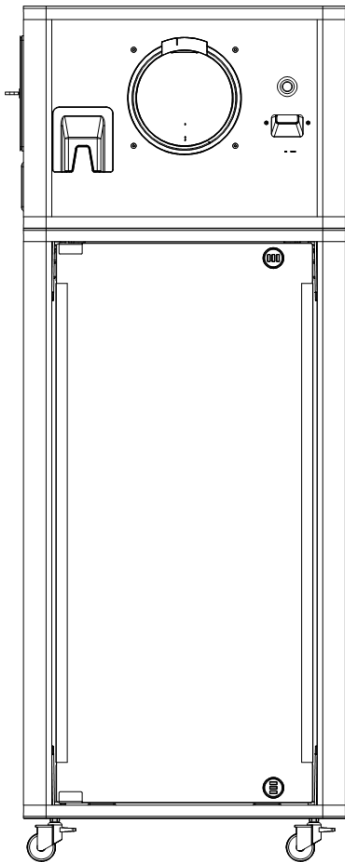




2025

# Operating and Safety User Manual – QUBE 2500 x



Version 1.2

Models: QUBE 25 series

2KR Designs Ltd

12/05/2025

# 1. Notes and symbols for the operating manual

## 1.1 Symbols



**Warning of electrical voltage:** This symbol indicates dangers to the life and health of the persons due to electrical voltage.



**Warning:** This symbol indicates a hazard with an average risk level, which, if not avoided, can result in serious injury or death.



**Caution:** This symbol indicates a hazard with a low risk level, which, if not avoided, can result in minor injury.

## 1.2 Safety

**Read this manual before starting or using the QUBE. Always store the manual in the immediate vicinity of the device in use.**



**Warning – Read all safety warnings and instructions.**

Failure to do so may result in electric shock and/or serious injury.

This appliance can be used by children aged from 10 years and above and by persons with reduced physical and sensory capabilities or lack of experience if they have been given supervision and/or instructions on the safe use of the device and understand the hazards involved.

Cleaning and user maintenance shall not be carried out by children or untrained individuals.

- Do not use the device in potentially explosive rooms or areas;
- Do not use the device in aggressive atmosphere;
- Only operate the device in an upright, stable position on firm ground;
- Use the brakes if using the QUBE cabinet to keep it from rolling and use the chain at the bag to prevent toppling;
- Allow the device to dry after cleaning before operating it; do not operate when wet;
- Do not expose the device to direct water spray;
- Do not insert objects and/or limbs during sliding doors operation;
- Do not sit or place heavy objects on the device;

- Regularly check external electric supply cables for damage, nicks, or cuts. Ensure that they are protected from damage (eg.: by animals, cutting equipment, etc.). Do not use the device if any power cable is found to be damaged. Replacements should be done by a qualified person;
- The mains connection must correspond to the technical specifications;
- Make sure that the ethernet cable is **shielded** type;
- Observe technical data when implementing extensions to cables;
- Place the device on a level surface to avoid accidental toppling over;
- Empty or remove the recycling bag before transport and/or storage;
- Switch the device off and disconnect it from the mains power supply when not in use for extended periods;
- Do not remove or block any sensors, as this will compromise the safety features of the machine
- Do not remove any safety signs, stickers or labels from the device.
- Do not leave any packaging lying around, as there is a high risk of suffocation, especially if used by children.

### **1.3 Intended use**

Only use this device to handle the specified containers for recycling purposes. Any unauthorized modifications, alterations or changes may render provisions for the correct and safe operation of the device non functional and/or ineffective. Such changes will render any warranty period null and void. The supplier / distributor / manufacturer will not be held responsible for any incidents arising through unauthorized modifications.

### **1.4 Qualified Personnel**

People who modify, repair, replace components, or adjust the device by opening the housing of the device must:

- Be aware of the dangers associated when working with electric devices that may be potentially damp or with disabled / damaged sensors;
- Have read and understood the safety and repair manual.

## **1.5 Behavior in the event of an emergency**

The device is equipped with multiple anti-pinch sensors for the moving flaps, making incidents extremely rare. However, in any emergency, the device can be switched off by:

- a. Using the on/off switch at the back of the device
- b. Pulling out the low voltage connector at the back of the device
- c. Disconnecting the power chord from the mains socket

Do not reconnect a defective device to the mains supply before a qualified technician has certified that it is safe to re-use.

## **2. Information about the device**

### **2.1 Device Description**

The device serves the purpose of accepting containers that qualify within regional/national recycling schemes by checking various parameters on the container. The unit can work in both online (standard) or off-line (optional) state.

The unit can be operated by consumers in two modes: manual (with a paper voucher) or digital (using a phone app by the service provider).

In manual mode, the user simply starts a session by pressing a button, and deposits containers one at a time. The device checks the container's barcode against a database to confirm the validity followed by checking the weight to ensure that it is empty from excessive fluids. At the end of a session a paper voucher is printed.

In digital app mode, the user is validated at the device via a barcode generated through the phone app. Containers are deposited and validated in the same way as manual mode. When the session ends, the value of the deposited containers is directly transferred to the user account – there maybe some delays depending on connectivity quality of the location where the unit is being used however all data is backed up until transferred.

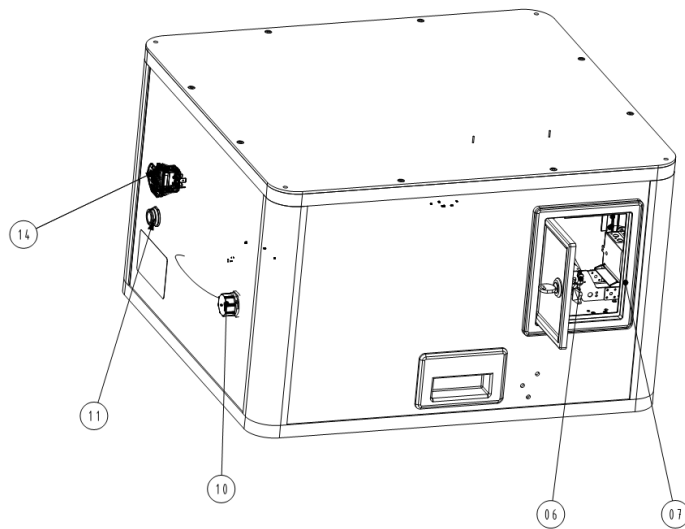
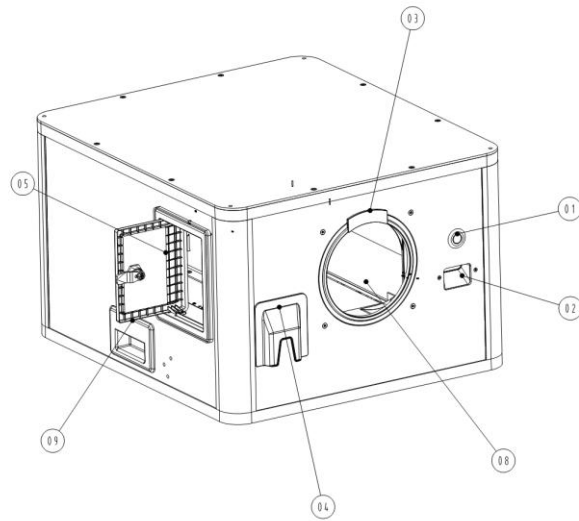
The device connects to the backend service via ethernet, wifi or LTE-3g/4g connection. Data is communicated and stored securely with certified encryption both on the machine (optional) and on the backend service (cloud based).

Accepted containers are dropped inside a secured standard wheelie bin or cabinet (optional accessory). Once full, the merchant is informed through the Trovr merchant app to change, scan and tag a serialized bag.

The device runs on DC low voltage through an external power supply connected to the mains.

## 2.2 Device Diagram

|    |                                      |
|----|--------------------------------------|
| 1  | Start / End session button           |
| 2  | External Barcode reader              |
| 3  | Function light                       |
| 4  | Printer paper exit (58mm thermal)    |
| 5  | Paper refill access                  |
| 6  | Paper roll shaft                     |
| 7  | Feeder roller knob                   |
| 8  | Container disposal tunnel            |
| 9  | Handles                              |
| 10 | Connector ethernet                   |
| 11 | Connector power supply               |
| 12 | Power supply 240V to 12V (separate)  |
| 13 | Ethernet sealed connector (separate) |
| 14 | Main switch                          |



## 2.3 Transport and Storage

Improper storage or transport of the device may cause damage to the device. It is important to read the notes below.

### 2.3.1 Transport

Before transporting the device, observe the following steps:

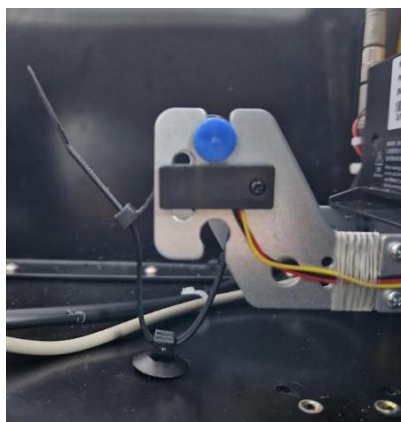
- Switch the device off from its main switch;
- Remove the plug from the mains socket (do not pull at the cable);
- Holding the back of the device, unlock the twist lock connectors for supply and ethernet and pull them out;

- Pack the power supply and cable in a plastic bag to protect them from moisture;
- Open the side panel and remove the paper roll (for printer variants), insert a temporary support under the printer chassis;
- Use the side handles to carry the device or place it on a trolley with wheels. Always use brakes to prevent rolling. Use anti-roll off wheel brakes whenever possible;
- For long-distance transport, it is recommended to place the device in a plastic bag within a box lined with expanded polystyrene to protect it from impact;
- Stack the power supply bag in a corner in the box. Do not place the power supply bag inside the disposal tunnel, as it may damage or offset the weighing scale.

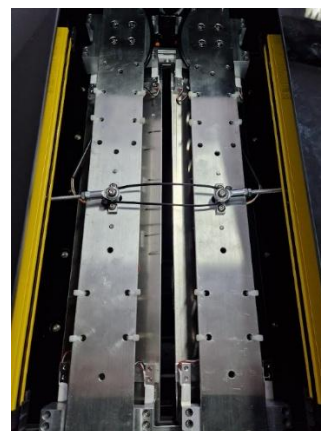
### 2.3.2 Unpacking

After transportation, the device shall be unpacked and started as follows:

- If new, remove the top packing and take out the power supply and ethernet adaptor from the side of the box;
- A new unit will be inside a plastic bag (be aware of choking hazards and/or warnings on the bag). Insert hands on the side until handles are found, use them in order to lift the unit out of the box;
- Place the unit on a stable horizontal surface to remove transport cable ties shown in the pictures below – printer cable tie can be accessed from side panel (5), for flaps shipping cable turn unit on its side and access from the bottom opening;



Printer shipping cable tie



Flaps shipping cable tie

- Connect and twist lock the power connector no. (9), if you have ethernet **shielded cable** close by - insert inside provided adaptor and connect connector no. (8);
- The printer paper exit cover (4) is shipped separately, follow the 3 steps shown in the pictures below to install it onto the front panel.



Peel of tape protection



Align cover against panel



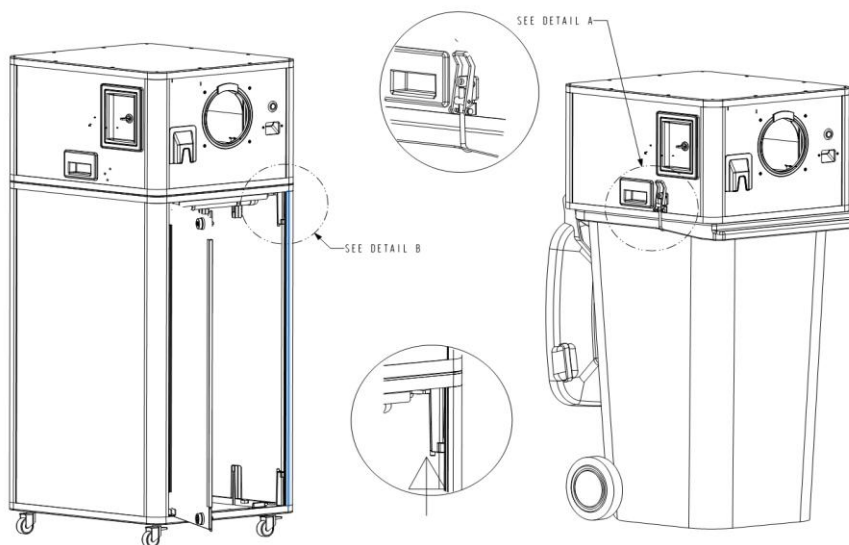
Press to affix to panel

- Open the side panel (5), take out the blue paper shaft (6) by pressing the ends and place a 58mm thermal paper roll. Get the paper end and insert straight into the paper slot at the back of the machine until it cannot go further. At this stage use manual feeder knob (7) to run the paper through (also refer to section 2.3.9).

### 2.3.3 Mounting and securing the device

The unit comes with two mounting options:

- Custom cabinet
- Standard wheelie bins



### **Cabinet mounting:**

The module is fitted with corner locating pins that match with the cabinet frame, the front of the device shall be aligned with the front lockable door of the cabinet. Once located, 2 bolts which are supplied shall be tightened at the front corners as shown in the diagram to secure the device. The cabinet is also equipped with brakes on the front wheels which shall be applied once its location is determined. An anti-topple chain is fitted at the back of the cabinet, it is highly recommended to fit this to the wall to avoid any accidental toppling over especially by kids.

### **Wheelie bin mounting:**

For customers that are supplied or prefer a standard 240l wheelie bin or any other bin with the same upper frame dimensions, the unit shall be located against the locating lip at the top of the bin opening. The clamps which will be supplied as shown in the diagram have adjustable hooks which shall be adjusted to the bin rim to secure it when the clamps are shut. The clamps should be equipped with locks to prevent any tampering. It is the responsibility of the customer to secure the bin.

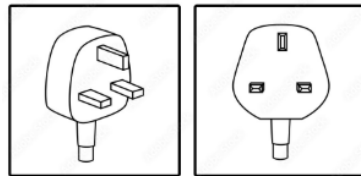
### **2.3.4 Powering the device**

At this stage, the unit is ready to switch on.

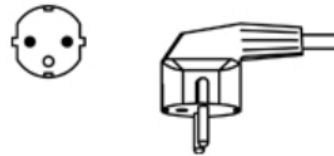
- Insert the power supply plug in the wall socket and switch on the machine from the main switch 12.
- At this stage, the function light 3 will switch red and the machine will start a self diagnostics sequence which can take several minutes. If the ethernet cable is connected, the system will start looking for a stable internet connection over cable. If no cabled connection is available, system will switch to internal wireless modem that will search for a wireless connection;
- In order to establish a wireless connection, wait for the front barcode reader (2) to switch on, generate a wifi connection QR code on your mobile and have it scanned by the barcode scanner (2) – you will hear a ‘beep’ when the barcode is read. If the barcode is recognized, the red light will start flashing whilst trying to connect. If the system goes to solid red again, just repeat the procedure until you get a connection i.e. indicator turns green.



Make sure that you are supplied with the correct wall-plug for your region. If the supply chord is not the correct one, contact your dealer to provide you with an approved chord.



BS plug (Type G)



EU Schuko plug (Type F)

### 2.3.5 First time registration

After transportation, the machine needs to be registered through the Trovr Merchant App:

- Retailer downloads Merchant App and creates a business Account by filling out the business details; if retailer operates out of the same address as where the business is registered, he can choose to make it a branch;
- Retailer can create further branches in the Merchant App as necessary;
- Retailer plugs in the Qube using an ethernet cable;
- If Wifi is being used the Retailer accesses the Wifi using the Merchant App by scanning the Wifi QR code;
- Once a connection has been secured to the internet, the Retailer should follow the registration steps outlined in the "Register Qube" section of "Qube Management" which will take the Retailer through the registration process;
- The Qube will then be registered the Trovr system and will show as registered with assigned branch.

### 2.3.6 First time registration of SIM card

For security reasons, units equipped with the optional 3G/4G connectivity will be shipped with a pre-installed operator SIM card for the respective country of operation. With the package you will also receive details required to register and activate the SIM card.

### 2.3.7 Depositing containers

Whether the machine is installed on top of the optional cabinet or a wheelie bin, before allowing deposit of containers, make sure that the bin system is lined with an operator approved bag of the right size. Fitting a new bag has to be logged via the Trovr app. This is necessary for the machine to be able to provide accurate inventory of the bag content once it is full and tagged to a specific barcode for traceability.

A new session can be initiated through either of the methods described below:

- Method 1: Using the TROVR user app with digital voucher/s. Scanning the QR code generated by the TROVR app using the front scanner allows you to start a digital / paperless voucher session. The indicator light will flash for a few seconds until the system checks that the system does not have anything inside the tunnel. As soon as the light becomes solid green, containers can be placed inside the tunnel one at a time.

Insert container with barcode facing upwards until one of the barcode readers beeps, let container go on the flaps and remove hand/s (if you do not, system safety features stop the process). If a container is accepted, flaps open and it drops; if it is rejected the system beeps and indicator goes red until it is removed. Continue the same process one container at a time.

To end a session, either use the app or press the button on the right. Your respective scheme account will be credited accordingly.

- Method 2: (applicable only to machines equipped with printers), in this case, a session is initiated by pressing the button on the right. The indicator light will flash for a few seconds until the system checks that the system does not have anything inside the tunnel. As soon as the light becomes solid green, containers can be placed inside the tunnel one at a time.

Insert container with barcode facing upwards until one of the barcode readers beeps, let container go on the flaps and remove hand/s (if you do not, system safety features stop the process). If a container is accepted, flaps open and it drops; if it is rejected, the system beeps and the indicator goes red until it is removed. Continue the same process one container at a time. To end the session, press the button on the right. The printer on the left will print out a voucher which is redeemable at shops according to your respective scheme.

### **2.3.8 Bin liner bag full**

The system is equipped with a sensor to detect bag full status. When the set level is reached and the sensor detects a part of a container exceeding this limit, the machine will not accept any more containers. If a session is ongoing, the session will be stopped and the user is credited accordingly. At this stage, the QUBE administrator is notified via app. to replace the liner bag according to the procedure established by the scheme operator. The system has the capability of providing a summary of the bag contents to the device administrator.

### **2.3.9 Replacing paper roll (for printer variants)**

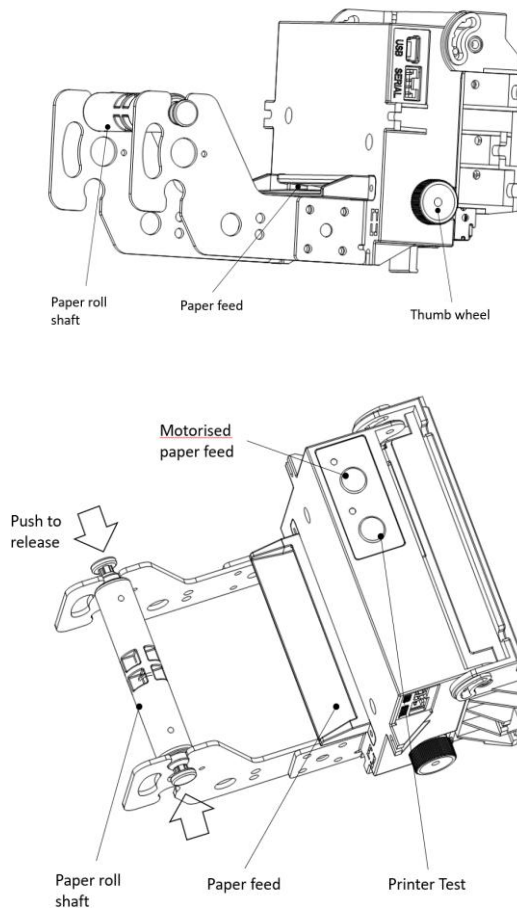
Machines that deliver paper vouchers are equipped with a printer. The 58mm paper roll is mounted on the printer backside which is mounted and concealed on the inner side of the enclosure. This can be accessed by opening the key locked door panel on the left hand side of the unit.

The printer has a paper low sensor which triggers the machine to send a warning message through the merchant app. Depending on the size of the transaction, when the warning shows, there will be enough paper for 7-10 more transactions. It is recommended not to leave the machine running until the full roll is finished.

Once the side door is unlocked and open, use the side thumb-wheel to roll and pull-back the last remaining paper. Then using your thumb and forefinger, press the ends of the blue shaft and gently lift the shaft with the paper roll out of the printer metal frame.

Holding the shaft between fingers, insert through the hollow paper roll shaft and clip shaft on the printer frame. Insert the paper roll leading edge into the automatic printer paper feeder until the printer feeder takes it over. If the paper is not fed straight or starts to crumple: pull it back gently either using the fingers and/or scroll wheel, cut damaged paper and try all over again.

Once done, close the door and lock to resume operations via the merchant app.



### 2.3.10 Safety and security devices

The device is equipped with anti-tampering and safety devices. Machine moving parts will stop immediately upon detecting an object going into the device panel aperture. If more than one sensor is triggered, it is diagnosed as tampering and/or vandalism leading to a lock down of the machine, audible alarm and notification to administrator (assuming connectivity is available).

All the device interior components are low voltage / low power devices, nevertheless the unit shall not be opened except by a trained and qualified technician. Opening and/or modifying the device without authorization voids warranty.

## 2.4 Errors and Faults

The device has been checked for proper functionality several times during production. If malfunction occurs nonetheless, check the device as per the following instructions:

### **i. Device does not power up**

- Check power connection;
- Check power cable and mains plug for damage. If you notice any damage, do not try to put the device in operation. If the supply chord is damaged, a service technician or similarly qualified person should replace it;
- Check the plug fusing;
- Make sure that the unit is operated within the rated operating temperature range;
- Switch off the device from the switch at the back, wait for a few minutes and try again. If the device remains non-starting, it has to be checked by an approved technician;
- Do not try connecting the device directly to the mains supply, the designated and approved power supply shall always be used.

### **ii. Device does not connect**

The basic version of the device comes equipped with ethernet and Wifi connectivity as a standard. Other options include connectivity over 3G/4G using a standard pre-fitted SIM card. The system will cycle through all the active options and automatically connect to the best signal. If after several attempts, no connection is established, the indicator light will turn stable red, wait for a few minutes and eventually switch to offline mode. In this case check:

- Modem (for Ethernet) is switched on;
- Modem has an active and reliable internet connection;
- Ethernet cable is not damaged;
- Ethernet connector is properly plugged on both sides and not damaged;
- There is sufficient WIFI strength in the zone of operation;
- There is sufficient mobile signal strength, move the unit around for stronger signal;
- SIM card (if applicable) is registered with an active contract.

### **iii. Front scanner does not read QR code**

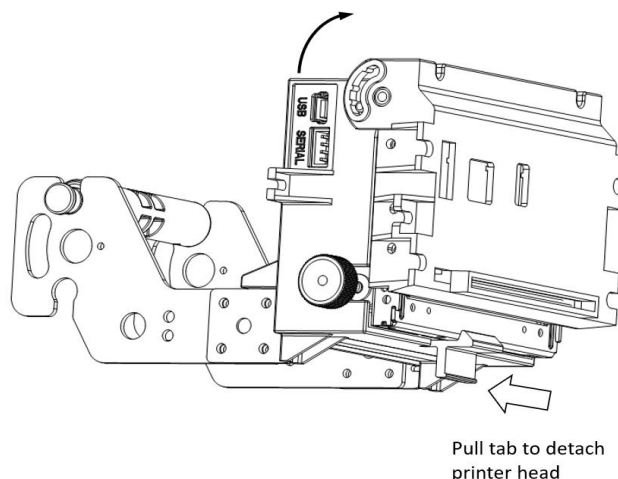
The front scanner, located underneath the push button – this is required for initial registration and wifi credentials setting. From there-on it is required whenever the user needs to start a transaction through mobile application. In case of failure to scan:

- Check that the scanner is on and responsive by passing a hand or object in front, if it is on white light together with a laser cross will flicker and show on the palm of your hand or object respectively;
- Check whether upon scanning, the scanner emits a short 'beep';
- Try increasing the intensity of your mobile display if scanning from mobile;
- Try cleaning the surface of the scanning device with a soft clean cloth;
- Scanner does not decipher dot-QR codes.

#### iv. Printer jam

If the thermal printer paper is not inserted parallel to the direction of motion, it may eventually crumple at the printer exit, potentially shredding the paper and jamming the front mechanism. In such cases:

- Open side door giving access to the printer and try to unjam the paper by rotating the feeder knob on the side of the printer in an anti-clockwise fashion;
- If paper is still jammed in the printer head, insert your hand underneath the printer as shown in the diagram and pull to unclip the printer body. Once open, remaining paper shreds can be removed and printer body clipped again in place;
- Cut the damaged paper straight and feed again into the printer until the printer feeder starts pulling the paper. To ensure proper feed of the paper, press the test print button on top of the printer and check that the paper comes out straight and cut properly.



#### **v. Container stuck between flap doors**

The module is equipped with sensors underneath the flaps to detect when a bag is full and inform the administrator. Since the drop of the containers is not controlled, there may be instances when even though the sensors detect a bag full, the container gets stuck between the flap doors. In this case the system will close the doors as much as physically possible before switching to full mode.

In this case, the administrator through the app shall perform a manual open flaps action for the container to fully drop into the bag and then a close action for the flaps to close again before resuming operation.

#### **vi. Incomplete and/or erratic flap doors opening / closing**

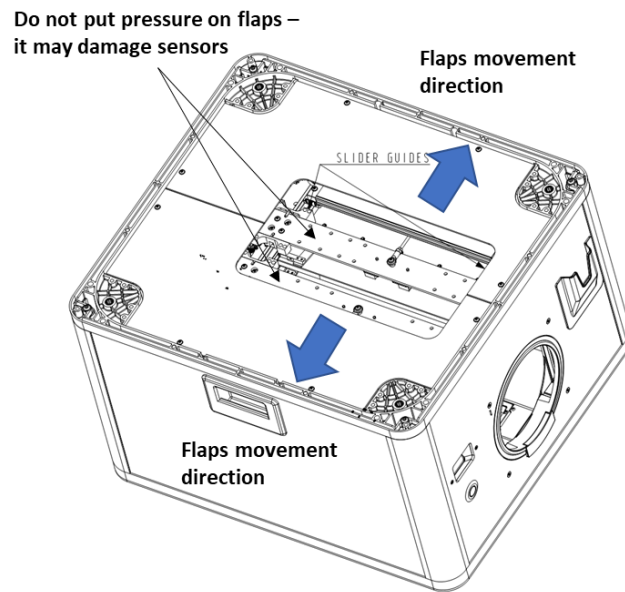
The device is equipped with sensors to detect the position and transition of the flap doors. If the doors do not close properly, the system will perform several tries to auto align and synchronize the movement of the doors. If unsuccessful, the system will go in 'not available' mode and send diagnostics through the administrator app. – any intervention with the flap sensors has to be done by a qualified / trained technician.

#### **vii. Jittering noise on movement of flaps**

Such a noise can be emitted from accumulation of debris and sticky fluids on the sliding guides of the flaps. If such a noise becomes continuous:

- Switch off the machine, disconnect the power supply and Ethernet connectors and place the protection caps on the exposed connectors;
- If the machine is mounted on a wheelie bin or cabinet, unclip or unscrew the bolts holding the unit to the respective base;
- Seek help so that using the side handles, flip the unit upside down on a flat surface – do not remove any protection flaps;
- Using dry compressed air (either from a main supply or canister), try through the bottom opening to dislodge accumulated dust from the sliders. If grime has accumulated, try cleaning it by using a lint free wet cloth – afterwards dry guides with air;
- Once ready, turn the unit again and secure it back on the respective unit i.e. wheelie bin or cabinet and test for noise and smooth operation;

- Even if the noise / jittering is gone, it is recommended to book an approved technician for a clean up of the machine.



#### viii. Front scanner lights up but does not scan

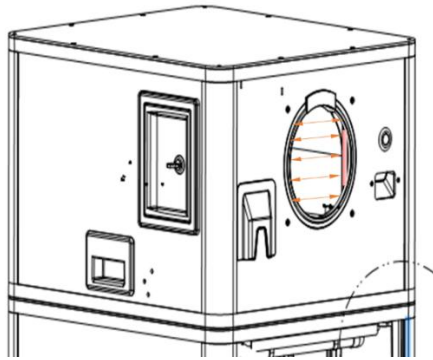
The front scanner is used to identify users with the app. If the red laser cross can be seen, the barcode scanner is on buy maybe:

- Your cell-phone intensity is too low, try increasing it;
- You are too close or not centered, try centering the phone using the laser cross as reference;
- Your QR code generator is in a dot format, try another code generator which generates a standard QR code;
- Try cleaning the surface of the scanner;
- Finally, you can perform a manual transaction with paper voucher by pressing the push button to start a session.

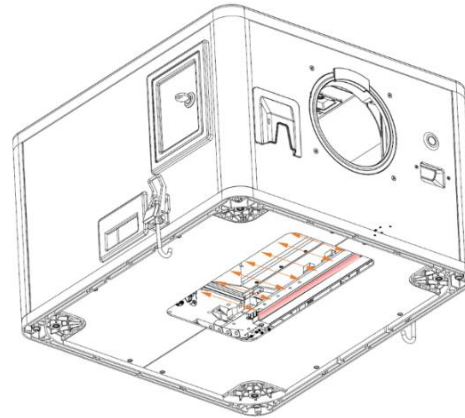
#### ix. Misaligned light curtain modules

The machine is equipped with 2 sets of light curtain modules as part of the safety measures. When either of these are interrupted, they are designed to switch off the motors which move the flaps to protect the user. These modules are factory aligned and securely located but in case either for any

reason they get misaligned or one of them fails, the unit goes in fail safe mode and stops operating. As part of the specified maintenance instructions, check the unit surfaces and clean for any debris and/or accumulated dirt that maybe blocking proper transmission of the light beams. If the problems persists, contact a qualified technician.



Light curtain set – upper



Light curtain set - lower

### 3. Routine Maintenance and Technical Information

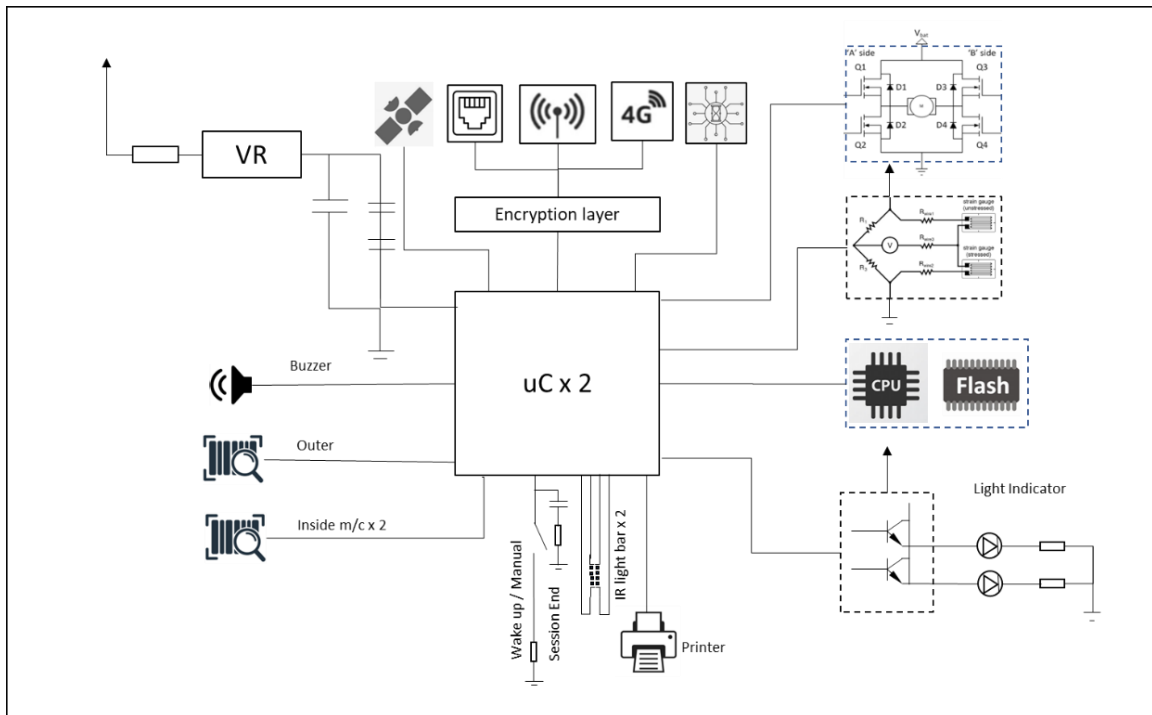
#### 3.1 Maintenance and care

| Maintenance and care interval  | Before every start-up | As needed | At least every week | At least every 4 weeks | At least every 6 months |
|--|-----------------------|-----------|---------------------|------------------------|-------------------------|
| Wipe all outer surfaces clean including flaps and surfaces of safety bars                                | X                     | X         |                     |                        |                         |
| Check connectors for any free-play, cracks or tears  |                       |           |                     | X                      |                         |
| Check for any foreign objects stuck to moving parts, push buttons, scanner, printer outlets and keyholes | X                     | X         |                     |                        |                         |
| Check attachment screws and safety chain   |                       | X         |                     |                        |                         |
| Empty bin and/or change bag  |                       | X         |                     |                        |                         |
| Perform a test run   |                       |           | X                   |                        |                         |
| Check for damage to the panel and moving parts   |                       |           |                     | X                      |                         |
| General clean, check for worn out components and replace (by approved technician)                        |                       |           |                     |                        | X                       |

Note: It is highly recommended that every 6 months, the machine is serviced by an approved technician. Discuss with your dealer for a maintenance agreement.

| Maintenance and care log   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|
| Wipe all outer surfaces clean including flaps and surfaces of safety bars                                |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| Check connectors for any free-play, cracks or tears  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| Check for any foreign objects stuck to moving parts, push buttons, scanner, printer outlets and keyholes |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| Check attachment screws and safety chain   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| Empty bin and/or change bag  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| Perform a test run   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| Check for damage to the panel and moving parts   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| General clean, check for worn out components and replace   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |

### 3.2 Functional Block Diagram



### 3.3 Technical Characteristics

|                         |   |
|-------------------------|---|
| Application location    | Internal or Protected External Environment                                  |
| Dimensions              | 570mm (W) x 640mm (D) x 400mm (H)   |
| Footprint               | 0.36m <sup>2</sup>  |
| Tare Weight             | 16kg  |
| Deposit Return Method   | Digital or Printed Voucher  |
| Materials               | PET and Aluminium   |
| Mounting options        | On own Cabinet (supplied separately); On Wheelie Bins (240l-320l )          |
| Capacity                | 180l when when mounted on Cabinet ; 240 / 320l when mounted on Wheelie Bins |
| Automation              | Barcode and Weight  |
| Safety and Security     | Anti-pinch and Anti-tamper sensors  |
| Barcode Reader          | EAN, CODE 128, QR code  |
| Container Size          | PET / ALU - upto standard 3l  |
| Compaction              | No  |
| Power consumption       | Max 80W; < 10W idle   |
| Mains Operating Voltage | 230±10V AC / 50Hz   |
| Unit Operating Voltage  | 12V DC  |
| Processing rate         | Upto 15 units per minute  |
| IP Rating               | IP53  |
| Connectivity            | WIFI / ETHERNET / LTE 3g/4g   |
| Offline operation       | YES   |
| Temp Range (operating)  | -10 deg. C to + 45 deg. C   |
| Integrated Cabinet Size | 570mm (W) x 640mm (D) x 1100mm (H)  |

### 3.4 Warranty and liability

This product is covered by 12 months of warranty on parts and labor (excluding shipping cost) from date of delivery to end customer. The warranty is subject to the following conditions and excludes warranty in case of:

- i. Machine is not registered through the merchant app. upon installation;
- ii. If location and/or ownership of machine is changed without notice, this should be updated through the merchant app;
- iii. Machine is operated in an unprotected environment;
- iv. Machine is subject to vandalism;
- v. Damage caused by extreme electricity supply surges / fluctuations beyond 230±10%V;
- vi. Use of the wrong electrical connections;

- vii. Machine is not secured to cabinet and/or wheelie bin;
- viii. Minor scratches and/or non-functional visual defects;
- ix. Evidence that routine maintenance and care is not taking place;
- x. Wear and tear of the dampening material used on the flaps surface;
- xi. Company bears no liability for accidents caused by unsecured machine and/or bins and/or cabinets;
- xii. Company also bears no liability for machines which have been modified by non-authorised persons especially modifications / bypassing of any of the safety devices.

### 3.5 Certification

This product has been certified to meet the following requirements:

- **IEC 62368-1:** Audio/video, information and communication technology equipment - Part 1: Safety requirements;
- **EN 55016-2-1:** Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-1: Methods of measurement of disturbances and immunity - Conducted disturbance measurements;
- **EN 55016-2-3:** Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurement of disturbances and immunity - Radiated disturbance measurements;
- **EN 61000-4-2:** Electromagnetic compatibility (EMC) -- Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test;
- **EN 61000-4-3:** Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test;
- **EN 61000-4-4:** Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test;
- **EN 61000-4-6:** Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields;
- **EN 61000-4-8:** Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test;
- **EN 61000-4-11:** Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase;

- **TS151010-1:** Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (3GPP TS 51.010-1 version 4.10.0 Release 4);
- **EN301908-1:** IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 1: Introduction and common requirements;

### 3.6 Disposal



The icon with the crossed-out waste bin on electrical or electronic equipment means that this equipment must not be disposed with household waste at the end of its life but must be sent to separate designated facility by the locality for recovery and recycling. You will find collection for free return of waste electrical and electronic equipment in your vicinity. The addresses maybe obtained from your municipality or local administration. Otherwise, please contact an official recycling center for electronic and electrical equipment authorized in your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of substances potentially contained in the equipment.

Declaration: This equipment has been designed using materials that are high recyclable and/or recoverable and which are easy to separate. The product contains no batteries and / or hazardous substances and is complaint with the ROHS directive of restricted substances.

### 3.7 ROHS Declaration of Conformity

The object of the declaration described above is in conformity with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

**Contact e-mail address:** [support@trovr.eu](mailto:support@trovr.eu)

**EU contact address:** 2KR Designs Ltd. A16A industrial Estate, Marsa MALTA

**UK contact address:** Trovr Tech Ltd. Dairy Barn, Bognor Road, Broadbridge Heath, Horsham UK

Signed on behalf of **2KR Designs Ltd**

Ing. Robert Borg, 25.02.2025 – Malta

**NOTE:** This manual has been completed identifying the highest potential issues that may affect the satisfaction and safety of our customers. It is our commitment to keep this manual regularly updated so kindly find the time to register the device online so that whenever new updates are available, you will be notified through e-mail. Any feedback regarding user experience and/or issues is highly appreciated.