



# SORT GATE AND DRAFT GATE REQUIREMENTS

## PURPOSE AND SCOPE

This document defines the requirements for the correct installation and operation of the CowManager Sort Gate and Draft Gate on a farm. For the purposes of this document, the term "Gate" refers to both the CowManager Sort Gate and the CowManager Draft Gate, unless stated otherwise. We only install a Gate when the customer has installed the CowManager ear sensors and has been using the Cow Monitoring system successfully for at least three months. This can be different in case of seasonal operations.

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## 1 FLOORPLAN

For optimal performance of the Gate we need to make a floorplan, that is taking the following into account:

- Type of parlor
- Type of identification (EID, Wearable). Gate uses the most modern RFID protocol
- Daily number of cows passing parlor(s)
- Type of concrete floor (slatted or solid floor)
- Heated floor
- Floor flushing (positions in barn)
- Buffer zone before the Gate
- Buffer zone after the Gate, or a plan for managing sorted cows
- Sorting area
- Gate placement area
- Length and width return lane

When farms have mixed breeds that differ a lot in size, we cannot guarantee optimal functioning. Please make sure there is no foot bath or teat-sprayer directly before or after the Gate, since the disinfectant impacts the hardware. Installation on heated floors needs to be investigated before installation.



## 2 PLACEMENT

For optimal performance the Gate is placed in barn, or under a roof protecting the Gate.

## 3 ELECTRICITY

The electricity needs to be installed by a qualified electrician running the cable from a 'clean' phase with a ELCB to a suitable outlet. Provide a GFCI power outlet. Provide one extra power point when an ethernet switch is being placed.

A ground fault circuit interrupter/ RCD (residual current device) power point is required.

### Electrical Specifications

- Input voltage range: 85–264 VAC
  - Compatible with both US and EU mains power without modification.
- Maximum power consumption: 60 W
- Current consumption:
  - 0.6 A at 230 VAC
  - 1.3 A at 110 VAC
- Internal fuse rating: 2.5 A
  - The supply cable connected to the Sort Gate must be rated to safely carry at least 2.5 A.

## 4 COMPUTER

For optimal performance of the CowManager software, we recommend using a dedicated PC or laptop that does not run any other business software (e.g., milking robot software). Ensure that your PC or laptop meets the following specifications:

- A Microsoft-supported Windows version (as of 2025, Windows 11 or higher)
- 64-bit processor
- 4 GB of RAM and at least 10 GB of free hard disk space
- Solid-state drive (SSD) recommended
- A free USB port (Type A); external USB hubs or extension cords cannot be used
- USB generation 2.0 (often black colored) or higher (often blue colored)
- Windows must always be fully updated, including all optional updates
- TeamViewer must be installed for support
- The PC or laptop must remain powered on and connected to the internet (sleep mode should be disabled in Windows)

## 5 INTERNET

A 24/7 internet connection is required to keep the system online. For optimal performance with CowManager, a stable download speed of at least 5 Mbps and an upload speed of at least 1.5 Mbps are necessary. Hard wired internet is required, mobile internet is not allowed. Please ensure the install of compatible data cables (Cat 6) and a stable internet connection. Ensure an extra spare ethernet cable is available, to use in case of a cable damage. One port and one additional port need to be available per Gate.



## 6 LINKS

To transfer all cow data into CowManager, we can set up an interface with most management programs. For more details, visit: [cowmanager.com/cow-management/integrations/](https://cowmanager.com/cow-management/integrations/). The PC running your management system must meet the above requirements, except for the USB port requirement. Sorting/ Drafting is only available through CowManager.

## 7 PREVENT DISRUPTION

CowManager hardware operates on a 2.4 GHz frequency, which cannot be changed. The following devices may cause signal interference:

- WiFi routers
- Ethernet bridges (point-to-point or P2P)
- WiFi extenders or mesh networks
- WiFi cameras
- Bluetooth devices

To minimize interference, we recommend hardwiring these devices, using the 5.0 GHz band, or setting your WiFi channel to channel 6 or higher.

## 8 NETWORK COVERAGE

We have worked with you and your CowManager Specialist to create a network plan for optimal coverage. While we have done our best using the available information, we cannot guarantee continuous 24/7 data transmission from all sensors. Please note that the coordinator must always be connected to the PC or laptop to collect and process data from the sensors. The coordinator is powered through the USB port of the PC or laptop.

For optimal signal coverage, the coordinator should be placed with a clear line of sight to a router up to 800 meters away. The sensor has a range of approximately 100 meters from the coordinator or router, provided there is a clear line of sight. We recommend positioning the routers about 3.5 meters high and ensuring at least 1 meter of clearance between the roof and the antenna. The antenna should always point upwards.

## 9 (RFID) EAR TAGS

Rules regarding the use of ear tags vary by country. Your CowManager Specialist can provide guidance on this. The Gate requires HDX EID ear tags. RFID in collars needs to be investigated and approved by CowManager first. CM Sort Gate and Draft Gate uses the ISO RFID standard. Each cow must have one unique EID. If animals wear both RFID collars and EID in the ear, or if animals have multiple EID numbers, this may significantly affect sorting performance. CowManager must first assess and approve the situation.

Ensure all animals are wearing HDX RFID tags

Ensure all animal-RFID numbers are registered in the CowManager database

Ensure all animals have matching RFID and animal number

Ensure all animals have one unique EID

For optimal performance, we recommend maintaining an active ISP subscription and make sure that the barn has a functioning internet router. This allows the CowManager application to send and receive data.



## **10 INSTALLATION**

When all of the above requirements are met, the CowManager Sorting system can be fully installed. Your CowManager Specialist will schedule an installation appointment. The Gate will be installed according to the previously approved floorplan. Installation can take place once the required concrete work and steel pathways have been completed and confirmed ready.

A user manual for the Gate will be included with your delivery.

## **11 SPAREPARTS**

At delivery, you will receive additional spare parts. Please store these in a dry place. You can use the spare parts to replace the long springs if needed. Use the user manual for replacement instructions.

## **12 COW TRAINING**

The cows will need to be trained to use the sorting system. This process may take several days and may require additional staffing.