

Revento 9000

Reverse Vending Machine



Revento 9000 – the innovative, space-saving solution for returning bottles, cans and crates. With its advanced camera technology, PC-based imaging and ergonomic operating, this reverse vending machine makes the return processes efficient. High tech in an allround solution – that’s the Revendo 9000.

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Recognition

Using advanced, pioneering camera-based recognition technology, this RVM examines the shape and color of single bottles and cans, and weighs them at the same time (full container recognition). Key features for clearing one-way containers are the optional barcode scanner to perform fully automated comparisons against the empties database and the optional security mark reader to prevent fraud.

The data that is captured is compared with pattern records in the database, and a fuzzy logic engine assesses whether the container should be accepted or rejected, depending on the defined assortment. As a result, only empties that are actually in the assortment will be accepted and refunded. An almost unlimited number of records can be stored as the machine is based on PC technology.

Crates are recognized via the 3D stereo vision method (two-eye principle). This exact method identifies the type of crate and how many bottles it contains. Another advantage: Crate recognition takes up very little space so that the entire machine has a footprint of just 0.48m²! Our innovative color logo recognition option processes the entire logo on the side of the crate, ensuring that crates of the same shape and color can be recognized and differentiated accurately.

Revento 9000 ensures a fully automated, time saving empties return.

Backroom

When empties have been accepted, they need to be moved and stored. This is handled by Wincor Nixdorf's modular backroom technology. Refillable bottles are collected on platforms, and crates are moved fully automatically into the backroom via roller conveyors and crate transport systems.

There is a wide range of sorting and compacting options for one-way PET bottles and cans, and they can be tailored to the store's specific situation.

Our compacting technology can handle very large volumes of returns and meets the requirements of clearing organizations (destruction of the security mark, and so on).

Every Wincor Nixdorf backroom installation is optimized for the best performance under the individual store conditions (available space, volume of empties, ratio of one-way to refillable containers).



IT integration and service

The Revendo 9000 has a standard XML-based interface. Consequently it can be easily integrated in point-of-sale and merchandise management systems. The advantage: Transaction receipts prevent tampering, and inventory discrepancies related to empties are reduced on a lasting basis. Clear inventory management is available by simply transferring the daily reverse vending transactions to a POS system. And the open, freely available interface has been optimally prepared for future applications such as central assortment control.

Another advantage lies in the comprehensive online serviceability of the Revendo product family via ISDN or LAN. Most service cases can be resolved online, saving time and expensive visits by technicians.

And if a fault needs to be fixed on site, Wincor Nixdorf's highly flexible service logistics and an innovative service concept ensure that spare parts are supplied as fast as possible and that technicians' visits are kept short, thus ensuring a high availability of the system.

An innovative service concept permits servicing entirely from the front. That saves time and ensures availability of the system.

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BASIC DATA

- **Dimensions (L x W x H):**
770 mm x 600 mm x 1690 mm
- **Weight:**
300 kg
- **Power:**
230 V, 50 Hz for the machine
- **Power consumption:**
337 W full load
248 W standby
- **Conformity:**
Machinery directive, EMC, CE
- **Temperature:**
+15° C to +35° C

RECOGNITION DATA

- **Camera-based color imaging with a resolution of more than 400,000 pixels**
- **Full container recognition**
- **Stereo vision crate recognition with optional color logo recognition**
- **One-way empties:**
Up to 27 containers/minute
(depending, among other things, on the number of characteristics to be recognized, such as barcode, security mark, ...)
- **Refillable empties:**
Up to 35 containers/minute
(depending, among other things, on the number of characteristics to be recognized, such as barcode, shape, ..)
- **Crates:**
Up to 15 crates/minute
(depending, among other things, on the number of characteristics to be recognized, such as size of the crate, logo, weight, ...)
- **Number of records:**
Almost unlimited

OUTPUT DATA

- **Printer:**
Thermal printer with presenter, paper width 60 mm

- **Receipt roll:**
Up to 500 m long
- **Paper:**
WN security paper, specifications available
- **Interfaces:**
 - Standard XML data interface via Ethernet LAN
 - Ethernet LAN connection for online service
 - BUS interface to control Wincor Nixdorf backroom components

STANDARD FEATURES

- **Door color:**
Wincor Nixdorf Green metallic
- **Chassis color:**
RAL 7015
- **Integrated keyboard for system administration**
- **Protection against fraud**
- **Full-graphic TFT display, 640 x 480**
- **Additional signals in the field of vision in the crate and bottle infeeds to guide users**

OPTIONS

- **Custom door color (RAL)**
- **ISDN adapter for online service**
- **Second button for additional functionality (e.g. donation button)**
- **Barcode scanner to accept non-refillable containers**
- **Security mark reader for one-way container deposits**
- **Logo recognition for crates**
- **Card reader**
- **UPS**
- **Variable installation frames**
- **System administration software (empties control™)**
- **Call module to report faults by voice messages via telephone**
- **Warning signal system**



The ergonomic user interface supports high volumes of returns.



Very easy system administration using a keyboard and display.

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