# **Closing water meter box**

Requirements for closing the box in water meters

V1.0.2 (DEZ/2023)



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#### 1 Introduction to Cash Closure

Cash closure for water meters is an essential practice to ensure operational efficiency and accuracy in water consumption measurements. In urban environments, where sustainable management of natural resources is a priority, the accurate assessment of water consumption plays a crucial role. This process not only ensures fairness in the supply of this vital resource but also contributes to the proper maintenance of supply networks.

Effective cash closure management extends beyond the verification of numbers recorded on meters; it involves a comprehensive approach that includes preventive maintenance, detection of potential leaks, and ensuring equipment is in optimal condition. By optimizing this procedure, sanitation companies can enhance precision in consumption measurement, reduce financial losses, and, consequently, promote a more sustainable use of water resources.

#### 2 Water Meter Box Closure

#### 2.1 Purpose of the Step

Close boxes and print the collective label for the box;

#### 2.2 Requirements

- Upon entering the screen, display only one field to enter the employee code. If the code is valid, show the box closure screen;
- Check if the user has permission; if not, display "You do not have permission to perform this operation.";
- Enter the serial number of one of the meters in the box;
- Check if the meter is already associated with a closed box;
- Check if the printer has been selected;
- Print the collective box label;
- Load fields for Work Order (OF), Lot, Box, Pallet, fixing set (if any), and quantity of seals;
- Check the model of the collective box label Fredson will check the existence and use of this label;
- Enter the code "CMDCLOSEBOX" in the "meter serial number" field;
- Insert the seal for all meters in the box;
- Insert the seals (which will be individually verified [1, 2, 3, and 4]) until the quantity of box seals is reached. After inserting the seals, click the button to close the box [5]. Checkpoints in this requirement:
  - 1. Check if the seal belongs to the Work Order; if not, inform "The {Seals} seals do not belong to Work Order {OF}";
  - 2. Check if the seal has already been used;
  - 3. Check if the seal is broken, lost, or defective;
  - 4. Verify if the meter has an active and not canceled package;
  - 5. Check if the meters whose seals were inserted belong to the same box.
- Check if a seal has been added; if not, inform "You need to inform at least one Seal," except for pilot Work Orders;

- Check if all meters in the box have been packaged; if not, inform "Some meter(s) did not go through packaging: {meter serial number}";
- Check if the scanned meters all belong to that box; if not, inform "The meters: {meter numbers} do not belong to the box.";
- Check if the label is to be printed as VOID or REELID;
- Print VOID or REELID label;
- Have the option to reprint the collective box label, based on the employee code.

# 3 Change log

## 3.1 Version 1.0.1

• Document on requirements for the cash closing stage in water meters.

## 3.2 Version 1.0.2

- Changing the change log information.
- Change in subtitle.
- Change in the header.