INDUSTRIAL ELECTRONICS

HIGH TECHNOLOGY IN
BAKERY EQUIPMENTS

STM PRODUCTS S.r.l.

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DOMIX 45®

Water Doser Mixer

USER'S INSTRUCTION MANUAL

CODE 2600201 – Rev. 06 - 02.09.2014

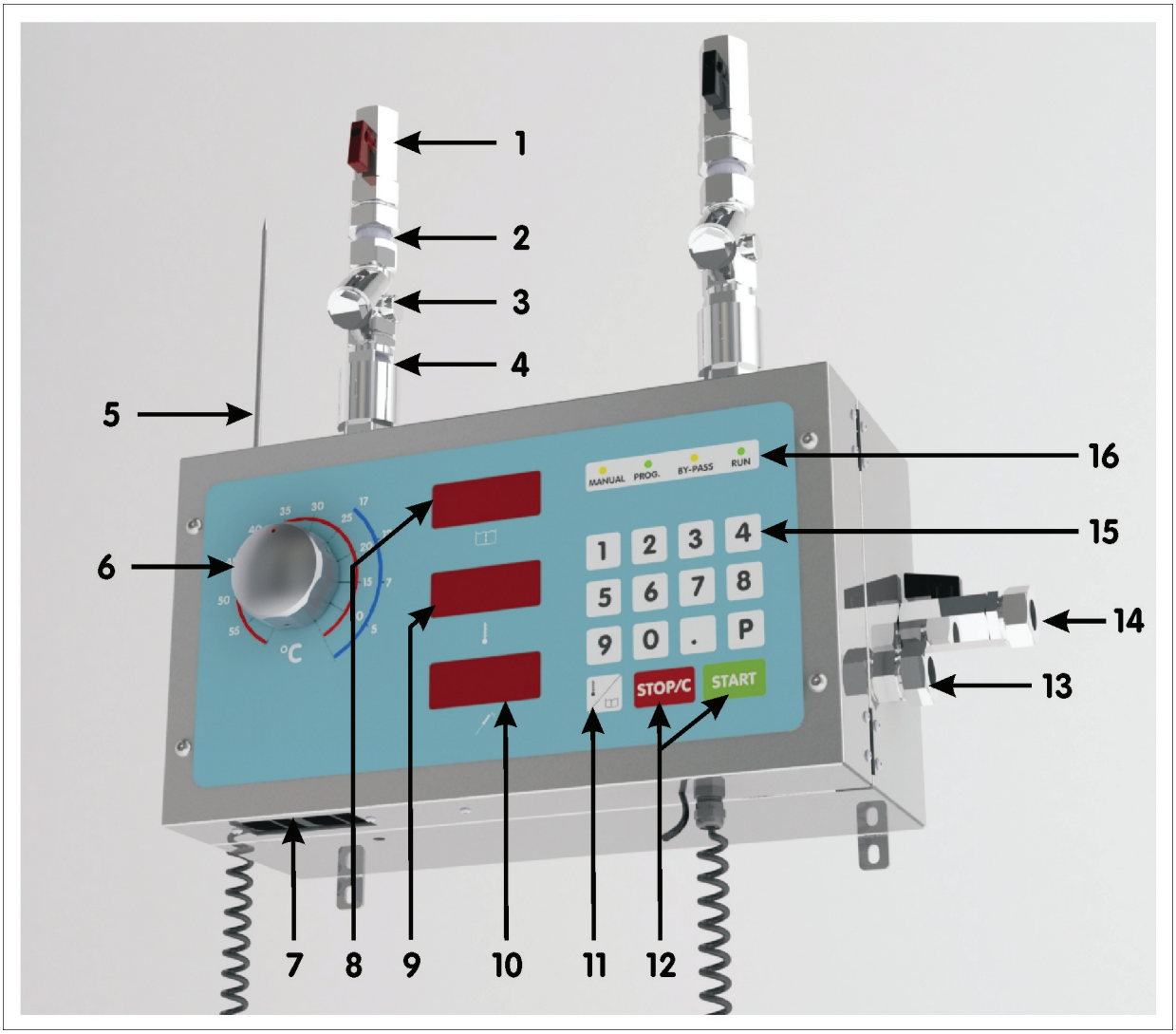


Fig. 1 (Descrizione esterna della macchina; Machine overview)

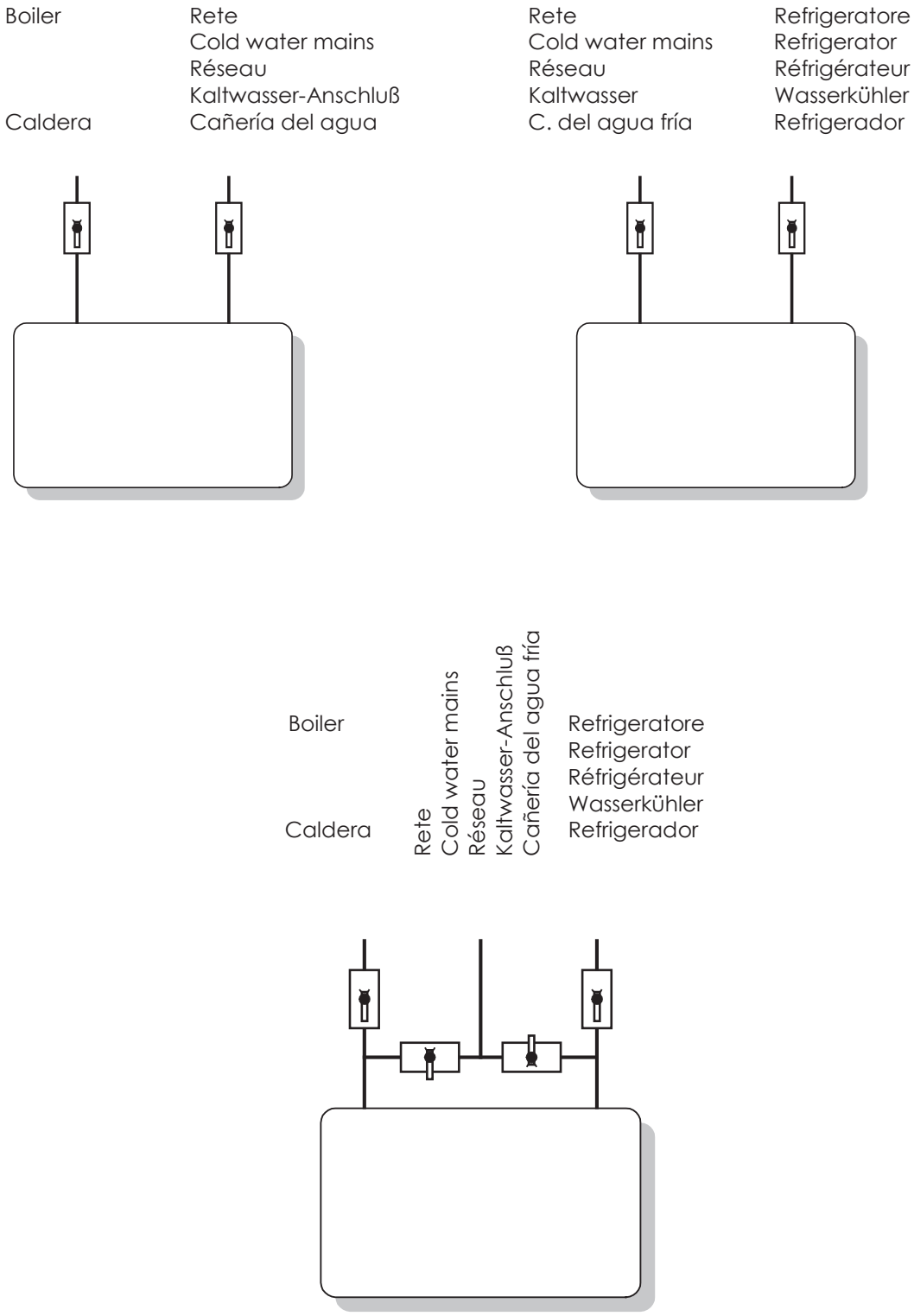


Fig. 2 (Layout collegamenti idraulici; Layout hydraulic connections)

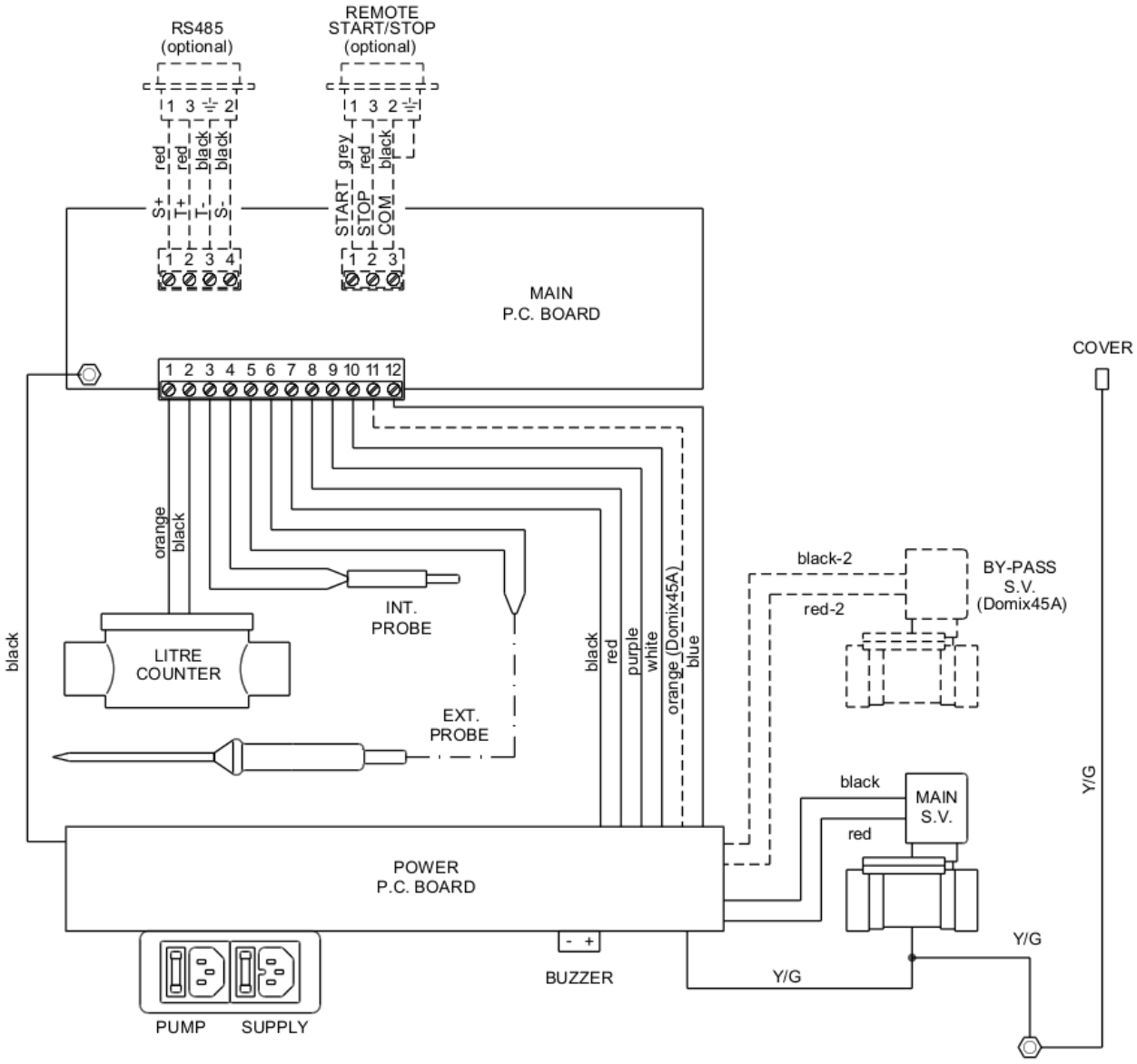


Fig. 3 (Schema Elettrico; Wiring Diagram)

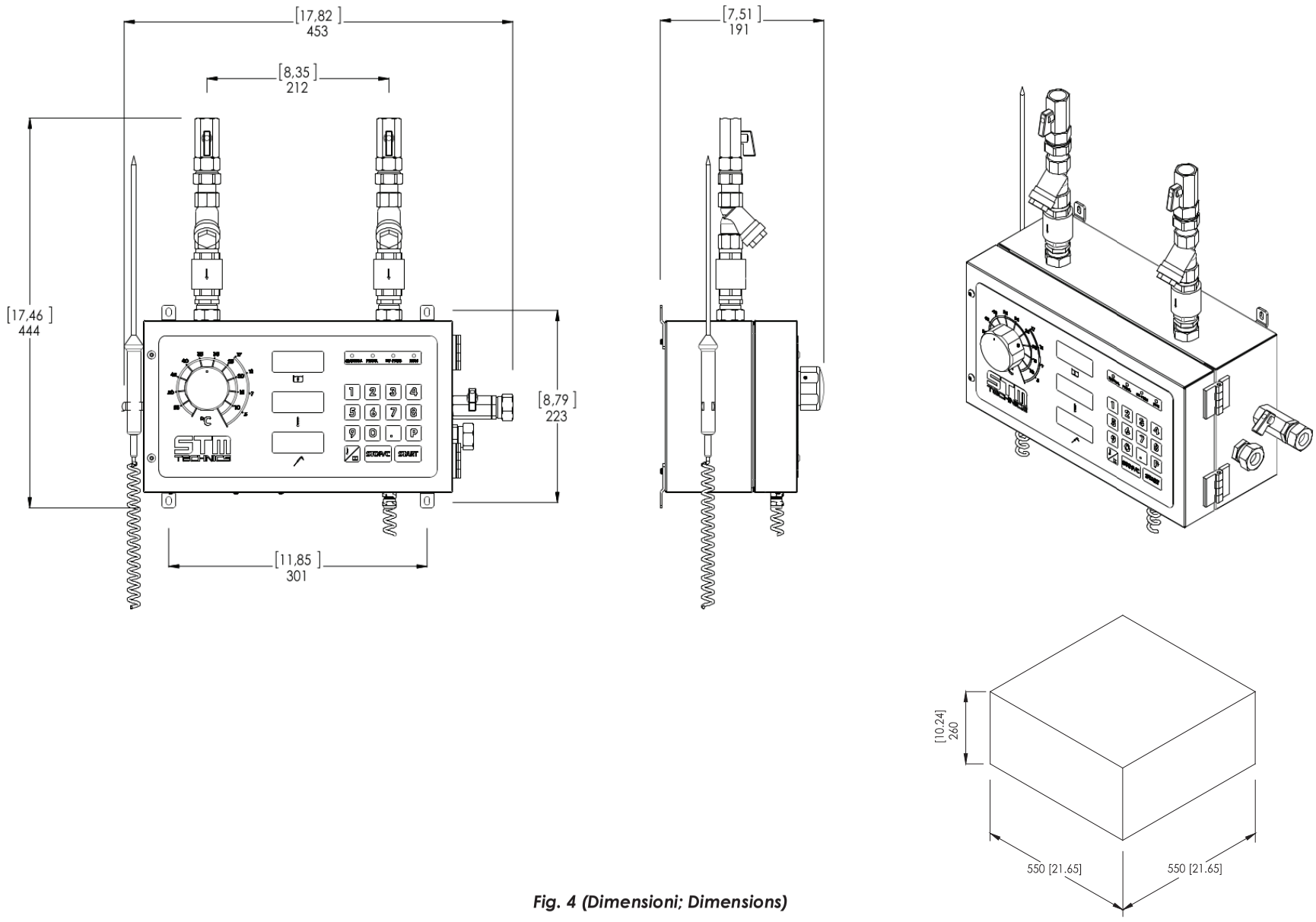


Fig. 4 (Dimensioni; Dimensions)

1- TECHNICAL FEATURES

Power supply (see Machine tag)	208-240V AC or 110-127V AC
Mains frequency	50/60 Hz
Total absorbed power	25 VA
Installation category	II
Environmental conditions	Indoor use only Temperature range 5 ÷ 50°C (40 ÷ 120°F) Relative humidity range 0 ÷ 95%
Hydraulic inlet connections	1/2"
Hydraulic outlet connections	16 mm
Max inlet Temp	65°C (149°F)
Temp regulation range	2 ÷ 60°C (36 ÷ 140°F) precision +/- 1%
Max inlet pressure	5 bar (72,5 psi)
Min inlet pressure	1 bar (14,5 psi)
Max ratio between the two entry pressures	1 : 5
Max batch	999,9 L; 99 lb + 15 oz; 999,9 lb
Dosing precision	± 1% (min batch: 5L)
Flow rate at 1 bar and 20°C	18 L/min (40 lb/min)
Flow rate at 5 bar and 20°C	40 L/min (88 lb/min)
Internal probe	Thermo-resistor PT1000 typeA
External probe	Thermo-resistor PT1000 typeA
Memory	80 programmable recipes
Supply fuse	250 V – T250 mA retarded @ 230 V 250 V – T630 mA retarded @ 115 V
Pump control fuse	250 V – F6,3 A
Protection Rating	IP 42

1.1. DESCRIPTION

(See Fig. 1)

1. Ball-taps with OR gasket.
2. OR gasket-type unions for an easier installation.
3. Stainless steel double mesh filters for water impurities.
4. Non-return valves.
5. External temperature probe.
6. Regulation knob for temperature setting, with reference scale.
7. Supply plug, with fuse and spare, and remote pump control plug, with fuse and spare.
8. Display showing the water quantity selected, still to be delivered (during the dosing), or already delivered (after pressing **[STOP/C]**).
9. Display for the internal electronic thermometer and the set temperature.
10. Display for the external electronic thermometer and the programs.
11. Key to move from temperature to quantity and vice versa.
12. **[STOP/C]** and **[START]** keys.
13. Delivery hose.
14. By-pass connection.
15. Membrane keyboard for data entry.
16. Series of function control lights.

2- MANUAL INTERPRETATION

All parts of the text that are important to the safety of people and objects are written in bold. The purpose of this manual is to provide the user, the installer and the maintenance technician with all the technical information required for the installation, use and ordinary maintenance to guarantee a long Machine life.
Should a spare part be required, only original components should be used. Requests for SPARE PARTS or INFORMATION relating to the Machine must be made to the distributor or to the nearest technical assistance centre, quoting the MODEL and MACHINE SERIAL NUMBER shown on the technical characteristics label.

The meaning of this symbol (used both on the machine and in this manual) is: Danger, electric shock risk.

The meaning of this symbol (used both on the machine and in this manual) is: Caution, please refer to attached documentation.

The meaning of this symbol (used both on the machine and in this manual) is: Operation prohibited.

3- PRELIMINARY INSPECTION

Inspect the Machine as soon as it has been received.
Check carefully that all the components are in the packing list or invoice.
Advise promptly of any damage caused during transportation and send a claim to the courier without delay.
<u>VERY IMPORTANT</u>: the manufacturer shall not be held liable for whatever damage to the Machine during transportation.

4- BASIC RULES OF SAFETY

The use of the device is prohibited to children and to persons with disabilities who are not assisted.

It is prohibited to touch the Device barefoot and if part of the body is wet or damp.

Cleaning is prohibited without disconnecting the Machine from mains.

Do not modify the safety devices or settings without the manufacturer permission.

It is prohibited to detach or twist Machine's wires even if it is disconnected from mains.

It is prohibited to open the Machine without having previously disconnected it from mains.

It is prohibited to disperse and to leave the packaging to the reach of children. It can be potentially dangerous.

5- MANUFACTURER DECLARATION

THE MANUFACTURER DECLINES ANY LIABILITY WHATEVER FROM ANY DAMAGE DERIVING FROM IMPROPER USE OF THE MACHINE AND/OR USE OF THE MACHINE IN ENVIRONMENTAL CONDITIONS THAT ARE NOT ADMITTED.

5.1. WARRANTY

The manufacturer, through its authorised distributors, warrants the repair or free replacement of all parts of this product that happens to break down due to defective material or workmanship within one year from delivery thereof, but not from improper or incorrect use, in compliance with the conditions outlined here below.
Materials that are subject to normal wear and tear such as pipes and tubing are excluded from this warranty. All faulty products must be returned to the manufacturer, or to an authorised distributor at the customer's expense following agreement for the goods to be collected by courier. All repairs or modifications must be carried out solely by the manufacturer or its authorised distributors or following explicit authorisation by the manufacturer or its authorised distributors. All products that have been subjected to improper or incorrect use or have been purposely or accidentally damaged or overloaded are excluded from this warranty. The manufacturer shall not be held responsible for any warranty whatever given by anyone, including its distributors, in the name and on behalf of the manufacturer that does not fall within the terms outlined in this warranty clause, unless otherwise specifically approved in writing by the manufacturer.

5.2. UNPACKING

Unpack the Machine with care and check the presence and good condition of all components.
Store the packaging so that it can be used to return the Machine, if necessary.
At the end of the Doser's life, dispose of the packaging material in compliance with local regulations. Pay particular attention to the expanded polystyrene protections. The outer box is in corrugated cardboard and can be recycled.

5.3. STORAGE

This product has a long shelf-life at the following ambient conditions: 2 ÷ 55°C and RH of 99% (non-condensing)
Nevertheless, after storage make sure that all parts function correctly.

6- INSTALLATION

Necessary operations relating to lifting, transportation, installation, start-up, maintenance and repair work must be carried out only by qualified personnel. Disconnect the electrical power supply when carrying out any of the above.

2 fuses, for pump and logic board, are fitted on the logic board and can be replaced when needed by qualified personnel only.

Installation must be carried out by skilled personnel under the supervision of a qualified person. All electrical connections must comply with the local requirements where the Machine is installed. The Machine must be earthed and protected against short circuits and overloads.
In case of hard water (with high lime scale content = hardness in French degrees higher than 25 ÷30, or 250 ÷ 300 ppm) it is necessary to employ an ion exchange water softener in order to maintain a residual hardness ranging between 5 and 10 French degrees (50 ÷ 100 ppm). The use of electronic water softeners is not recommended since their efficacy has not yet been proved.
Fix the doser-mixer to the wall at 1350 ÷ 1550mm height from the floor: four wall plugs are supplied.
A 90° wall plug hook is supplied to provide support for the water delivery outlet elbow.

Do not place other machines underneath the Domix.

Arrange for the water inlet piping as shown in the lay-out diagrams, Fig. 2. Mount the ball taps (1) at the end of the pipes (black lever = cold on the right and red lever = warm on the left). Provide to insulate thermically the inlet pipes to obtain the best performances.

It is recommended to install the DOMIX as close as possible to the chiller / boiler avoiding to place piping in the vicinity of heat sources such as ovens.

Cleanse all pipes to eliminate installation waste which may damage the Machine. Connect the ball taps to the doser-mixer by means of the "O" ring gasket type unions (2).
Insert the delivery hose (13) into its housing.
Connect the by-pass (14) to a drain by means of the supplied tube.

It is forbidden to install a fixed pipe into the by-pass (14) in order to ensure disassembly in case of maintenance.

Check that the voltage and frequency correspond to those shown on the unit data tag. Make sure that the electrical installation complies with the local electrical connections and safety regulations.

To power the Machine use the supplied flying socket, fitted with a three cable min. section 3x1,5mm². It is recommended to install an external switch to power the Machine.

Use the supplied flying socket to connect the remote pump(s). The use of a pump is necessary when one of the two inlet pressures is less than 1 bar, for example when using unpressurized water heaters or refrigerators.

NOTICE: in the case of water chiller equipped with a surge tank with pressure switch, this must be by-passed and the pump must be controlled directly by the Doser, through a power relay.

The pump plug has the following wiring diagram (clean contact):

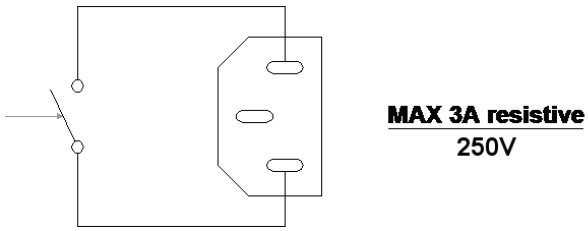


Fig. 5 (pump control wiring diagram)

This is a normally open (NO) clean contact that closes when the unit requires chilled water.
The equipment is fitted with an auxiliary precision electronic thermometer with a mobile probe (5), usable at distances up to 5 metres.
Temperature readout on the display is continuous (10), except when the program number appears.

The machine is equipped with a complete self-diagnosis system which allows to quickly identify installation problems or Machine's breakdowns: messages will appear on the Machine's display.

7- MACHINE FUNCTIONS

7.1. START

To power the Machine use the external switch (or plug in the flying socket).). The first messages that appear are related to the Machine self-diagnosis. Type of Machine and microprocessor software version are also displayed.
At the end of the self-diagnosis the displays indicate respectively

- Quantity discharged before power off.
- *Internal temperature.*
- *External temperature.*

7.2. MANUAL BATCH

Press [P] followed by **[00]** (the yellow led **(MANUAL)** lights up and the quantity display flashes).
Select the required water quantity. If only the quantity has to be stored, press **[START]**.
To store also the temperature, press ,the temperature display flashes, and enter batch Temp .
In case of data entry error press **[STOP/C]** and reselect.

ATTENTION: the temperature value stored in the model Domix45 has no influence on batch temp or by-pass length which can be regulated manually through the ball valve (14).

Press **[START]** to batch.
First of all the remote pump control is activated, the *RUN* valve opens and the corresponding led lights up; the central display (9) shows the actual discharge temperature and the display (8) indicates the decreasing quantity.
Use knob (6) to adjust water temperature checking it on the electronic thermometer (9). When regulating water Temp, wait a few seconds between adjustments so as to allow the inlet water Temp to stabilize.
To ensure best mixing inlet warm water Temp should be at least 18°F higher than the required batch water Temp and inlet cold water Temp should be at least 9°F lower. Low temperatures (under 50 ÷ 60°F) can be obtained by using a refrigerator.

ATTENTION: the graduated scales are indicative being influenced by inlet water Temps and pressures. The scale "red" indicates batch Temp when using NETWORK+HOT; The scale "blue" indicates the batch Temp when using CHILLED+NETWORK as inlet waters.
A refrigerator must be installed to obtain low batch Temps (below 10 ÷ 15°C).
Machine's Scales have been graduated by mixing 3° C inlet refrigerated water, 18° C mains water and 65° C warm water and 2 bar as inlet pressure.

To stop manually water delivery at any time press **[STOP/C]**. In the display (8) the quantity of delivered water flashes; to resume delivery press **[START]** ; otherwise press again **[STOP/C]** to erase memory.
To modify quantity and/or temperature in memory, press and proceed as for the first data entry.
Simply press **[START]** for identical successive batches as the doser-mixer keeps in memory batch data. Memory is protected against power failure; press **[START]** to resume batch when power is restored.

7.3. RECIPE SETTING

Enter the program number (ex. **P01**, **P02** etc.) which appears on the lower display (10) (**PROG.** led lights up) and then the desired water quantity, appearing on the upper display (8).
To store also the temperature, press  and then proceed as for the manual batch.

Warning: recipe numbers from 1 to 9 must always be set with the format: 01, 02, etc.

To exit from recipe setting, batch the recipe itself by pressing **[START]**), or enter a new recipe (press P XX) or wait for 6 seconds: **in all these cases the recipe is stored**.

ATTENTION: recipe temperature in the model Domix 45 has only the purpose of storage. It has no influence on the batch Temp and on the by-pass length which is to be regulated manually with the ball valve (14).

7.4. RECIPE DOSING

To recall a recipe, enter the recipe number (for example **P28**), which is shown for 3 seconds on the lower display (10), while the upper displays show quantity and temperature. Press **[START]** to batch. If required, enter new quantity and/or temperature as explained above.
To stop water delivery manually at any time press **[STOP/C]** . After that on display (8) the delivered water quantity flashes; to resume delivery press again **[START]** , otherwise, press **[STOP/C]** to erase quantity and a new quantity can be entered.

7.5. SPECIAL FUNCTIONS

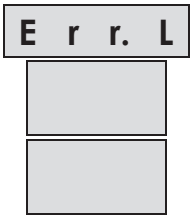
Recipes memory viewer
Press for 3 seconds P and all recipes stored in memory are listed one after the other (**PROG.** led flashes). Press **[STOP/C]** to stop the *Recipes memory viewer*.

Free batch
A batch can be carried out on the basis of the Temp only and with no control on quantity: select program **[P99]**.
On the upper display appears **[FrEE],** the central display shows the water temperature while the bottom shows the external temperature.
To start a free batch press **[START]** and press **[STOP/C]** to stop it.
To exit, enter a new recipe or **[P00].**
This function may be useful in case of litre-counter failure.

8- ERRORS

All errors messages are displayed through flashing abbreviations and an intermittent beep. Press **[STOP / C]** to stop the latter. Press **[START]** to delete the error message and to resume delivery. Press twice **[STOP / C]** to delete delivery. Here below are the possible error messages and their abbreviations .

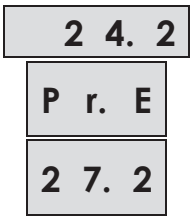
8.1. Litre-counter error



DISPLAY 1

No impulses from the flow meter: after 15 seconds will appear "**Err.L**.". Press **[STOP / C]** to erase the message and the upper display shows the quantity discharged. Press **[START]** to resume delivery and **[STOP / C]** to delete delivery.
For troubleshooting see paragraph 12-.

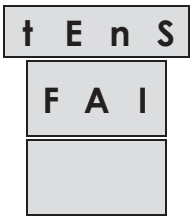
8.2. Probe Error



DISPLAY 2

The "**Pr.E**" message appears on the display referred to the damaged or wrongly connected probe. The Machine is not blocked and can continue to work.
Use the external probe to check that the batch temperature is correct.
For troubleshooting see paragraph 12-.

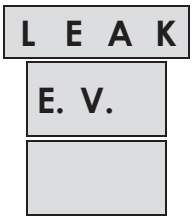
8.3. Power Fail



DISPLAY 3

In case of power failure during a water delivery the message "**tEnS FAI**" appears when power is restored. Press **[STOP/C]** to cancel the message. Press **[START]** to complete delivery or press **[STOP/C] again** to erase delivery.

8.4. Solenoid valve leaking



DISPLAY 4

If the outlet solenoid valve does not shut perfectly leakages are detected and the user is alerted through the warning: "**LEak E.V."** The error is non-blocking. The user can continue to work. Of course, if the problem is not removed, the alarm continues to appear.
Press **[STOP / C]** to delete the message.
For troubleshooting see paragraph 12-.

In the installer parameters this control can be disabled

9- MAINTENANCE INSTRUCTIONS

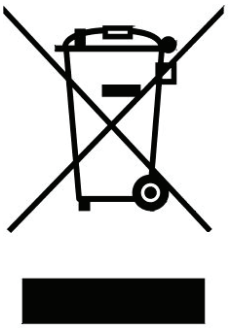
- Clean periodically the external filters (3). The frequency depends on the impurities present in the pipes.
- Clean the external surface weekly. Use a soft sponge soaked in water with mild soap; for stubborn dirt, use alcohol or turpentine.
- Do not direct water jets onto the Machine.
- When switching off the doser-mixer, set always the Temp regulation knob (5) to its mid position to optimize mixing valve adjustments on following switching on.
- The solenoid valve inner membrane should be cleaned every six months (time varies depending on water hardness).
- Check periodically dosing accuracy. Carry out some delivery tests on different quantities and measure the results with a precision scale previously calibrated.

The use of non-original spare parts is strictly prohibited.

The original spare parts No. are listed in **Tab. 1**.

10- DEVICE DISPOSAL

The used package may be disposed through regular disposal treatment centres. It is made only of non-polluting materials, recyclable as secondary prime materials. The Machine, accessories and batteries included, do not belong to the domestic disposal category, since they can be recycled and reused. The European Directory 2002/96/CE about electric and electronic components disposal (RAEE) prescribes the separate collection of the electric and electronic components respect to the mixed urban disposals for their further recovery, reuse and recycle. Don't dispose the electric and electronic components together with domestic disposals or through the regular disposals collection services. The EU countries require the use of separate collection services. Be informed about your local separate collection services for electric and electronic components disposal showing this symbol:



11- CERTIFICATIONS

CE

12-TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
The Machine doesn't switch on	The power fuse in the logic board is burnt.	Disconnect power and replace the fuse.
"**Err.L**" message	There is no water coming from the chiller.	Check the inlets.
	RUN or BY-PASS obstructed.	Check the outlets.
	Litre-counter damaged.	Call the Service.
	Other.	Call the Service.
Low flow-rate	Inlets filters obstructed.	Clean the filters.
	Plant problems.	Call the Service.
Dosing error	Solenoid valve slowly closing.	Call the Service.
	Litres counter bad calibrated.	Call the Service.
"**Pr.E**" probe error	Probe damaged.	Call the Service.
"**LEAK E.V.**" message	RUN or/and BY-PASS valve doesn't close properly.	Call the Service.

13-PEZZI DI RICAMBIO / SPARE PARTS / PIECES DE RECHANGE

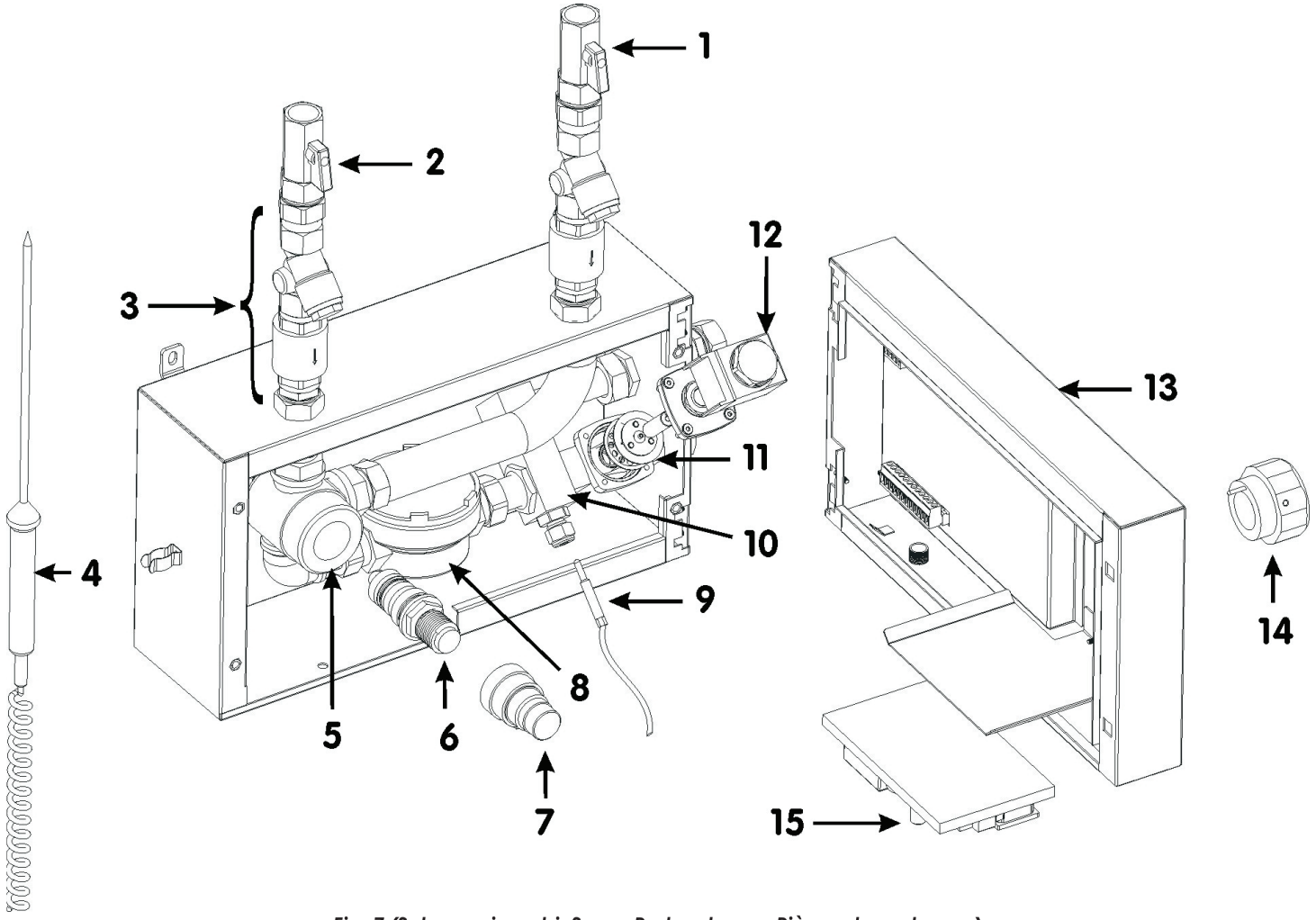


Fig. 7 (Schema ricambi; Spare Parts scheme; Pièces de rechange)

POS.	Desc.	Cod. 230V	Cod. 115V
1	Saracinesca a sfera fredda (nera, DX) Cold water ball gate valve (black, right) Vanne à sphère froid (noir, droite)	3801217	---
2	Saracinesca a sfera calda (rossa, SX) Hot water ball gate valve (red, left) Vanne à sphère chaud (rouge, gauche)	3801216	---
3	Gruppo filtro-valvola non ritorno Filter – non-return valve assembly Filtre et vanne de non-retour	3801230	---
4	Sonda di temperatura esterna External temperature probe Sonde extérieure	3812511	---
6	Elemento termostatico Thermostatic element Elément thermostatique	4400351	---
7	Anello di Arresto + dado di regolazione Regulation pin Règlement broches	4400505	---
8	Contalitri a 2 fili 2 wire litre-counter Compte-litres	3801007	---
9	Sonda di temperatura interna Internal temperature probe Sonde intérieure	3812522	---
10	Gruppo elettrovalvola con bobina Solenoid valve assembly with coil Groupe électrovanne avec bobine	3801127	3801129
11	Kit interno elettrovalvola Internal solenoid valve group Kit interne E.V.	4400451	---
12	Bobina per elettrovalvola Coil for solenoidvalve Bobine pour E.V.	4400405	4400406
13*	Coperchio con tastiera ed elettronica Cover with keyboard and electronics Couvercle avec clavier et électronique	---	---
14	Manopola di regolazione Regulation knob Poignée de régulation	3801208	---
15	Scheda alimentazione e attuatori Actuators and supply board Fiche alimentation et actionneurs	3811534	3811537
--	Presa volante di alimentazione Supply flying socket Prise volante d'alimentation	4400606	---
--	Presa volante per telecomando pompa Pump remote control flying socket Prise volante pour télecontrôl pompe	4400608	---
--	Tubo di scarico Ø 16mm Delivery Hose Ø 16mm Tuyau de décharge Ø 16 complet	3801209	---
5+6+7	Gruppo miscelatore completo Complete mixing unit Groupe mélangeur complet	3801305	---

Tab. 1 (Ricambi; Spare parts; Pièces détachées)

13* - Richieda il corretto codice del ricambio per la Sua macchina, fornendo il suo numero di matricola (nr. di produzione).
- Please ask for the correct spare code for your machine, providing its serial (production) number.
- S.v.p. demandez le correct code du rechange pour votre machine, nous indiquant son numéro de série (n° de la production).

PRODUCTS

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BAKERY EQUIPMENTS

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DOMIX 45-45A-45APSKit

Technician manual

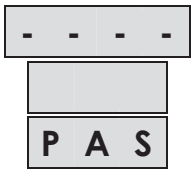
CODE 2600203 – Rev. 00 - 22.12.2009

INDICE

1 PARAMETERS ACCESS

1.1. ENTER PASSWORD

Switch on the device, holding down simultaneously for 3 seconds the **[1]** and **[9]** keys to access various screens to modify installer parameters. To move from one screen to the next using the **[P]** key, you can not go back on previous screens or jump directly to the end. Use the keys **[1] [2] [3] [4]** to make the choice between various options. Exit from the parameters by pressing again the combination **[1]** and **[9]**.



DISPLAY 1

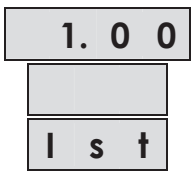
In this screen enter the password 1131 and press **[P]** key to display and/or modify the installer parameters. Enter the password 9977 and press the **[P]** key if you want to display and/or modify the factory settings.

2 INSTALLER PARAMETERS

2.1. FLOW-METERS CALIBRATION (FIRST STEP, INSTANTANEOUS ERROR)

The machine has been calibrated under standard conditions to give a precise dosing with a maximum error of + / -1%. If the conditions at installation (pressure, pressure drop, etc..) are different, they could affect the accuracy. There is a procedure for the correction of these errors. This procedure is divided into two phases. The first stage corrects only the instantaneous error due to the time of closing of the valves. The second phase, also corrects the systematic error. The first phase can be conducted independently by the second, while absolutely necessary to have access to the second, run even the first. Before entering the calibration must necessarily have a bucket of at least 15 liters and a precision scale.

THE UNIT OF MEASURE USED IN THESE PHASES DEPENDS ON THE UNIT SET. IF THE UNIT SETTED IS [L/°C], THE UNIT OF MEASURE WILL BE THE LITER ANT THE CENTS PER LITER.
IN THE CASE OF [lb-oz/°F] THE UNIT OF MEASURE WILL BE lb/oz
IN THE CASE OF [lb/°F]WITH POUNDS AND CENTS PER POUND, THE UNIT OF MEASURE IS lb WITH ITS CENTS.



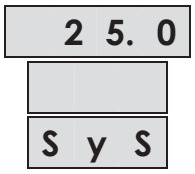
DISPLAY 2

Pressing **[START]**, the device performs a batch of 1.00Kg. At any time you can stop and repeat the batch with the **[STOP/C]** key. At the end of the batch, on the first line of the display flashes the value ***0.00***. Is now possible to set the amount read from the scales.

ATTENTION!! INPUT THE VALUE READ FROM THE SCALE NOT THE DEVIATION
EXAMPLE: THE BALANCE SHOWS 1,07 kg, INPUT 1.07 NOT 0.07.

The entered value can be deviated from that starting +/-50%. If there is an error higher necessary, replace the meter. Press **[P]** key to proceed to the next step.

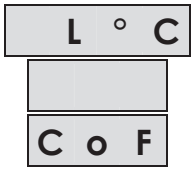
2.2. FLOW-METERS CALIBRATION (SECOND STEP, SYSTEMATIC ERROR)



DISPLAY 3

The input value can change from a low of 10.00 liters at a maximum of 70.00 liters. Proceed as shown in the 2.1 paragraph. In this phase, the maximum error allowed is +/- 20%.

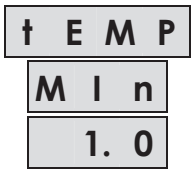
2.3. UNIT OF MEASURE



DISPLAY 4

This parameter lets you select the unit in which to operate the machine. It is possibile to choose between degrees Celsius and liters ("L °C") by pressing the **[1]** key, degrees Fahrenheit and pounds (" Lb. °F") by pressing the **[2]** key, or degrees Fahrenheit and pounds oz ("On ° F") by pressing the **[3]** key.

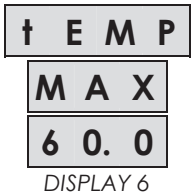
2.4. MINIMUM SET TEMPERATURE



DISPLAY 5

The allowed values are between 0.5 and 10 °C (default 1 °C) or between 33.8 and 50 °F (default 34 °F/38° APSKIT Vers.).

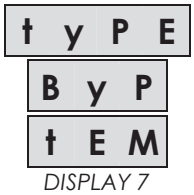
2.5. MAX SET TEMPERATURE



DISPLAY 6

The allowed values are between 20 and 60 °C (default 60 °C) or between 68 and 140 °F (default 140 °F).

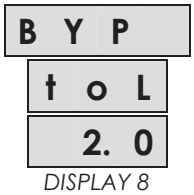
2.6. BY-PASS MODE



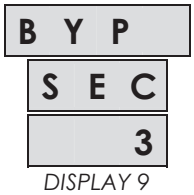
DISPLAY 7

Using the keys **[1]** and **[2]**, it is possible to choose respectively:
"Control temperature" (the lower display shows "TEM") and the device opens the solenoid RUN when the internal probe reaches the setpoint ± tolerance (setted in the next parameter).
"Time control" (the lower display shows "TIM"): the device opens the solenoid RUN only after a delay time (setted in the next parameter) from pressing the **[START]**

2.7. BY-PASS HYSTERESIS TEMPERATURE OR BY-PASS DELAY TIME



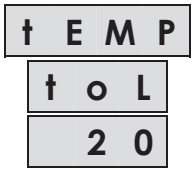
DISPLAY 8



DISPLAY 9

The allowed values are:
Between 1.5 and 5.0 °C (default 2 °C) or between 2.7 and 9.0 °F in "Control temperature" mode (APS kit version 5°F default).
Between 00 and 99 seconds (default 3 sec) in "Time control" mode.

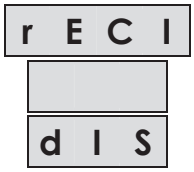
2.8. DELAY TIME BEFORE UNREACHABLE TEMPERATURE ALARM



DISPLAY 10

This screen appears only if the bypass was selected in "Control temperature" mode.
It can be set from 10 to 120 seconds, with default of 20.

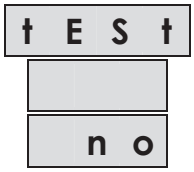
2.9. HOW TO PROTECT THE RECIPES.



DISPLAY 11

With this parameter, it is possible to prevent the change of the recipes set.
To enable this protection use the **[2]** key to bring the value of the parameter to "**Abi**".
To disable, bring the value to "**DIS**" by pressing the **[1]** key.

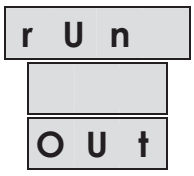
2.10. TESTS



DISPLAY 12

By pressing **[1]** or **[2]** it is possible to chose if perform (or no) a series of tests on I / O of the device.

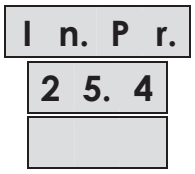
2.1.1. TEST OUTPUT



DISPLAY 13

The bottom display shows always the message "**Out**",
In the top display appears "**rUn**", "**PUM P**" and "**byPA**" (only for DOMIX45A).
The choice between the outputs is performed by pressing the **[1], [2]** and **[3]**, while with the **[START]** and **[STOP/C]** the outputs can enable and disable.

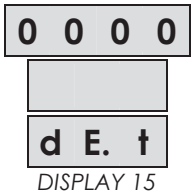
2.1.2. PROBES TEST



DISPLAY 14

When the display shows "**In.Pr.**" the temperature shown is the internal, while when the display shows "**ES.Pr.**" the temperature shown is the external.
To switch from internal to external use the **[1]** and **[2]** keys.

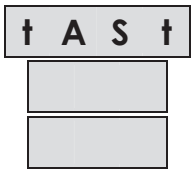
2.1.3. FLOW TEST



DISPLAY 15

Pressing the [START] the device opens the solenoid RUN while with the [STOP/C] it closes the valve. While the RUN solenoid valve is open, the top display shows the instantaneous flow meter always expressed in liters per minute **regardless of the unit of measure chosen**.

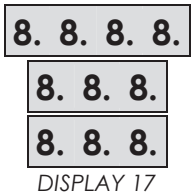
2.1.4. KEYBOARD TEST



DISPLAY 16

The bottom display shows the key pressed.
To move to the next parameter the key **[P]** must be pressed twice, at the first pressure the display shows the value "Pro", at the second one it goes to the next parameter.

2.1.5. DISPLAY TEST



DISPLAY 17

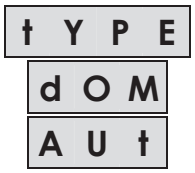
In this screen all the leds and the display are lit.

3 FACTORY SETTINGS

3.1. DEVICE MODEL

Choosing the password **9977** in the DISPLAY 1 the factory sttings can be modified.

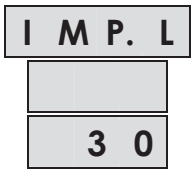
WARNING: CHANGING THE PARAMETERS IN THIS SECTION MAY 'PREVENT THE PROPER OPERATION OF THE MACHINE. IF THE DEVICE NOT WORKING 'PROPERLY AFTER THE CHANGES, RESET COMPLETE MACHINES.



DISPLAY 18

"AUt" value the device is configurated as a Domix 45A
"MAN" value the device is configurated as a Domix 45
To switch use the **[1]** and **[2]** keys.

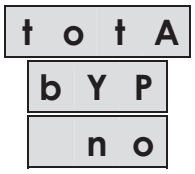
3.2. FLOW METER CONSTANT



DISPLAY 19

Modify this value only if the flow-meter used is different from the original.

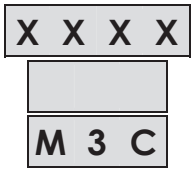
3.3. TOTALIZER CONSUMPTION



DISPLAY 20

If set "YES" (key **[1]**) the totalizer of cubic meters includes water discharged from the BYPASS solenoid valve.
if set "no" (key **[2]**) the totalizer of cubic meters includes only water discharged from RUN solenoid valve.

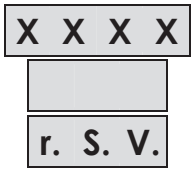
3.4. CUBIC METERS TOTALIZER



DISPLAY 21

The upper display shows the total cubic meters discharged (or if the previous parameter is set to "no" only from the RUN).
To reset the counter, press for 3 seconds **[STOP]**.

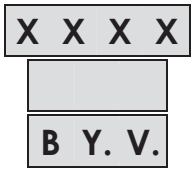
3.5. RUN SOLENOID VALVE LIFE



DISPLAY 22

The upper display shows the number of the opening of the RUN solenoid valve.
To reset the counter, press for 3 seconds **[STOP]**.

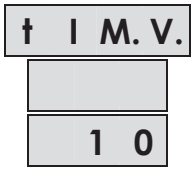
3.6. BY-PASS SOLENOID VALVE LIFE



DISPLAY 23

The upper display shows the number of the opening of the BY-PASS solenoid valve.
To reset the counter, press for 3 seconds **[STOP]**.

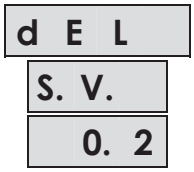
3.7. SOLENOID VALVES LEAKING



DISPLAY 24

This value indicates when the microprocessor starts to check if the valves are properly closed. It can be set a minimum of 10 to a maximum of 20 seconds.
Pressing the **[0]** will disable the control.

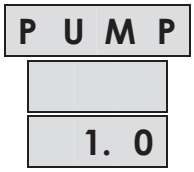
3.8. VALVES SWITCH DELAY (ONLY FOR DOMIX45A)



DISPLAY 25

It indicates the delay between the BY-PASS valves closing and the RUN opening.
Allowed value from 0.1 to 0.5 seconds (default 0.2).

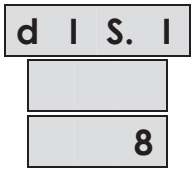
3.9. PUMP SWITCH OFF DELAY



DISPLAY 26

It indicates the delay between the RUN valves closing and the PUMP deactivating.
Allowed value from 00.0 a 5.0 (default 1.0).

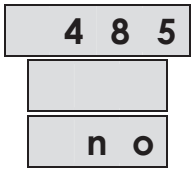
3.10. DISPLAY INTENSITY



DISPLAY 27

Allowed value from 0 a 9 (default 8).

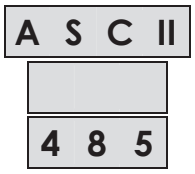
3.11. SERIAL INTERFACE SETTINGS



DISPLAY 28

By pressing **[2]**, and again the **[P]** key, the device procedes to shows the serial interface settings.
If **NO** is selected, all the configuration section will be skipped.

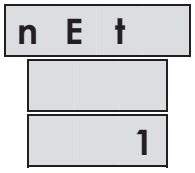
3.10.1. TRANSMISSION PROTOCOL



DISPLAY 29

In this menu it is possible to set the transmission protocol (ASCII or RTU mode).
The choice can be done by pressing [1] or [2]

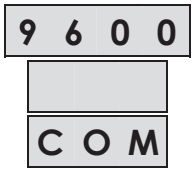
3.10.2. NET ADDRESS



DISPLAY 30

In this menu it is possible to set the net address. Range: 1 ÷ 254, (default 1).

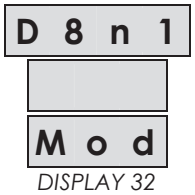
3.10.3. COM SPEED



DISPLAY 31

In this menu it is possible to set com speed: 1200, 2400, 4800, 9600, 19200, 38400, 57600.
The choice can be done by pressing the keys from[1] to [7]

3.10.4. TRANSMISSION MODE



DISPLAY 32

'd8' = 8 data bits. (d7 = 7 data bits, etc)
n = no parity check (e = even parity check, o = odd parity check)
1 = 1 stop bit (2 = 2 stop bits, etc).
ASCII : d8n1, d8n2, d7n1, d7n2, d7E1, d7E2, d7o1, d7o2.
rtU : d8n1, d8n2.
The choice can be done by pressing the keys from[1] to [8]

4 RESET

To force a reset of the machine to factory settings at any state of operation for 5 seconds, press the keys **[2] [6] [0]** simultaneously (after three beep row, the system starts as the first switch on).

5 TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
The unit doesn't switch on	The power fuse in the logic board is burnt.	Disconnect the power and replace the fuse.
"**Err.L**" message	There is no water coming from the chiller.	Check the inlets.
	RUN or BY-PASS obstructed.	Check the outlets.
	Litre-counter damaged.	Call the Service.
	Other	Call the Service.
Low flow-rate	Inlets filters obstructed..	Clean the filters
	Plant problems	Call the Service.
Errore nel dosaggio	Solenoid valve slowly closing.	Call the Service.
	Litres counter bad calibrated	Call the Service.
Unreachable temperature "**tEMP not corr**"	One of inlet water is close	Check the inlets, Check the plant.
	Too long inlet way or insufficient insulation.	Check the plant.
	Thermostatic element failure	Call the Service.
Errori sonde	Probes damaged	Call the Service.
"**LEAK EV**" message	RUN or/and BY-PASS valves doesn't close properly	Call the Service.