English

HayTimer
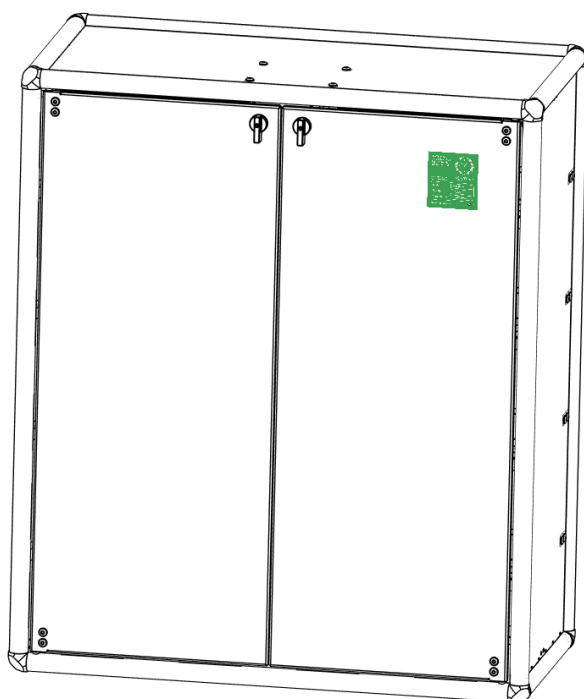
User manual

The HayTimer is produced by:

Valetudo Horse Products BV
Lage Scheiddijk 4
7261RL Ruurlo
The Netherlands
www.HayTimer.eu

Dear customer,

Congratulations on your purchase of the HayTimer. We are confident that you and your horse will enjoy the HayTimer. 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 HayTimer 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".

We would like to see you satisfied. On our website www.HayTimer.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 Info@HayTimer.eu. We will do our best to answer your question within 24 hours.

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1. Safety Instructions

All users of the HayTimer 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 HayTimer:

- Never allow your horse access to the HayTimer while the doors are open.
- The HayTimer must be mounted to a stable construction.
- The distance between the HayTimer and a side wall is EITHER less than 50 mm OR more than 500 mm.
- The HayTimer can start automatically, keep your distance from the drive unit.
- The HayTimer may only be used with hay with a maximum moisture content of 25%.
- Remove wet rained hay from the HayTimer within 24 hours.
- Only use hay that is free of foreign materials.
- Horses are flight animals and can react unpredictably to the HayTimer.
- The HayTimer can only be used by horses and for the purpose for which the HayTimer was designed.
- Never make any adjustments to the HayTimer other than described in this user manual.
- Keep hands, clothing, tools, and loose objects away from the moving parts of the HayTimer during operation.
- Do not allow children or unauthorized persons to operate or play near the HayTimer.

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 HayTimer in the horse box and activating the HayTimer 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 HayTimer if your horse cannot get used to the presence of the HayTimer.

Horses are and remain living creatures, each with their own behavior. Deprivation of the hay can lead to aggressive behavior aimed at the HayTimer or the environment. The HayTimer 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 HayTimer and remove the HayTimer 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 applicable service standards. We warrant the first purchaser of the HayTimer that each product will be free from defects in material and workmanship for a limited period of 24 months from the date of the invoice, unless otherwise specified in writing.

This warranty does not apply to defects, malfunctions, or physical damage caused by direct or indirect misuse, improper installation, neglect, accident, exposure to unsuitable environmental conditions, alterations not made or approved by us, or lack of normal maintenance. This warranty also does not apply to cosmetic defects, surface damage, or normal wear and tear of components that do not adversely affect the functioning of the HayTimer.

Horses are flight animals and can react unpredictably to the HayTimer. In no event shall we be liable for any death or injury to persons or horses, or for any direct, indirect, special, incidental, or consequential damages arising from the use of the HayTimer. This includes, but is not limited to, wear or damage to teeth, colic, cuts, bruises, broken bones, stress-related issues, or behavioral disorders.

We do not guarantee that the HayTimer can prevent or resolve all gastrointestinal or health-related disorders. The HayTimer is a management tool intended to support feeding routines. You remain fully responsible for your feeding policy, stable management, and for deciding whether continued use of the HayTimer is appropriate based on the behavior, condition, and well-being of your horse.

Use of the HayTimer is entirely at the owner's risk.

3. Installation

The HayTimer is designed to be mounted to a wooden or stone wall using the four mounting points on the back of the cabinet. Mounting hardware suitable for both wood and stone is supplied.

We recommend installing the HayTimer with the bottom of the cabinet at a minimum height of **800 mm above ground level**. At this height, the top floor will be at approximately **1600 mm**, which allows it to be filled comfortably.

3.1 Marking the mounting holes

Start by determining the desired mounting height of the HayTimer. The **lower mounting holes** must be positioned **125 mm above** the final mounting height of the HayTimer. For example, if the HayTimer is to be mounted with its bottom at 800 mm above ground level, mark the lower holes at **925 mm** height. The two lower holes must be marked **500 mm apart**, measured horizontally.

The **upper mounting holes** are positioned **750 mm vertically above** the lower holes, also **500 mm apart** horizontally. Ensure that all four holes are aligned correctly before drilling.
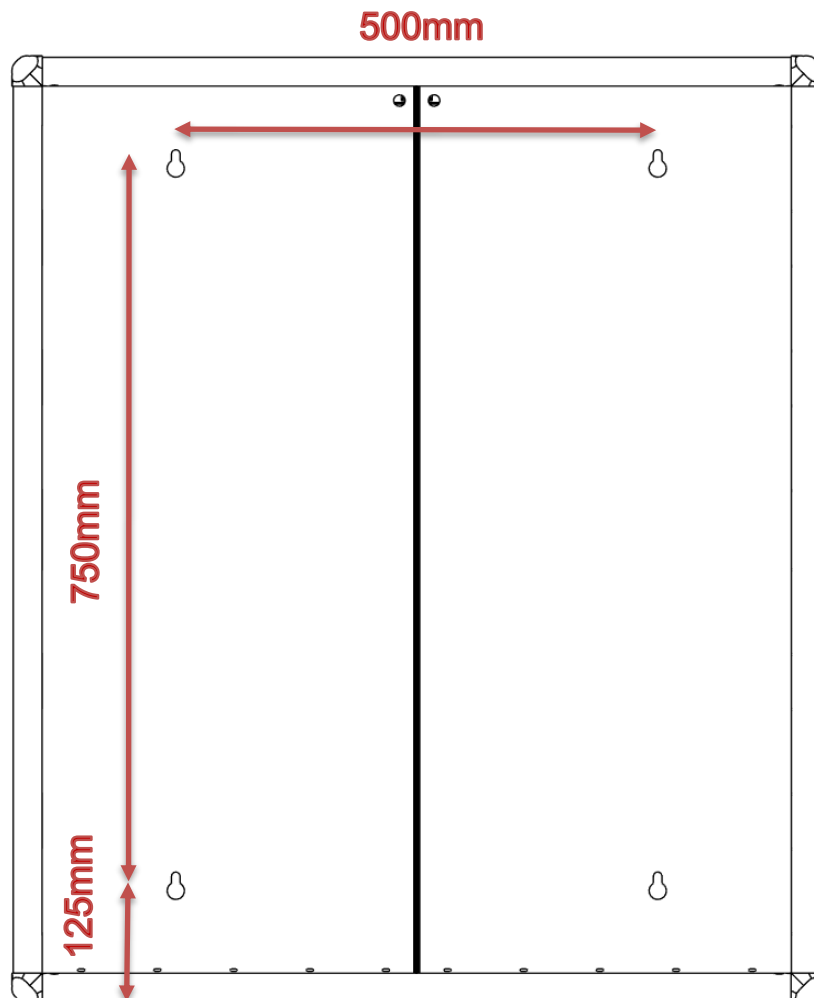
3.2 Drilling the holes

For mounting to wood, pre-drill the holes using a **6 mm wood drill bit**. For mounting to stone, drill the holes using a **12 mm stone drill bit** and insert the **4 plastic plugs**.

3.3 Using the spacers

Four round spacers are supplied with the HayTimer. Each spacer has a diameter of **30 mm** and a thickness of **16 mm**. Insert a coach screw through each spacer (the short coach screws for a wooden wall and the long coach screws for a stone wall) and screw it into the wall or partition.

Do not tighten the screw fully at this stage. Leave approximately **10 mm** of space between the head of the coach screw and the spacer. Once all four screws are installed, slide the spacers fully against the wall.
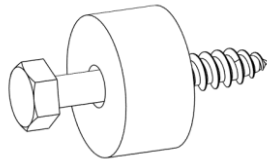
3.4 Hanging the HayTimer

Lift the HayTimer and hang it onto the screw heads using the keyhole-shaped mounting holes on the back of the cabinet. When the HayTimer is properly seated on all four screws, tighten the coach screws fully to secure the unit firmly against the spacers. After installation, check that the HayTimer is stable, level, and securely mounted.

4. Introduction

The HayTimer is an automatic hay feeding system designed to support a more natural feeding rhythm for horses when continuous grazing is not possible.

In natural conditions, horses eat small amounts of roughage spread evenly throughout the day and night. In many modern housing situations this is difficult to achieve. The HayTimer helps bridge this gap by releasing small portions of hay at controlled intervals, reducing long fasting periods and supporting digestive health.

This user manual explains how to use the HayTimer. It covers daily operation, controller functions, filling with hay, and basic care. Assembly, mechanical adjustment, and initial startup are described in the Assembly Instructions that can be found on www.HayTimer.eu.

The HayTimer is designed to be intuitive in use. Once installed and set up, daily operation consists mainly of filling the unit with hay and checking that it is functioning as expected.

Read this manual carefully before first use. It will help you understand what the HayTimer does, how it behaves during normal operation, and how to use it safely and effectively.

4.1 System overview

From the user's perspective, the HayTimer has three main functional parts:

4.1.1 The cabinet

The cabinet holds the hay and protects the internal mechanism. It is designed for outdoor and stable use and can be accessed through the cabinet doors for filling and inspection. The cabinet remains closed during normal operation.

4.1.2. The trapdoors

Inside the cabinet, the hay rests on multiple internal trapdoors. These trapdoors are released one by one to dispense portions of hay. The release of a trapdoor causes the hay resting on that trapdoors to drop down. This process is fully automatic and controlled by the system.

4.1.3 The controller

The controller is accessible from the front of the cabinet. It contains the display, a single control button, the camshaft drive unit and the battery compartment. Through the controller menu, you can reset the trapdoors, release trapdoors manually, set the system time and set a maximum of eight feeding times.

During normal operation, the HayTimer works automatically according to the programmed schedule. The user only needs to refill hay, check the battery status periodically, and observe that the system is operating as expected.

The internal drive mechanism and mechanical components are not accessible during normal use and do not require user interaction. Any mechanical adjustments or assembly-related procedures are described in the separate assembly manual.

If you are unfamiliar with the HayTimer, take some time to observe its operation without hay loaded. This will help you understand how the floors release and how the system behaves during a feeding cycle.

4.2 Batteries

The HayTimer is powered by batteries and does not require a fixed electrical connection. This makes the system suitable for use in stables, shelters, and outdoor environments where mains power is not available or not desired.

4.2.1 Battery type

The HayTimer operates on **six AA batteries**. You may use:

- Alkaline AA batteries
- Rechargeable NiMH AA batteries

For most users, alkaline batteries are recommended due to their long operating life and low self-discharge. Always use batteries of the **same type and from the same set**. Do not mix old and new batteries, and do not mix different battery types.

4.2.2 Battery installation

The battery compartment is located in the controller unit. Insert the batteries according to the polarity markings shown inside the compartment. The negative pole of the battery, the flat end, must be in contact with the spring. The order of the batteries does not matter.
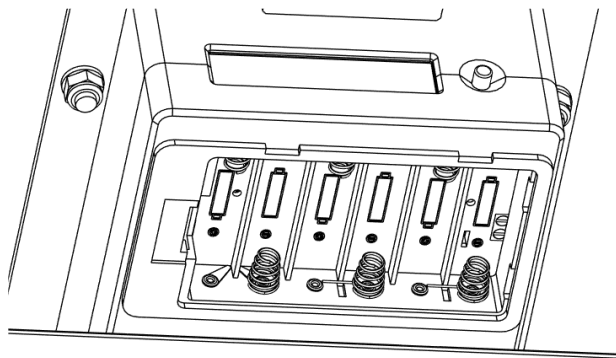
When the last battery is inserted, the HayTimer will automatically power up and the display will switch on. Reinstall the battery cover:

- First insert the small hooks on the **right side**
- Then press the locking clip into place until it snaps in
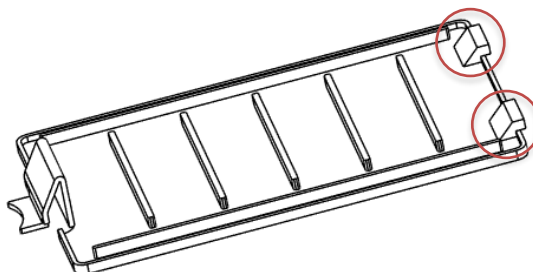
4.2.3 Battery life

Battery life depends on:

- Battery type
- Number of feeding times per day
- Ambient temperature

Under normal conditions, battery life typically exceeds **one year**. Cold temperatures may reduce battery performance.

4.2.4 Low battery behavior

The battery status is shown on the display. When the message **Low Batt** appears, the batteries are running low. The HayTimer will continue to operate normally, but the batteries should be replaced within one week to ensure reliable operation.

The programmed feeding timers are stored in non-volatile memory and are **always retained**, even if the batteries are empty or removed for an extended period of time.

When replacing the batteries:

- If all batteries are replaced within one minute, the internal clock will continue to run and the time setting is retained.
- If battery replacement takes longer than one minute, or if batteries are installed for the first time, the HayTimer will restart and you will be prompted to set the time.

5. Controller operation

The HayTimer is operated using a single button and a two-line display. All settings and functions are accessed through the controller menu.

5.1 Display overview

The display has two lines.

On the **top line**:

- The current time is shown on the left
- On the right, the battery status is shown, or the last error message if one occurred

On the **bottom line**:

- During normal operation, the display shows the time of the next drop
- When navigating the menu, the bottom line shows the current menu option

If no button is pressed for **2 seconds**, the controller exits the menu and returns to normal operation showing the next scheduled drop time. After an additional **3 seconds**, the display switches off automatically.

5.2 Button operation

The controller is operated using a single button.

- A short press and release is used to scroll through menu options or increase values
- A long press, approximately 2 seconds until the display is updated before release is used to confirm a selection

5.3 Menu structure

The main menu consists of the following options, shown in this order:

- Reload
- Set Timers
- Set Clock
- Drop Floor

You can scroll through the menu options using short presses. Select a menu option by pressing and holding the button until the second line of the display changes according the menu option.

5.3.1 Reload

This option resets the position of the camshaft so that all trapdoors can be closed and prepares the HayTimer for the next feeding cycle. Before activating this menu option, make sure that all front trapdoors are placed in the upright position as explained in the next chapter.

5.3.2 Set Timers

This option allows you to program up to **eight feeding times**. After selecting this menu option, Timer 1 is displayed followed by the currently set time. If a timer shows 00:00, that timer is **not in use**. A short press will display Timer 2 and so on. The timers are automatically sorted and displayed in chronological order based on the time of day at which the next floor will be released. When you change the time of a timer, all timers are automaticaly reordered.

In order to set a timer, select the desired timer and confirm. First, the **hour** can be set. When the hour value reaches 23, it rolls over to 0. After confirming the hour, the **minutes** can be set. The minutes increase in steps of **5 minutes**. This prevents having to scroll through all 60 minutes when adjusting a timer. When the minutes value reaches 55, it rolls over to 0. After confirming the minutes, the controller returns to the main menu.

In order to delete a timer, select the desired timer and confirm. Then set the time to 00:00 indicating the timer is not used. As a result, it is not possible to set a drop time at 00:00.

5.3.3 Set Clock

This option is used to set the current time of day. The procedure for setting the clock is identical to the procedure for setting a timer, only in this case the minutes are advanced by 1 minute.

5.3.4 Drop Floor

This option allows you to manually release the trapdoors of a specific floor were floor 1 is the lowest floor in the cabinet and the first floor which opens the trapdoors to release hay. After selecting this option Floor 1 is displayed. A short press will display Floor 2 and so on.

Select the desired floor and confirm to release it, provided that the floor is still closed the camshaft will rotate to open the trapdoors of this floor. Note that the trapdoors of all floors **below** the selected floor will also open if they were still closed.

5.4 Automatic exit behavior

In all menu functions:

- If no button is pressed for **2 seconds**, the controller exits the menu
- The display returns to showing the next scheduled drop time
- After **3 more seconds**, the display switches off

This behavior is normal and helps conserve battery power.

6.0 Synchronisation of multiple HayTimers

Multiple HayTimers can be linked together using a synchronisation cable. This allows several HayTimers to release hay at the same time. Each HayTimer is equipped with **two synchronisation connectors** which are located at the back of the controller.

The role of the HayTimer, either **Master** or **Slave**, is determined by which plug of the cable is used.

6.1 Master and Slave roles

The synchronisation cable has two plugs:

- One plug is labeled as **Master**
- The other plug is not labeled and therefore used as **Slave**

When the Master plug is used in either of the **synchronisation connectors** that HayTimer functions as a **Master**. When the Slave plug is used in either of the **synchronisations**, that HayTimer functions as a **Slave**. A HayTimer becomes a Master or a Slave purely based on the plug used. No additional settings are required in the menu.

As a result, a single HayTimer can drive two Slaves if both Master plugs are used. A more typical setup is that HayTimers are chained together with the first HayTimer using the Master plug on one of the synchronisation connectors driving a second HayTimer using the first synchronisation connector. That HayTimer can use the second synchronisation cable using a Master plug again to drive a third HayTimer and so on.

6.2 Operation of synchronised HayTimers

When a Master HayTimer releases hay as a result of one of its programmed feeding times, all connected Slave HayTimers will also release hay at the same moment, provided that a closed floor is still available. This ensures that multiple HayTimers dispense hay simultaneously, for example in group housing or adjacent stalls.

6.3 Combined operation

A Slave HayTimer does not lose its own functionality. A Slave HayTimer can:

- Release hay based on its **own programmed feeding times**
- Additionally release hay when it receives a signal from a **Master HayTimer**

This means that a Slave HayTimer may release hay more often than the Master, depending on its own timer settings. If this is not desired, make sure that all timers of the Slave HayTimer are set to 00:00 (not used).

7. Hay net option

The HayTimer can be used in combination with a hay net to slow down the eating speed of the horse. At the bottom of the side walls and the back wall of the HayTimer, a row of slotted holes is provided. These slots allow a hay net to be attached to the lower part of the cabinet using cable ties. The front of the hay net is attached using cable ties to the **lower round tube underneath the doors**.

Using a hay net slows down the rate at which the horse can eat. This helps extend feeding time and can support a calmer and more natural eating pattern. When a hay net is used, it is possible to create **five feeding moments**:

- One feeding moment from the hay net
- Four feeding moments from the HayTimer

The hay net is **not supplied** with the HayTimer. Users can choose their own hay net, allowing them to select a mesh size that best suits their horse and feeding needs.

When using a hay net in combination with the HayTimer, always ensure that:

- The hay net is securely fastened
- There are no loose parts that could cause entanglement
- The hay net does not interfere with the movement of the doors

This option provides additional flexibility in managing feeding speed and feeding moments, while keeping full control over the daily feeding routine.

8. Using the Timers

The HayTimer gives you full flexibility in how often and when hay is released. There is no fixed feeding scheme. What is appropriate depends on your horse, the housing situation, and how long the horse has access to forage during the day.

You can set up 8 feeding times per day. These feeding times determine when a floor is released and hay becomes available.

A commonly used approach is to fill the HayTimer in the morning and use four feeding times during the day. In the evening, the HayTimer is refilled and the remaining four feeding times are used to provide hay during the night. This allows hay to be distributed evenly over a 24-hour period with only two refill moments per day.

When a hay net is used underneath the HayTimer, an additional feeding moment is created. In that situation, it is possible to offer up to ten feeding moments per day: two from the hay net and up to eight from the HayTimer itself.

Using all eight feeding times is an option, **not a requirement**.

If horses are turned out to pasture during the day, or have access to another HayTimer in a paddock, fewer feeding times may be sufficient. In such cases, using four feeding times, possibly combined with a hay net, can work very well.

For horses that are only in a paddock or stable for a limited number of hours, even fewer feeding times may be appropriate. For example, if horses are housed for only four hours, setting two feeding times may be sufficient.

The HayTimer is designed to adapt to your management, not to dictate it. You decide how many feeding times to use and when they occur. Always observe your horse closely and adjust feeding times based on eating behavior, body condition, and overall well-being.

9. Daily use

Before refilling the HayTimer with hay, **all floors must be empty**. This is important because the front trapdoors must be placed in the **upright position** before the menu option **Reload** can be used. As long as hay is still present on a floor, its front trapdoor cannot be moved fully upright.

If you want to refill the HayTimer while there is still hay inside, first select the menu option **Drop Floor** and choose **Floor 4**. This will release all remaining hay, allowing the trapdoors to be positioned correctly before reloading.

9.1 Positioning the front trapdoors

Place all **front trapdoors in the upright position**. Start with the **top trapdoor**:

- Push it slightly inward
- Rotate it upward into the vertical position
- Hold the trapdoor vertically with your left hand.

Repeat this step with your right hand for the remaining front trap doors, working from top to bottom. These trap doors remain vertical.
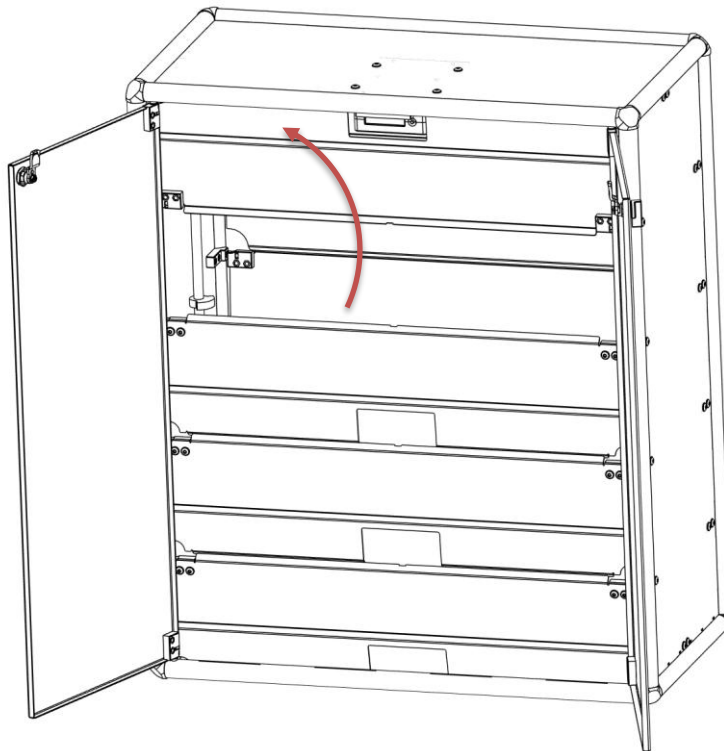
9.2 Reloading the trapdoors

Hold the top trapdoor vertically with your left hand. Briefly press the button with your right index finger to activate the display. The menu option **Reload** will be shown. Press and hold the button.

After approximately 2 seconds, the controller will drive the camshafts. Release the button. Wait until the controller has finished and the display has switched off.

9.3 Lowering the front trapdoors

Turn the top trapdoor down until it rests on the cam blocks. Then start with the **trapdoor below**:

- Push it in slightly
- Turn it down until it rests on the cam blocks

Continue with the next trapdoor below and work your way down.
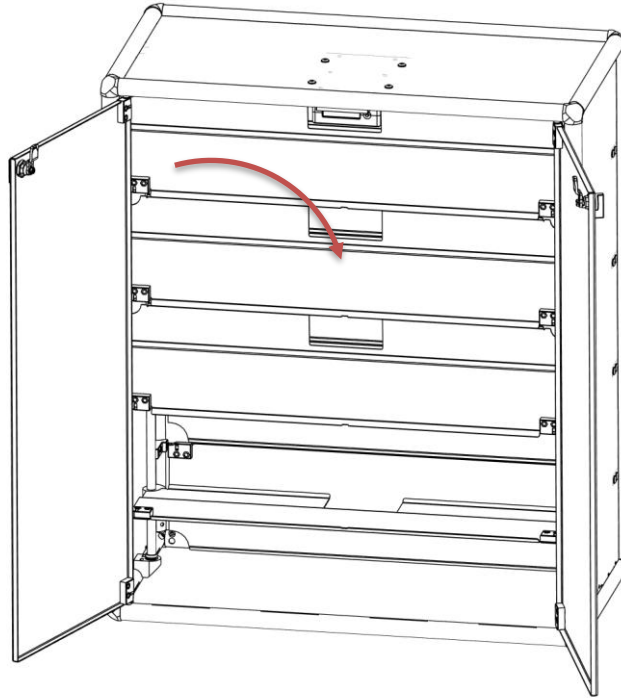
9.4 Positioning the back trapdoors

Insert your hand between the **first and second front trapdoor**. Lift the **top back trapdoor** by its front edge. Rotate it upward until it touches the top front trapdoor.

Push it slightly further upward. This will also lift the top front trapdoor momentarily. When the front trapdoor falls back onto the camblocks, lower the back trapdoor until it rests on the front trapdoor.

Repeat this procedure for all back trapdoors, working from **top to bottom**.

9.5 Filling the HayTimer

There are **two ways** to fill the HayTimer.

The first option is filling the HayTimer with **slices of compacted hay** without pulling them apart. When using slices of hay, it is important that there is **free space on both the left and right side** between the hay and the camshafts. There must also be some **free space at the front and the back** so the hay can drop down freely when the trapdoors open.

The second option is filling the HayTimer with **loose hay**. When using loose hay, the same clearances must be maintained as with slices of hay. The floor can be filled with loose hay until the trapdoors of the floor above are pushed upward. At that point, the HayTimer is **overfilled**. The trapdoors above must **not** be pushed open by the hay.

Maintaining free space around the hay and preventing the trapdoors above from being pushed open is essential for reliable operation. If these guidelines are not followed, the hay will be under tension. When the trapdoors release, the hay expands and can clamp itself inside the cabinet. In that situation, the hay will usually **not fall** when a floor is released.

Not all floors need to be filled. You always start filling the HayTimer at the **bottom floor** and work **upwards**. If you choose to use fewer floors, simply stop filling once the desired amount of hay has been placed. The upper floors may remain empty. Empty floors do not affect operation, provided that the filling order from bottom to top is respected.

9.6 Checking the controller status

After filling the HayTimer and before closing the doors, you can optionally press the button on the controller. The display will switch on and show the current time. This allows you to quickly check whether the time is still correct. On the same screen, the battery status is shown.

After the first button press, the menu option **Reload** is displayed. If you do not press the button again, the controller will automatically return to normal operation. The display will then show **Next drop** followed by the time at which the next floor, starting with the bottom floor, will open. This allows you to verify when the next hay release will take place.

After a few seconds, the display will switch off automatically.

9.7 Closing the doors

After filling the HayTimer, **always close both cabinet doors**. Never leave your horse unattended while the doors of the HayTimer are open. Open doors expose moving parts and internal components and can lead to unsafe situations for both horses and people. Make sure both doors are fully closed and properly locked before leaving the horse box or paddock.

10. Error messages

During operation, the HayTimer continuously monitors its own functioning. If an irregular situation is detected, an error message may be shown in the **top right corner of the display**.

When an error is detected, the **current action is stopped**. This prevents unreliable or unsafe operation. If a new action is requested, for example by a programmed feeding time, a synchronisation signal from a Master unit, or a manual menu selection, the HayTimer will attempt to execute that action.

If the action is completed successfully, the error message will automatically disappear and normal operation will resume. If the action fails again, the error message related to the **most recently requested action** will be displayed.

Most error messages indicate an internal safety condition. In these cases, the HayTimer protects itself by stopping the operation. Only a limited number of error messages can be resolved by the user.

In the following sections, each possible error message is explained. For every message, you will find what it means, why it can occur, and what action is required.

10.1 Low batt

This message indicates that the batteries are almost empty. The HayTimer can continue to operate for a limited time, but the batteries should be replaced as soon as possible to ensure reliable operation.

Replace all batteries at the same time using a full new set. After replacing the batteries, check that the correct time is set before resuming normal operation.

10.2 Too slow

This message indicates that the camshaft rotates too slowly during operation. The motor is running, but it takes too much time to complete the movement.

If this error occurs **directly after assembly**, the most likely cause is that the lock nuts on the linking plates are tightened too much. Check which side is affected. There are two lock nuts on the left linking plate and two lock nuts on the right linking plate. Loosen the relevant lock nut slightly by turning it **1/16 of a turn counterclockwise**.

If the error occurs **after a long period of operation**, the batteries may be too weak. This can be caused by normal battery depletion or by very low ambient temperatures, which reduce battery capacity. In both cases, replace all batteries with a full new set.

10.3 Max cur

This message indicates that the current in the camshaft drive unit is too high during operation.

If this error occurs **directly after assembly**, the most likely cause is that the lock nuts on the linking plates are tightened too much. Check which side is affected. There are two lock nuts on the left linking plate and two lock nuts on the right linking plate. Loosen the relevant lock nut slightly by turning it **1/16 of a turn counterclockwise**.

Another possible cause is that something is obstructing the movement of the camshafts, for example hay or debris. Check whether all camshafts and linking plates can move freely. Remove any hay or foreign material that may be trapped around the camshafts or between the linking plates.

10.4 Internal errors

The following error messages indicate an **internal system issue**:

- Mem error
- No current
- No change
- No clock
- IO stuck

When one of these messages is displayed, the HayTimer has detected a condition that cannot be resolved through normal user actions. The system stops the current operation to protect itself and prevent unreliable behavior.

These errors **cannot be resolved by the user**. They indicate an internal issue that requires inspection or service. If any of these error messages appear, contact support for assistance.

Please include the error message shown on the display and describe what action was being requested at the time the message appeared.

Do not attempt to make adjustments or repairs yourself.

11. Maintenance

The HayTimer is designed to be completely maintenance-free. **No lubrication is required at any point.**

Do not apply grease, oil, or any other lubricant to the HayTimer. Lubricants attract sand and dust, which can create an abrasive mixture and **lead to increased wear** instead of protection.

The camshaft is made of a self-lubricating material and requires no maintenance. No adjustments or treatments are necessary.

If the HayTimer is not used for more than one month, it is recommended to remove the batteries. This prevents possible battery leakage and protects the electronic components.

Other than periodic visual checks and battery replacement when needed, no maintenance is required.

12. Decommissioning

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

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

13. Technical Information

13.1 Specifications

Model	HayTimer
Construction year	2025
Width	840 mm
Depth	420 mm
Height	980 mm
Volume for hay	220 liters
Weight	20 kg
Batteries	6xAA
Battery life	Over a year

13.2 EU Declaration of Conformity

EC Declaration of Conformity for Machines

(Original Statement)

HayTimer.eu
Lage Scheiddijk 4
7261 RL Ruurlo
The Netherlands

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

hereby declares:

Name: HayTimer
Functie: Horse feeding device

Model/type: See type label
Serialnumber: See type label

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

DIRECTIVE 2014/30/EU (EMC) and 2011/65/EU (RoHS)

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

NEN-EN-61000-6-3 (Radiation)
NEN-EN-61000-6-1 (Immunity)

Place: Ruurlo
Date: 24 November 2025

Name: Jan van de Kamer
Function: Director   Signature: