small pieces of grass with their front teeth. Since grass is mostly water, they get relatively little nutrition. When horses temporarily do not have access to a pasture, hay is a good alternative. Since the hay is loose, a horse can no longer cut off small pieces with its front teeth. Instead, it grabs a tuft of hay with its lips.

This results in two problems: much more nutrition is absorbed by the same volume, since the water has largely been removed from the grass. Also, instead of cutting a small piece, only a tuft can be eaten, resulting in relatively even more nutrition being absorbed per bite.

Although dividing hay into 3 or 4 portions a day is a common practice, it goes against a horse's natural instincts and will eventually lead to digestive problems.

Horses have a relatively small stomach that cannot expand and their stomach acid and bile flow continuously. When horses consume hay in large chunks, it disrupts their natural chewing process and reduces saliva production, often leading to blockage of the esophagus.

The resulting blob of hay is squeezed through the small intestine. Only on the outside of the blob can nutrients be absorbed; inside the blob they remain and eventually enter the large intestine. Harmful bacteria thrive on these nutrients while beneficial bacteria die off. This imbalance makes the colon more acidic, leading to accumulation of lactic acid and gas. The swelling of the gut leads to colic, causing daily stress and discomfort for horses.

3.3 The FeedingMaster

The FeedingMaster is designed to mimic the horse's natural nutritional intake as closely as possible when the horse is stabled or in the paddock. That is, to offer as gently and as consistently as possible the optimal amount of food for the horse for 24 hours a day.

The FeedingMaster presses the hay against the grid with high force. This allows the horse to grab sprigs of hay with its lips without touching the grate with its teeth. The high pressure prevents the horse from processing large tufts of hay.

To prevent eating too quickly, the FeedingMaster inserts short breaks of a few minutes. By setting the length of these pauses, the daily amount of hay can thus be distributed over 24 hours. The break is a maximum of 15 minutes to prevent the stomach from becoming empty. In practice, most horses eat for 1 minute and need somewhere between 5 and 10 minutes of break time.

REMARK: A setting of 1 minute of eating and 4 minutes of not eating is a better setting than 2 minutes of eating and 8 minutes of not eating. In both cases, the horse eats the same, but the first setting distributes the hay even more evenly.

The FeedingMaster can be filled with 10 kg of hay. You determine how much of this amount is distributed over 24 hours, so it is not the case that everything you fill in the FeedingMaster can be eaten in 24 hours. In fact, you determine the rate at which it can be eaten.

The recommendation is to fully fill the FeedingMaster daily, even if your horse is allowed to eat less than 10 kg per 24 hours. The remaining amount of hay will then still be available in the FeedingMaster daily when you refill it completely. However, if you arrive at the stable later than normal then your horse can continue to eat from this reserve, the stomach will never become empty, and the intestines will continue to work optimally.

4. Installation

The instructions in this user manual have been written in as much detail as possible to enable you to install the FeedingMaster correctly. It is also possible that you approach a local technical installation company. No special tools or installation materials are required.

WARNING: The FeedingMaster weighs 70 kg, lift it with two people or use a hand truck for moving.

4.1 Installation Requirements

The FeedingMaster is IP-65 certified. This means that the FeedingMaster is dust-tight and protected against low-pressure water jets such as rain. The FeedingMaster can therefore be mounted both indoors and outdoors. The FeedingMaster must not be mounted in direct sunlight to prevent heating. Place the FeedingMaster in a shaded area between 10:00 AM and 4:00 PM.

WARNING: The FeedingMaster must not be mounted in direct sunlight. The steel can get so hot that your horse burns his lips.

WARNING: Never spray the FeedingMaster with a high-pressure hose. Under high pressure, water will be sprayed into the controller, resulting in permanent damage.

The FeedingMaster must be mounted against a wall. The wall must be solid and made of a hard material such as stone, concrete or hardwood. The wall must be at least 1 meter wide and 1 meter high. The walls must be closed and flat, nothing may hang from or protrude, such as a feeding or drinking bowl. The floor must be hardened, dry and level.

If the side of the FeedingMaster is placed against a side wall, place it 10 mm to **maximum** 50 mm from the side wall. This makes it easier to remove and install the grid.

WARNING: Place the FeedingMaster EITHER less than 50 mm OR more than 500 mm from a side wall otherwise it will create a gap in which your horse could get his leg stuck.

REMARK: Preferably place the FeedingMaster against the front wall of the horse box where the door is also located. Your horse will then stand with its head towards you during feeding, which is safer when you step into the horse box.

WARNING: If your horse is startled during feeding, your horse can throw its head up. Therefore, never place the FeedingMaster under protruding objects such as feeding or drinking troughs to prevent your horse from bumping its head.

4.2 Electrical installation

The FeedingMaster is connected to a grounded socket. The power cable of the FeedingMaster must be routed in the corners of the wall/floor or wall/wall through an impact-resistant installation pipe with a diameter of 16 mm to the socket.

If a grounded outlet is not available, it must be installed by an installation company in accordance with local laws and regulations.

WARNING: The socket must be mounted out of reach of the horse and the power cable must be led through an impact-resistant installation pipe in places where the horse can reach the power cable. If the horse can gnaw on the installation, the horse can be electrified.

WARNING: Do not use a metal conduit to route the power cable to the power outlet. If the power cable is damaged, this tube can become live.

4.3 Unpacking the assembly parts

When assembling the parts to the FeedingMaster, it is necessary to tilt it. To prevent damage, it is advisable to place it on a blanket.

Pull the grid locking pin towards you and tilt the grid fully forward so that it hangs against the rubber protective flap.

Remove the mounting brackets and box of installation material from the FeedingMaster. Tilt the grid slightly away from the rubber protective flap, then tilt the FeedingMaster forward so that it remains at an angle. Lift the controller with the power cord in one hand and tilt the feeding base forward with the other hand.


Place the controller on the ground and tilt the feeding base back. Pick up the controller under the FeedingMaster and put it aside so that the FeedingMaster can tilt back. Tilt the FeedingMaster back, the grid can hit the rubber protective flap, which is no problem.


When the cables between the FeedingMaster and the controller are twisted together, turn the controller over until the cables hang neatly next to each other.

4.4 Side rubber protective flap (optional)

To protect the FeedingMaster from being kicked by a horse, it is standard equipped with a rubber protective flap at the front. Optionally, it is also possible to mount a rubber protective flap on one or both sides.

Pull the grid locking pin towards you and tilt the grid fully forward so that it hangs against the rubber protective flap. Mount the suspension bracket against the side of the FeedingMaster. Both sides of the suspension bracket are the same, it does not matter which side is used. The side to which the rubber plate is attached should be as high as possible. Secure the suspension bracket with four M8x20 flange bolts. The rubber protection flap is mounted with the M8x25 flange bolts. Push a flange bolt through one of the center holes in the rubber protection flap.

Place it in front of the appropriate hole in the suspension bracket and screw it on by hand. Push the remaining four M8x25 flange bolts through the holes in the rubber plate and tighten them by hand. Retighten the flange bolts by half a turn.

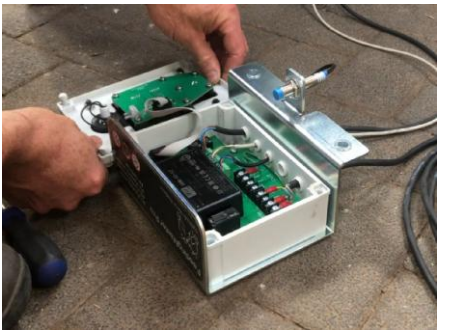
4.5 Extended power cord (optional)

The FeedingMaster is standard equipped with a power cord with a length of 5 meters. If this length is not sufficient for connecting the FeedingMaster, a power cord with a length of 10 meters is available.

WARNING: Do not connect the FeedingMaster with an extension cord. The power plug connections can lead to a short circuit with the risk of fire.

WARNING: Never open the controller when the FeedingMaster is connected to the mains power. Various parts of the controller system carry high voltage, which can cause serious bodily injury.

To install the 10 meters power cord, the standard power cord must be removed. Unscrew the four gray screws on the corners of the controller housing. Remove the front panel and place it next to the controller.

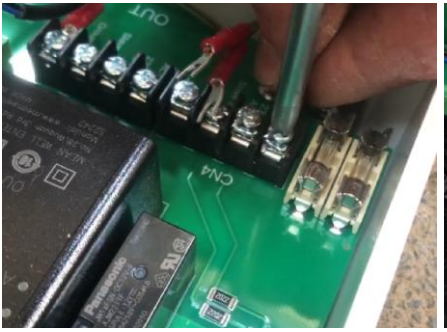


Unscrew the swivel from the strain relief through which the power cord is fed. Unscrew the three connections of the connector on the controller marked CN4 (In) two turns. Remove the spade cable lugs by sliding them out from under the terminals.

Remove the power cord by pulling all three forked cable lugs out of the swivel one after the other. Install the 10 meters power cord by inserting all three forked cable lugs one after the other through the swivel. Slide the fork cable lugs into the terminals of the connector on the controller marked CN4 (In). The third connection marked “Slave” In is not used. Connect the wires as follows:

- The brown wire is connected to the leftmost terminal marked “230VAC-L”.
- The blue wire is also connected to the terminal marked “230VAC-N”.
- The green/yellow wire is connected to the last terminal which is marked “Ground”.

Hand tighten the connections, then turn clockwise 1/8 turn.



Pull the wires up a little while the power cord is being pushed into the swivel. Slide this until about 5 mm of the black jacket comes out of the swivel. Then tighten the swivel firmly by hand. Check whether the power cord is firmly attached by pulling it out of the controller, it must not slide out of the swivel.

Place the front panel in front of the controller. Press the display cable towards the bottom right corner of the housing. Place the front panel on the controller. Check whether it is flush with the housing on all sides. The front panel must touch the housing without resistance, never press it if this is not the case. In that case, check that there are no cables between the front panel and the controller.

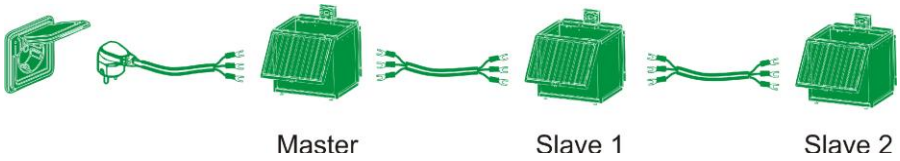
Tighten the four gray screws on the corners of the controller housing by hand. Then turn them clockwise 1/8 turn.

WARNING: Never place the front panel on the controller at an angle. The controller is no longer waterproof, which can lead to malfunctions and damage.

WARNING: Do not overtighten the four gray screws on the corners of the controller housing. The controller is no longer waterproof, which can lead to malfunctions and damage.

4.6 Synchronization cable (optional)

If several FeedingMasters are placed in a paddock, they can offer hay synchronously. The FeedingMasters are connected in series, only the first FeedingMaster is connected to the grounded socket. This FeedingMaster (hereinafter the “Master”) determines when hay is offered and when a break is taken. The first FeedingMaster that is connected to the Master (hereinafter the “Slave”) follows the supply of hay. A second Slave can be reconnected to the first Slave. Up to 4 Slave FeedingMasters can be connected to one Master.



WARNING: Never connect more than 4 Slave FeedingMasters to a Master. The Master is then overloaded with the risk of fire hazard.

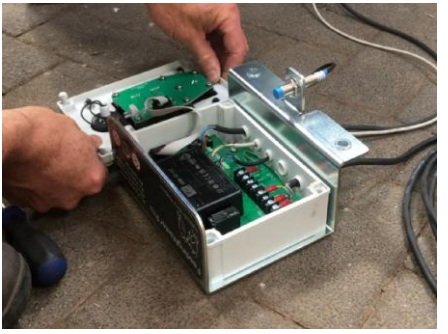
A special synchronization cable is required to connect a Slave. This cable replaces the power cord and the power plug of the Slave and is connected between the Master and the Slave. The Master is therefore provided with two cables: the standard power cord with power plug and the synchronization cable to which the first Slave is connected.

If a second Slave is connected to the first Slave, the first Slave also has two cables: the synchronization which replaces the power cord and connects it to the Master and the second synchronization cable where the next Slave is connected.

4.6.1 Connecting to the Master

WARNING: Never open the controller when the FeedingMaster is connected to the mains power. Various parts of the controller system carry high voltage, which can cause serious bodily injury.

Unscrew the four gray screws on the corners of the controller housing. Remove the front panel and place it next to the controller.



In addition to the gland through which the power cord is fed, a second gland is present for the synchronization cable. It is fitted with an M6 flange bolt to seal it, unscrew the swivel and remove the flange bolt.

Place the synchronization cable by inserting all four fork cable lugs one after the other through the gland. Both sides of the synchronization cable are equal, so it does not matter which side is used.

Unscrew all four connections of the connector on the controller marked CN1 (OUT) by two turns. The ground wire connected to the last terminal may remain. The black sheath of the synchronization cable does not have to slide into the swivel yet, it is easier if the synchronization cable can still slide back and forth.

Slide the forked cable lugs into the terminals of the connector. Connect the wires as follows:

- The brown wire is connected to the leftmost terminal marked “230VAC-L”.
- The gray wire is connected to the terminal marked “230VAC-N”.
- The black wire is connected to the terminal marked “Slave Out”.
- The green/yellow wire is connected with the present ground wire to the last connection marked “Ground”.

If the fork terminal of the yellow/green is difficult to insert into the existing fork terminal of the ground wire, it may help to turn the fork terminal of the ground wire completely so that both thick parts of the fork terminal are opposite each other. Hand-tighten the connections, then turn clockwise 1/8 turn.

Pull the wires up a little while sliding the sync cable into the swivel. Slide this until about 5 mm of the black jacket comes out of the swivel. Then tighten the swivel firmly by hand. Check whether the synchronization cable is secure by pulling it out of the controller unit, it must not slide out of the swivel.

Place the front panel in front of the controller. Press the display cable towards the bottom right corner of the housing. Place the front panel on the controller. Check whether it is flush with the housing on all sides. The front panel must touch the housing without resistance, never press it if this is not the case. In that case, check that there are no cables between the front panel and the controller. Tighten the four gray screws on the corners of the controller housing by hand. Then turn them clockwise 1/8 turn.

WARNING: Never place the front panel on the controller at an angle. The controller is no longer waterproof, which can lead to malfunctions and damage.

WARNING: Do not overtighten the four gray screws on the corners of the controller housing. The controller is no longer waterproof, which can lead to malfunctions and damage.

4.6.2 Connecting the Slave

If there are places between the Master and the Slave where your horse can reach the synchronization cable, the synchronization cable must be protected by an impact-resistant installation tube with a diameter of 16 mm. Then first place the Master in place as described later in this chapter. Feed the synchronization cable through the impact-resistant installation tube until it is available at the place where the Slave will be placed.

WARNING: Do not connect the Master's power cord to a grounded power outlet while installing the Slave. Several wires of the synchronization cable carry high voltage which can cause serious injury.

To connect the Slave to the synchronization cable, the standard power cord must be removed. Unscrew the four gray screws on the corners of the controller housing. Remove the front panel and place it to the right of the controller. Unscrew the swivel from the strain relief through which the power cord is fed. Unscrew the four connections of the connector on the controller marked CN4 (In) two turns, also the third connection which is not provided with a wire.


Unscrew the swivel from the strain relief through which the power cord is fed. Unscrew the three connections of the connector on the controller marked CN4 (In) two turns. Remove the spade cable lugs by sliding them out from under the terminals. Remove the power cord by pulling all three forked cable lugs out of the swivel one after the other.

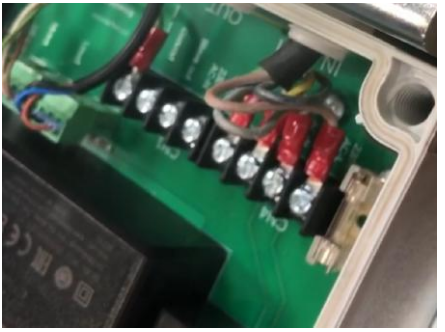

Place the synchronization cable by inserting all four fork cable lugs one after the other through the gland. Both sides of the synchronization cable are equal, so it does not matter which side is used.

Slide the fork cable lugs into the terminals of the connector on the controller marked CN4 (In). Connect the wires as follows:

- The brown wire is connected to the leftmost terminal marked “230VAC-L”.
- The gray wire is connected to the terminal marked “230VAC-N”.
- The black wire is connected to the terminal marked “Slave In”.
- The green/yellow wire is connected to the last terminal which is marked “Ground”.

Hand-tighten the connections, then turn clockwise 1/8 turn.

Pull the wires up a little while sliding the sync cable into the swivel. Slide this until about 5 mm of the black jacket comes out of the swivel. Then tighten the swivel firmly by hand. Check whether the synchronization cable is secure by pulling it out of the controller unit, it must not slide out of the swivel.



On the Slave, another FeedingMaster can be connected using a synchronization cable to the connections of the connector on the controller which is marked with CN1 (Out). In that case, follow the instructions as indicated in the chapter 'Connecting to the Master' to connect the synchronization cable to the Slave.

Place the front panel in front of the controller. Push the display cable towards the lower right corner of the housing. Place the front panel on the controller. Check whether it is flush with the housing on all sides. The front panel must touch the housing without resistance, never press it if this is not the case. In that case, check that there are no cables between the front panel and the controller.

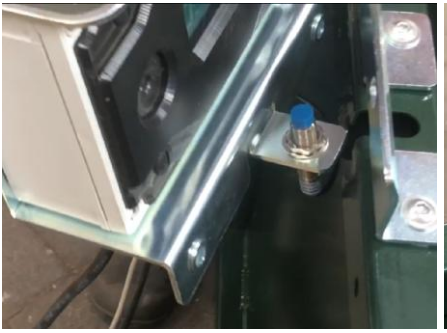
Tighten the four gray screws on the corners of the controller housing by hand. Then turn them clockwise 1/8 turn.

WARNING: Never place the front panel on the controller at an angle. The controller is no longer waterproof, which can lead to malfunctions and damage.

WARNING: Do not overtighten the four gray screws on the corners of the controller housing. The controller is no longer waterproof, which can lead to malfunctions and damage.

4.7 Assembling the parts

Position the controller by sliding the grid sensor into the top box girder at the back of the FeedingMaster. Secure it with two countersunk M8x60 bolts, hand tighten as far as possible. Tighten them with the supplied Allen key.




Place a mounting bracket against the back of the FeedingMaster. Secure this first with a countersunk M8x60 bolt, tighten it by hand as far as possible. Then place an M8x20 flange bolt in the hole just above the feeding base, tighten it by hand as far as possible.


Install the second M8x60 countersunk bolt and the second M8x20 flange bolt. Repeat for the other mounting bracket. Fold the feeding base forward and place the M8x20 flange bolts in the bottom holes of the mounting brackets. Tighten these by hand as far as possible and tighten with the Allen key.

4.8 Power cord

Determine the correct route for the power cord from the FeedingMaster to the grounded outlet. If the power cord is mounted within reach of your horse (inside **and** outside the horse box), you must lead the power cord through an impact-resistant PVC installation pipe. Fix the installation pipe well with brackets, always place it at an angle from wall to floor or wall to wall. Run the installation tube to the center behind the FeedingMaster to ensure that your horse can never reach the power cord.

To pass the power cord through the installation conduit, it is necessary to remove the power plug. To do this, loosen the locking screw in the housing, use a well-fitting Phillips screwdriver. Then pull the power plug out of the housing. This might not go smoothly. If the locking screw moves, it is not loose enough or it may help to lift it slightly using a fine flat screwdriver.

Unscrew and remove the two screws from the strain relief. Loosen the three screws that secure the connecting wires to the power plug by one turn. The power cord can be removed.

4.9 Placing FeedingMaster

Place the FeedingMaster at the chosen location 50 cm from the wall against which it will be mounted. To mark the mounting holes on the wall, the FeedingMaster must be pushed against the wall. It is not yet necessary to install the power cord. This can be temporarily placed on the grid of the FeedingMaster so that it does not get stuck while marking the mounting holes.

The FeedingMaster is equipped with adjustable feet to compensate for small irregularities of up to 15 mm. Check whether these are all fully rotated in the FeedingMaster.

Slide the FeedingMaster against the wall. Check with a spirit level that the FeedingMaster is level both side to side and front to back.

If not, determine which angle is the highest. The other corners can be raised using the adjustable feet. Start with a corner that is next to the highest corner. Place the spirit level between the two corners and turn the adjustable leg clockwise, seen from above, until this side is level.

The adjustable leg can be turned by hand, it is also possible to place a 10 mm wrench just above the black foot and turn the adjustable foot with it. Repeat for the other corner next to the highest corner and finally the last corner. The locking nuts of the adjustable feet can now be tightened against the underside of the FeedingMaster.

The holes in the mounting brackets have been extended to accommodate deviations during drilling. Mark the center of the hole on the wall where the holes are to be drilled.

Slide the FeedingMaster away from the wall to drill the holes.

4.9.1 Mounting on stone wall

Drill the holes with a hammer drill equipped with a 12 mm masonry drill bit. Drill the hole 80 mm deep and blow dust out of the hole well. Insert the supplied SX-12 wall plugs into the holes and use a hammer to drive them all the way into the hole. The collar of the plug must be flush with the wall. Later use the 8x50 mm lag screws for fixing.

4.9.2 Mounting on wooden wall

Drill the holes with a drill fitted with a 6 mm wood drill bit. Drill the hole 25 mm deep and blow dust out of the hole well. Later use the 8x25 mm lag screws for fixing.

REMARK: Before drilling, check whether the lag screws to be used are shorter than the thickness of the wall. Place a piece of tape around the drill at the required depth relative to the tip of the drill. During drilling you can then see how far you still must drill, this prevents you from drilling too deep and possibly going through the wall.

WARNING: If the wall is thinner than the length of the supplied lag bolts, shorter lag bolts may not be used, there is a chance that the FeedingMaster will come loose from the wall when your horse starts to pull the FeedingMaster. If the wall is thinner, drill the hole through the entire wall and fix the mounting brackets with longer hexagonal bolts, which are fitted with a washer and lock nut at the back of the wall.

4.9.3 Fixing to the wall

Place the FeedingMaster 50 cm in front of the wall against which it will be mounted. Now feed the power cord through the impact-resistant PVC installation pipe or through the hole in the horse box wall. Make sure the power cord is not tight.

REMARK: This extra space of the power cord is necessary to remove the FeedingMaster from the wall during service without having to remove the power cord.

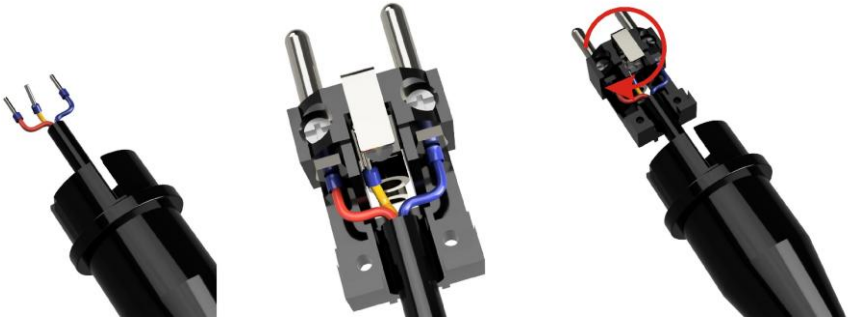
Check whether the cables between the controller and the FeedingMaster have been fed in the FeedingMaster as far as possible. Slide the FeedingMaster against the wall again and screw it down using the lag bolts and M8 washers.

4.10 Fitting the power plug

If the power plug has been removed to lead the power cable through the impact-resistant installation pipe, it must now be mounted again.

Feed the power cable through the housing of the power plug. Push the pinched plug of the green/yellow wire as far as it will go **left** between the metal grounding plate and the screw, this is the middle contact of the power plug. Tighten the screw by hand, then tighten it an additional 1/2 turn. When you pull the power cable, it must not come loose from the power plug.

Push the pinched plug of the brown wire as far as possible into the leftmost contact pin, the plastic housing of the pinched plug must rest against the contact pin of the power plug. Tighten the screw by hand, then tighten it an additional 1/2 turn. Repeat with the blue wire and the rightmost contact pin.



Place the red strain relief over the outer sheath of the power cable, the convex side must point away from the power cable. Place and tighten the two screws of the strain relief so that the power cable can slide. Push the power cable towards the contacts of the power plug. The outer casing must be visible at least 2 mm behind the strain relief. Tighten the two screws of the strain relief firmly, when the power cable is pulled, no movement of the wires should be visible.

There is a hole in the middle grounding plate at the front of the power plug. Rotate the housing of the power plug so that the locking screw in the housing is at this hole, then slide the power plug into the housing. Then tighten the locking screw.

5. First usage

Before using the FeedingMaster, it is wise to carefully read the following general explanation of the operating system.

5.1 The programs

The FeedingMaster has 4 programs which can be selected for use. The active program is shown on the display with a 'P' in front of the program number. If the FeedingMaster is connected as a Slave with a synchronization cable, the active program will be shown with a 'C' on the display as soon as the Master starts executing P1 or P2.

The following programs are available:

- P1/C1, feeding takes place during the set time.
- P2/C2, waiting for the set time.
- P3, feeding is blocked.
- P4, settings.

P1 and P2 will be the most used programs to feed the horse as evenly and calmly as possible. The FeedingMaster cycles automatically between the two programs.

P3 can be used if your horse is temporarily not allowed to eat, for example after anesthesia for dental treatment. You must determine when the horse can be fed again, at that time you can select P1 (or P2).

P4 does not perform any function. This program is only used to make various settings available.

5.2 The Controls

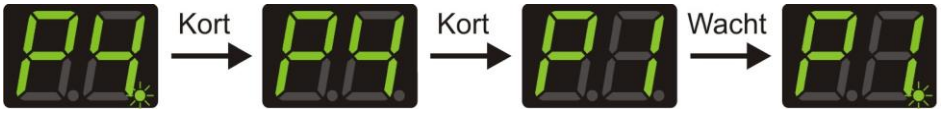
The selection of the program or the making settings is done with the help of a button on the controller of the FeedingMaster. This button is placed to the right of the display out of reach of a horse's nose.

5.2.1 Selecting a program

If the FeedingMaster can accept a new command, the dot behind the active program will flash. By briefly pressing the button you switch between the different programs.

When the desired program is shown in the display, stop pressing the button. After a short while the program will be executed.

As an example, P4 is the active program and you want to select P1:

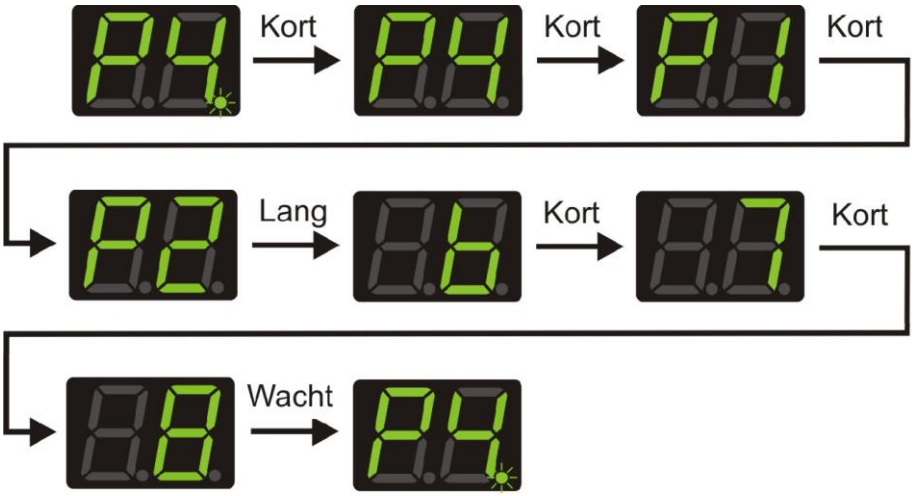


5.2.2 Adjusting settings

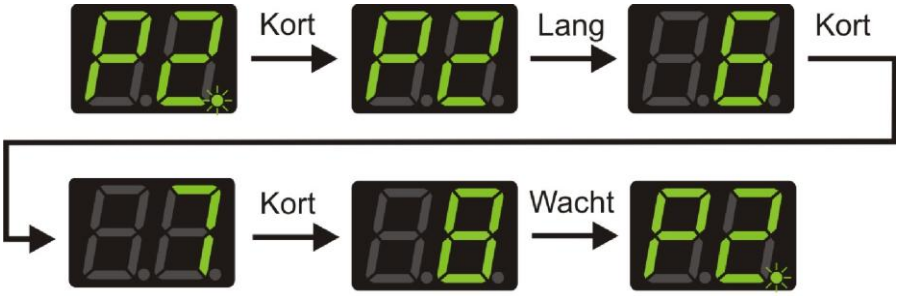
To change or read the setting of a program, press and hold the button. After 2 seconds the current set value is shown on the display, you can then release the button.

The setting can be changed by briefly pressing the button. Holding the button automatically increases the value in small increments. When the desired setting is reached, release the button or stop pressing the button. After 2 seconds the setting is saved and the current program is displayed again.

For example, you want to change the time your horse has to wait before eating again from 6 to 8 minutes. The currently selected program is P4 (no action):



In the same example, if the active program is P2, activate the settings by pressing briefly and then holding the button:



5.3 Settings

5.3.1 P1

In P1 you can set the time for how long your horse can eat. This can be set from 0.5 to 5 minutes with a resolution of 0.1 minute (6 seconds).

For horses that use a FeedingMaster in a closed space such as a horse box, it is advisable to set this time to 1 minute. If your horse has a free range, for example in a paddock, it is advisable to set this time to 1.5 minutes so that there is some time to walk to the FeedingMaster.

5.3.2 P2

In P2 you can set the time that your horse must wait until it is allowed to eat again. This can be set from 1 to 15 minutes with a resolution of 0.1 minute (6 seconds) between 1 and 10 minutes and a resolution of 1 minute between 10 and 15 minutes.

For most horses, a good starting point is 7 minutes. Depending on whether your horse eats too little or too much, this time can be shortened or extended.

5.3.3 P4

In P4, various settings can be made that influence the operation of your FeedingMaster. There are also several service programs in P4 that can be executed during maintenance of your FeedingMaster. The active setting or the service program to be executed is shown on the display with an 'S'. The following choices are available:

- S1, which Program is started when the FeedingMaster is powered.
- S2, setting the force with which the hay is pressed against the grid.
- S3, enable or disable the eating behavior sensor.
- S4, setting the number of kilograms of hay per 24 hours.
- S5, enable or disable the AutoTune option.
- S6, display diagnosis data.
- S7, calibrating the feeding base height sensor.

5.3.3.1 P4, S1: Startup program

S1 is used to set which program the FeedingMaster executes as soon as the mains power is present. This can be if you put the mains power plug in a grounded socket yourself, but also if the mains power is present again after a power failure.

Due to safety requirements, this is set to P4 (no action) by default. We recommend setting this to P1 so that feeding resumes when the mains power is restored.

WARNING: If you select program P1, P2 or P3 to be executed after a power failure, the FeedingMaster drive unit can be switched on automatically as soon as the power failure is restored. This can lead to dangerous situations if you are carrying out maintenance on the FeedingMaster at that time.

5.3.3.2 P4, S2: Hay pressure

During feeding, the hay is pressed firmly against the grid. This raises the hay between the bars so that your horse can grab it with his lips and prevents your horse from touching the grid with his teeth. The pressing also makes it more difficult to pull tufts of hay out of the FeedingMaster so that the eating speed is as low as possible.

The hay pressure is set to the lowest position by default. If the FeedingMaster is filled with long hay (longer than 20 cm) or the horse very conveniently pulls large tufts of hay from the FeedingMaster, the hay pressure can be set higher so that the eating speed is slowed down.

This can be set in S2. By default, this setting is set to the lowest pressure (LO), this can be changed to a higher pressure (HI). After changing the setting or after placing the grid, the hay is first pressed against the grid with maximum pressure to calibrate the pressure. The hay will then be pressed with the new pressure.

If you want to test the set pressure after changing it, you can select P1. Once the hay has been compacted and the calibration is complete, select P2 to lower the hay. Then choose P1 which will use the new pressure setting.

5.3.3.3 P4, S3: Eating behavior sensor

The FeedingMaster is equipped with a sensor that is used to determine the eating behavior of your horse. If your horse does not use the FeedingMaster for half an hour, it will remain in P1. Only when the FeedingMaster registers that your horse is actively eating will it start executing waiting times again.

However, extreme weather conditions such as ice or snow can prevent the operation of the sensor from being disrupted. It is then possible to temporarily switch off the sensor. In S3 this can be set.

By default the sensor is off (0), it can be switched on (1).

REMARK: If multiple FeedingMasters are linked together to provide hay synchronously, it is not possible to use the eating behavior sensor as it is not possible to determine which horse eats from which FeedingMaster. In this case the sensor must be switched off.

5.3.3.4 P4, S4: Kilogram per 24 hours

By varying the times of feeding and waiting, you can regulate how much hay your horse can eat per 24 hours. It is possible to adjust this yourself over several days, but the FeedingMaster is equipped with an AutoTune option to automatically find the right settings and to adjust them continuously depending on the eating behavior of your horse.

To make this possible, you do not enter times in S4, but the number of kilograms of hay that you want to distribute over 24 hours. This can be set between 4 and 24 kg with a resolution of 0.5 kg between 4 and 10 kg and a resolution of 1 kg between 10 and 24 kg.

5.3.3.5 P4, S5: AutoTune

The AutoTune functionality can be enabled in S5 (1), by default it is disabled (0). When the AutoTune is switched on, the sensor that determines the eating behavior of your horse is also switched on.

REMARK: If multiple FeedingMasters are linked together to provide hay synchronously, it is not possible to use AutoTune as it is not possible to determine which horse eats from which FeedingMaster. In this case, AutoTune must be disabled.

5.3.3.6 P4, S5: Display diagnostic data

When you contact us for support, it is useful if we know some data and settings of your FeedingMaster. To make this easy, this service program can be started, which displays the necessary information in succession on the display. If you send us a film recording of this, we can answer your questions faster and better. This is not necessary for every question, if it is necessary, we will ask for it.

5.3.3.7 P4, S6: Feeding base height sensor calibration

After replacing the height sensor of the feeding base during maintenance, the FeedingMaster must be recalibrated to determine the lowest and the highest position of the feeding base. This calibration routine is explained in detail in the Service Manual that comes with the height sensor.

To prevent accidental activation of the calibration routine, it must be confirmed after selection. After selection, a 0 will be shown in the display. If you do not change this, the routine will be aborted after 2 seconds, and no changes will be made.

5.4 Powering the FeedingMaster

As soon as the mains power plug is placed in a grounded socket, the FeedingMaster will switch on. When the FeedingMaster starts up, the installed software version is displayed which consists of two numbers separated by a dot. Once the FeedingMaster is operational, the current active program will be displayed. When you power up the FeedingMaster for the first time this will be P4 (no action).

REMARK: In case of a service request you may need to have this version number at hand, it is advisable to write this number down in this manual.

5.5 Filling the FeedingMaster

To fill the FeedingMaster, pull the locking pin towards you and tilt the grid towards you until it hangs against the rubber protective flap. As soon as you lift the grid, the drive unit of the FeedingMaster switches on and the feeding base will move to the filling position. The display will show the message below to indicate that the FeedingMaster is blocked during filling.

WARNING: Stay out of reach of the feeding base while it is in motion to avoid serious injuries due to the risk of jamming.

As soon as the feeding base has come to a standstill, you can fill the FeedingMaster with hay. It is important that you shake the hay loose before placing it in the FeedingMaster.

REMARK: By using loose hay, the hay can be distributed more evenly against the grid. Your horse can eat more easily and the FeedingMaster can more reliably analyze the eating behavior of your horse.

REMARK: By shaking the hay loose, you immediately check whether it is free of materials that your horse cannot or may not eat.

WARNING: Never fill the FeedingMaster when your horse is in the horse box, in that case the grid has been removed. There is a chance that your horse will get stuck in the FeedingMaster with the risk of panic reactions and injury.

WARNING: The hay must be free of foreign materials such as stone, wood, cans, sharp branches and so on. If this material is placed in the FeedingMaster, it will be pressed against the grid during feeding. This can result in serious injury to your horse's lips.

WARNING: Only use hay or silage with a maximum moisture percentage of 25%. Remove wet hay from the FeedingMaster within 24 hours to prevent mold or fire due to brood.

Press the hay with both hands. For optimum filling, press hay towards the corners of the FeedingMaster. The FeedingMaster is maximally filled when the hay is up to the top edge of the FeedingMaster after compacting.

REMARK: If after filling the hay rises above the top edge of the FeedingMaster, it is wise to remove some hay. You can press down the excess hay with the grid, but in that case the FeedingMaster cannot pause if your horse eats too quickly.

REMARK: Even if your horse is allowed to eat less than 12 kg of hay per 24 hours, it is wise to fill the FeedingMaster completely every day. After all, you can set the maximum amount your horse can eat. By filling the FeedingMaster to the maximum, you can be sure that your horse will never run out of hay, even if you suddenly arrive at the stable a little later than usual.

Remove any hay from the edges. Tilt the grid back up and let it fall gently over the strike plate until you hear a clear 'click' from the locking pin. Check that the grid is secure by pulling it up. As soon as you press the grid and click the locking pin into place, the FeedingMaster will run the activated program again. If this is P1, the FeedingMaster will compact the hay and display how many kilograms of hay have been added since the last filling.

REMARK: The FeedingMaster indicates how many kilograms of hay have been added since the last filling and not the total amount of hay present. If you refill the FeedingMaster around the same time every day, this information gives a good indication of how much your horse has eaten in the last 24 hours. This should be about the same daily under constant conditions. A clear deviation is usually the first indication that something is wrong with your horse.

5.6 The acquaintance

Set P1 to the maximum time of 5.0 minutes, set P2 to the minimum time of 1.0 minutes. As a result, the feeding base moves the least and your horse has the most time to get used to the FeedingMaster. Cover the grid with a thin layer of loosely shaken hay, most horses cannot resist this and will quickly become interested.

Please read the warnings below carefully before placing your horse in the horse box with the FeedingMaster.

WARNING: Never allow your horse to use the FeedingMaster with a halter or bridle. There is a chance that the halter or bridle will get caught on something with the risk of panic reactions and injury.

WARNING: Never let your horse use the FeedingMaster with a loose, long mane or long braid. There is a chance that the mane or braid will become entangled in something with the risk of panic reactions and injury. If your horse has a long mane, braid it in such a way that it does not hang loose in the FeedingMaster.

WARNING: Never allow your horse to use the FeedingMaster without a grid. There is a chance that your horse will get stuck in the FeedingMaster with the risk of panic reactions and injury.

WARNING: Never let horses with a hoof width less than 7 cm use the FeedingMaster. There is a chance that your horse's hoof will get stuck in the FeedingMaster, causing panic reactions and injury.

WARNING: Be aware that the change by placing the FeedingMaster in the horse box can lead to flight behavior of your horse with danger for horses and persons.

WARNING: Be aware that the sound and the movement of the feeding base can lead to flight behavior of the horse with danger for horses and people.

WARNING: Never grab the grid with your hand(s) when the drive unit is in operation, in that case your fingers could become trapped between the grid and the feeding base.

WARNING: Never stay with your horse in the horse box, any movement of the FeedingMaster can startle your horse, which can lead to flight behavior of your horse, endangering horses and persons.

WARNING: Keep observing your horse until your horse independently eats hay from or from the FeedingMaster and he is not startled by the noise the FeedingMaster makes while moving the feeding base.

Then place your horse in the horse box, be prepared that usually your horse's first reaction is a startle reaction. If your horse doesn't want to go into the stable, give your horse time to make the right choice. Reward him as soon as he enters the horse box, take off his halter and leave the horse box.

Observe your horse's behavior outside the horse box. Most horses quickly make the connection between the FeedingMaster and food. In general, horses fully accept the FeedingMaster within a few hours. In case your horse needs more time, you can continue to offer hay on top of the grid.

As soon as your horse starts to eat calmly when the FeedingMaster offers the hay, set P1 to 1.0 minute. If your horse has a free range to, for example, a paddock, set P1 to 1.5 minutes to give your horse time to walk to the FeedingMaster when hay is offered.

Set P2 to 7.0 minutes, for most horses this is a good starting point.

REMARK: In the first days it is possible that your horse shows restless behavior when the hay is removed. Then do not set P2 shorter, this prevents your horse from being rewarded with hay for his restless behavior. Only when your horse remains calm during the lowering of the feeding base can you set P2 shorter if necessary.

5.7 The first days

In the first days of use, try to top up the FeedingMaster with hay every 24 hours. This gives you the best insight into what your horse eats per 24 hours and what the correct setting of the FeedingMaster is.

Carry out daily maintenance according to chapter 7.1. Fill the FeedingMaster when your horse is out of the horse box. Shake the remaining hay loose and distribute it evenly over the feeding base. Then fill the FeedingMaster completely with fresh hay and replace the grid. Always check that the grid is secure by pulling it up firmly after the locking pin has clicked into the strike plate. The locking pin must lock with a clear click.

WARNING: Never fill the FeedingMaster when your horse is in the horse box, in that case the grid has been removed. There is a chance that your horse will get stuck in the FeedingMaster with the risk of panic reactions and injury.

Adjust P2 as follows:

- If your horse has eaten too little in the past 24 hours, shorten the waiting time by 1 minute.
- If your horse has eaten too much in the past 24 hours, extend the waiting time by 1 minute.

Repeat this every 24 hour until the correct amount of hay has been eaten.

5.8 Daily use

Carry out daily maintenance according to chapter 7.1. Shake off the remaining hay and distribute it evenly over the feeding base. Then fill the FeedingMaster completely with fresh hay and replace the grid. Always check that the grid is secure by pulling it up firmly after the locking pin has clicked into the strike plate. The locking pin must lock with a clear click.

WARNING: Each horse is different and will have to be viewed individually. So keep a close eye on your horse and adjust the settings to suit the behavior and condition of your horse.

5.9 Empty Detection

If the FeedingMaster is empty, no more waiting time will be executed, the FeedingMaster will continue to execute P1. This will prevent your horse from encountering an empty FeedingMaster when your horse reacts to the feeding base rising. As soon as the FeedingMaster is refilled, the feeding cycle is resumed (starting with P1), so no additional actions are required.

You can fill the FeedingMaster to the maximum, even if your horse is only allowed to eat a few kilograms per 24 hours, after all, you regulate the quantity supplied yourself. This prevents an empty FeedingMaster, an empty stomach and the stopping of your horse's digestion.

5.10 Eating behavior sensor

The FeedingMaster is equipped with a sensor that is used to determine the eating behavior of your horse. This sensor reacts to the heat that your horse radiates. As soon as the sensor detects your horse, the middle dot on the display lights up.

5.11 AutoTune

With the AutoTune function it is possible to find the right settings automatically and to adjust them continuously depending on the eating behavior of your horse. You determine the feeding time yourself, which is set in P1. It is recommended to set P1 to 1.0 minutes when the FeedingMaster is placed in a horse box so that your horse is always near the FeedingMaster. If your horse has a free range to, for example, a paddock, set P1 to 1.5 minutes to give your horse time to walk to the FeedingMaster when hay is offered.

You can set P1 as you wish, the above is advice based on user experiences. The AutoTune function regulates P2 within the limits of P2 (1..15 minutes). If this is not possible with the setting of P1, an error will be shown on the display after several attempts. If you then adjust P1, it will try to adjust P2 again. The FeedingMaster starts with the current setting of P2, adjusts it daily and stores it in the controller. The amount of the daily adjustment depends on the deviation from the desired amount of hay.

You can read P2 daily by selecting P2 and holding the control button. After 2 seconds the current set value will be shown on the display, you can then release the button.

REMARK: If you change any setting, AutoTune will restart with the current value of P2. After 24 hours have passed, this will be adjusted (if necessary).

In setting S4 in program P4 you set the desired number of kilograms of hay per 24 hours, if your horse always has access to the FeedingMaster during the 24 hours.

As an example: the FeedingMaster is in a walk-in barn. Your 600 kg horse may eat 9.0 kg of hay per 24 hours. Then set S4 in P4 to 9.0.

As an example: the FeedingMaster is in a horse box. Your 600 kg horse may eat 9.0 kg of hay per 24 hours. However, your horse is on a pasture with nutritious grass for 12 hours a day so that half of its required nutrition comes from the pasture. Therefore, you still set S4 in P4 to 9.0. The FeedingMaster regulates P2 in such a way that 4.5 kg of hay can be eaten in the 12 hours that your horse is present in the horse box.

As an example: the FeedingMaster is in a horse box. Your 600 kg horse may eat 9.0 kg of hay per 24 hours. However, your horse is on a meadow with very poor grass for 12 hours a day, such as in autumn or winter. Since there is no more food in it, it is necessary that your horse can eat 9.0 kg of hay in the 12 hours that your horse is present in the horse box, so 18 kg of hay in 24 hours. You then set S4 in P4 to 18.0 so that the FeedingMaster can distribute the 9 kg of hay over 12 hours.

The AutoTune function can control P2 under certain conditions. The following conditions apply:

- Your horse must have access to the FeedingMaster for at least 6 hours per 24 hours. Interruptions for training or paddock are not a problem.
- Your horse's eating rate must be a minimum of 0.1 kg/hour and a maximum of 1.25 kg/hour.
- P2 is a minimum of 1 minute and a maximum of 15 minutes with a resolution of 0.1 minute over the entire range.

5.12 Synchronous feeding

If multiple FeedingMasters are linked together to offer hay synchronously, the FeedingMaster which one is connected to mains power determines when the hay is offered (the Master).

To adjust the correct amount of hay during the first days of use, it is therefore not necessary to update P1 and/or P2 on all connected FeedingMasters (the Slaves).

However, once the correct feeding and non-feeding times have been found, it is advisable to copy these settings in all FeedingMasters. The reason for this is that each FeedingMaster can take over the task as Master if a malfunction occurs with another FeedingMaster. By copying the settings, the hay dosage remains the same.

The eating behavior sensors of all FeedingMasters must be switched off. This is to prevent a FeedingMaster from remaining in P1 if it has not been used for half an hour. In that case, connected FeedingMasters will no longer receive a signal to switch to P2 and will report an error from the Master (E7).

The AutoTune function of all FeedingMasters must be disabled. AutoTune assumes that one horse uses the FeedingMaster. If multiple horses use the FeedingMaster, it is not possible to determine which horse eats from which FeedingMaster and therefore it is not possible to adjust this automatically.

6. Faults

If an error occurs during any FeedingMaster action, this will be shown on the display with an 'E' followed by a number. The error message is displayed alternately with the active program (e.g. P2 -> E1 -> P2 ->E1, etc.). The FeedingMaster automatically retries the action after some time. If it is possible at that time, the error message will still be displayed.

The automatic repair is nice for your horse, but it may be an indication that your FeedingMaster needs to be serviced soon, especially if the error repeats itself more often. If the FeedingMaster has been able to repair itself, the error message can be removed by briefly pressing the controller button.

If an error message is displayed, try to solve the error according to the chapter below. If it is not possible to solve the malfunction, please contact us via Service@VHProducts.eu. Please state the error code that is displayed on your FeedingMaster. We will then contact you as soon as possible to solve the problem.

WARNING: While troubleshooting possible malfunctions, the correct operation of the FeedingMaster cannot be guaranteed. Therefore, be extra alert to sudden movements of the drive unit! Remove the mains power plug from the grounded socket if you do not want to take any risks.

WARNING: If a fault cannot be rectified, switch off the FeedingMaster by removing the mains power plug from the grounded socket. Leave the grid on the FeedingMaster and feed your horse hay by placing it on or next to the FeedingMaster. Never let your horse eat from a FeedingMaster without a grid.

6.1 Error messages

Message	Cause	Solution
E1	The current for the drive unit is too low.	Remove the hay from the FeedingMaster, tilt the feeding base upwards. Check that all cabling is undamaged and that all connections are still tight. Check whether there is any material between the drive unit. Check the temperature of the electric motor, it should be no more than hand warm.
E2	An object has been detected while the feeding base is lowering.	
E3	The execution of the selected program takes too long.	
E4	The feeding base sensor gives incorrect measurements.	
E5	The feeding base sensor does not give any measurements.	
E6	The FeedingMaster is not calibrated.	Contact Valetudo Horse Products.

(Continued error messages)

Message	Cause	Solution
E7	No connection to the previous FeedingMaster during synchronous feeding.	Check the correct operation of the previous FeedingMaster. Check whether the cable to the previous FeedingMaster is undamaged. Check whether the feeding behavior sensor of the previous FeedingMaster is disabled.
E8	The eating behavior sensor has seen no change for 24 hours.	Gently clean the sensor with a cotton swab.
	Too little motion was detected during AutoTune.	Disable AutoTune if your horse can eat from the FeedingMaster for less than 6 hours in 24 hours.
E9	The settings cannot be saved.	Contact Valetudo Horse Products.
E10	The drive unit turns reversed.	Check the connections to the drive unit.
	The feeding base height sensor turns reversed.	Check the connections to the feeding base height sensor.

(Continued error messages)

Message	Cause	Solution
No display	The mains power is not present.	Check the mains power of the socket.
	Power cable is defective.	Check that the power cable is not damaged.
	Fuse is defective.	Check or replace the fuse with the same type.

7. Maintenance

7.1 Daily Maintenance

Check daily that the FeedingMaster is not damaged after use by your horse. Check that:

- The controller is mounted securely.
- The grid or the bars in the grid are not bent.
- The spring in the locking pin works.
- The FeedingMaster has no visible damage.
- All 4 suspension straps are tight.
- The FeedingMaster is firmly attached to the wall.

WARNING: If there is any damage to the FeedingMaster, take it out of use in such a way that your horse cannot be injured. If this is not possible, place your horse in another horse box. Always contact Service@VHProducts.eu so that your FeedingMaster can be repaired as soon as possible.

7.2 Weekly Maintenance

The small parts of the hay collect on and under the feeding base, which must be removed from the FeedingMaster every week.

Remove the grid from the FeedingMaster, wait until the feeding base has reached the filling position and the drive unit has stopped completely. Push all the sand and other fine particles to the center of the feeding base, use two hands to remove it from the FeedingMaster.

Tilt the feeding base away from you by pulling it up at the front on a suspension strap. Hold the feeding base with one hand and scoop out all fine parts from the FeedingMaster with your other hand. Then slowly lower the feeding base back into its original position using the suspension belt.

WARNING: Tilt the feeding base **never** from back to front. This can cause the drive unit cables to get caught in the drive unit and cause permanent damage.

7.3 Quarterly maintenance

The hinges of the grid may be lubricated every 3 months. Spray some penetrating oil such as WD40 on the brass ring between both moving parts.

REMARK: Place a reminder in your calendar that repeats every 3 months.

7.4 Annual Maintenance

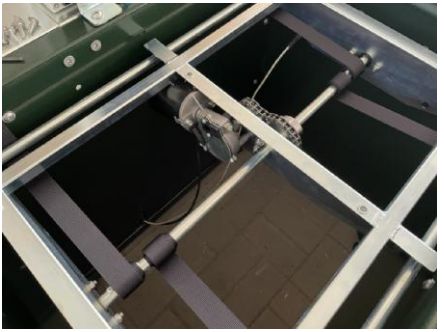
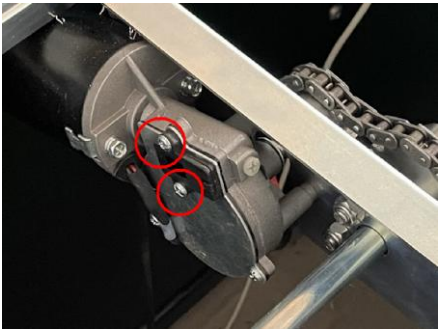
The motor of the drive unit may require lubrication every year. Remove all hay from the FeedingMaster and clean it as described in 'Weekly maintenance'.

Place the grid and perform P1 so that the feeding base rises completely. When the feeding base has reached the top position, switch off the FeedingMaster by removing the mains power plug from the grounded socket.

WARNING: Always remove the power plug from the earthed socket when working on the feeding base. The drive can suddenly be set in motion when the FeedingMaster starts a feeding cycle.

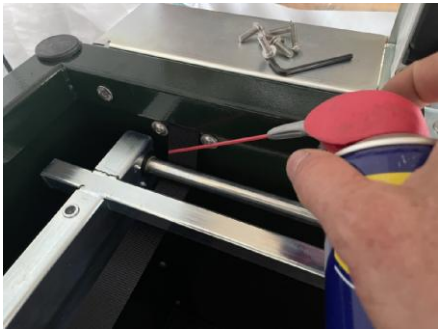
Tilt the FeedingMaster grid forward. The feeding base must be removed to carry out maintenance on the drive unit. To do this, the six M6x16 flange bolts must be loosened with a 4 mm Allen key. Dust has collected in the head of the flange bolt, which means that the Allen key usually cannot be inserted. Use a small screwdriver to loosen the dust in the head, then blow the head clean. Loosen the six flange bolts and remove the feeding base.

Remove the two Phillips screws from the black cap on the motor.

Pull the black cap out of the motor to expose the gears. If there is plenty of grease that has been pressed against the wall of the motor, this can be scraped off the wall with a fine screwdriver and lubricated over and between the teeth of the gears. If no grease is visible, place a teaspoon of White Grease or Vaseline over and between the gears.


Place the black cap back in the motor and secure it with the two screws, the longest screw goes into the top hole. Spray some White Grease between the axles and the black bearing blocks. Rotate the turning shafts a few times to spread the grease.



Lower the feeding base back into place and switch on the main power again by inserting the mains power plug into the grounded socket.

WARNING: Do not spray grease or oil on the drive unit chain. If it gets greasy, sand and dust stick to it, causing extra wear.

REMARK: Place a reminder in your calendar that repeats annually.

7.5 Cleaning

The FeedingMaster may be washed with water at low pressure, for example with a garden hose connected to tap water or with water from a bucket. The water may be a maximum of 30 degrees Celsius, possibly with a car wash detergent. Do not use aggressive or abrasive cleaning agents.

WARNING: Never spray the FeedingMaster with a high-pressure hose. Under high pressure, water will be sprayed into the controller, resulting in permanent damage.

Remove all hay as described under weekly maintenance. Select program 3 so that the feeding base lowers completely. Wet the FeedingMaster, leaving the feeding base in place to prevent water from entering the motor.

Let the FeedingMaster soak for some time, the dirt will then be easier to remove. Wash the FeedingMaster with a soft cloth or sponge. Avoid aggressive scrubbing of the controller front panel. Gently clean the sensor with a damp cotton swab.

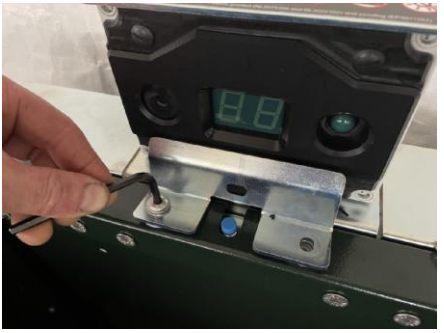
Then rinse the FeedingMaster with clean water and let it dry before filling the FeedingMaster with hay.

7.6 Replace fuse

The FeedingMaster fuse is in the controller behind the front panel. Switch off the FeedingMaster by removing the mains power plug from the grounded socket. Wait until the display has completely switched off. Pull the grid locking pin towards you and tilt the grid fully forward so that it hangs against the rubber protective flap.

WARNING: Never open the controller when the FeedingMaster is connected to the mains power. Various parts of the controller system carry high voltage, which can cause serious bodily injury.

Remove the two M8x20 flange bolts from the strike plate. Unscrew the four gray screws on the corners of the controller housing. Remove the front panel and place it to the right of the controller.



Two fuses are visible in the lower left corner of the controller. The left fuse is for the protection of the Slave input, the right fuse is the mains fuse of the controller. Remove it by popping the fuse out of its holder. Check whether the fuse is defective. If so, replace it with the same type (250 VAC, 1A, slow, 5x20 mm).

Place the front panel in front of the controller. Push the display cable towards the lower right corner of the housing. Place the front panel on the controller. Check whether it is flush with the housing on all sides. The front panel must touch the housing without resistance, never press it if this is not the case. In that case, check that there are no wires between the front panel and the controller.

WARNING: Never place the front panel on the controller at an angle. The controller is no longer waterproof, which can lead to malfunctions and damage.

Tighten the four gray screws on the corners of the controller housing by hand. Then tighten them 1/8 turn clockwise.

WARNING: Do not overtighten the four gray screws on the corners of the controller housing. The controller is no longer waterproof, which can lead to malfunctions and damage.

Place the two nylon washers on the blind rivet nuts. Fit the strike plate and lightly tighten it with the two M8x20 flange bolts.

Tilt the grid back up and let it fall gently over the strike plate until you hear a clear 'click' from the locking pin. Slide the strike plate parallel to the grid at approximately 1 mm from the grid. Tighten the two M8x20 flange bolts securely. Check the correct operation of the locking pin.

7.7 Decommissioning

The FeedingMaster does not contain any materials that need to be disposed of chemically. The FeedingMaster does contain valuable materials that can be reused to produce other devices.

Follow local regulations and never dispose of the FeedingMaster with normal household waste. Hand it in at a municipal collection depot for electrical and electronic equipment.

WARNING: Remove the mains power plug from the grounded socket before removing the FeedingMaster.

WARNING: Remove all installation material from the horse box after the FeedingMaster has been removed.

8. Technical Information

8.1 Specifications

Model	FeedingMaster Pro
Construction year	2023
Width	780 mm
Depth	665 mm
Height	879 mm
Volume for hay	210 liters
Weight	70 kg
Maximum fill weight	12 kg
Maximum sound	45 dB
Mains power	120..230 VAC
Fuse	250 VAC, 1AT, 5x20 mm
Power consumption at rest	5W
Maximum power consumption	40W

8.2 EU Declaration of Conformity

EC Declaration of Conformity for Machines

according to directive 2006/42/EC

(Original Statement)

Valetudo Horse Products BV
Lage Scheiddijk 4
7261 RL Ruurlo
The Netherlands

Telefoon: +31 65 588 3925
E-mail: Info@VHProducts.eu

hereby declares:

Name: FeedingMaster
Function: Horse feeding device
Model/type: FeedingMaster Pro
Serialnumber: See type plate
Year: See type plate

complies with all applicable provisions of the following directive(s):

DIRECTIVE 2006/42/EC (Machinery Directive)

The following (harmonised) standards have been used, where applicable:

NEN-EN-ISO 12100 (Safety of machines)
NEN-EN-IEC 60204-1 (Electrical safety of machines)

Valetudo Horse Products

Place: Ruurlo
Date: April 30th, 2023

Name: Jan van de Kamer
Function: CEO

Signature: