

# Snakky<sup>SL</sup>

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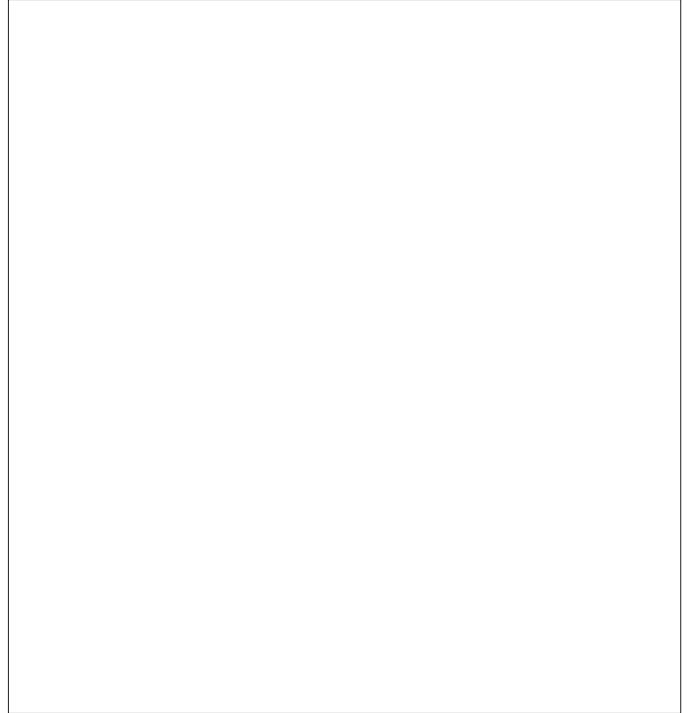


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**DICHIARAZIONE DI CONFORMITA'**  
**DECLARATION OF CONFORMITY**  
**DÉCLARATION DE CONFORMITÉ**  
**KONFORMITÄTSERKLÄRUNG**  
**DECLARACIÓN DE CONFORMIDAD**  
**DECLARAÇÃO DE CONFORMIDADE**  
**VERKLARING VAN OVEREENSTEMMING**  
**INTYG OM ÖVERENSSTÄMMELSE**  
**OVERENSSTEMMELSESERKLÆRING**  
**YHDENMUKAISUUSTODISTUS**



Valbrembo, 03/05/2001

Dichiara che la macchina descritta nella targhetta di identificazione, è conforme alle disposizioni legislative delle direttive: **89/392, 89/336, 73/23 CEE** e successive modifiche ed integrazioni.

Declares that the machine described in the identification plate conforms to the legislative directions of the directives: **89/392, 89/336, 73/23 EEC** and further amendments and integrations.

Déclare que l'appareil décrit dans la plaque signalétique satisfait aux prescriptions des directives: **89/392, 89/336, 73/23 CEE** et modifications/intégrations suivantes.

Erklärt, daß das im Typenschild beschriebene Gerät den **EWG** Richtlinien **89/392, 89/336, 73/23** sowie den folgenden Änderungen/Ergänzungen entspricht.

Declara que la máquina descrita en la placa de identificación, resulta conforme a las disposiciones legislativas de las directivas: **89/392, 89/336, 73/23 CEE** y modificaciones y integraciones sucesivas.

Declara que o distribuidor descrita na chapa de identificação é conforme às disposições legislativas das directivas **CEE 89/392, 89/336 e 73/23** e sucessivas modificações e integrações.

Verklaart dat de op de identificatieplaat beschreven machine overeenstemt met de bepalingen van de **EEG** richtlijnen **89/392, 89/336** en **73/23** en de daaropvolgende wijzigingen en aanvullingen.

Intygat att maskinen som beskrivs på identifieringsskylten överensstämmer med lagstiftningsföreskrifterna i direktiven: **89/392, 89/336, 73/23 CEE** och påföljande och kompletteringar.

Det erklæres herved, at automaten angivet på typeskiltet er i overensstemmelse med direktiverne **89/392, 89/336** og **73/23 EU** og de senere ændringer og tillæg.

Forsikrer under eget ansvar at apparatet som beskrives i identifikasjonsplaten, er i overensstemmelse med vilkårene i EU-direktivene **89/392, 89/336, 73/23** med endringer.

Vahvistaa, että arvokyltissä kuvattu laite vastaa **EU**-direktiivien **89/392, 89/336, 73/23** sekä niihin myöhemmin tehtyjen muutosten määräyksiä.

  
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C.E.O



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Issued on: 2002 - 09 - 04

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CERTIFICATE n.

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Apparecchiature elettromeccaniche/elettroniche per la  
distribuzione automatica e la ristorazione  
*Electronic/electromechanical vending-machines*

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Prima emissione  
First issue

19 Dicembre 1997

Emissione corrente  
Current issue

31 Marzo 2000

La validità del presente certificato è subordinata a sorveglianza annuale e al riesame completo del Sistema di Gestione Ambientale con periodicità triennale secondo le procedure dell'IMQ S.p.A.  
The validity of the certificate is submitted to annual audit and a reassessment of the entire Environmental Management System within three years according to IMQ S.p.A. rules



E.A. 19

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# INTRODUCTION

**This technical documentation is part and parcel of the vending machine and must always follow the machine in case it is moved or transfer of ownership, so as to allow consultation by different operators.**

Before starting installation and using the machine, it is first necessary to carefully read and understand the instructions contained in this manual, as they offer important information on installation safety, operating instructions and maintenance.

**This manual is divided into three chapters.**

The **first chapter** describes the loading and routine maintenance operations which are carried out in areas of the machine accessible with simple use of the door key, without using any other tools.

The **second chapter** contains the instructions for correct installation and all information necessary for optimum use of the machine.

The **third chapter** describes maintenance operations which involve the use of tools to access potentially dangerous areas.

**The operations described in the second and third chapters must be carried out only by personnel who have the specific knowledge of the machine functioning from a point of view of electrical safety and health regulations.**

## IDENTIFICATION OF THE VENDING MACHINE AND ITS CHARACTERISTICS

Every machine is identified by its own serial number, indicated on the rating plate attached inside the cabinet on the right side.

This plate (see Fig. 1) is the only one acknowledged by the manufacturer as the identification of the apparatus, and carries all the data which readily and safely give technical information supplied by the manufacturer. It also assists in the spare parts management.

## IN CASE OF FAILURE

In most cases, any technical problems are corrected by small repair operations; however, before contacting the manufacturer we recommend that this manual be read carefully.

Should there be serious failures or malfunctions, contact the following:

NECTA VENDING SOLUTIONS SpA  
Via Roma 24  
24030 Valbrembo  
Italy - Tel. +39 - 035606111

## TRANSPORT AND STORAGE

To prevent any damage, special care should be taken when loading or unloading the vending machine.

The machine can be lifted by a motor-driven or manual forklift truck, and the forks are to be placed underneath the machine from the side clearly indicated by the symbol on the cardboard package.

**Do not:**

- overturn the vending machine;
- drag the vending machine with ropes or similar;
- lift the vending machine by its sides;
- lift the vending machine with slings or ropes;
- shake the vending machine.

The machine should be stored in a dry room where the temperature remains between 0°C and 40°C.

Avoid stacking machines one on top of the other and always keep it upright as indicated by the arrows on the packing.

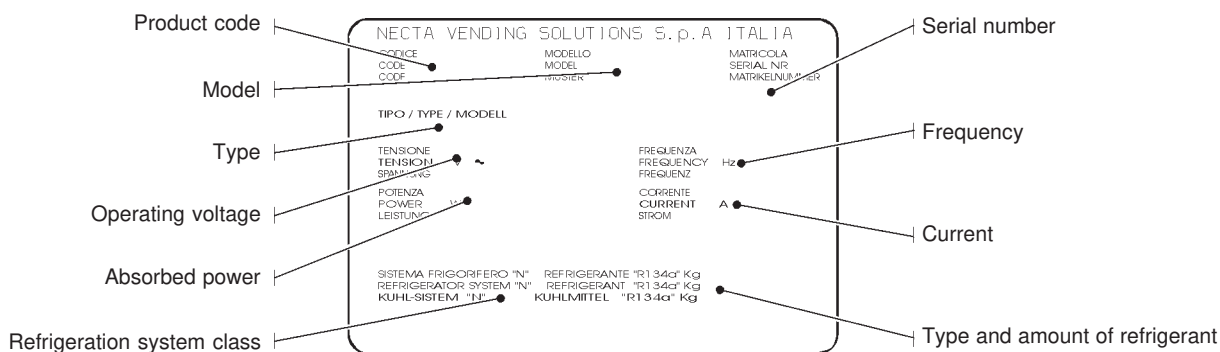


Fig. 1

## USING THE VENDING MACHINE FOR PACKAGED PRODUCTS

The machine can operate only as “slave”, which means that it has to be connected to a “master” machine that can control its functions, since the reduced electronics does not permit autonomous operation of this vending machine. The various functions are programmed through the selection keypad of the “master” machine, which must be of the numeric combination type.

All models are equipped with variable configuration trays, adding or removing dividers, spirals and ratiomotors; therefore the machine can be easily suited to specific needs. All trays are preset for the operation of up to 6 selections (maximum setting).

The compartments are equipped with independent motors and spirals; each selection will continue its operation autonomously even if the other selections are disconnected.

## POSITIONING THE VENDING MACHINE

The vending machine is not suitable for outdoor installation. It must be positioned in a dry room where the temperature remains between 2°C and 32°C, and not where water jets are used for cleaning (e.g. in large kitchens, etc.).

The machine can be used only in a bank with another machine that can control the “master/slave” function.

The same “master” machine can control a bank with two machines operating as “slave”.

The ventilation system allows the back panel to be leaned against the wall, thus saving space, as air is drawn from under the machine and exhausted through a grille on the right-hand side. However, the grille must be completely free without obstructions to the airflow for at least 40 cm. If this were not possible, the spacer supplied with the machine must be fitted to ensure the required distance from the wall (see Fig. 2).

### Warning!

**Incorrect ventilation may compromise the proper functioning of the cooling unit.**

The machine should be positioned with a maximum inclination of 2°.

If necessary provide proper levelling by way of the adjustable feet included.

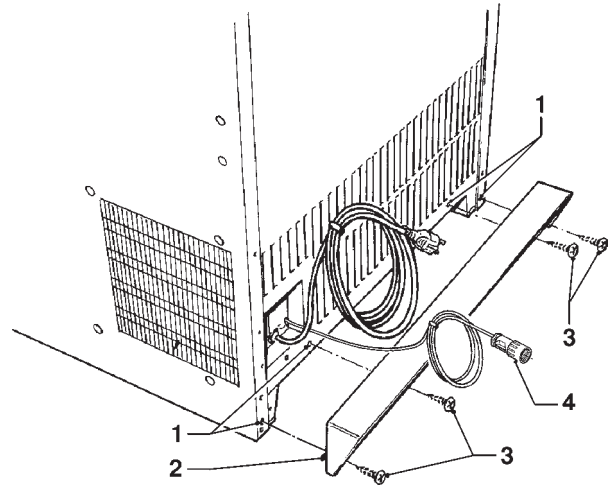


Fig. 2

- 1 - Securing holes
- 2 - Spacer
- 3 - Fastening screws
- 4 - Can-bus connection cable

## WARNING FOR INSTALLATION

**The machine installation and the following maintenance operations should be carried out by qualified personnel only, who are trained in the correct use of the machine according to the standards in force.**

The machine is sold to be connected to a “master” machine.

The composition of the bank of machines and assembly must be carried out only in accordance with the manufacturer’s instructions, where necessary using the approved kits.

**The integrity of the machine and compliance with the standards of the relevant systems must be checked at least once a year by qualified personnel.**

## PRECAUTIONS IN USING THE MACHINE

The following precautions will assist in protecting the environment:

- use biodegradable products only to clean the machine;
- adequately dispose of all containers of the products used for loading and cleaning the machine;
- keep the machine away from heat sources;
- regularly check the condition of the door seal to limit any heat dispersion;
- limit as much as possible door opening time during loading operations to avoid temperature increase inside the cabinet and subsequent power consumption.

## WARNING FOR SCRAPPING

Whenever the machine is to be scrapped, the laws in force regarding environment protection should be strictly observed. More specifically:

- ferrous and plastic materials and the like are to be disposed of in authorized areas only;
- insulating materials should be recovered by qualified companies.
- the gas inside the cooling unit, regardless of the type (see the identification plate), should be recovered by qualified companies by means of special equipment.

## TECHNICAL SPECIFICATIONS

Power supply voltage	230 V~
Power supply frequency	50 Hz
Absorbed power	345 W
Max. operating conditions:	
Ambient temperature	32 °C
Relative humidity	65 %

### Refrigeration system:

Compressor's refrigeration output	320 W
Fan-forced evaporator	
Programmable defrosting cycle	

## DIMENSIONS

Height	1700 mm
Width	600 mm
Depth	854 mm
Overall depth with door open	1335 mm
Weight	165 Kg

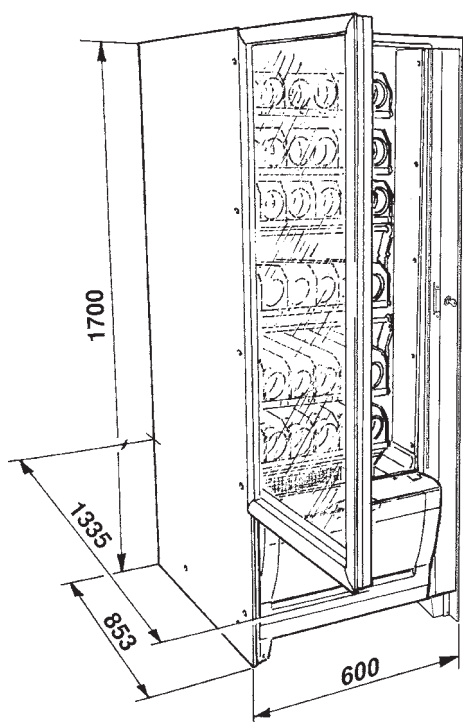


Fig. 3

## CONTROLS AND SAFETY DEVICES

- Main switch
- Timeout for power supply to dispensing motors
- Compressor overheating protection
- Line fuses
- Fuses on transformer primary and secondary windings

## ACCESSORIES

A wide range of accessories can be installed on the machine, to vary its performance. The installation kits are supplied with their own installation and test instructions, which must be strictly observed to ensure the machine safety.

**Installation and the following testing operations must be carried out exclusively by personnel who have a specific knowledge of the machine functions from a point of view of electrical safety and health regulations.**

## POWER CONSUMPTION

The machine power consumption depends on many factors, such as temperature and ventilation of the room where it is installed, temperature of loaded products, internal temperature of the refrigerated box.

Under average conditions, and namely:

- ambient temperature: 20 °C
- refrigerated box temperature: 8 °C
- temperature of loaded products (machine completely empty) 20 °C

the following power consumption levels resulted:

- hourly stand-by power consumption 151 Wh

The above power consumption calculated from average data should only be taken as an indication.



## CHANGEABLE COMBINATION LOCK

Some machine models are fitted with a changeable combination lock.

The lock is supplied with two silver colour keys to be used for normal opening and closing.

The lock can be customised by using a kit, available as accessory, which permits the combination of the lock to be changed.

This kit includes a change key (black) for the current lock combination as well as the change (gold) and use (silver) keys for the new combination.

Sets of change and use keys with other combinations can be supplied on request.

Additional sets of use keys (silver) may be requested, indicating the combination stamped on the keys.

Generally, only the use key (silver) is used, while the combination change keys (gold) can be kept as spares.

**Do not use the change key for normal opening, as it may damage the lock.**

### To change combination do as follows:

- open the machine door to avoid forcing the rotation;
- lightly lubricate the inside of the lock with a spray;
- insert the current change key (black) and rotate to the change position (reference notch at 120°);
- remove the current change key and insert the change key (gold) with the new combination;
- rotate to the close position (0°) and remove the change key.

The lock will now have the new combination.

**The keys with the old combination cannot be used for the new combination.**

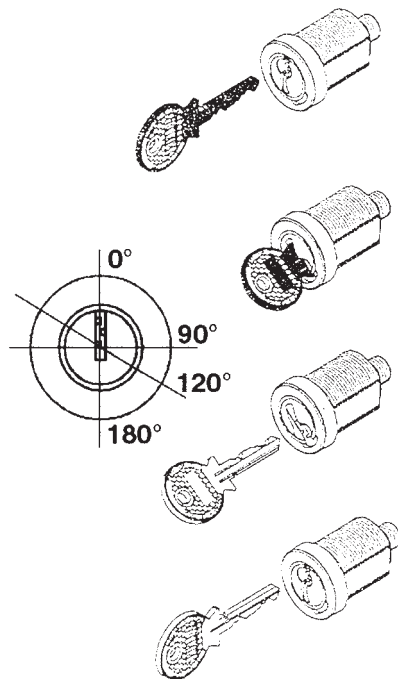


Fig. 4

# Chapter 1 LOADING AND CLEANING

## CONFIGURING THE SPIRALS

According to the size of the products to be dispensed, each machine can be fitted with a variable number of trays (maximum 6), product compartments and with dispensing spirals of different pitch.

### MAIN SWITCH

By opening the side door, access can be gained to the main switch (see Fig. 5) that disconnects the power from the machine electrical system to allow the loading and cleaning operations in full safety.

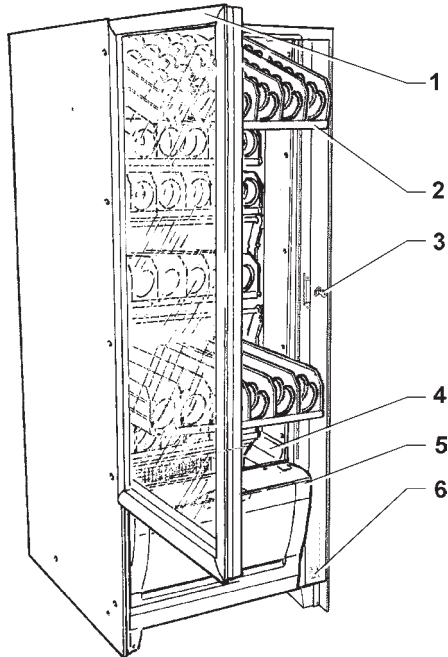


Fig. 5  
1 - Door opening grip  
2 - Trays  
3 - Lock  
4 - Product passage photocells (optional)  
5 - Product dispensing compartment  
6 - Main switch

**This vending machine should only be used to sell and dispense packaged products that do not need refrigeration to be preserved.**

Strictly comply to the producer's specifications regarding storage method and expiry date for each product.

**Any other use is unsuitable and thus potentially dangerous.**

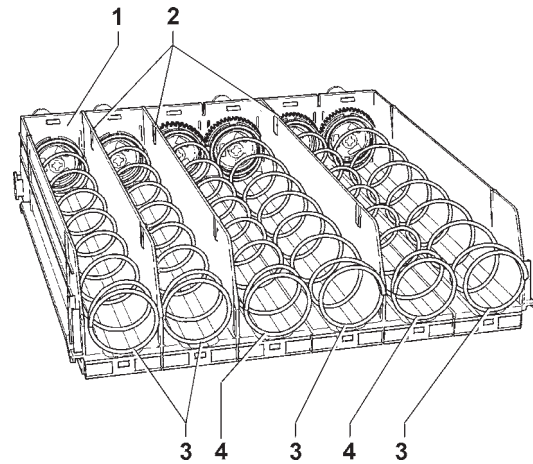


Fig. 6  
1 - Tray  
2 - Mobile walls  
3 - Right-hand spiral  
4 - Left-hand spiral

The spirals can be housed either in 152 mm compartments (two spirals, right-hand and left-hand, in each compartment) for large size products, or into 75 mm compartments (one right-hand spiral in each compartment) for small size products.

When dispensing sticks of candies or similar products, it is possible to set the rotation of the spirals to 180° instead of 360° for the 75 mm compartments and use a special right hand spiral fitted with a divider (see Fig. 7), doubling the capacity of the compartments.

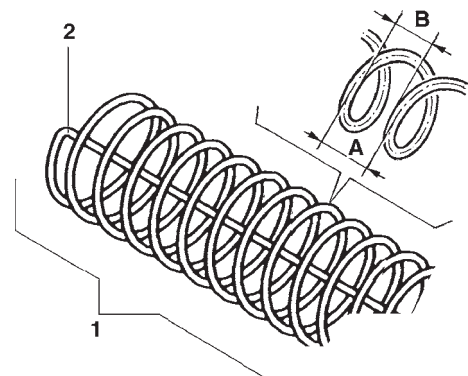


Fig. 7  
1 - 180° rotation spiral  
2 - Divider  
A - Spiral pitch  
B - Maximum product size

It is also possible to insert a divider in the already installed spirals (see Fig. 8).

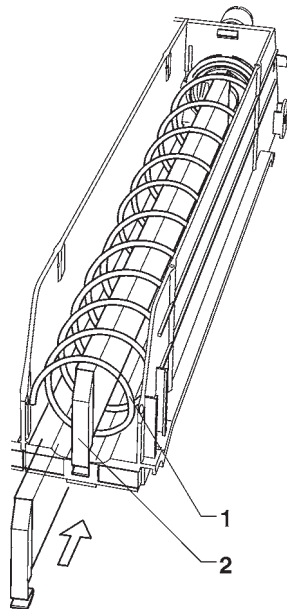


Fig. 8

- 1 - Spiral
- 2 - Divider

As standard feature or using special kits, the machine can be equipped with small compartments, suitable for dispensing cans, plastic bottles up to 69 mm dia., 0.2 litre Tetra-Paks.

The compartments equipped in this way can be recognised by the shape of the product support bracket (see Fig. 9).

Some bottle types can be dispensed without using the supports.

Most bottles can be dispensed without using any special accessories, loading the bottles up side down, so that the cap slides in the compartment channel.

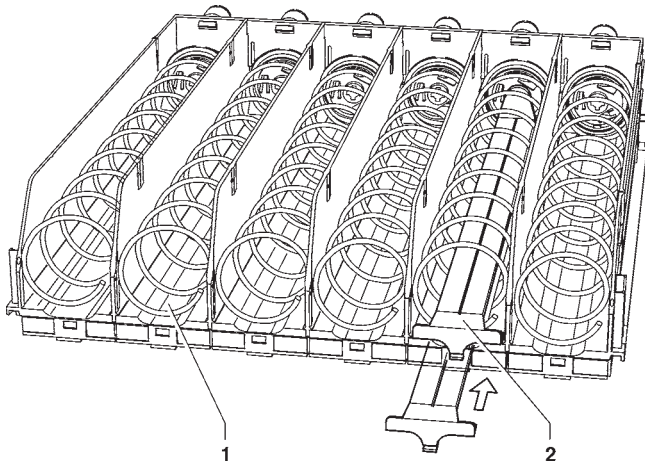


Fig. 9

- 1 - Compartment's channel
- 2 - Product raised support

The spirals can be positioned with 22,5 degree steps by pulling them towards the front and rotating them in the direction of ejection.

Normally, the products can be dispensed without any problems when the spiral end is in the lower centre position.

The maximum size (see Fig. 6) and the number of products, the pitch and the direction of rotation of the spirals are shown in the following table.

	A mm.	B mm.	N°
↻↻	80	76	6
	64	60	7
	54	50	8
	46	42	10
	40	36	11
	34	30	13
	30	26	14
	24	20	19
↻	24 (180°)	20	19+19

The machine is supplied with a table indicating the optimum setting for the different product types.

The configuration can be changed following the indications of the relevant chapter.

## HYGIENE AND MAINTENANCE

According to current health and safety regulations, the operator of vending machines is responsible for their hygiene and cleaning.

It is advisable to use sanitising products (chlorine based detergent or similar) to clean all surfaces even if not in direct contact with food.

Some parts of the machine can be damaged by strong detergents.

The manufacturer declines all responsibility for damage caused

by non-compliance with the above instructions or by the use of strong or toxic chemical agents.

**Under no circumstances should sprayed water be used.**

**Before any maintenance operation always switch the machine off.**

## LOADING PRODUCTS

- Remove one tray at a time, lifting it and pulling it past the retaining slide. The upper trays will tilt downwards to facilitate loading.

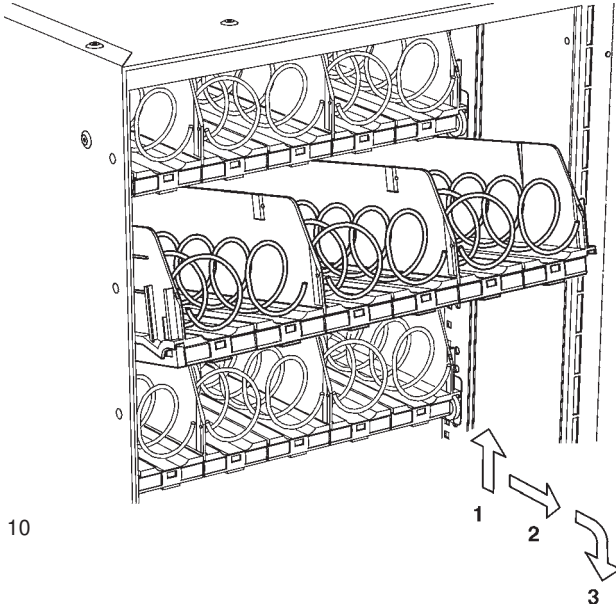


Fig. 10

- Load all products starting at the front, without inserting products with a temperature above 30°C, ensuring that all spaces are filled. The bottom of the product must rest at the bottom of the compartment with the label facing the window so that it can be identified.

**All products should load easily, do not insert products which are too large for the space.**

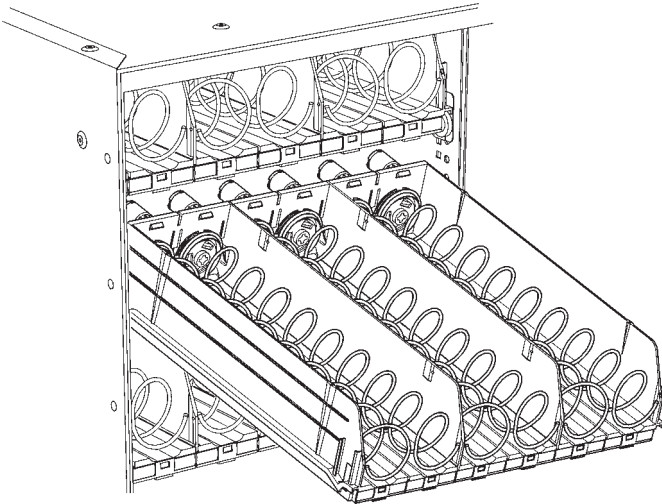


Fig. 11

- Push in the trays completely, ensuring that they go past the retaining slide.

The sealed end of bags may be caught under the spiral, preventing the free fall of the product.

Fold the seal towards the front of the unit and upwards before inserting the product in the spiral.

**More fragile products must be placed on the lower trays to prevent damage when they drop.**

Very thin products can be dispensed only using the special spacer.

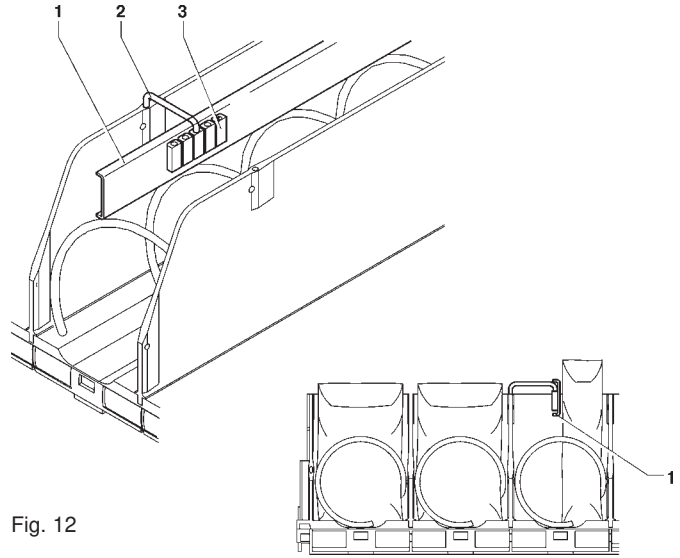


Fig. 12

- 1 - Product spacer
- 2 - Brackets
- 3 - Adjustment notches

## NOISE LEVEL

The continuous, weighted equivalent acoustic pressure level is below 70 dB.

## START-UP

Each time the machine is started, the number of trays connected to the system are checked by the electronic controls.

Also the number of actually connected compartments is checked.

## OPERATING TEMPERATURE

The machine can operate only where the ambient temperature is between 2°C and 32°C.

The cabinet temperature can be adjusted between 8°C and 20°C.

## Chapter 2 INSTALLATION

The machine installation and the following maintenance operations should be carried out by qualified personnel only, who are trained in the correct use of the machine and are aware of the specific risks of such operations.

The machine is not suitable for outdoor installation, it must be installed in a dry room where the temperature remains between 2°C and 32°C.

It cannot be positioned where water jets are used for cleaning (e.g. in large kitchens, etc.).

The machine should be positioned with a maximum inclination of 2°.

The relative humidity must not exceed 65%.

### UNPACKING THE VENDING MACHINE

After removing the packing, ensure that the machine is intact.

If the vending machine is found to be damaged, immediately inform the carrier and do not use the machine.

**No packing elements (i.e. plastic bags, polystyrene foam, nails, etc.) should be left within the reach of children, as they are potentially dangerous.**

Packing materials must be disposed of in authorised containers and the recyclable ones must be recovered by qualified companies.

**If the vending machine had been laid down during transport, allow at least one hour before connecting it to the mains.**

### MASTER/SLAVE BANK

Since the machine does not have its own user interface, it must be connected to another vending machine that has master functions.

The master machine must have a numeric keypad to allow programming operations and vending for the bank of machines.

It is also possible to configure as master those vending machines that have direct selection buttons, using the numeric keypad supplied with the machine.

The bank can be composed of three vending machines, of which one is master and two are slave; in this case the selection numbers of the two slave machines must be set with three digits.

The typical configurations are therefore as follows:

A - Master with direct buttons (adding the numeric keypad) + slave without interface; all components required for this configuration are supplied with the machine.

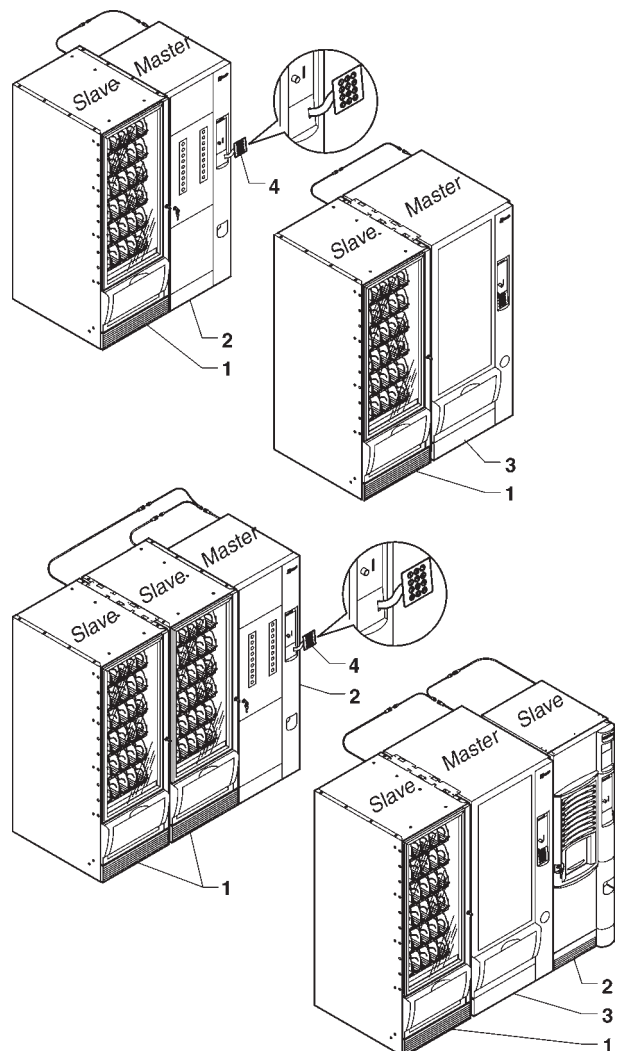


Fig. 13

- 1 - Vending machine without interface
- 2 - Vending machine with direct buttons
- 3 - Vending machine with numeric keypad
- 4 - Additional numeric keypad

Using special kits also the following configurations are possible:

B - Master with numeric keypad + slave without interface

B - Master with direct buttons (adding the numeric keypad) + 2 slaves without interface

B - Master with numeric keypad + slave with direct buttons + slave without interface

### Important notice!

**When assembling the bank of machines the ventilation grilles of the cooling units must be taken into account.**

Should the grilles be covered, the spacer supplied with the machine must be fitted (see Fig. 2).

Specific kits are available for the different models to close the empty space between cabinet and wall.

### Warning!

**Do not move the vending machines when already assembled.**

It is not possible to lift them or push them and slide them along the floor, nor can they be transported, without separating the various machines.

## CONNECTING THE VENDING MACHINES

Ensure that the master vending machine is connected to the power supply.

- Remove the pre-cut section of the external back panel and eliminate any burrs on the sheeting.
- Insert the can-bus cable inside the cabinet and secure connector's holder plate to the back panel with 2 screws.
- From the front of the vending machine, drill a 10-mm diameter hole on the left side of the cabinet.
- Remove the cover from the power supply unit and connect the can-bus cable terminal to connector "J4" or "J6" on the actuation board. Secure the cable and replace the parts that were removed.

## CONNECTING THE NUMERIC KEYPAD

If the master machine is of the type with direct selection buttons, the numeric keypad (see Fig. 18) must be installed as follows:

- by removing the pre-cut section make a hole on the door for the numeric keypad wiring.
- attach the keypad, taking care not to leave any air bubbles.
- connect the keypad cable to connector J16 on the C.P.U. board

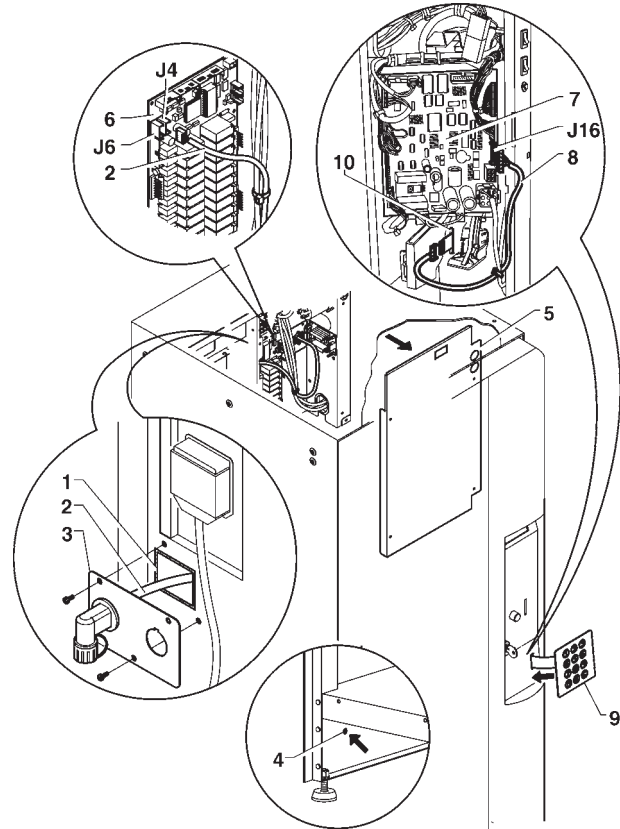


Fig. 14

- 1 - Pre-cut section
- 2 - Can-bus connector
- 3 - Connector's holder plate
- 4 - Machine securing hole
- 5 - Power supply unit cover
- 6 - Actuation board
- 7 - C.P.U. Board
- 8 - Keypad cable
- 9 - Numeric keypad
- 10 - Slot for keypad flat cable

## ASSEMBLING THE VENDING MACHINES

To assemble master and slave vending machines do as follows:

- Check that side ventilation grilles of the machines equipped with a cooling unit are completely free. Should the ventilation grilles be covered, even partially, due to the layout to be adopted, it will be necessary to fit the spacer (see Fig. 15) supplied with the machine.

### Important notice!

The bank of machines should in any case be at least 4 cm from the wall so that correct ventilation may be ensured.

- Ensure that the inclination of the machines does not

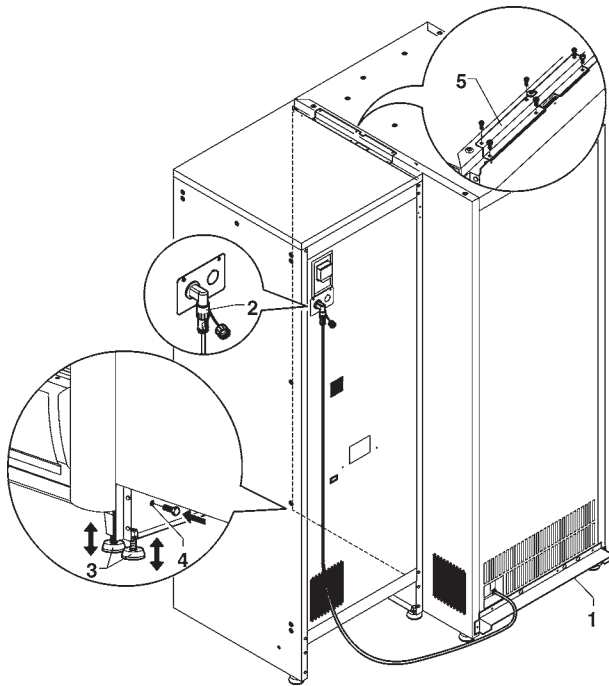


Fig. 15

- 1 - Spacer
- 2 - Can-bus cable connectors
- 3 - Adjustable feet
- 4 - Securing hole (to be drilled)
- 5 - Machine clamping bracket

exceed 2°; If necessary provide proper levelling by way of the adjustable feet included; the feet must be adjusted to keep the machines side by side at the same height.

- Secure the clamping bracket to the left side of the master machine and position it next to the vending machine; connect the connectors of the external can-bus cable.
- Line up the front of the two vending machines, taking care not to pull the external can-bus cable and not to damage the cabinet with the protruding clamping bracket.
- Secure the clamping bracket to the top panel of the slave machine. Secure the two vending machines with the screw at the base.

## CONNECTING THE MACHINE TO THE POWER SUPPLY

The machine is designed to operate under a single-phase 230 V~ voltage and is protected by T6.3 A fuses. A power supply outlet must be provided for each machine of the bank.

**It is not possible to connect more than one machine to the same power outlet.**

Before making the connection, ensure that the rating of each machine corresponds to that of the power grid, and more specifically:

- the supply voltage rating must be within the range recommended for the connection points;
- the main switches should be capable of withstanding the peak load required, and at the same time ensure proper omnipolar disconnection from the power grid with an opening gap of the contacts of at least 3 mm.

**The switches, the power outlets and the plugs must be located in an easily accessible position.**

The electrical safety of the machine is ensured only when it is correctly earthed according to the safety standards in force.

**This fundamental safety requirement must be duly verified, and if in doubt the system must be carefully tested by qualified technicians.**

The power supply cable is of the type with a fixed plug. Any replacement of the power cable (see Fig. 16) should be made by qualified and suitably trained personnel only using cables type HO5 RN - F or HO5 V V-F or H07 RN-F with a 3x1-1.5 mm<sup>2</sup> section.

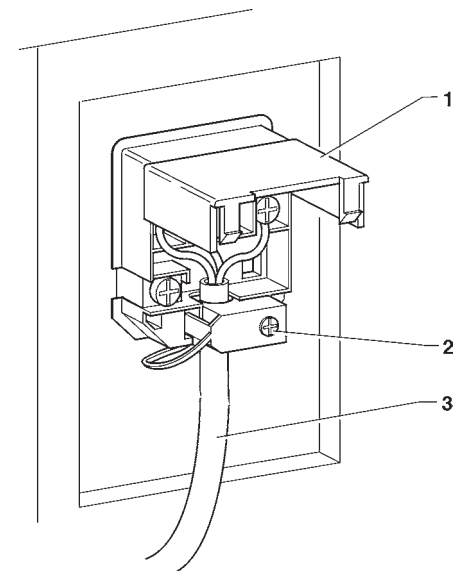


Fig. 16

- 1 - Lift cover
- 2 - Cable clamp
- 3 - Power supply cable

**Do not use adapters, multiple sockets and/or extensions.**

**THE MANUFACTURER DECLINES ALL RESPONSIBILITY FOR ANY DAMAGE CAUSED BY NON-COMPLIANCE WITH THE ABOVE MENTIONED PRECAUTIONS.**

## CONTROLS AND INFORMATION

The machine can be used only as slave, therefore the control functions are handled by the master machine. The main switch, which is of the manual type, disconnects the machine in the event of maintenance operations. The information for the user (sales price and selection number) is indicated on self-adhesive labels to be placed in front of the spirals during installation.

## INTERNAL COMPONENTS

The evaporator assembly mounted on the cabinet shelf comprises two fans, the evaporator, the air duct and a water retaining tray placed under the evaporator. The C.P.U. board (central processing unit) located in the lower right section inside the vending machine controls the different functions and communicates with the C.P.U. board of the master machine.

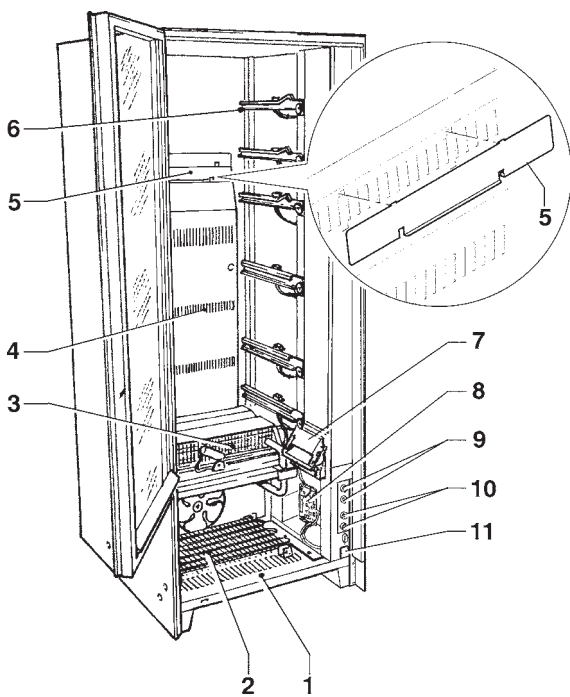


Fig. 17

- 1 - Product dispensing compartment housing
- 2 - Cooling unit condenser
- 3 - Cooling unit evaporator
- 4 - Cold airflow grilles
- 5 - Removable grille cover
- 6 - Tray guides
- 7 - Product passage photocells
- 8 - C.P.U. board
- 9 - Transformer fuses
- 10 - Mains fuses
- 11 - Main switch

The cooling unit is located in the lower part of the cabinet. When removing the cover of the last ventilation grille (see Fig. 17) the air circulation ensures a uniform temperature inside the refrigerated box, between 9°C and 12°C. When covering the ventilation grille, the temperature inside the refrigerated box is differentiated between the upper three trays (12°-16°C) and the lower three trays (8°-10°C).

The cooling unit is defrosted automatically every 6 hours. However, the timing is programmable.

The power supply unit, mounted in the lower section of the cabinet, contains the relay card which activates the compressor, the protection fuses, the main switch, the transformer and the C.P.U. board.

## MAIN SWITCH

The power supply unit (see Fig. 27) is fitted with a manual switch that disconnects the power from the machine electrical system,

**except from the terminal board supporting the line cable, the line fuses and from the same switch area.**

**Before removing the cover from these parts (indicated with a specific plate) it is necessary to disconnect the external switch.**

**All operations which require the machine to be energised with the door open must be carried out by qualified personnel who are aware of the specific risks of such condition.**

## BANK CONFIGURATION

The machines are initially configured for operation in a bank of machines, therefore the software must be set for the necessary options.

After completing the connection between the machines and to the power supply, switch on only the master machine.

Access the master/slave function in the technician menu and select the type of slave to define the number of digits indicating the selection.

Two digits (XX) are advisable if the bank has only one machine with numeric selection.

If there are two slaves, it is advisable to use three digits (0XX, 9XX) for identifying the selection groups.

When switching on the slave regarding the choice made, the master will communicate if the procedure was successful.

If necessary, repeat the procedure to configure the second slave, making sure not to configure two slaves the same way.

The configuration must be defined every time the master machine is initialised.

Should the configuration of a slave need to be changed, access the master function that indicates the switched on slaves as not configured.

After the configuration, it will be possible to access the filler and technician menus of the slave from the master machine.

When pressing the programming button on the master, the software will ask the user to select the type of vending machine to be accessed.



## OPERATING MODES

The machine control software has three different function levels, which are:

- normal operation;
- filler menu;
- technician menu.

According to the operating mode, the display and keypad functions of the master machine change as described in the following paragraphs.

### USER INTERFACE

The interaction between system and operator happens through the following components located on the master machine:

- Liquid crystal display (LCD) (the number of lines and of characters depend on the type of master).
- External keypad configured via software with numeric keys from 0 to 9, having with the following functions in the in the filler and technician menus:

#### Numeric keys

1 to 7 are used to select directly a menu item by keying in the corresponding number shown in the summary tables included in the appendix to this manual.

#### Next menu key Ⓣ:

“↓” is used to move to the next menu option. In the case of command management it varies the status of Logical Data where required, or in the case of Numeric Data it writes the value 0.

#### Previous menu key Ⓢ:

“↑” is used to move to the previous menu option. In the case of command management it varies the status of Logical Data where required, or in the case of Numeric Data it writes the value 8.

#### Enter key ⓔ:

“↵” is used to move from a menu to a sub-menu or to enter a command. In the case of Logical Data it enters the status that appears on the display.

#### Exit key ⓐ:

“←” is used to move from a sub-menu to the higher level menu, or to exit from the current command.

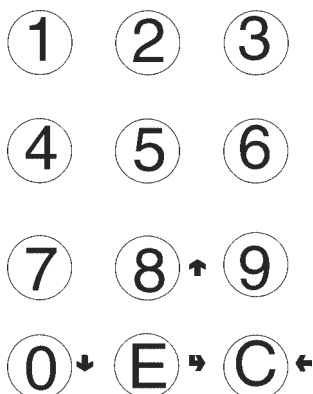


Fig. 18

## NORMAL OPERATING MODE

The machine is preset to normal operating mode when connected to the power supply with the main switch on. The lighting is switched on and the messages for the customer are indicated on the display of the master.

### FILLER MENU

The machine is preset to “filler” mode when pressing the menu access button on the master machine and selecting on which machine to operate.

The “↑” and “↓” keys scroll through the filler menu which permits:

“Statistics”	Data reading and display
“Single Prices”	Changing the price for one selection
“Special selections”	Virtual selections Return of virtual price Two-motor selections Photocell parameters
“Test”	Test selection Motor test Autotest
“EVADTS”	Connection

**If a menu is not enabled during programming, a title is displayed in the list but it cannot be accessed.**

#### Price key Ⓣ:

Key Ⓣ is used to access directly the price/selection combination of time band 0, if the function is enabled in the “Technician” menu.

## STATISTICS

Data on the machine operations is stored in both general counters and relative counters, which can be reset without losing total data.

### PRINT

Connect an RS232 serial printer having a Baud rate of 9600, 8 data bit, no parity, 1 stop bit to the serial port located on the push-button board to print all of the statistics, and namely:

#### Total

- counter by single selection
- counter by time bands
- failure counter
- photocell errors
- motor errors
- dispensing compartment lock errors

#### Relative

- counter by single selection
- counter by time bands
- failure counter
- photocell errors
- motor errors
- dispensing compartment lock errors

The hardcopy printout will also contain the machine information, and namely:

- date/time of print
- machine name
- software version
- operator code
- machine code
- Installation date.

To connect the printer, do as follows:

- press the confirm print key "↵", displaying the message "Confirm?";
- connect the printer before confirming;
- press the confirm key "↵" to start printing.

### DISPLAY

When pressing the confirm key "↵" the data described in the paragraph "Printing the statistics" is sequentially displayed.

### RESETTING THE RELATIVE STATISTICS

Statistics can be reset for relative counters globally (all types of data) or selectively for:

- selections
- failures
- photocell errors
- motor errors
- dispensing compartment lock errors

Press the confirm key "↵", and the message "Confirm?" starts blinking.

Press the confirm key "↵", the message "Working" is displayed for a few seconds and all statistics are reset.

## PRICES FOR SINGLE SELECTIONS

This function is used to change the sales price for each selection according to the time band.

Key Ⓞ is used to access directly the price/selection combination settings, if the function is enabled in the "Technician" menu.

## SPECIAL SELECTIONS

### VIRTUAL SELECTIONS

This function is used to define a pair of selections that can be sold at a price different from the sum of the two selections, using a single selection number. 10 virtual selections can be programmed (70 to 79).

### RETURN OF VIRTUAL PRICE

This function is used to define, in the event of failed second dispensing in a virtual selection, not to cash the price of the second selection (only if an MDB payment system or validator are used). With other payment systems, it can be decided whether or not return the entire amount.

### SELECTIONS WITH TWO MOTORS

The machine can be set up to dispense long products, and dividers can be fitted so that two motors are used for each single selection.

With this function the operation of two motors can be combined, specifying the selection number of the second motor.

The first motor number will be the selection number, while the selection number of the associated motor will remain disabled.

### Important notice!

**After a failure to the motors of these selections, the machine configuration procedure in the "Spiral/Selection" menu must be followed.**

### DISPENSING DETECTION

The vending machine can be fitted (as standard feature or as optional according to the model) with a device that, by means of photocells, detects the passage of dispensed products.

This device permits, in the event of failed detection of the dispensed product:

- set a rotation time for the spiral beyond the limit switch, to overcome any jamming;
- return or not the paid amount;
- block further selections for the involved spiral.

## TEST

### SELECTIONS

This function is used to simulate the normal dispensing of products without inserting any money to check the functioning of the spiral rotation by pressing the selection keys.

### MOTOR TEST

It activates all motors in a sequence, indicating on the display the number of the involved selection.

### AUTOTEST

A function to check, in a semiautomatic manner, the correct operation of some devices is implemented in the software.

Some checks occur automatically, others need the manual operation of the monitored component; press key "➡" to go to the next check.

The monitored devices are:

### "Temperature"

The value of temperature detected by the probe is displayed.

In the event of disconnection the value -11.0 is displayed.

In the event of a short-circuit the value 41.0 is displayed.

Press "←" to advance.

### "Buzzer"

A series of sounds is emitted.

### "Compressor"

The compressor is activated/deactivated using the "➡" and "←" keys.

### "Selections"

All selections are activated in a sequence.

### "Photocells"

If the product detection device is present, the light beam reading and interruption are checked.

### "Disp compt lock"

If the device for locking the dispensing compartment opening, use the "➡" and "←" keys to lock and unlock the compartment opening.

## EVADTS TRANSFER

When activating this function, the machine awaits the connection with a device to acquire the EVADTS statistics.

## TECHNICIAN MENU

Using the programming procedures described in this section, it is possible to set all variables regarding machine configuration.

To access it is necessary to press the programming button on the master machine and enter the information for the machine that will be set to “filler menu” mode. Press key  $\odot$  from the filler menu.


**N.B. By pressing again the key  $\odot$  from the technician menu, the machine will return to “filler” mode.**


The “ $\uparrow$ ” and “ $\downarrow$ ” keys scroll through the technician menu items, which include:

Failures	Read Failures Reset failures Motor errors Motors status Reset motor errors	Statistics	Display	partial total
			Cancel	partial total
			Display relat.	partial total
			Cancel relat.	partial total
			Print relative	partial total
			Cancel	partial total
Program parameters	Cash Prices Master/Slave Decimal point Bonus	Test	Complete selections Motor test Autotest	
		Miscellaneous	Machine info	Installation date Machine code Operator code
Spirals/selections	Configuration Virtual selections Return of virtual price Two-motor selections Product code		Initialising	
		EVADTS	Pass code Security code Connection	
Photocells	Spiral settling time Money return Empty spiral control			
Disp compt lock	Operating mode Unlock time Out of service time Out of serv. if open			
Cold parameters	Temperature Defrosting Cooling unit			
Display	Language Personalised strings			
Miscellaneous	Password Energy saving Menu masking			

## PRESENT FAILURES

### READING

When the “Failure” function is displayed, press the confirm key “” to display the present failures.

If no failures are currently present, after pressing the confirm key “” the message “End failures” will be displayed.

The monitored failures are:

#### Compressor

The machine is locked if the compressor runs non-stop for more than 24 hours.

#### RAM Data

One or more areas of the RAM contain wrong data which was corrected with the default values.

The machine will continue to function, but it would be advisable to initialise as soon as possible.

#### Probe

The machine is locked after 5 minutes if the internal temperature sensor is disconnected; the display will indicate a temperature of  $-11^{\circ}\text{C}$ .

The machine is locked after one hour if a sensor short circuit is detected; in this case the display will indicate a temperature of  $+41^{\circ}\text{C}$ .

#### Motor errors

With this function the failed motors are displayed for approximately 1 second.

Scrolling through all failed motors is automatic.

#### Note:

By restarting the machine any blocked motors are detected as not present.

### Dispensing compartment lock

When the function “unlock compartment with dispensing” and the parameter “out of service if open” are active, the machine will lock if the locking device of the dispensing compartment remains blocked when closed or it does not close within the programmed time.

#### Motors status

This function is used to read the last failure that occurred in each spiral, even if the machine configuration has an empty position.

A motor can be in una of the following conditions:

- motor functioning;
- motor not present; when the motor is not detected at machine start-up.
- motor disconnected; when a motor detected at machine start-up is not detected during a selection.
- motor blocked; when the positioning button is not operated within the “timeout”.
- empty spiral; when, with the dispensing control installed, no dispensed product is detected.

#### Note:

By restarting the machine any blocked motors are detected as not present.

#### RESET

By confirming this function all current failures will be reset.

# PROGRAMMING PARAMETERS

## CASH

This set of functions controls all parameters regarding the payment systems and the sales prices.

### SELECTION PRICES

Four different prices can be set for each selection according to the programmed time bands for when the time table option is set.

For each of the 4 time bands prices (0 to 65,535) can be programmed globally (same price for all selections) or for the single selections.

Should the majority of products be sold at the same price, it will be convenient to set the price globally and then change the figure of the selections with different prices.

### TIME BANDS

Four programmable time bands are provided for selling products at different prices.

The time periods are programmable for beginning and end time by hours (00 to 23) and minutes (00 to 59).

If the values for start and end of the time band are set to 00.00 the time period is disabled.

The reference time is kept by an internal clock, programmable as:

day/month/year week-day 1-7

and then

hour/minutes/seconds.

## MASTER/SLAVE

The machine control system is pre-arranged for the connection in a bank of vending machines.

This function is used for sending the information necessary for controlling the payment system to the master.

### IMMEDIATE CHANGE

Normally, the amount of credit inserted for a selection is cashed after the machine sends the message "Selection successful".

When this function is enabled, disabled by default, the cash message is sent at the beginning of dispensing.

### SLAVE PRICE HOLDING

If an Executive payment system in "Price Holding" mode is set in the master machine, the information must be set also in the software of the slave machine.

### COMBINED SELECTIONS

A combined selection is intended as the association of two selections, one from the slave and one from the master, to the same number (80 to 89) sold at a single price, different from the sum of the prices for the two selections.

In the case of a bank with two slaves operating with three-digit selections, the first digit (0 to 9) is displayed automatically.

The related menu is used for combining a slave selection (10 to 79) with a master selection (01 to 18 or 10 to 79 according to the type of keypad).

If one of the two selections is not available, the combined selection is not dispensed. If the immediate change option is not activated on the master machine, it might be possible that the first selection fails. In this case the entire amount is returned. If the second selection fails, it will be possible to decide whether to keep or return the entire amount by activating/deactivating the "Virtual change return" option.

## SPIRALS/SELECTIONS

This set of functions is used to define the selection control parameters.

### MACHINE CONFIGURATION

This function is used to detect and store the number and position of the trays and of the selection motors.

### VIRTUAL SELECTIONS

This function is used to define a pair of selections that can be sold at a price different from the sum of the two selections, using a single selection number. 10 virtual selections can be programmed (70 to 79).

In the case of a bank with two slaves operating with three-digit selections, the first digit (0 to 9) is displayed automatically.

### RETURN OF VIRTUAL PRICE

This function is used to define, in the event of failed second dispensing in a virtual selection, not to cash the price of the second selection (only if an MDB payment system or validator are used). With other payment systems, it can be decided whether or not return the entire amount.

### SELECTIONS WITH TWO MOTORS

In order to dispense long products, dividers can be fitted so that two motors are used for each single selection.

With this function the operation of two motors can be combined, specifying the selection number of the second motor.

The first motor number will be the selection number, while the selection number of the associated motor will remain disabled.

### Important notice!

**After a failure to the motors of these selections, the machine configuration procedure in the "Spiral/Selection" menu must be followed.**

### PRODUCT CODE

This function is used to assign a 4-digit identification code to each spiral for processing the statistics.

## PHOTOCELL PARAMETERS

The vending machine can be fitted (as standard feature or as optional according to the model) with a device that, by means of photocells, detects the passage of dispensed products.

When this device is installed, the following can be monitored:

- Error before dispensing; when at the selection start the photocell beam is not read.
- Error after dispensing; when the motor fails during dispensing.
- Error for no product; when the device does not detect the passage of a product during dispensing.

In these cases the machine can be programmed to:

- set a rotation time for each spiral for settling beyond the normal rotation;
- return or not the paid amount;
- block further selections for the involved spiral.

## DISPENSING COMPARTMENT LOCK PARAMETERS

The dispensing compartment can be fitted (as standard feature or as optional according to the model) with a lock device.

This function is used for deciding whether leaving the dispensing compartment “always free” or “unlock it with dispensing”.

In “unlock with dispensing” mode the dispensing compartment flap is unlocked only for a certain period of time, programmable at between 1 and 10 minutes, after each product selection. In this case it is possible to enable the function that places the vending machine out of service for a certain period of time, programmable at between 1 and 10 minutes, if the dispensing compartment flap stays open.

The machine is placed out of service if the lock device is always closed during dispensing.

## REFRIGERATION PARAMETERS

The operation of the refrigeration system can be programmed for the following functions.

### TEMPERATURE

The machine internal temperature during normal operation can be set directly in °C (8° to 20°C, 8°C by default). The temperature differential deviation defined with the previous function for starting/stopping the cooling unit is 2°C.

### DEFROSTING

This function allows for a defrosting cycle (switching the cooling unit off, regardless of the temperature) of 20 minutes. The time interval between cycles can be programmed from 0 to 99 hours (set to 6 hours by default); the time interval will be determined according to the relative humidity and the frequency of door openings.

With the timing set to 0 the function is disabled.

### ENABLE COLD UNIT

The cooling unit operation can be disabled. The change will apply when restarting the machine.

## DISPLAY

This set of functions is used to manage the messages indicated on the external display.

### LANGUAGE

There is an option of language, selected among the available ones, to be used for the messages on the display.

### CUSTOMISING THE MESSAGES

The machine uses standard messages to give information to the user during normal operation (e.g. “Ready”, “Take” etc.). When this function is enabled, the message can be changed in the same manner as setting the promotional message. Changes are stored as copies of the standard messages.

Therefore, if this function is disabled, the standard messages will be displayed again, but the changed messages are still stored.

## MISCELLANEOUS

This set of functions contains some sub-menus, used less frequently, which permit control of the functions described below.

## PASSWORD

### ENABLING THE PASSWORD

This function is used to enable the option of requesting the password to access the technician menu; the password request is disabled by default.

### ENTERING THE PASSWORD

It is a 5-digit numeric code which is required to access the technician menu.

The default value of this code is set to 00000.

## ENERGY SAVING

This function, disabled by default, is used to suspend vending in certain hours.

2 suspended service time bands can be programmed.

## DISPLAYING THE FILLER MENU

This function is used to determine the filler menu options to be left active or to be disabled (ON/OFF):

- Statistics
- Single selection prices
- Special selections
- Test
- EVADTS

The reference numbers of the menus do not change even if some are disabled.

## STATISTICS

Data on the machine operations is stored in both general counters and relative counters, which can be reset without losing total data.

### PRINT

Connect an RS232 serial printer having a Baud rate of 9600, 8 data bit, no parity, 1 stop bit to the serial port located on the push-button board to print all of the statistics, and namely:

#### Total

- counter by single selection;
- counter by time bands;
- failure counter;
- photocell errors;
- motor errors;

#### Relative

- counter by single selection;
- counter by time bands;
- failure counter;
- photocell errors;
- motor errors;

The hardcopy printout will also contain the machine information, and namely:

- date/time of print
- machine name
- software version
- operator code
- machine code
- Installation date.

To connect the printer, do as follows:

- press the confirm print key "↵", displaying the message "Confirm?";
- connect the printer before confirming;
- press the confirm key "↵" to start printing.

## DISPLAY

When pressing the confirm key "↵" the data described in the paragraph "Printing the statistics" is sequentially displayed.

### RESET STATISTICS

Statistics can be reset for counters globally (all types of data) or selectively for:

#### Total

- selections
- failures
- photocell errors;
- motor errors;

#### Relative

- selections
- failures
- photocell errors;
- motor errors;

Press the confirm key "↵", and the message "Confirm?" starts blinking.

Press the confirm key "↵", the message "Working" is displayed for a few seconds and all statistics are reset.

**N.B.:** when resetting the total statistics also the relative statistics are reset.

## TEST

### SELECTIONS

This function is used to simulate the normal dispensing of products without inserting any money.

To check the functioning of the motors press the selection keys.

### MOTOR TEST

It activates all motors in a sequence.

### AUTOTEST

A function to check, in a semiautomatic manner, the correct operation of some devices is implemented in the software.

Some checks occur automatically, others need the manual operation of the monitored component; press key "↵" to go to the next check.

The monitored devices are:

#### "Keypad"

Press the key of the master machine numeric keypad requested on the display; if it works correctly the request for the next key is presented.



### “Temperature”

The value of temperature detected by the probe is displayed.

In the event of disconnection the value -11.0 is displayed. In the event of a short-circuit the value 41.0 is displayed. Press “←” to advance.

### “Buzzer”

A series of sounds is emitted.

### “Compressor”

The compressor is activated/deactivated using the “▶” and “←” keys.

### “Selections”

All selections are activated in a sequence.

### “Photocells”

If the product detection device is present, the light beam reading and interruption are checked.

### “Disp compt lock”

If the device for locking the dispensing compartment opening, use the “▶” and “←” keys to lock and unlock the compartment opening.

## MACHINE INFORMATION

The machine can memorize a series of codes which will identify it when retrieving statistics.

More specifically the following can be stored:

- 6-digit operator code;
- 8-digit vending machine code which identifies the machine.

### INSTALLATION DATE

This function is used to store the current date of system, if set correctly, as installation date.

The date is printed when retrieving the statistics.

### MACHINE CODE

When the “Machine code” function is displayed the eight-digit numeric code identifying the machine can be changed (from the default 0).

### OPERATOR CODE

When the “Operator code” function is displayed the six-digit numeric code identifying groups of machines can be changed (from the default 0).

## EVADTS CODES

The EVADTS (European Vending Association Data Transfer System) communication protocol has two codes for identifying the machine and for recognising the data transfer terminal:

### PASS CODE

It is a four-digit alphanumeric code (0-9; A-F) that must be the same as the one in the data transfer terminal to allow its identification.

Press the confirm key “▶” and the code is displayed as “0000” regardless of the actual value; then press the correction key “←” and the first digit will start blinking.

Using the scrolling keys, its value can be changed (during the change operation the value becomes visible).

Press the change key “▶” and the next digit starts blinking.

Press the confirm key “▶” after changing the fourth digit; the value is stored and the display indicates “0000” again.

### SECURITY CODE

It is a further alphanumeric code for reciprocal recognition between machine and EVADTS terminal.

Programming works as in the “Pass” code.

Connection

This function places the machine in wait mode for connection to retrieve data.

### EVADTS CONNECTION

When activating this function, the machine awaits the connection with a device to acquire the EVADTS statistics.

## INITIALISING

When the “Initialise” function is displayed the vending machine can be initialised, selecting the “country” (intended as configuration type) and the language, restoring all related default data.

This function should be used in the event of a memory data error or when the software version is replaced/updated. All statistic information will be reset.

Press confirm key “▶”; the country and the language to be used are requested, then the message “Confirm?” is displayed.

Press confirm key “▶” a second time and the message “Working” is displayed for a few seconds.

## Chapter 3 MAINTENANCE

The integrity of the machine and compliance with the standards of the relevant systems must be checked at least once a year by qualified personnel.

The maintenance operations described in this chapter should be carried out with the machine energised and therefore by qualified personnel, who are trained in the correct use of the machine and are aware of the specific risks of such condition.

The main switch is located on the power supply unit (see Fig. 27).

**Inside the machine, the only parts that stay energised are those protected by covers and carrying a plate with the warning “Disconnect the power before removing the protective cover”.**

**Before removing such protective covers the external switch must be disconnected.**

### PRINTED BOARD FUNCTIONS AND INDICATOR LIGHTS

The C.P.U. (Central Processing Unit) board controls all users set for the maximum configuration and processes the signals from the cooling unit sensor.

The card also houses some LEDs which, during the machine operation, give the following indications:

- Green LED (3): blinks during normal operation of the C.P.U. board;
- Yellow LED (4): glows when 5 V DC are detected;
- Red LED (16): glows when, for any reason, the software is reset.

### SOFTWARE UPDATE

The machine is fitted with a Flash EPROM which can be electronically updated.

By means of a special program and suitable system (Personal Computer or similar) the machine management software can be updated without replacing the EPROM.

#### **Warning!**

When downloading the software it is advisable to disconnect the motor connectors from the CPU board (**J1 e J2**).

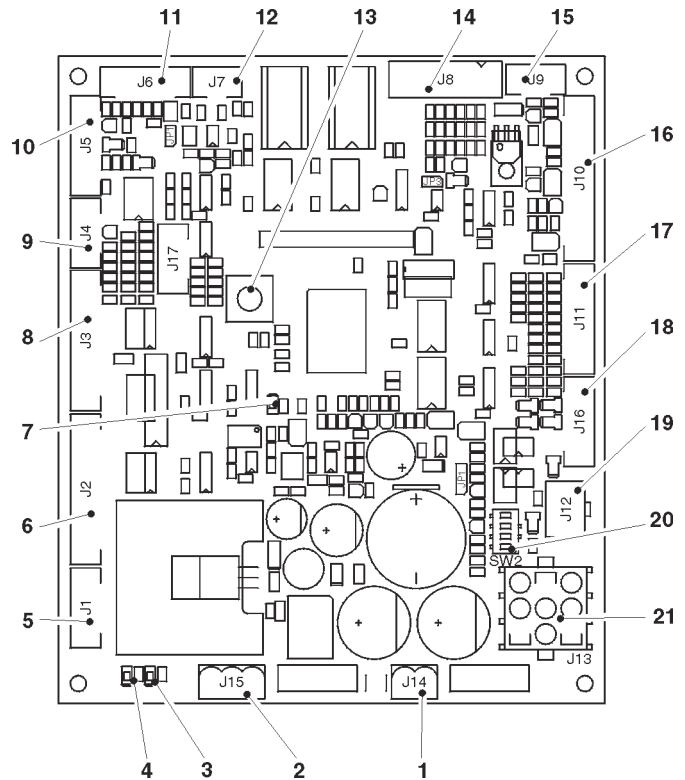


Fig. 20

- |    |   |
|----|---|
| 1  | - J14 not used                              |
| 2  | - J15 Board power supply                    |
| 3  | - Green LED: run (DL2)                      |
| 4  | - Yellow LED: 5 V DC (DL1)                  |
| 5  | - J1 Dispensing compartment lock connection |
| 6  | - J2 Spiral motor control                   |
| 7  | - Red LED: CPU board reset (DL3)            |
| 8  | - J3 Input/output                           |
| 9  | - J4 not used                               |
| 10 | - J5 RS232                                  |
| 11 | - J6 Photocells                             |
| 12 | - J7 Can-bus                                |
| 13 | - Button not used                           |
| 14 | - J8 not used                               |
| 15 | - J9 NTC probe                              |
| 16 | - J10 not used                              |
| 17 | - J11 not used                              |
| 18 | - J16 not used                              |
| 19 | - J12 not used                              |
| 20 | - Minidips not used                         |
| 21 | - J13 not used                              |

## CONFIGURING THE TRAYS

### PRODUCT SPACERS

The spacers are used when loading “narrow” products. The spacers should be fitted to contain products, without blocking them, towards the right-hand side of the compartment, so that they stay upright. According to the type of products, assess whether it is more convenient to use the short or long side of the brackets and in which of the five adjustment notches to connect them. Pull the spacer towards the front to close the space and push it back to open the space. There must be at least 3 mm between the spacer and the products.

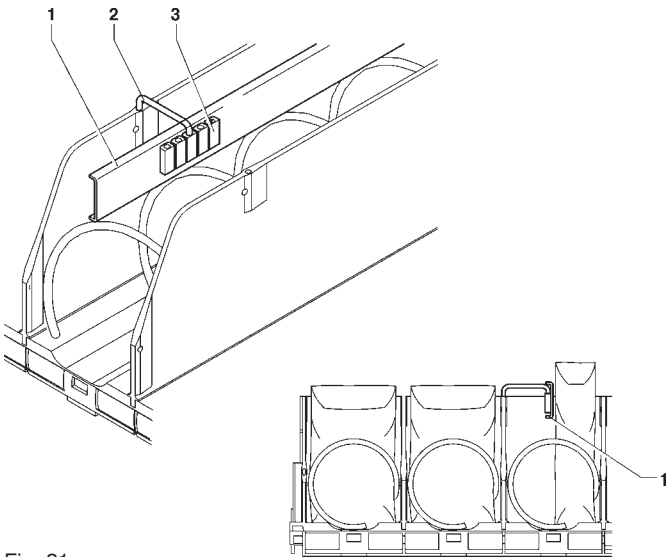


Fig. 21

- 1 - Product spacer
- 2 - Brackets
- 3 - Adjustment notches

### PRODUCT EJECTOR

The ejectors, right-hand and left-hand, must be used for products packed in bags, such as potato crisps or similar. As they are hooked at the end of the spiral they push the products further out. If necessary slide the ejector along the spiral wire to locate the most appropriate position according to the product being dispensed.

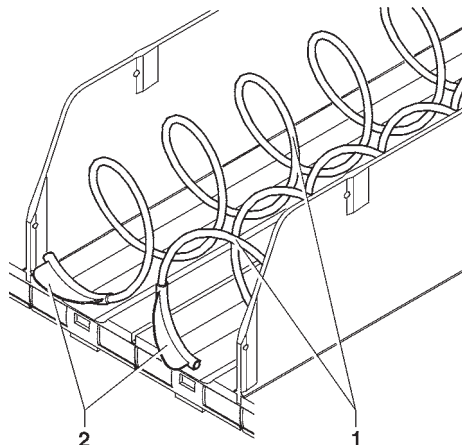


Fig. 22

- 1 - Spirals
- 2 - Ejectors

## REPLACING THE SPIRALS

In order to change the number and the set-up of the compartments, proceed as follows:

- Slide out the concerned tray.
- Rotate the spiral in the opposite direction to the ejection rotation, holding the plastic support flange still, to separate the two parts and fit the other spiral.
- Fit the new spiral assembly proceeding in the opposite direction, ensuring that the spiral is positioned correctly.

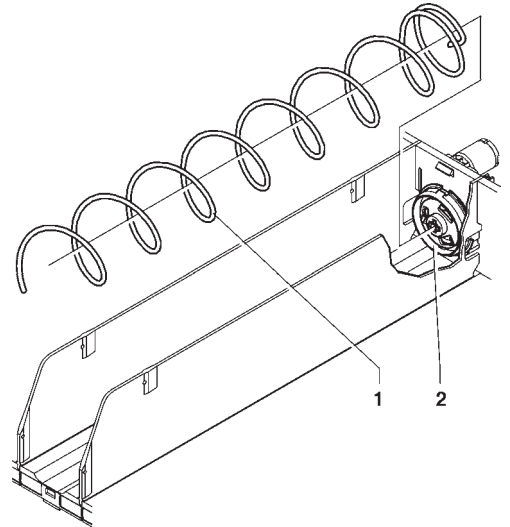


Fig. 23

- 1 - Spiral
- 2 - Plastic flange

## REMOVING THE TRAYS

To replace the trays proceed as follows:

- Slide out the tray to be modified;
- remove the electrical connector from the tray;
- lift the tray to unblock the retaining slide.
- To fit a new tray, proceed in the opposite way.

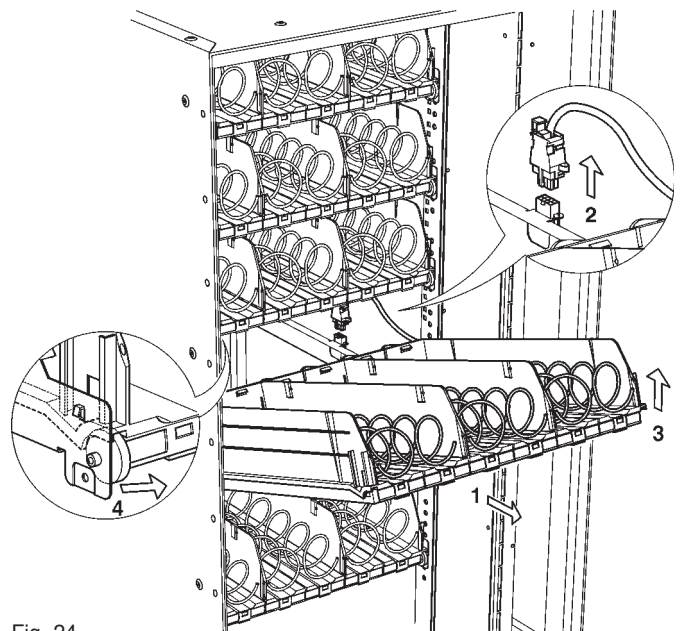


Fig. 24

## CHANGING THE NUMBER OF TRAYS

The vending machines are supplied with 6 trays. It is however possible to bring the number of trays to 5, proceeding as follows:

- Disconnect the plug from the power supply.
- Remove all trays from the machine.
- Move the guides (see Fig. 25) placed on the side supports, except the first ones at the bottom which stay in the same position.
- Carry out the same operation for the connectors, placed at the bottom of the cabinet.
- Remove the pair of guides not used.
- Replace the 5 trays, ensuring that the connectors are inserted properly.
- Secure the removed cables, as not to be in the way of other trays and cables.
- Reprogram the machine.

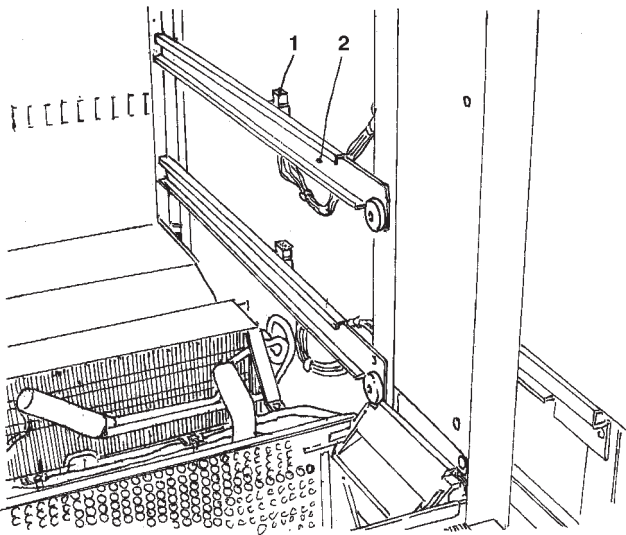


Fig. 25

- 1 - Tray connector
- 2 - Tray guide

## CHANGING THE TRAY CONFIGURATION

The configuration of the spirals on each tray can be changed. To go from two selections with single spirals to one selection with double spirals, do as follows:

- Remove the tray to be modified.
- Remove the centre wall, pushing it towards the back and then lifting.
- Remove the spirals, and the flanges, from the two motors.
- Disconnect the left-hand side motor from the cable and remove it from the tray. In its place, fit the bush and pin bush.
- Install the right-hand and left-hand spirals with the same pitch onto the new flanges (right and left are identical), fitted with a cogged wheel, and then connect the right-hand one to the motor still on the tray and the left-hand one onto the previously installed bushes. The two cogged wheels must mesh.
- Remove the price labels and the compartments no longer used, and if necessary update the price labels still in use.
- Program the new selections with the desired price.
- Test the modified selections, to be sure of their correct operation.

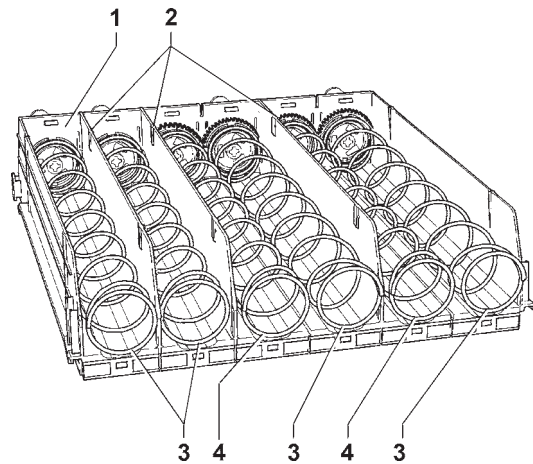


Fig. 26

- 1 - Tray
- 2 - Mobile walls
- 3 - Right-hand spiral
- 4 - Left-hand spiral

**N.B.:** The selection numbers are formed by two figures; the first figure refers to the tray number, counting from the top (1-6), the second figure refers to the spiral number, counting from the left (0-5).

The selection number to which the motor is connected will therefore be formed by the tray number plus the wire code number.

## POWER SUPPLY UNIT

The fuses and the switch at the front of the power supply unit have the functions indicated below.

**When replacing any fuses the power supply cable must be disconnected from the mains.**

To access the inside of the power supply unit, remove the product dispensing compartment proceeding as described in the chapter "Access to the cooling unit".

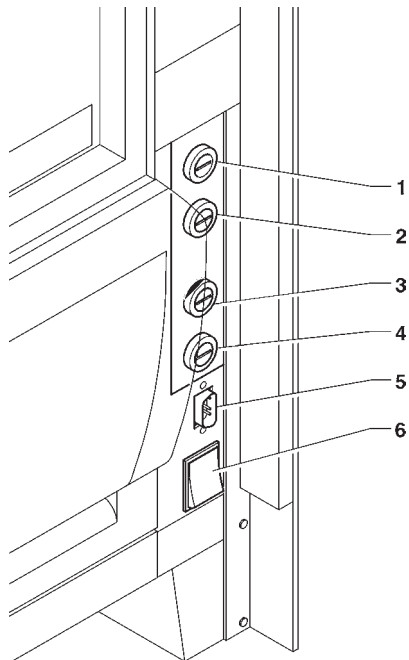


Fig. 27

- |   |   |
|---|---|
| 1 | Transformer primary winding protection fuse   |
| 2 | Transformer secondary winding protection fuse |
| 3 | Line fuse                                     |
| 4 | Line fuse                                     |
| 5 | RS232 serial port                             |
| 6 | Illuminated main switch                       |

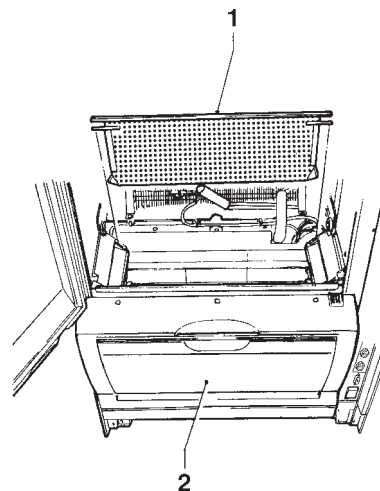


Fig. 28

- |   |                        |
|---|------------------------|
| 1 | Anti-intrusion grille  |
| 2 | Dispensing compartment |

Fig. 29

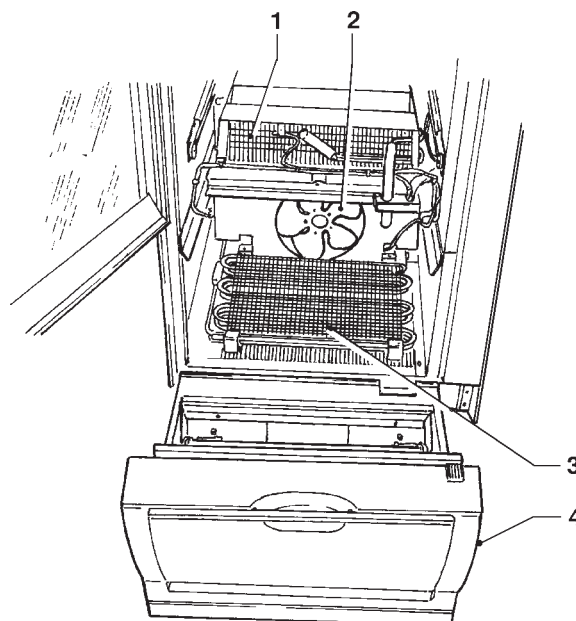
- |   |                        |
|---|------------------------|
| 1 | Evaporator             |
| 2 | Fan                    |
| 3 | Condenser              |
| 4 | Dispensing compartment |

## ACCESS TO THE COOLING UNIT

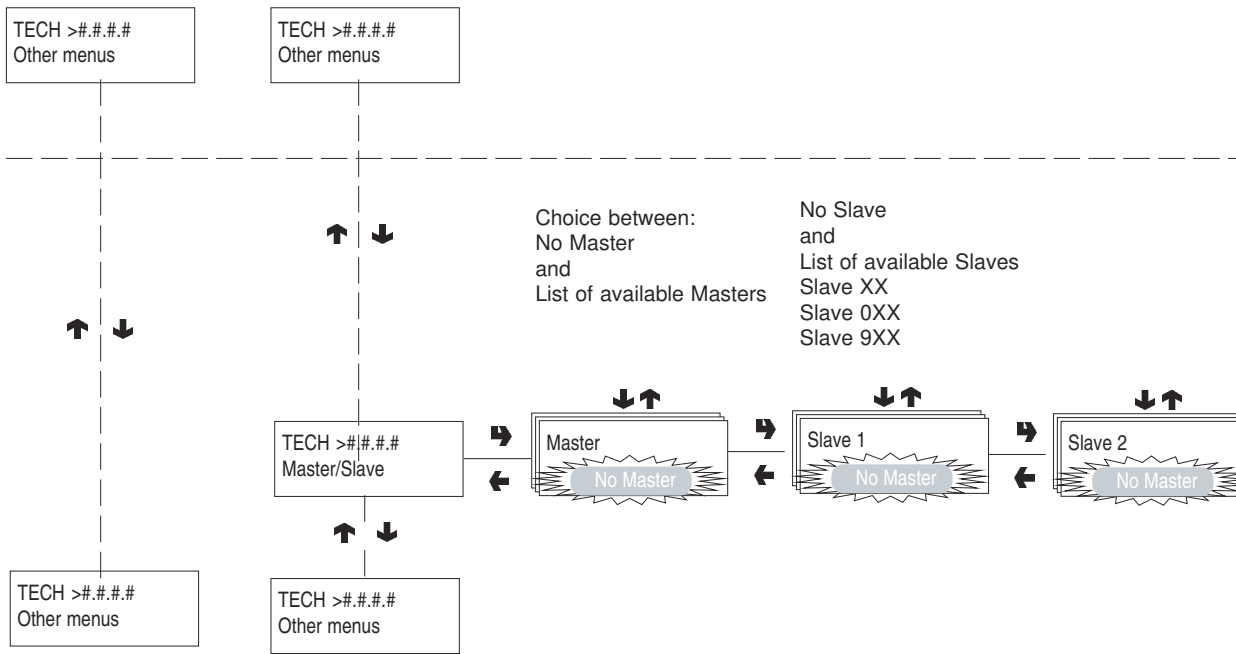
At least every six months it is necessary to clean the ventilation grilles of the cooling system using a vacuum cleaner or compressed air.

If for any reason the cooling unit need to be accessed from the machine, do as follows:

- remove the last tray;
- remove the anti-theft grille;
- undo the fastening screws from the product dispensing compartment and remove it;
- for re-assembly, proceed in the opposite way.



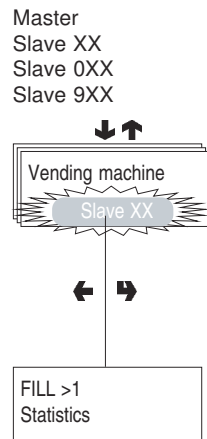
# Master menu - Choice of machine



Choice between:  
No Master  
and  
List of available Masters

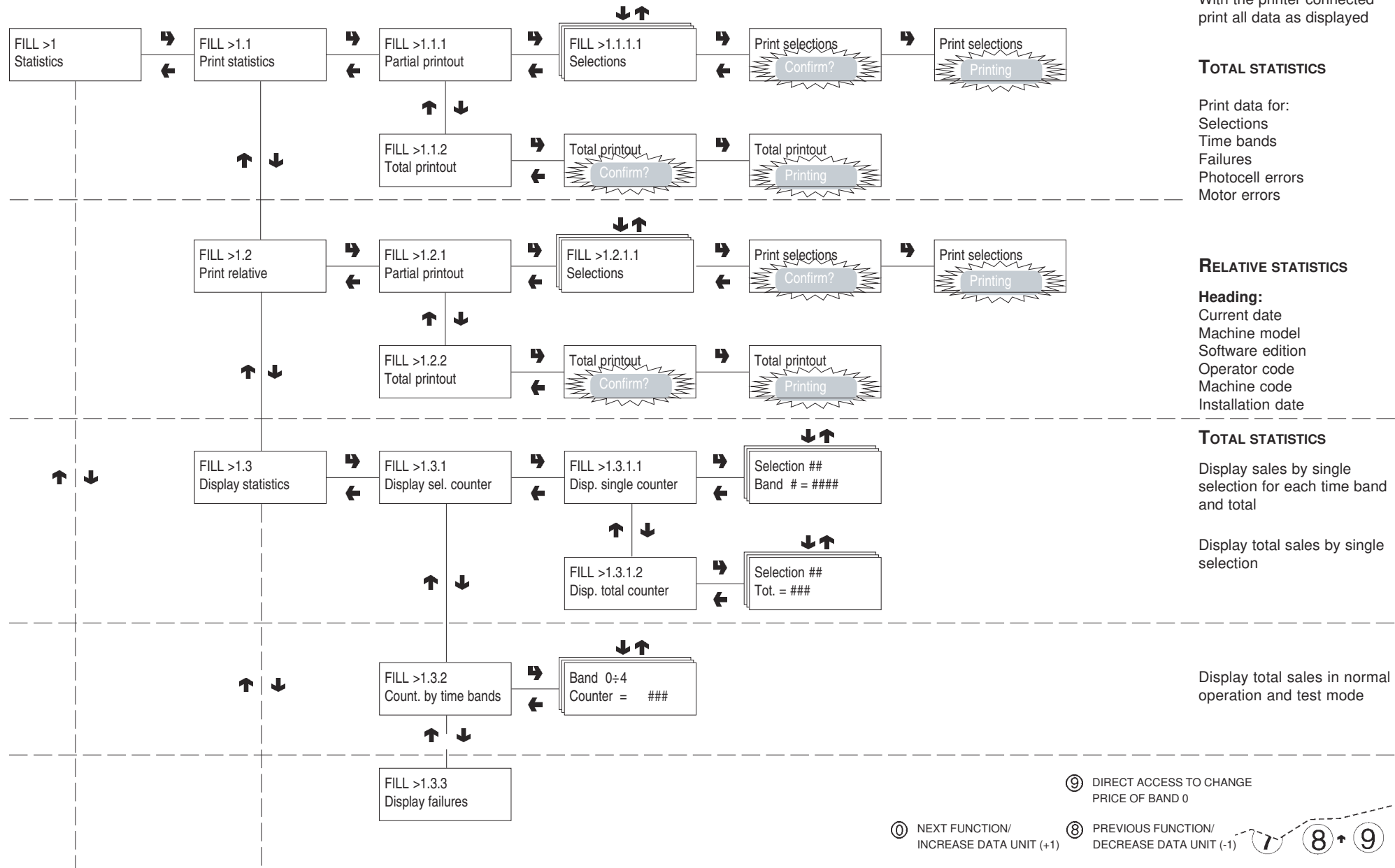
No Slave  
and  
List of available Slaves  
Slave XX  
Slave 0XX  
Slave 9XX

At installation or after initialising the Master or one Slave.  
Defining the type of Slave.  
The Slave that is switched on will take on the type indicated on the display.  
If choosing No Slave, all currently switched on slaves will lose their configuration.



After configuration, press the programming access button on the Master to display the list of machines that are actually configured in the bank of machines:

# Filler menu - Summary



With the printer connected  
print all data as displayed

### TOTAL STATISTICS

Print data for:  
Selections  
Time bands  
Failures  
Photocell errors  
Motor errors

### RELATIVE STATISTICS

**Heading:**  
Current date  
Machine model  
Software edition  
Operator code  
Machine code  
Installation date

### TOTAL STATISTICS

Display sales by single  
selection for each time band  
and total

Display total sales by single  
selection

Display total sales in normal  
operation and test mode

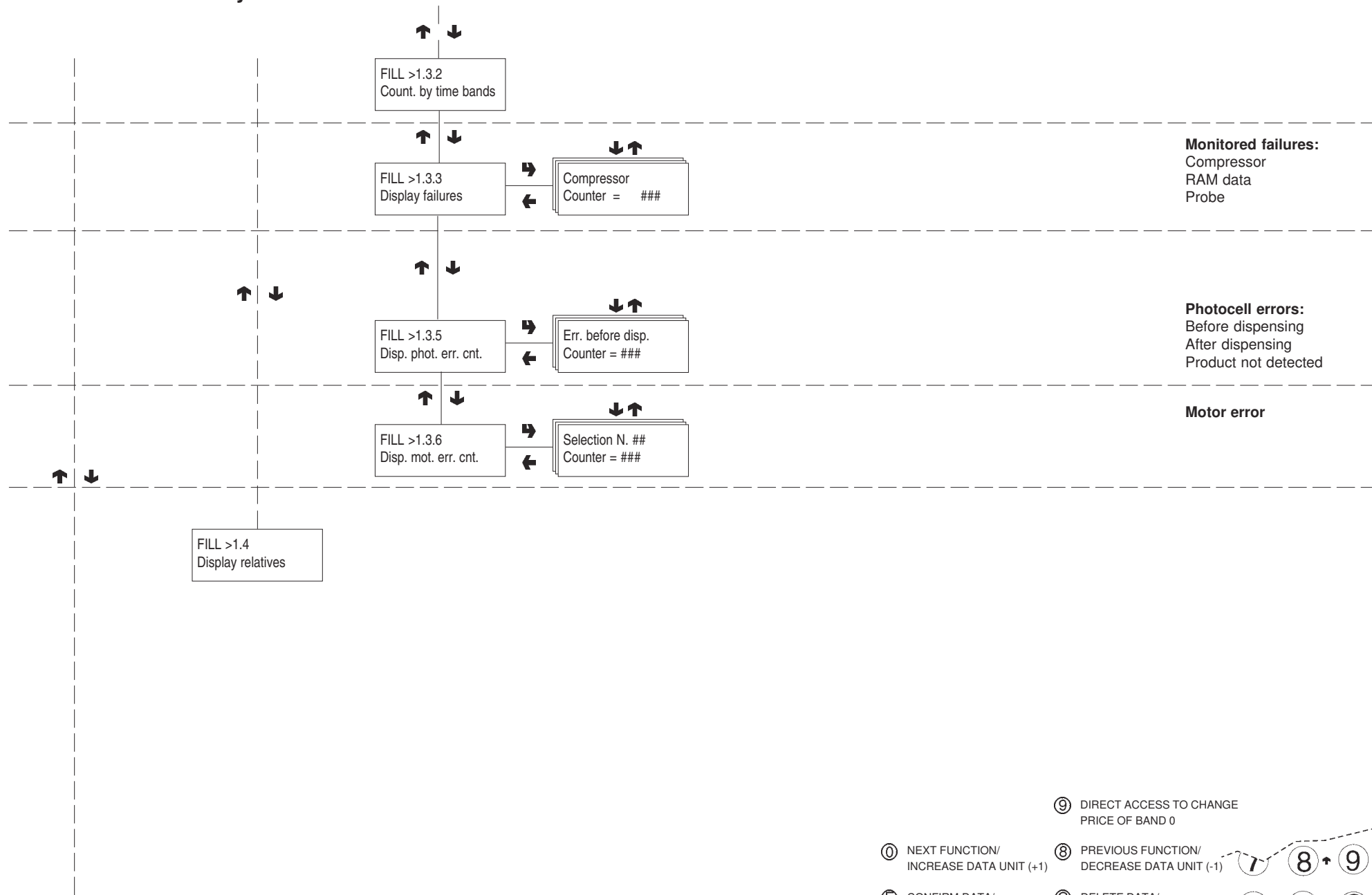
Ⓞ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)      Ⓢ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

ⓔ CONFIRM DATA/  
CONFIRM FUNCTION      Ⓞ DELETE DATA/  
EXIT FUNCTION

Ⓟ DIRECT ACCESS TO CHANGE  
PRICE OF BAND 0

0 ↓ E → C ←

# Filler menu - Summary

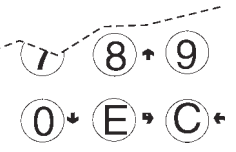


**Monitored failures:**  
Compressor  
RAM data  
Probe

**Photocell errors:**  
Before dispensing  
After dispensing  
Product not detected

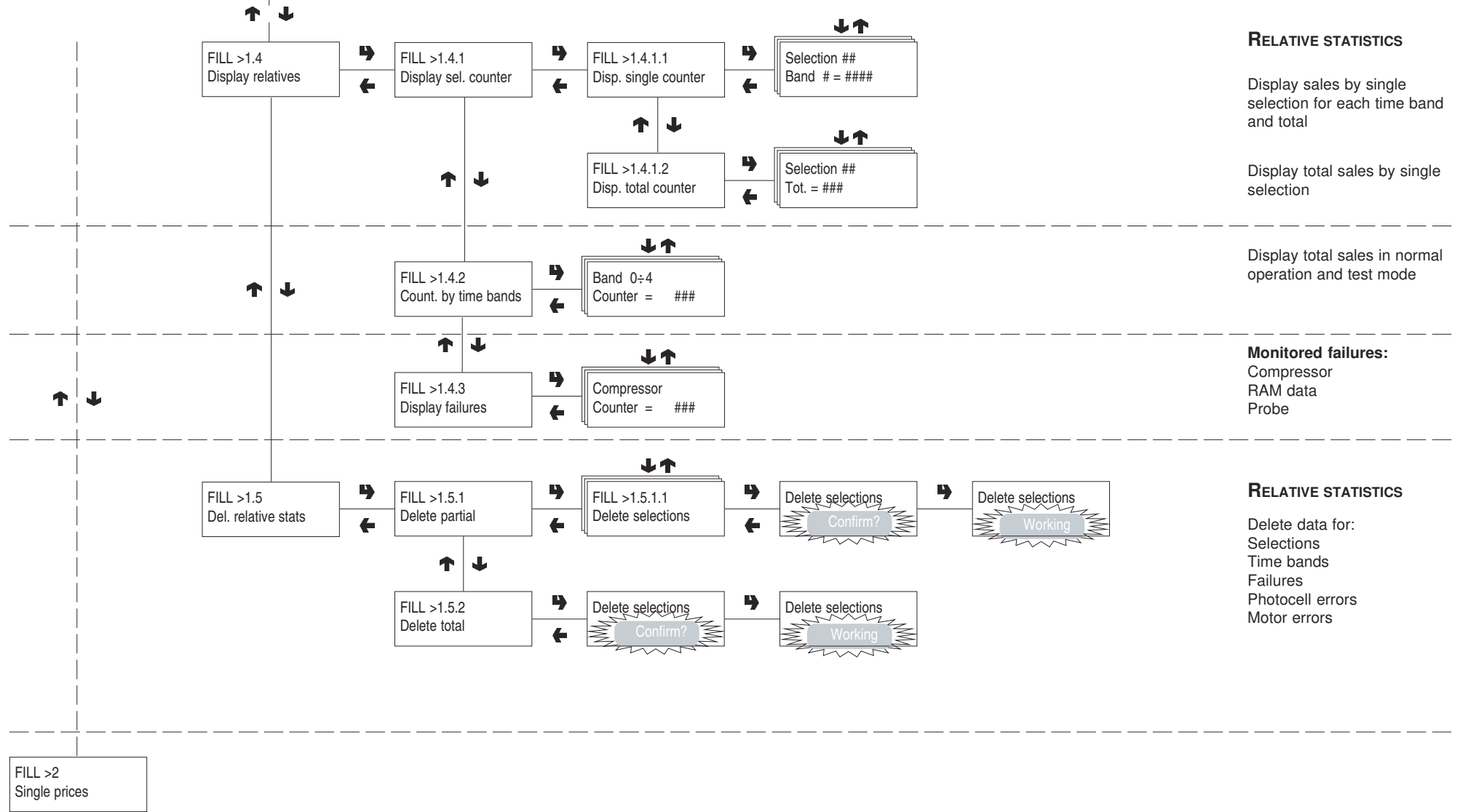
**Motor error**

- ① NEXT FUNCTION/  
INCREASE DATA UNIT (+1)
- ② CONFIRM DATA/  
CONFIRM FUNCTION
- ③ DIRECT ACCESS TO CHANGE  
PRICE OF BAND 0
- ④ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)
- ⑤ DELETE DATA/  
EXIT FUNCTION





# Filler menu - Summary



## RELATIVE STATISTICS

Display sales by single selection for each time band and total

Display total sales by single selection

Display total sales in normal operation and test mode

## Monitored failures:

Compressor  
RAM data  
Probe

## RELATIVE STATISTICS

Delete data for:  
Selections  
Time bands  
Failures  
Photocell errors  
Motor errors

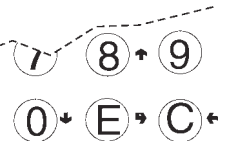
⑨ DIRECT ACCESS TO CHANGE PRICE OF BAND 0

⑩ NEXT FUNCTION/ INCREASE DATA UNIT (+1)

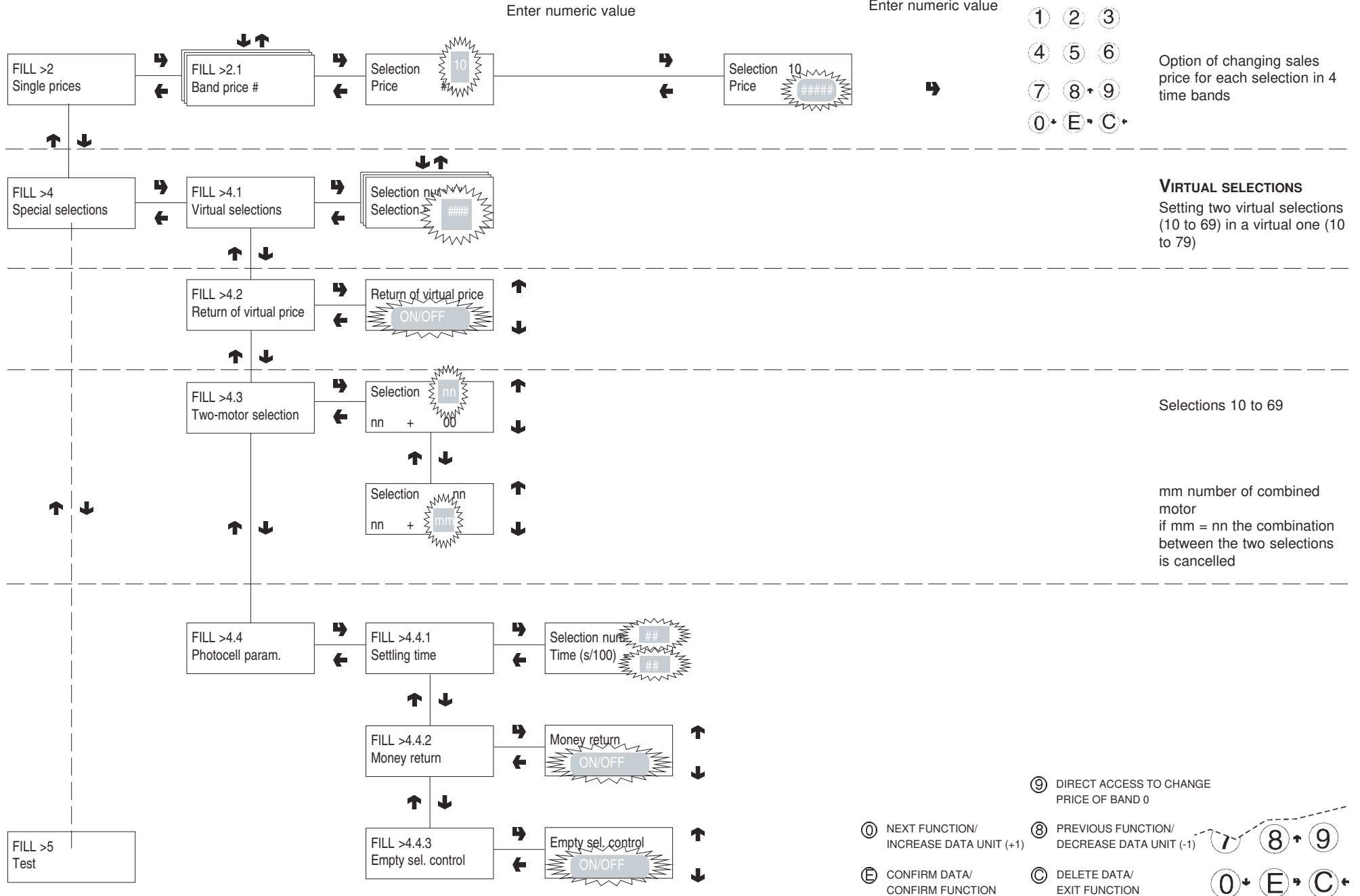
⑧ PREVIOUS FUNCTION/ DECREASE DATA UNIT (-1)

Ⓔ CONFIRM DATA/ CONFIRM FUNCTION

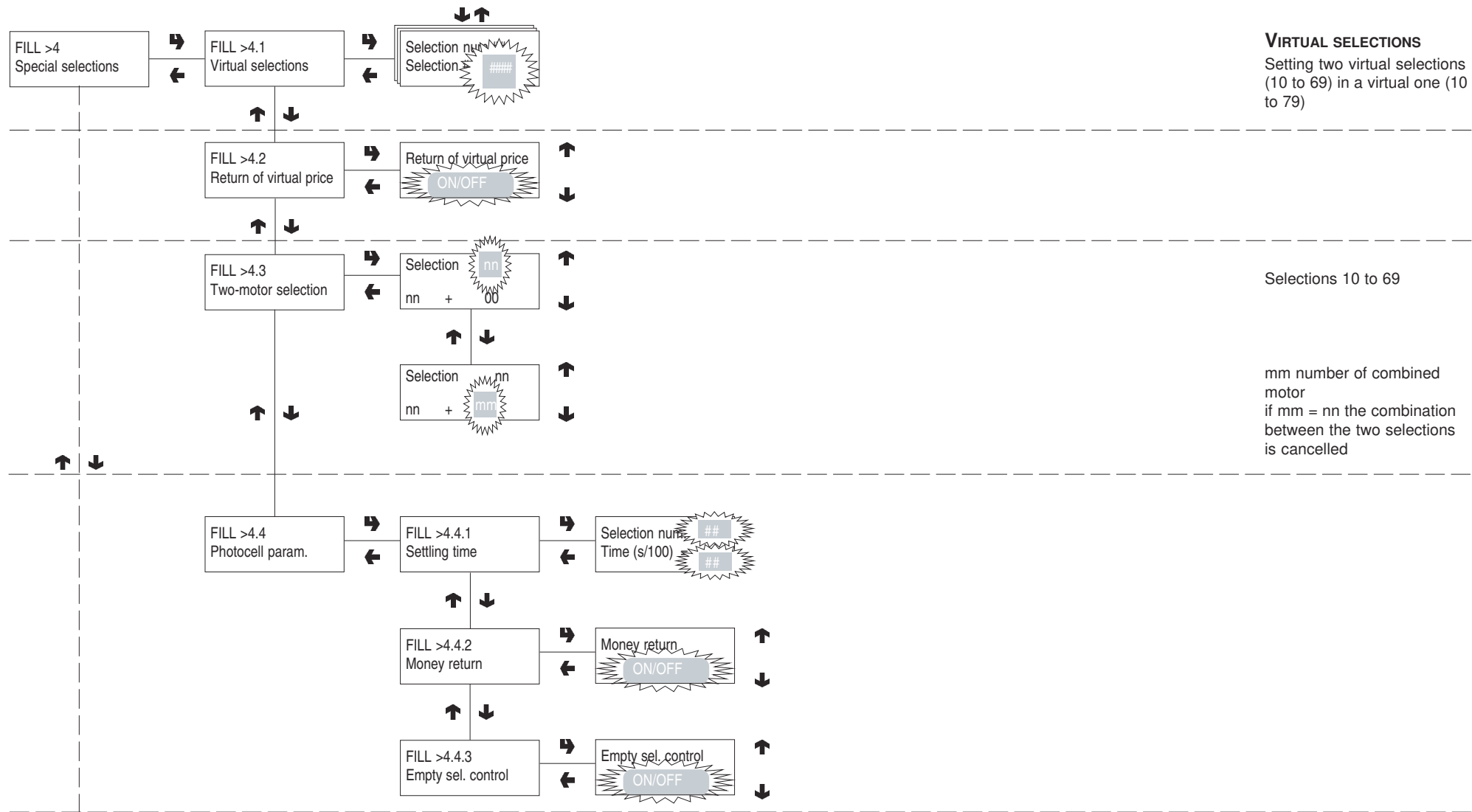
Ⓒ DELETE DATA/ EXIT FUNCTION



# Filler menu - Summary



# Filler menu - Summary



**VIRTUAL SELECTIONS**  
Setting two virtual selections (10 to 69) in a virtual one (10 to 79)

Selections 10 to 69

mm number of combined motor  
if mm = nn the combination between the two selections is cancelled

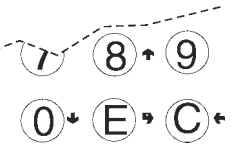
⑨ DIRECT ACCESS TO CHANGE PRICE OF BAND 0

⓪ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

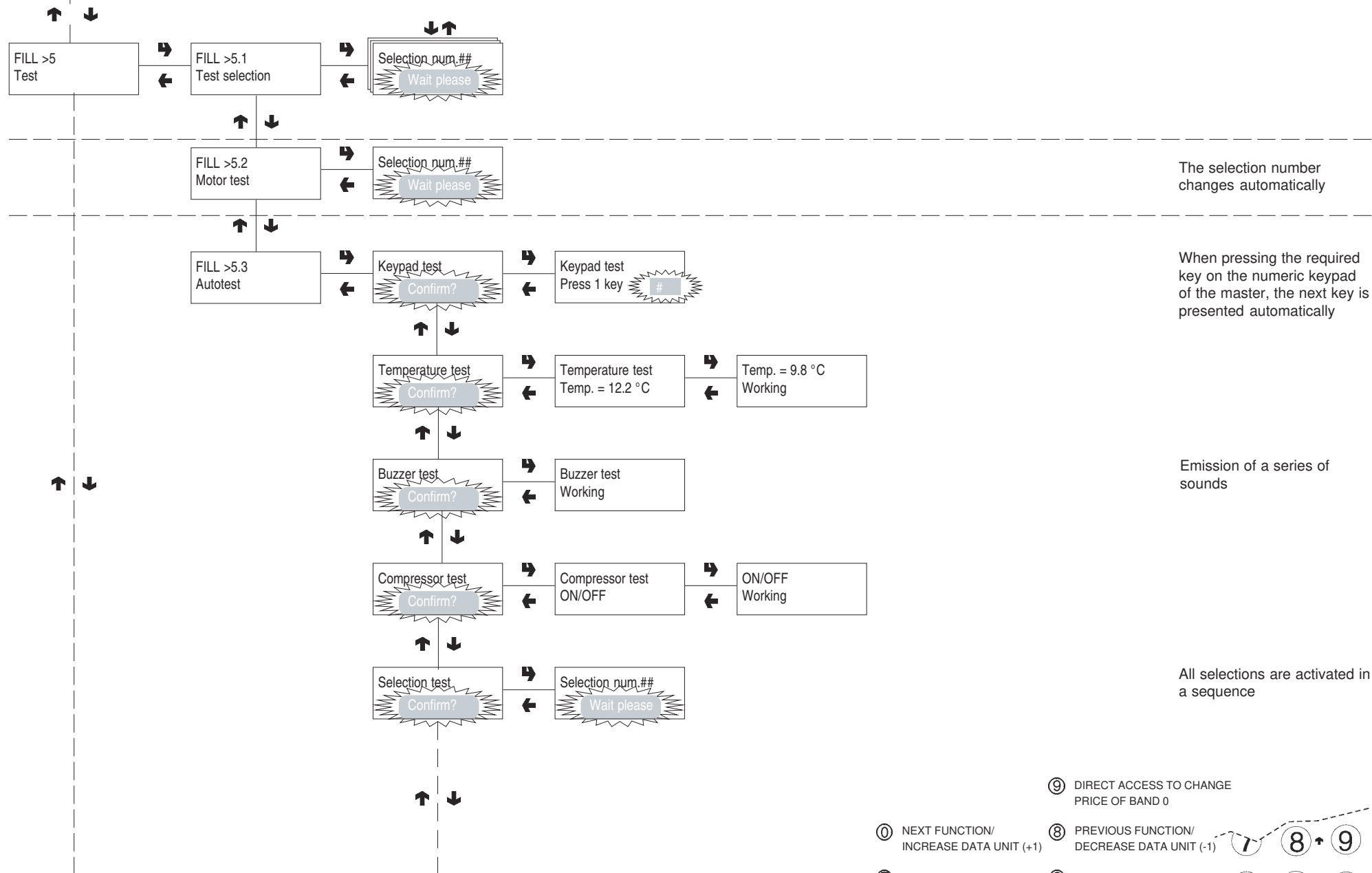
⑧ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

ⓔ CONFIRM DATA/  
CONFIRM FUNCTION

Ⓒ DELETE DATA/  
EXIT FUNCTION



# Filler menu - Summary



The selection number changes automatically

When pressing the required key on the numeric keypad of the master, the next key is presented automatically

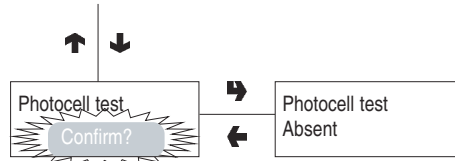
Emission of a series of sounds

All selections are activated in a sequence

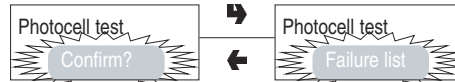
- ⓪ NEXT FUNCTION/ INCREASE DATA UNIT (+1)
- Ⓢ PREVIOUS FUNCTION/ DECREASE DATA UNIT (-1)
- ⓐ CONFIRM DATA/ CONFIRM FUNCTION
- ⓐ DELETE DATA/ EXIT FUNCTION
- ⓐ DIRECT ACCESS TO CHANGE PRICE OF BAND 0

# Filler menu - Summary

ALTERNATIVELY



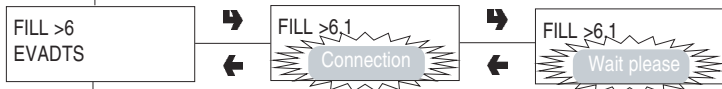
**WITH PHOTOCELLS  
DISCONNECTED**



**WITH PHOTOCELLS**  
If the light beam is interrupted within 2.5 seconds it displays "OK" or  
Error no product  
If a failure is present:  
Error after dispensing  
Error before dispensing

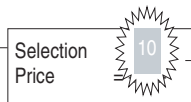


With dispensing compartment lock device present



Enter numeric value

⑨



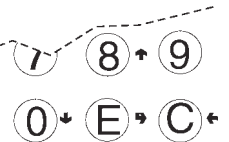
- ① ② ③
- ④ ⑤ ⑥
- ⑦ ⑧ ⑨
- ⑩ E C

- ① NEXT FUNCTION/  
INCREASE DATA UNIT (+1)
- E CONFIRM DATA/  
CONFIRM FUNCTION

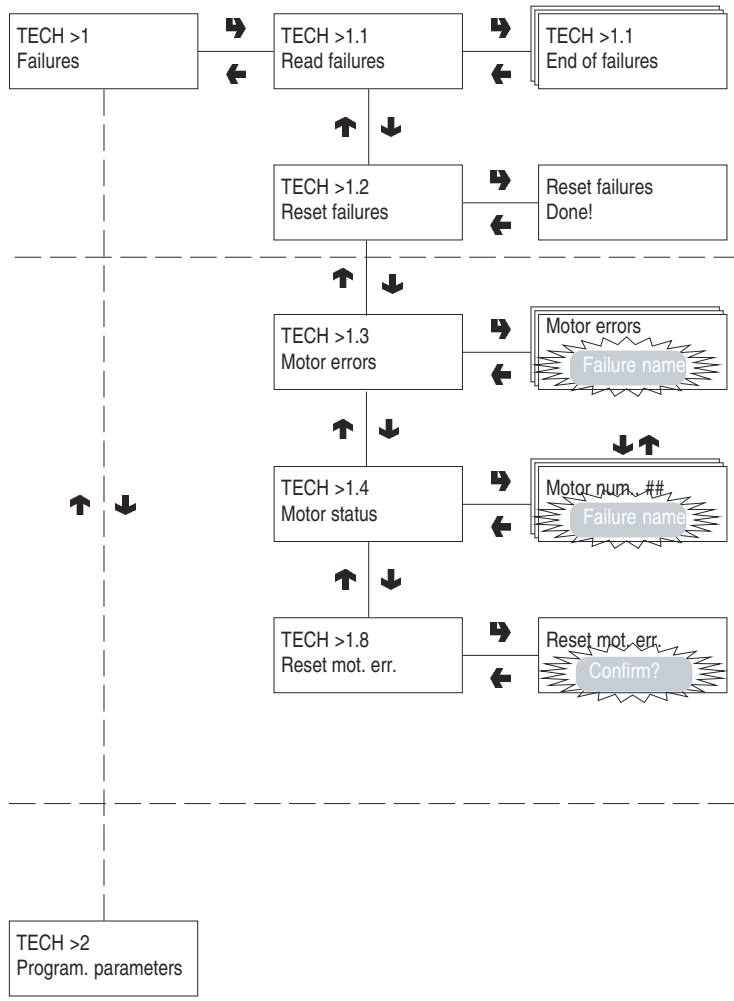
⑨ DIRECT ACCESS TO CHANGE  
PRICE OF BAND 0

⑧ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

③ DELETE DATA/  
EXIT FUNCTION



# Technician menu - Summary



Time scrolling of present failures

Time scrolling of present failures

## DISPLAYING FAILURES

- Monitored failures:**
- Compressor
  - RAM data
  - Probe
  - Dispensing compartment

## Possible motor conditions:

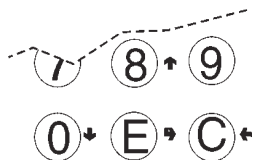
- OK
- Blocked
- Disconnected
- Not functioning
- Not present
- Empty selection

⓪ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

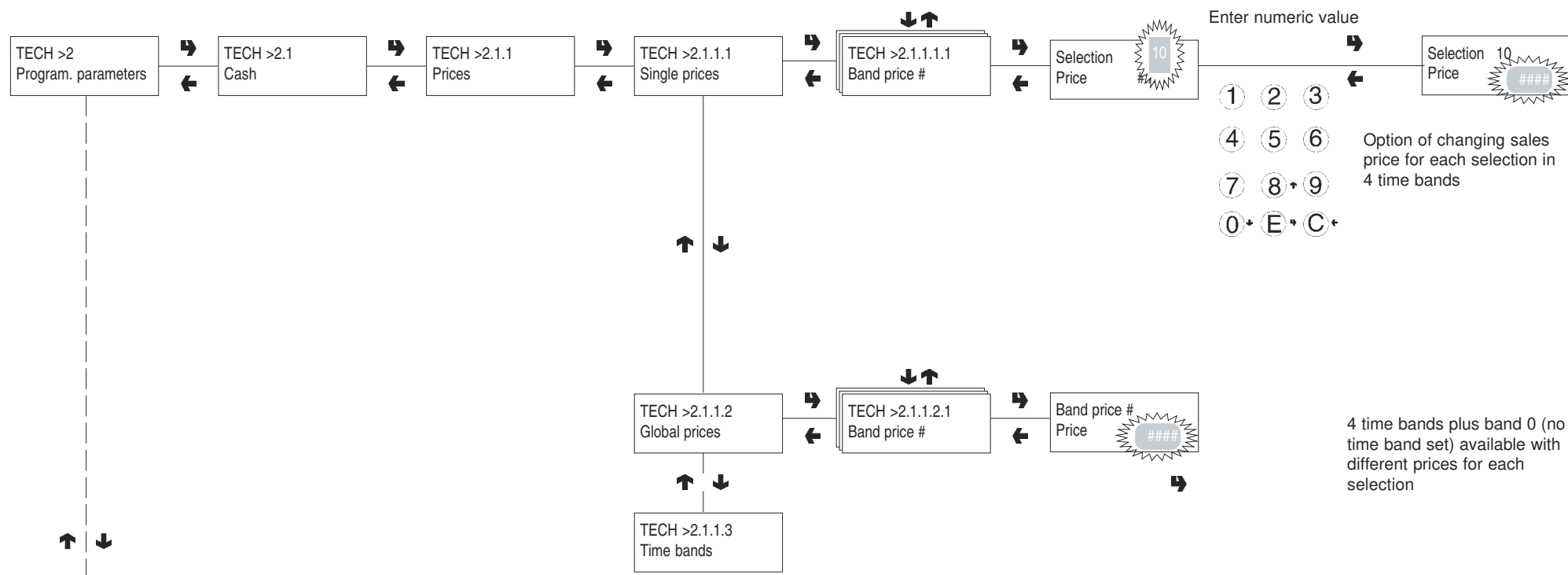
Ⓢ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

ⓔ CONFIRM DATA/  
CONFIRM FUNCTION

Ⓒ DELETE DATA/  
EXIT FUNCTION



# Technician menu - Summary

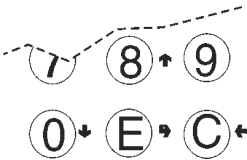


Ⓜ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

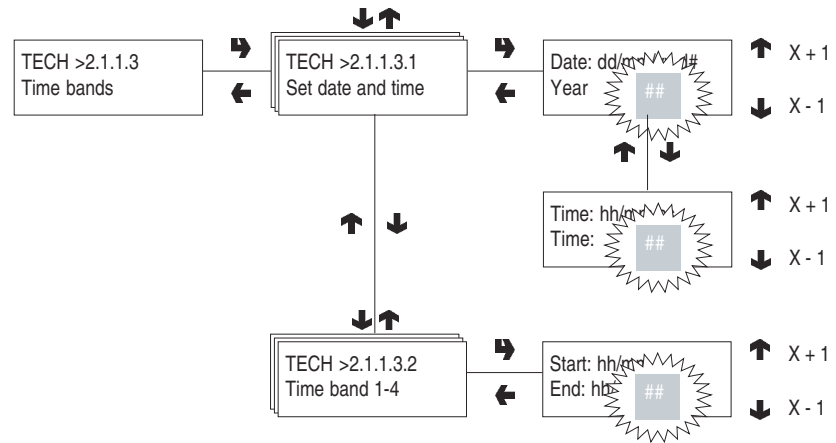
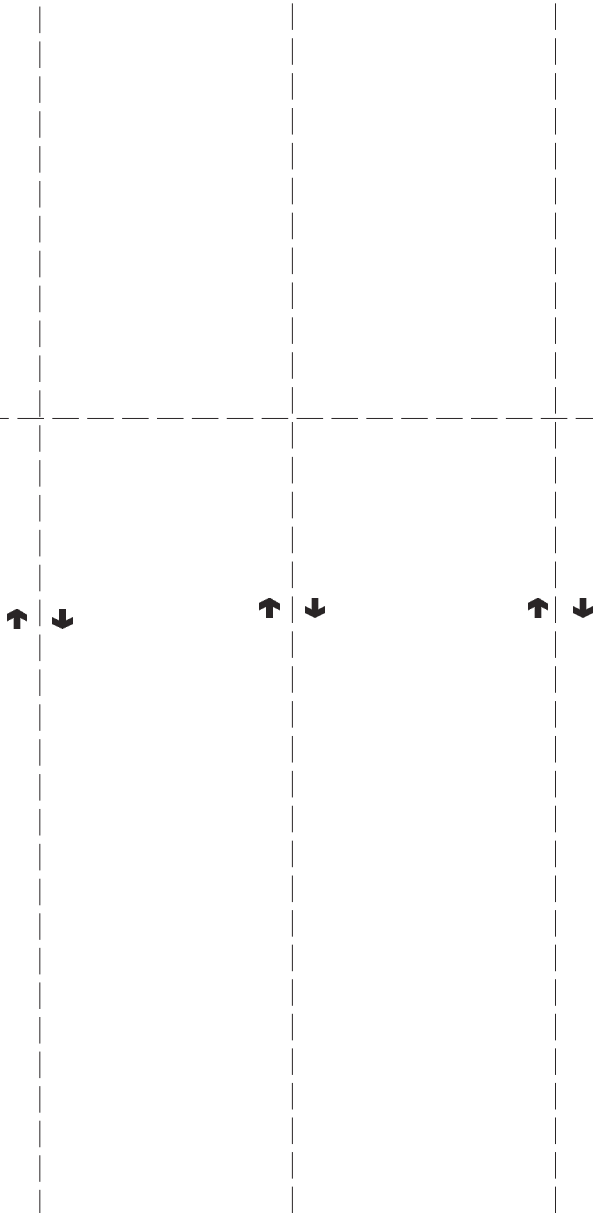
Ⓟ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

ⓔ CONFIRM DATA/  
CONFIRM FUNCTION

Ⓢ DELETE DATA/  
EXIT FUNCTION



# Technician menu - Summary



## CLOCK

When confirming the blinking values, day, month, year and week day are entered one after the other. When confirming the week day, hour and minutes are displayed, which can then be changed and confirmed.

## TIME BANDS

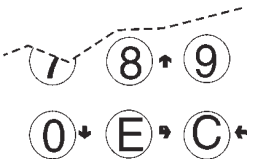
When confirming the blinking values, hour and minute for start and end of time band are entered one after the other. If start and end values are set to 00.00 the time bands are deactivated.

Ⓢ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

Ⓣ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

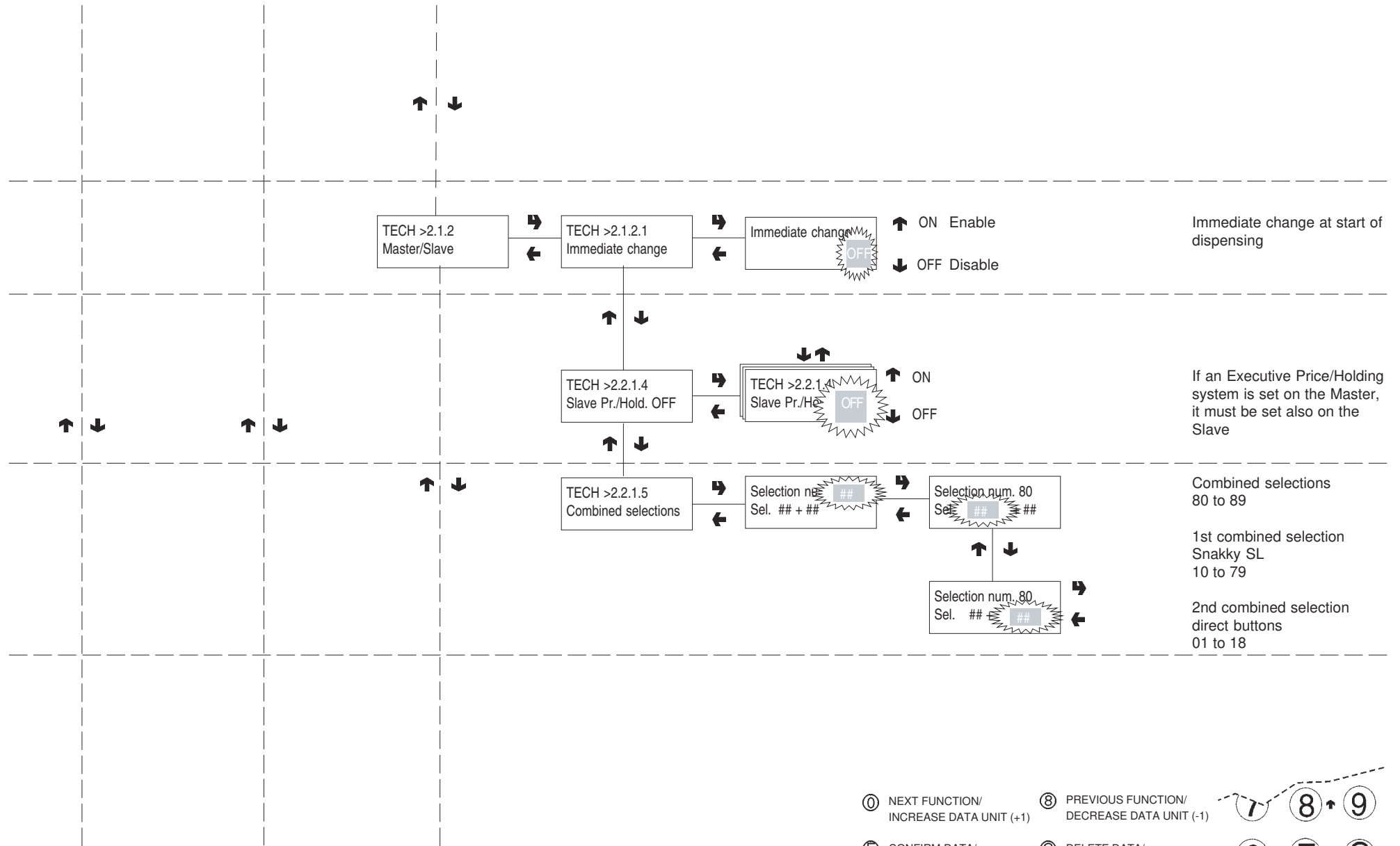
ⓔ CONFIRM DATA/  
CONFIRM FUNCTION

ⓐ DELETE DATA/  
EXIT FUNCTION





# Technician menu - Summary

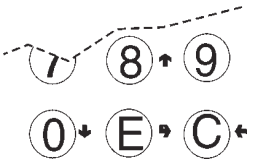


Ⓜ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

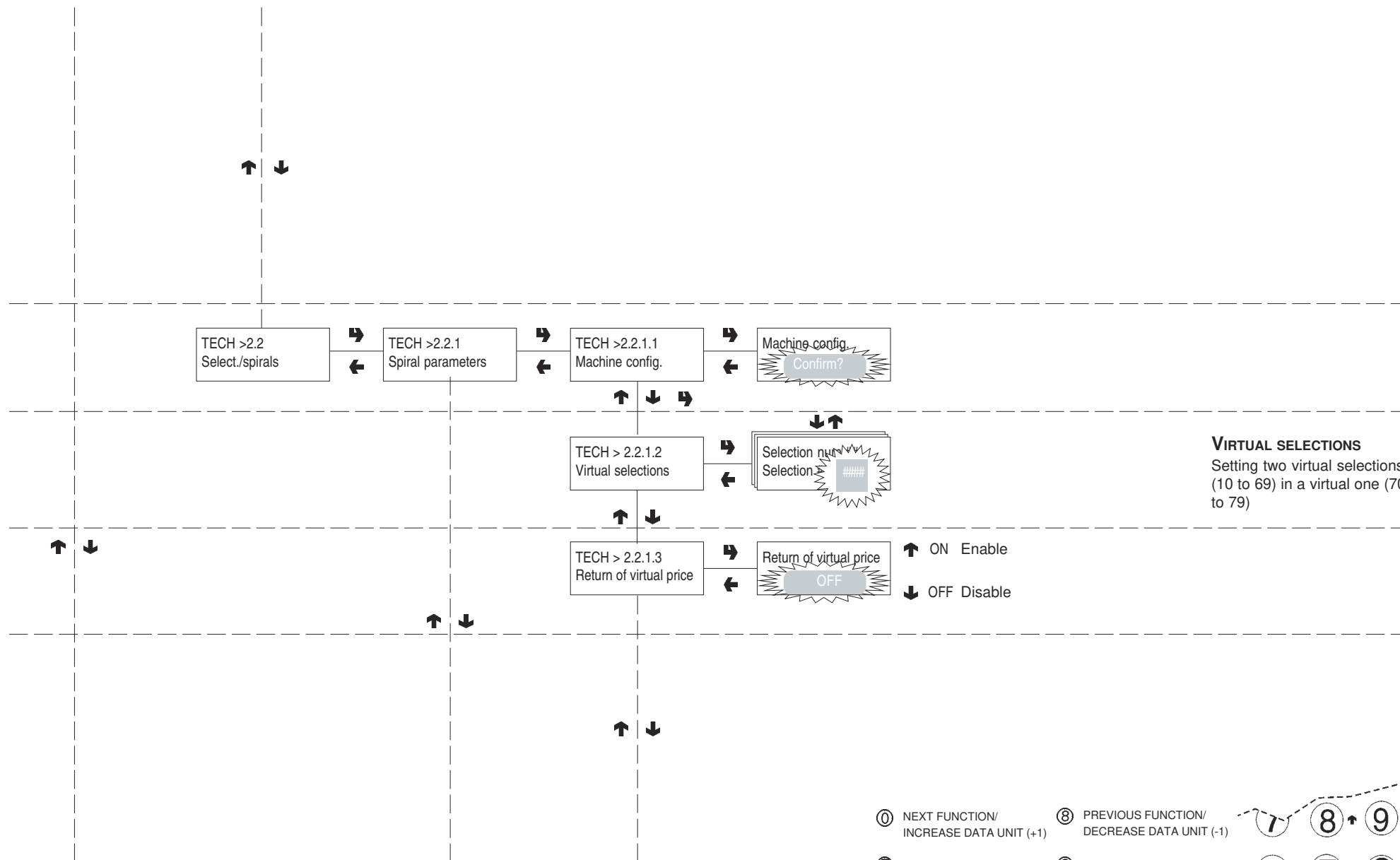
Ⓟ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

Ⓢ CONFIRM DATA/  
CONFIRM FUNCTION

Ⓤ DELETE DATA/  
EXIT FUNCTION



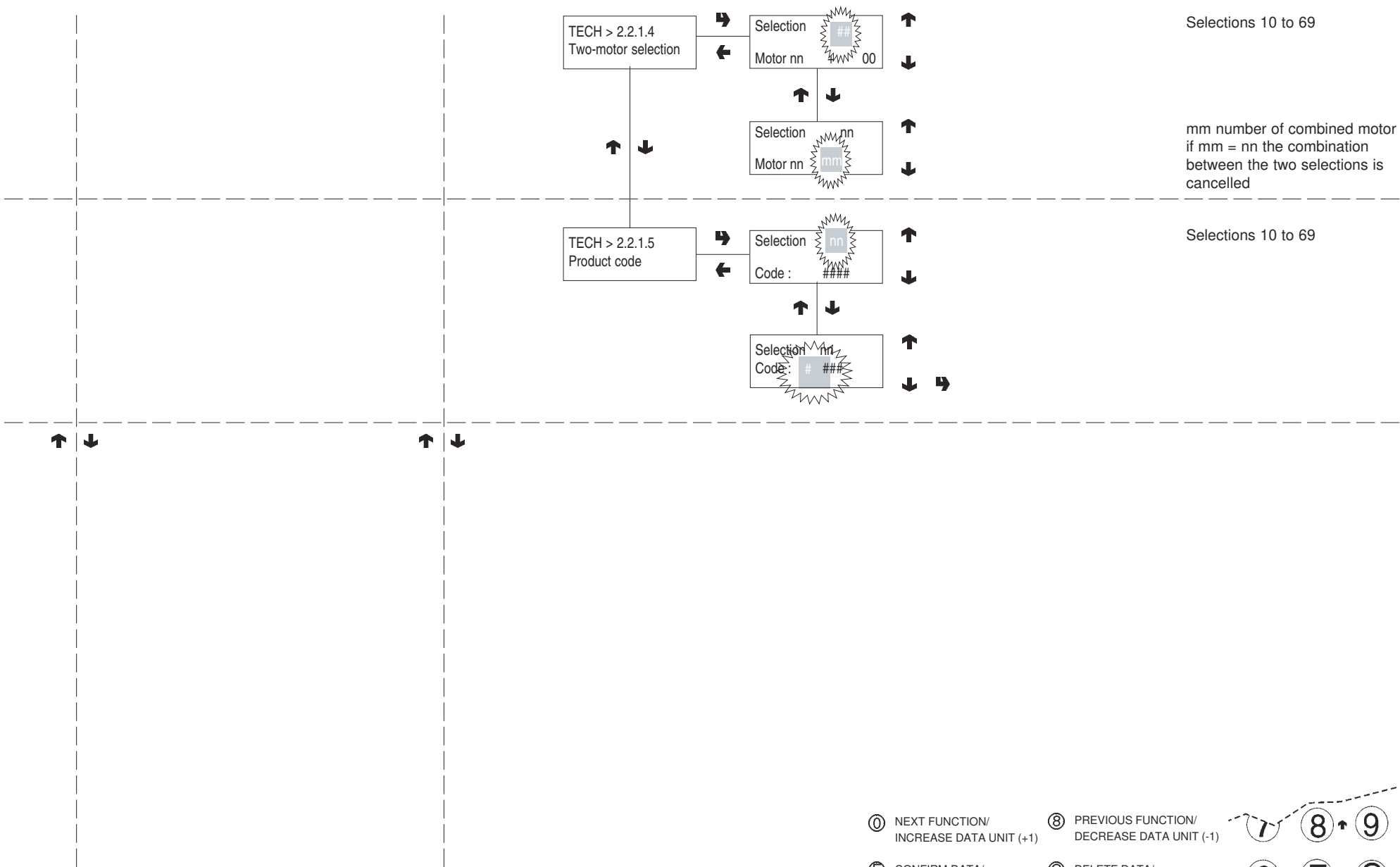
# Technician menu - Summary



**VIRTUAL SELECTIONS**  
 Setting two virtual selections  
 (10 to 69) in a virtual one (70  
 to 79)

- ⓪ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)
  - Ⓢ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)
  - ⓔ CONFIRM DATA/  
CONFIRM FUNCTION
  - Ⓒ DELETE DATA/  
EXIT FUNCTION
-

# Technician menu - Summary

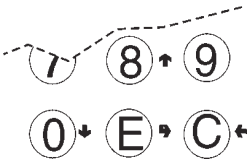


Ⓜ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

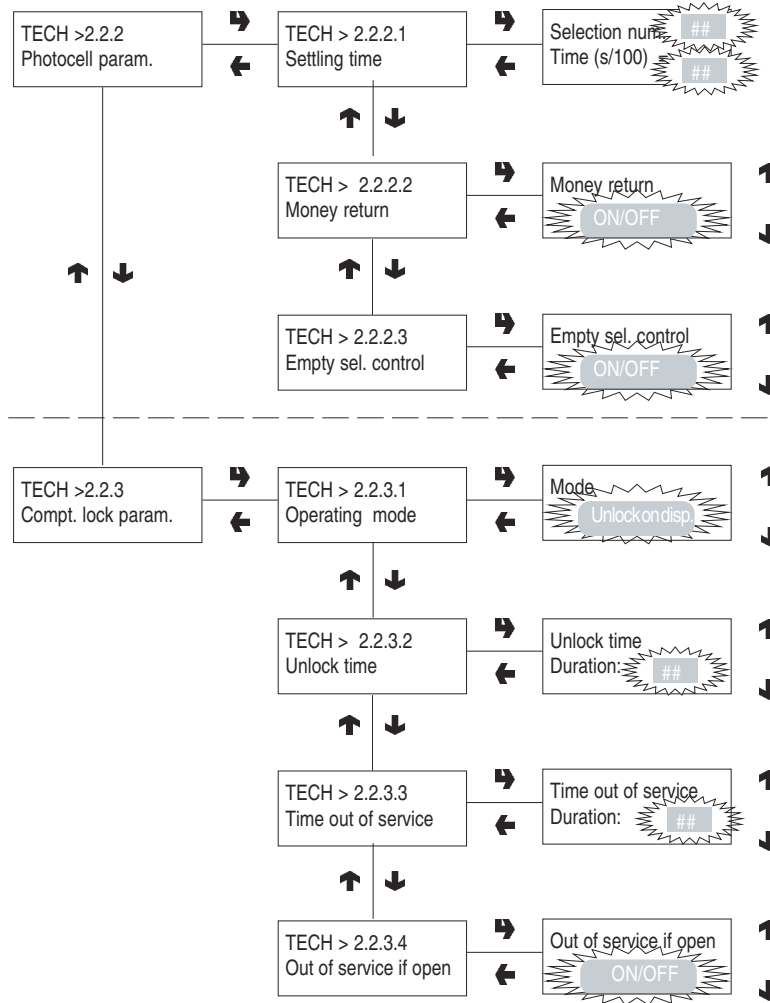
Ⓟ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

Ⓢ CONFIRM DATA/  
CONFIRM FUNCTION

Ⓣ DELETE DATA/  
EXIT FUNCTION



# Technician menu - Summary



## UNLOCK DISPENSING COMPARTMENT

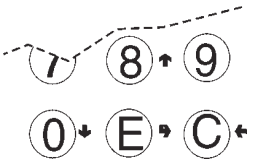
- Always unlocked
- Unlocked upon dispensing for ## minutes
- 01 to 10 minutes
- 01 to 10 minutes
- Out of service if the compartment fails when open

Ⓜ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

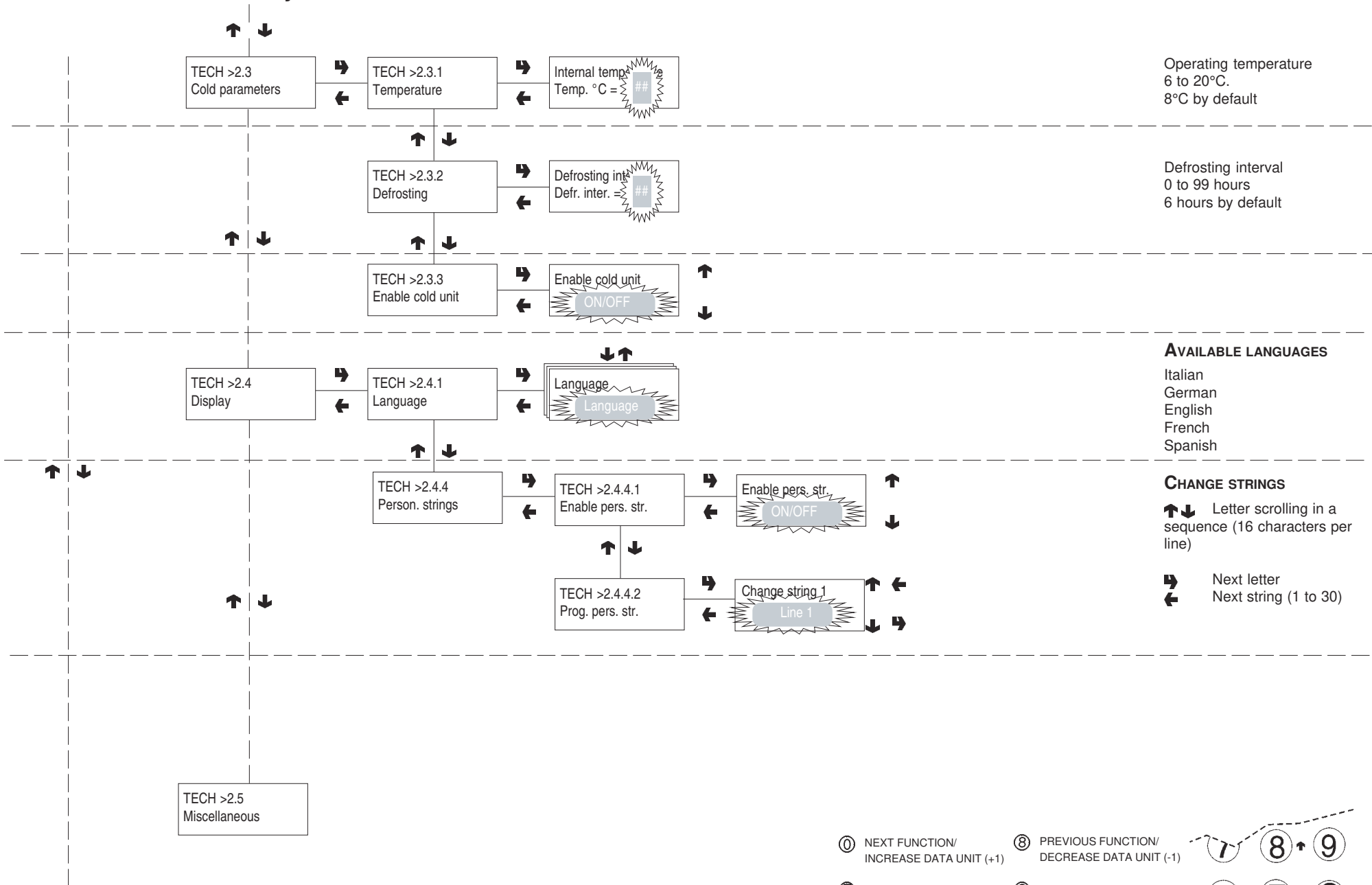
Ⓛ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

ⓔ CONFIRM DATA/  
CONFIRM FUNCTION

ⓐ DELETE DATA/  
EXIT FUNCTION



# Technician menu - Summary



Operating temperature  
6 to 20°C.  
8°C by default

Defrosting interval  
0 to 99 hours  
6 hours by default

### AVAILABLE LANGUAGES

Italian  
German  
English  
French  
Spanish

### CHANGE STRINGS

↑↓ Letter scrolling in a sequence (16 characters per line)

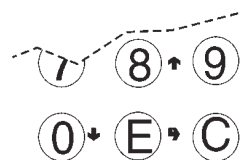
➡ Next letter  
← Next string (1 to 30)

Ⓜ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

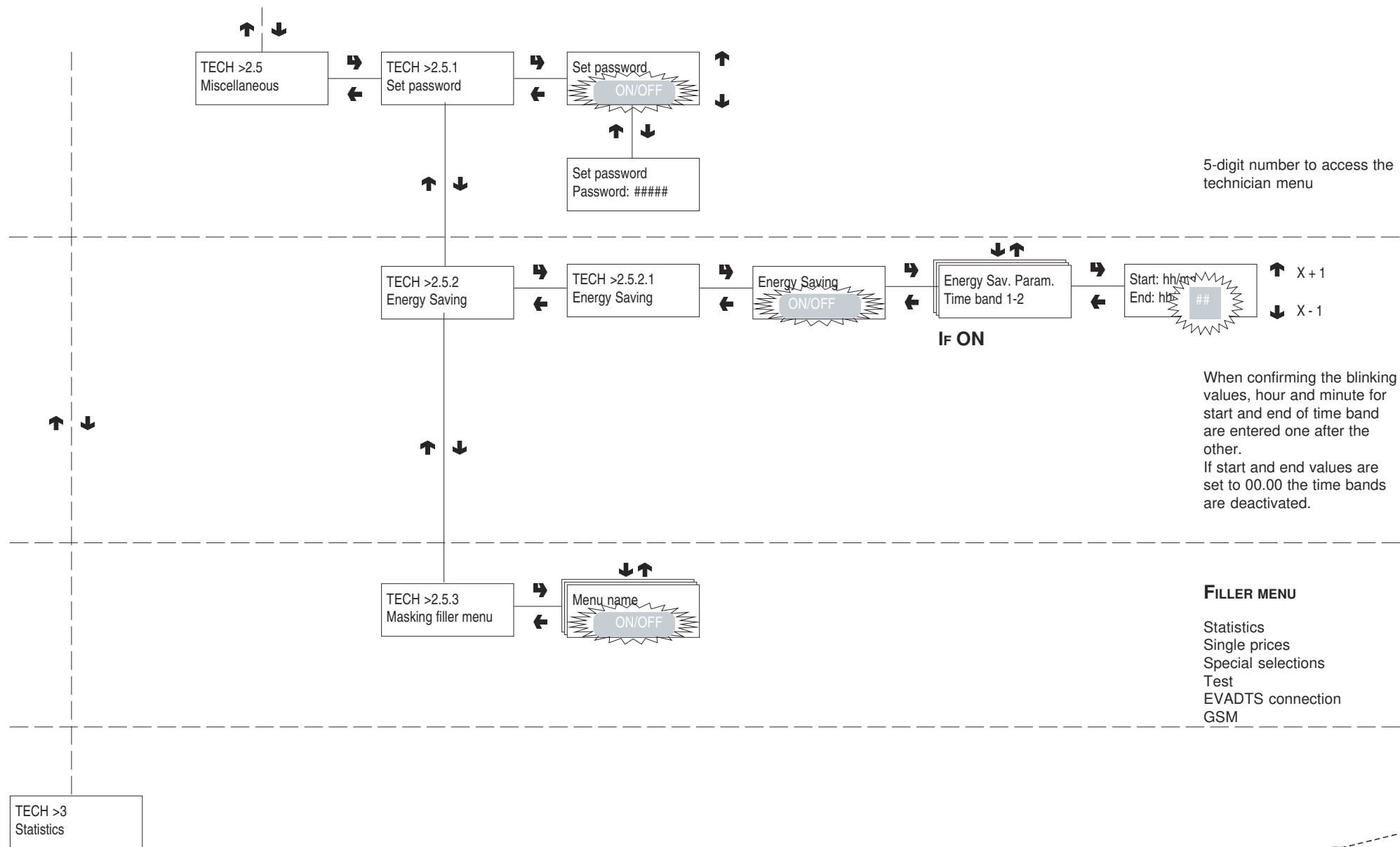
Ⓟ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

Ⓢ CONFIRM DATA/  
CONFIRM FUNCTION

Ⓤ DELETE DATA/  
EXIT FUNCTION



# Technician menu - Summary



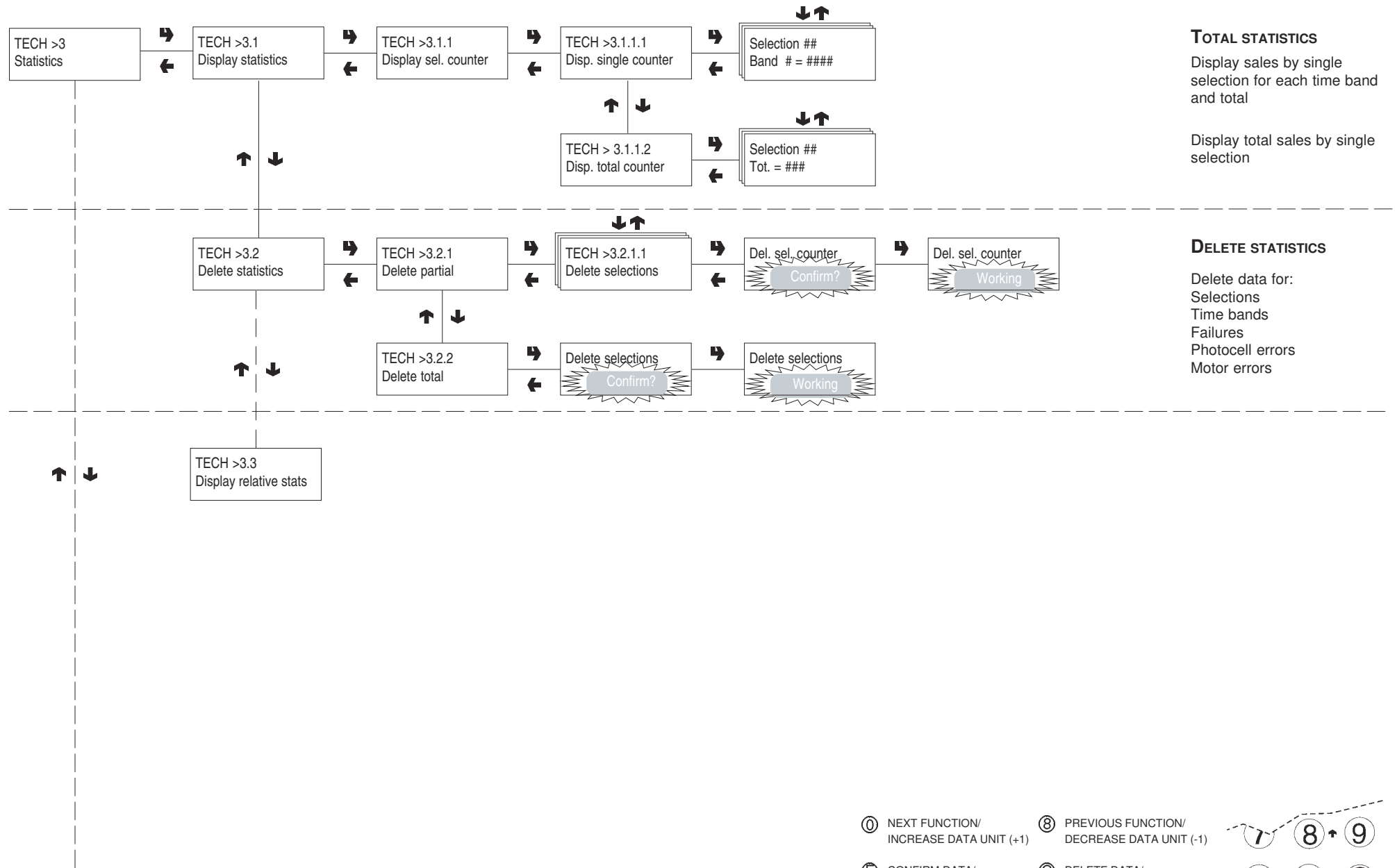
5-digit number to access the technician menu

When confirming the blinking values, hour and minute for start and end of time band are entered one after the other. If start and end values are set to 00.00 the time bands are deactivated.

- FILLER MENU**
- Statistics
  - Single prices
  - Special selections
  - Test
  - EVADTS connection
  - GSM

Ⓞ NEXT FUNCTION/ INCREASE DATA UNIT (+1)      Ⓢ PREVIOUS FUNCTION/ DECREASE DATA UNIT (-1)  
 ⓔ CONFIRM DATA/ CONFIRM FUNCTION      ⓐ DELETE DATA/ EXIT FUNCTION

# Technician menu - Summary



**TOTAL STATISTICS**  
Display sales by single selection for each time band and total

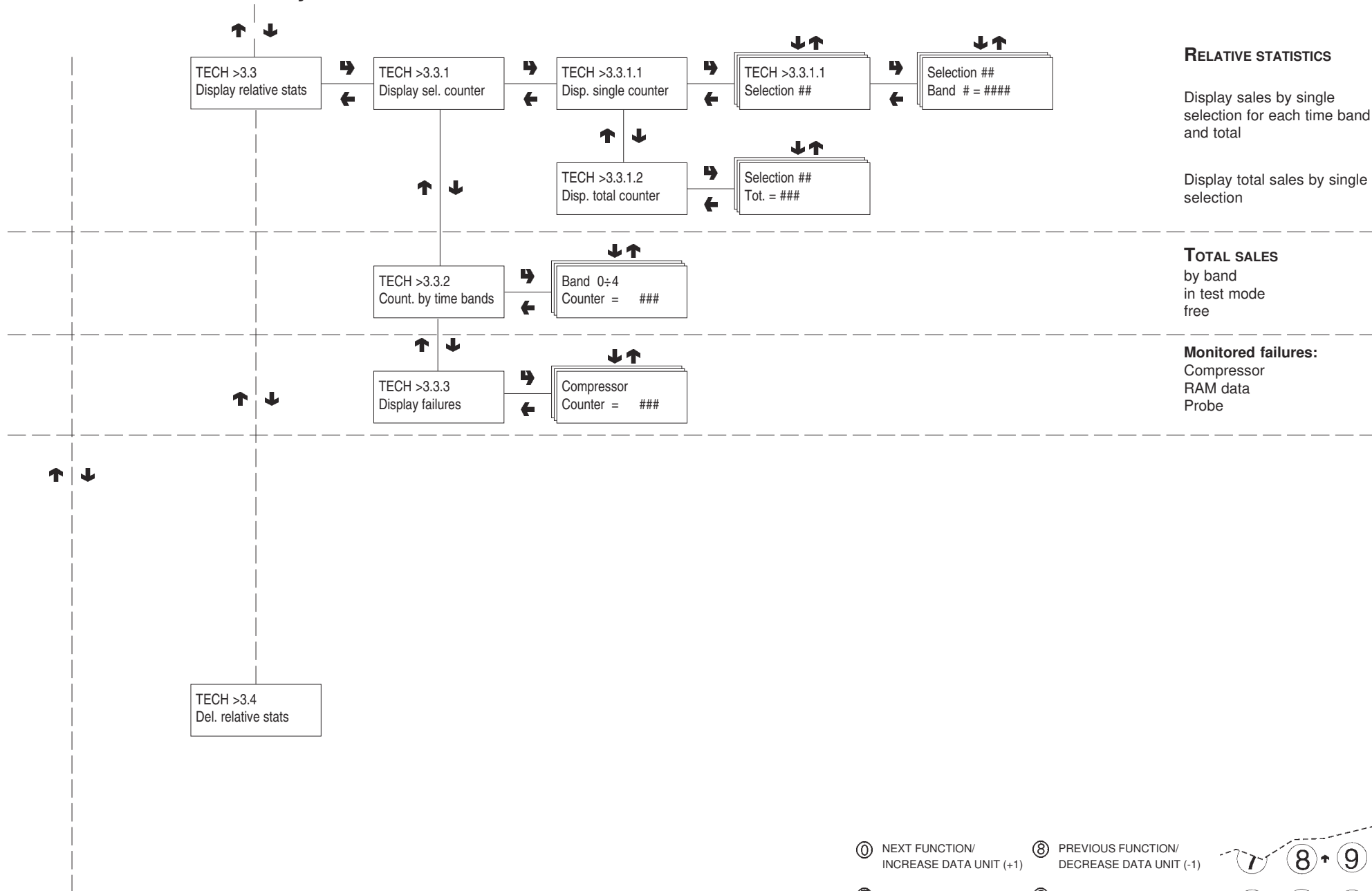
Display total sales by single selection

**DELETE STATISTICS**  
Delete data for:  
Selections  
Time bands  
Failures  
Photocell errors  
Motor errors

Ⓞ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)      Ⓢ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

ⓔ CONFIRM DATA/  
CONFIRM FUNCTION      ⓐ DELETE DATA/  
EXIT FUNCTION

# Technician menu - Summary



### RELATIVE STATISTICS

Display sales by single selection for each time band and total

Display total sales by single selection

### TOTAL SALES

by band in test mode free

### Monitored failures:

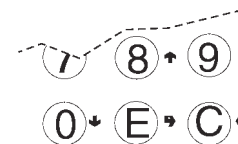
Compressor  
RAM data  
Probe

⓪ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

Ⓢ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

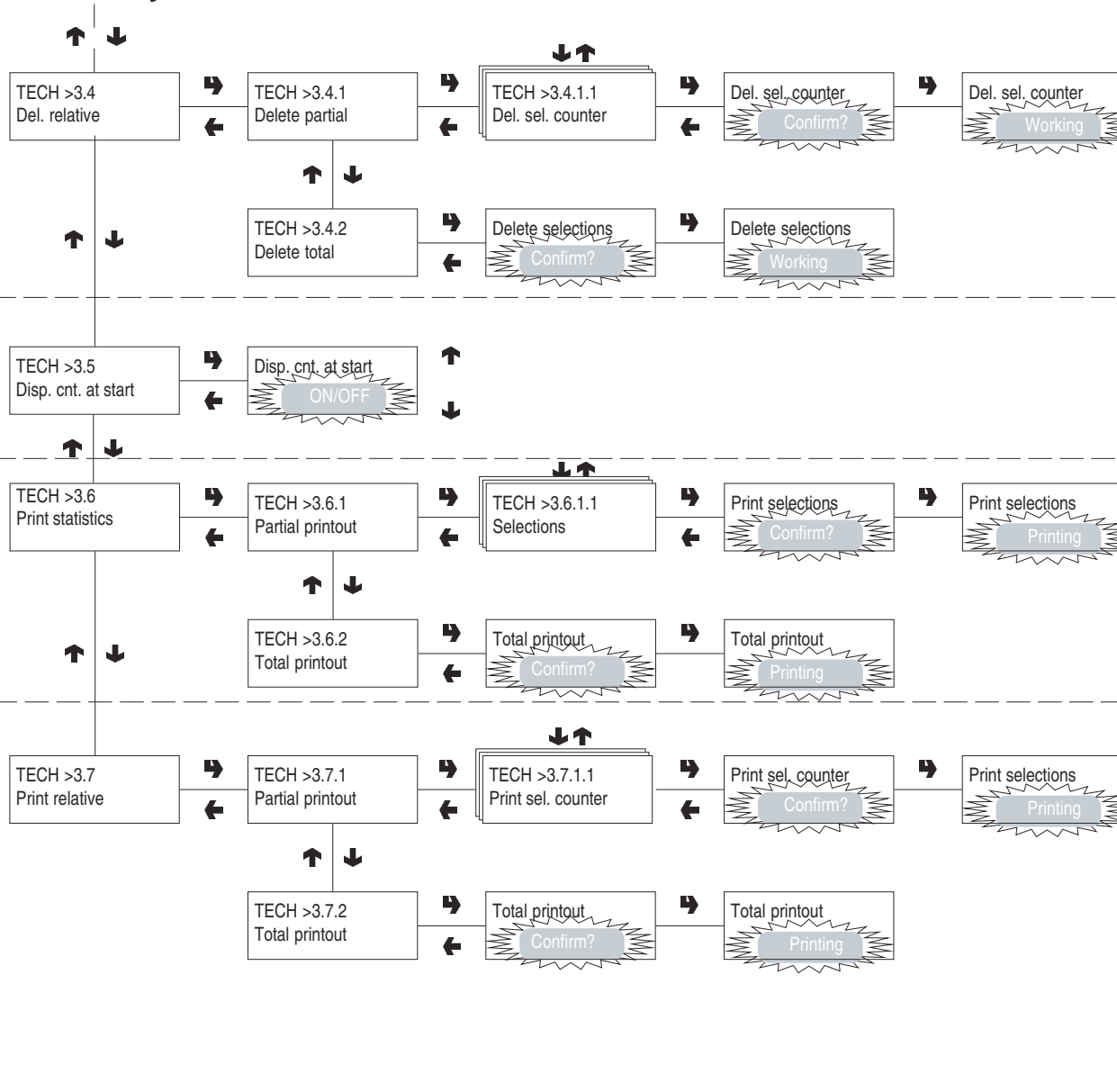
Ⓔ CONFIRM DATA/  
CONFIRM FUNCTION

Ⓒ DELETE DATA/  
EXIT FUNCTION





# Technician menu - Summary



## RELATIVE STATISTICS

Delete data for:  
 Selections  
 Time bands  
 Failures  
 Coin mech data  
 Photocell errors  
 Motor errors

The number of selections made are indicated on the display at machine start-up.

## Heading:

Current date  
 Machine model  
 Software edition  
 Operator code  
 Machine code  
 Installation date

## TOTAL STATISTICS

## RELATIVE STATISTICS

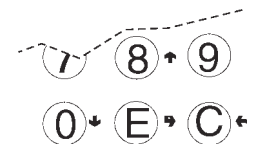
Print data for:  
 Selections  
 Time bands  
 Failures  
 Photocell errors  
 Motor errors

⊙ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

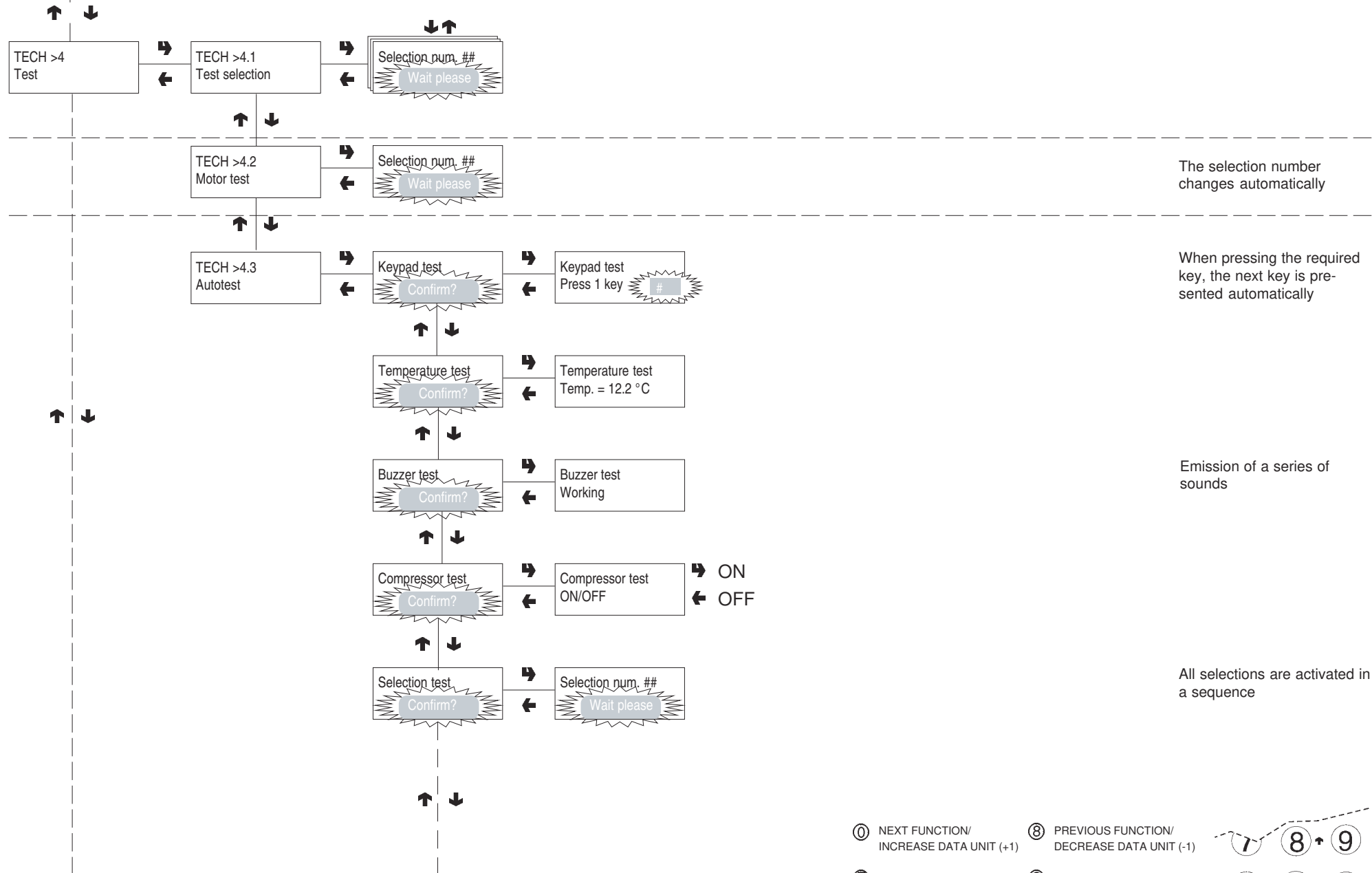
⊙ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

Ⓢ CONFIRM DATA/  
CONFIRM FUNCTION

Ⓢ DELETE DATA/  
EXIT FUNCTION



# Technician menu - Summary



The selection number changes automatically

When pressing the required key, the next key is presented automatically

Emission of a series of sounds

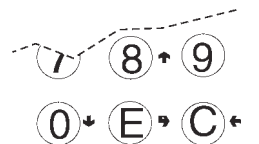
All selections are activated in a sequence

⓪ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

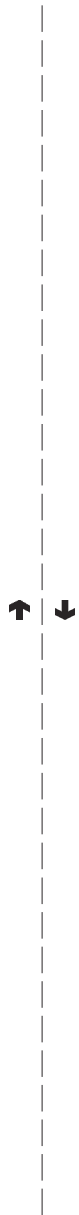
Ⓢ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

ⓔ CONFIRM DATA/  
CONFIRM FUNCTION

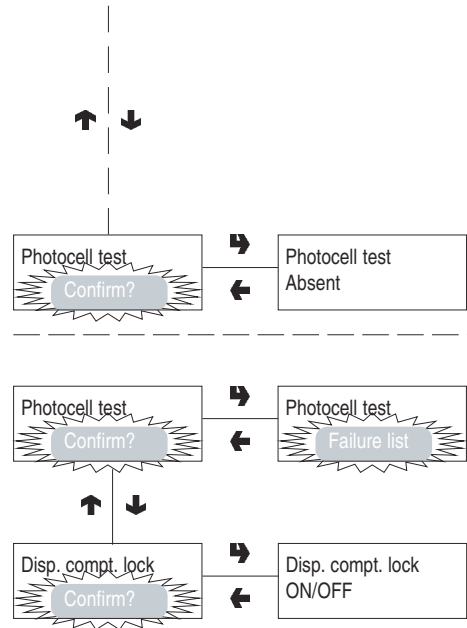
Ⓒ DELETE DATA/  
EXIT FUNCTION



# Technician menu - Summary



ALTERNATIVELY



**WITH PHOTOCELLS  
DISCONNECTED**

**WITH PHOTOCELLS**

If the light beam is interrupted within 2.5 seconds it displays "OK"  
or  
Error no product  
If a failure is present:  
Error after dispensing  
Error before dispensing

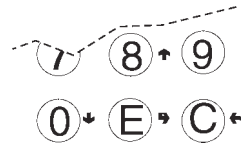
With dispensing compartment lock

⓪ NEXT FUNCTION/  
INCREASE DATA UNIT (+1)

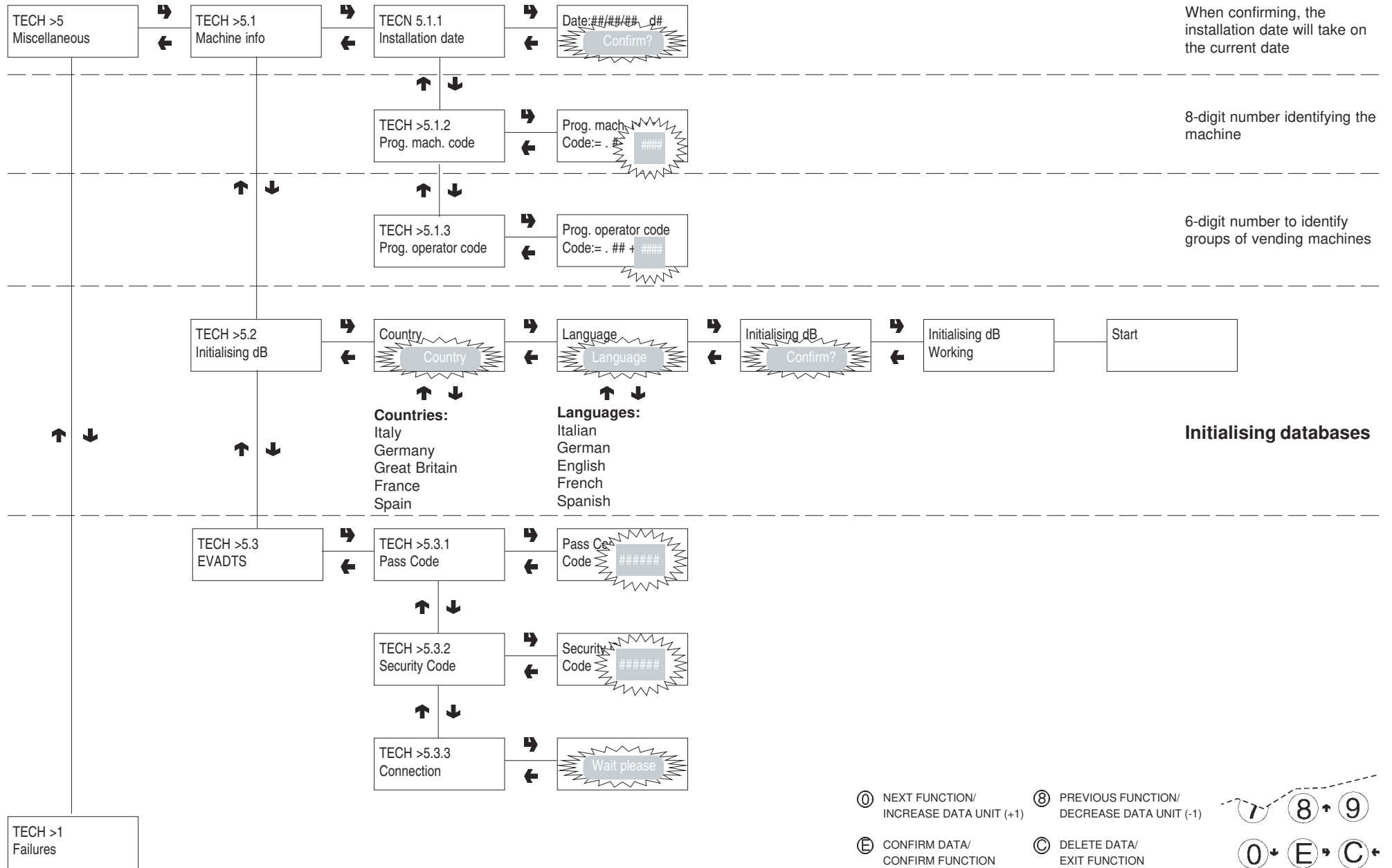
Ⓢ PREVIOUS FUNCTION/  
DECREASE DATA UNIT (-1)

ⓔ CONFIRM DATA/  
CONFIRM FUNCTION

ⓐ DELETE DATA/  
EXIT FUNCTION



# Technician menu - Summary

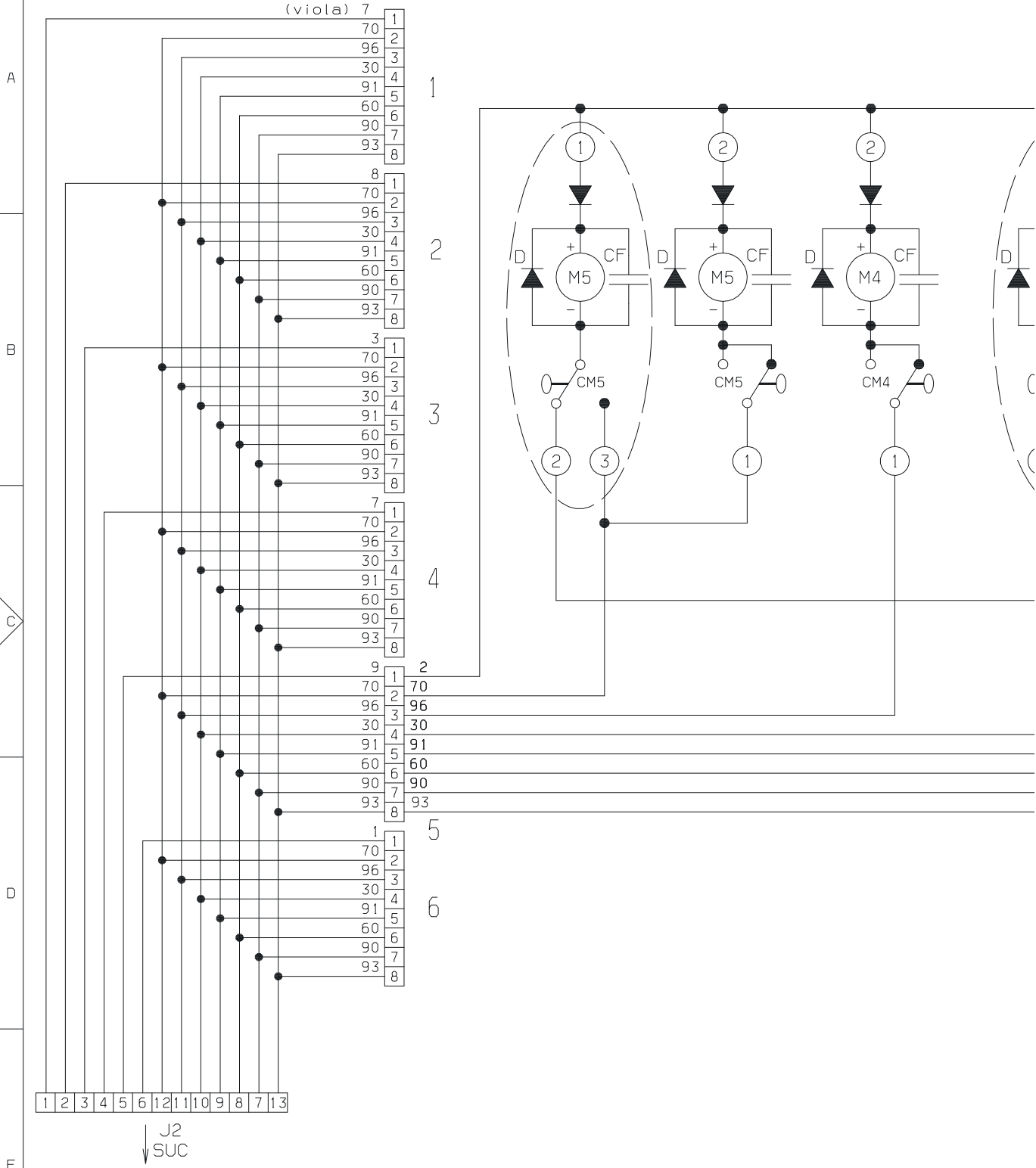


## WIRING DIAGRAM LEGEND

INITIALS	DESCRIPTION	INITIALS	DESCRIPTION
CCB	CAN-BUS CONNECTOR	MS1	DISP COMPT FLAP MICROSWITCH
CF	FILTER CONDENSER	MUR	COMPRESSOR
CM0-9	VENDING MOTOR CAM	MVT	FAN
CMV	DISPENSING COMPARTMENT MOTOR CAM	NTC	TEMPERATURE PROBE
D	DIODE	RS232	SERIAL PORT
FA	RADIO INTERFERENCE SUPPRESS	RT	BALLAST
FD	PHOTODIODE	SOR	OUT/R BOARD
FT	PHOTOTRANSISTOR	ST	STARTER
IG	MAIN SWITCH	SUC	C.P.U. BOARD
ISA	OPEN DISP COMPT FLAP SWITCH	TR	TRANSFORMER
M1-...	RELEASE MOTOR	TX....	DELAYED FUSE (X=COURRENT)
MBV	DISPENSING COMPARTMENT LOCK MOTOR		

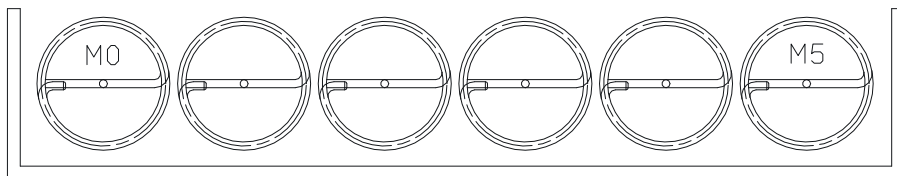
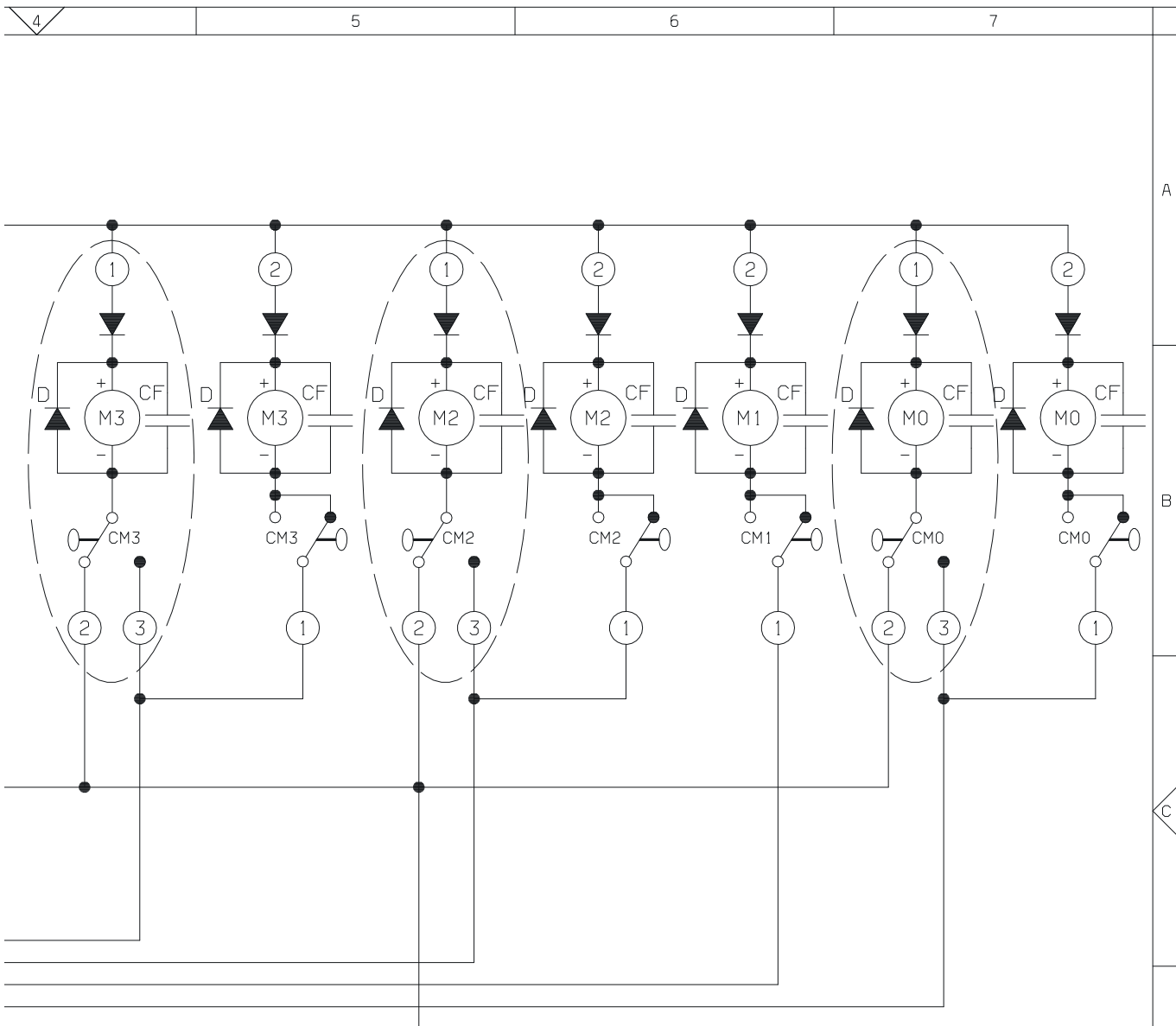


### CASSETTI I/TRAYS



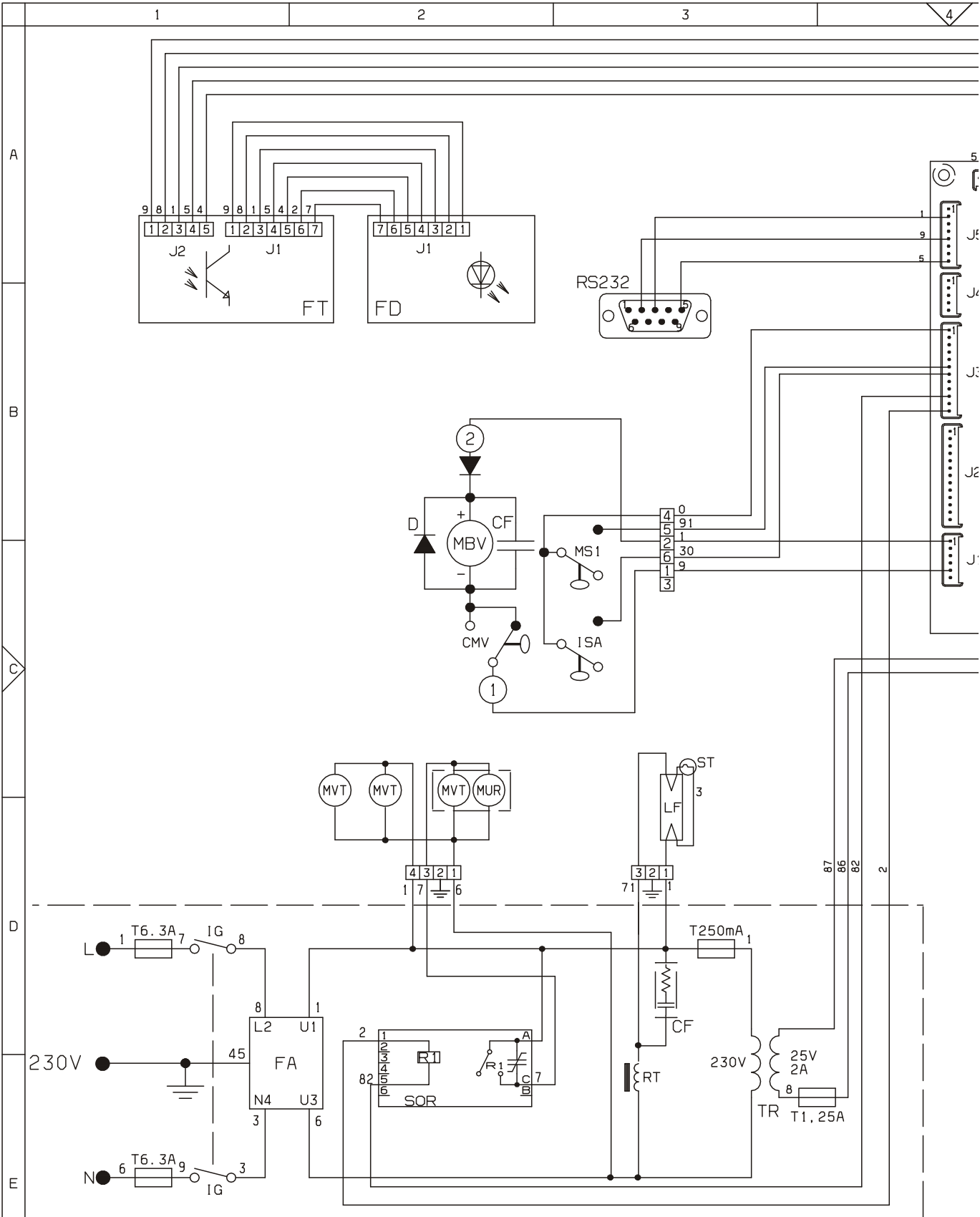
1	2	3	4	5	6	12	11	10	9	8	7	13																																															
0 NERO	1 MARRONE	2 ROSSO	3 ARANCIO	4 GIALLO	5 VERDE	6 AZZURRO	7 ROSA	8 VIOLA	9 GRIGIO	0 BIANCO	1 NERO	2 BIANCO	3 GRIGIO	4 NERO	5 BIANCO	6 GRIGIO	7 ROSSO	8 ARANCIO	9 GIALLO	0 VERDE	1 AZZURRO	2 ROSA	3 VIOLA	4 GRIGIO	5 BIANCO	6 NERO	7 GRIGIO	8 ROSSO	9 ARANCIO	0 GIALLO	1 VERDE	2 AZZURRO	3 ROSA	4 VIOLA	5 GRIGIO	6 BIANCO	7 NERO	8 GRIGIO	9 ROSSO	0 ARANCIO	1 GIALLO	2 VERDE	3 AZZURRO	4 ROSA	5 VIOLA	6 GRIGIO	7 BIANCO	8 NERO	9 GRIGIO	0 ROSSO	1 ARANCIO	2 GIALLO	3 VERDE	4 AZZURRO	5 ROSA	6 VIOLA	7 GRIGIO	8 BIANCO	9 NERO





BIGHTS 91BLANCO	<b>NECTA</b> <b>VENDING SOLUTIONS SpA</b> A company of <b>N&amp;W GLOBAL VENDING GROUP</b>	MODELLO <b>Snakky</b> <b>SL</b>	GRUPPO SCHEMA ELETTRICO FUNZIONALE CASSETTI	DATA 21-02-01	FOGLIO 1 / 1	DISEGNATO FOGLIO BONACINA	CONTROLLATO MONGUZZI
					LEGENDA CODICE <b>608536901</b>		
	4	5	6	7			





NECTA VENDING SOLUTIONS S.P.A.  
 SI RISERVA A TERMINI DI LEGGE  
 LA PROPRIETA' DEL PRESENTE  
 DISEGNO CON DIVIETO DI  
 RIPRODURLO O DIVULGARLO SENZA  
 SUA PREVIA AUTORIZZAZIONE

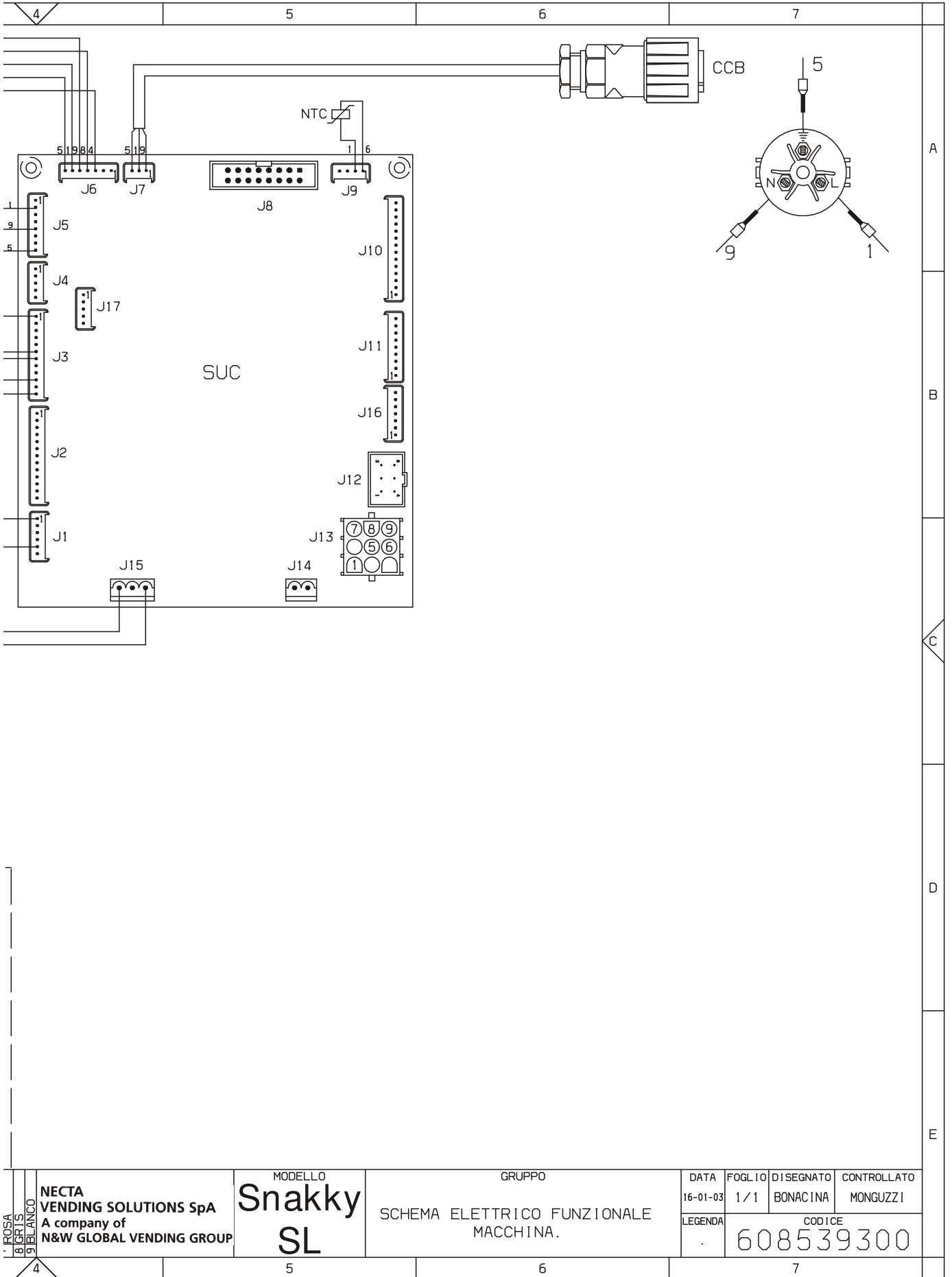
- 0 NERO
- 1 MARRONE
- 2 ROSSO
- 3 ARANCIO
- 4 GIALLO
- 5 VERDE
- 6 AZZURRO
- 7 ROSA
- 8 VIOLO
- 9 GRIGIO
- 0 BIANCO
- 1 NERO
- 2 BROWN
- 3 ORANGE
- 4 YELLOW
- 5 GREEN
- 6 BLUE
- 7 LIGHT BLUE
- 8 PINK
- 9 VIOLET
- 0 GREY
- 1 WHITE
- 2 NODI
- 3 MARRON
- 4 ROUGE
- 5 ORANGE
- 6 JAUNE
- 7 VERT
- 8 BLEU CIEL
- 9 ROSE
- 0 GRIS
- 1 BLANC
- 2 SCHWARZ
- 3 BRAUN
- 4 ROT
- 5 ORANGE
- 6 GELB
- 7 GRUEN
- 8 BLAU
- 9 HELLEBLAU
- 0 ROSA
- 1 LILLA
- 2 GRAY
- 3 WEISS
- 4 NEGRO
- 5 MARRON
- 6 ROJO
- 7 NARANJA
- 8 AMARILLO
- 9 VERDE
- 0 OSCURO
- 1 AZUL CLARO
- 2 ROSA
- 3 BLANCO

NEC  
 VEN  
 A cc  
 N&V

sx39300 1







ROSA GRIGIO BIANCO	<b>NECTA</b> <b>VENDING SOLUTIONS SpA</b> A company of <b>N&amp;W GLOBAL VENDING GROUP</b>	MODELLO <b>Snakky</b> <b>SL</b>	GRUPPO SCHEMA ELETTRICO FUNZIONALE MACCHINA.	DATA 16-01-03	FOGLIO 1/1	DISEGNATO BONACINA	CONTROLLATO MONGUZZI
					LEGENDA CODICE <b>608539300</b>		













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