

M39 GT Dosatron / M39 GT HD Dosatron

MANUALE DEL TECNICO
ENGINEER'S MANUAL
MANUEL DU TECHNICIEN
TECHNIKERHANDBUCH
MANUAL DEL TÉCNICO
MANUAL DO TÉCNICO

Index

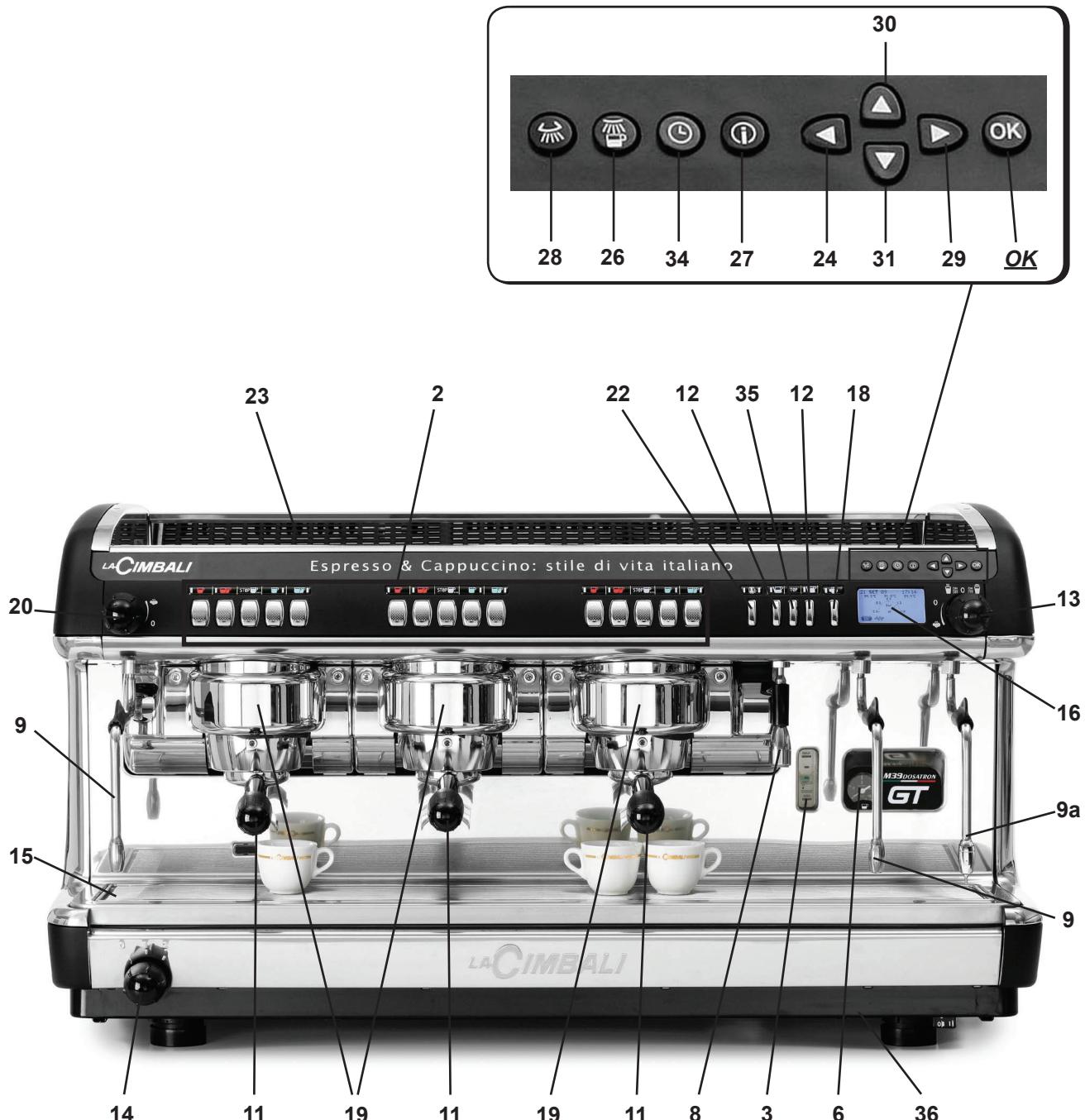
Page

PROGRAMMING - ENGINEER MODE

27. Data flow chart - Technician programming	5
28. Programming	6
29. Electric heating	6
30. Key menu - Coffee selection	7
Pressure profile	7
30.1 Key menu - Hot water selection	7
31. Configuration menu	8
Turbosteam	9
Washing options	10
32. Manual control panel	11
33. DATA menu: COUNTERS	13
33.1 DATA menu: Wash 1 Archive	13
33.2 DATA menu: MALFUNCTIONS ARCHIVE	14
33.3 DATA menu: INFO	14
Serial number	14
Version	15
Setup	15
Entering Standard Data	15
Dip settings	15
34. Check-control messages	16
35. Display info and messages	17
Disassembly	19
Setting	19
Wiring diagram	28
Hydraulic circuit	39

These chapters in the manual are to be used by qualified, authorized technical staff.

M39 Dosatron GT



Legenda - Legend - Legende - Legende - Leyenda - Legenda

IT	LEGENDA	GB	LEGEND	FR	LEGENDE
2	Tastiera di selezione	2	Selection panel	2	Plaque à touches sélections
3	Indicatore di livello	3	Level Indicator	3	Indicateur de niveau
6	Manometro pompa	6	Pump Pressure Gauge	6	Manomètre pompe
8	Erogatore acqua calda	8	Hot water outlet	8	Bec débit eau chaude
9	Tubo (lancia) vapore	9	Steam pipe	9	Tuyau de la vapeur
9a	Tubo (lancia) Turbosteam	9a	Turbosteam pipe	9a	Tuyau Turbosteam
11	Portafiltro	11	Filter-Holder	11	Porte-filtre
12	Pulsante acqua calda	12	Hot water button	12	Bouton de l'eau chaude
13	Selettori Turbosteam	13	Turbosteam selector	13	Sélecteur Turbosteam
14	Manopola interruttore generale	14	Main Switch Knob	14	Interrupteur général
15	Bacinella appoggiatezze	15	Tray	15	Bassinelle d'égouttoir
16	Display grafico	16	Graphical display	16	Ecran graphique
18	Pulsante erogazione vapore	18	Steam button	18	Bouton de la vapeur
19	Boiler caffè	19	Coffee boiler	19	Boiler café
20	Manopola erogazione vapore	20	Steam supply knob	20	Robinet de débit du vapeur
22	Pulsante scaldatazzze elettrico	22	Electrical cup warmer button	22	Touche chauffe-tasses électrique
23	Piano appoggiatezze	23	Cups warmer	23	Chauffe-tasses
24	Tasto "RES" (uscire dalla programmazione / invalidazione dati immessi)	24	"RES" key (to quit programming mode / cancel entered data)	24	Touches "RES" (sortir de la programmation / données introduites non valables)
26	Tasto lavaggio circuito caffè	26	Coffee circuit flushing key	26	Touches de lavage du circuit café
27	Tasto "I" (visualizzazione numero cicli)	27	"I" key (displays the number of cycles)	27	Touches "I" (affiche nombre des cycles)
28	Non Usato	28	Not used	28	Non utilisé
29	Tasto "PRG" (entrare in programmazione / menu)	29	"PRG" key (to access programming mode / menu)	29	Touches "PRG" (entrer en programmation / menu)
30	Tasto "+" (modificare parametri / orologio)	30	+" key (to modify parameters / clock)	30	Bouton "+" (modifier les paramètres / horloge)
31	Tasto "-" (modificare parametri / orologio)	31	-" key (to modify parameters / clock)	31	Bouton "-" (modifier les paramètres / horloge)
34	Tasto "PARAMETRI CLIENTE"	34	"CUSTOMER PARAMETERS" key	34	Touche "PARAMÉTRES CLIENT"
35	Tasto "STOP-CONTINUO" acqua calda	35	Hot water "STOP-CONTINUOUS" key	35	Touche "STOP-CONTINUU" eau chaude
36	Leva riempimento manuale acqua in caldaia	36	Manual refill water lever in boiler	36	Levier remplissage manuel eau dans chaudière
OK	Pulsante attivazione / disattivazione resistenza caldaia - conferma dati immessi	OK	On / Off switch boiler resistance - confirm entered data	OK	Bouton pousoir d'activation / désactivation résistance chaudière - confirmation des données introduites
DE	LEGENDE	ES	LEYENDA	PT	LEGENDA
2	Wahlstellen	2	Teclado de selección	2	Teclado de seleccão
3	Standanzeige	3	Indikator de nivel	3	Indicador de nível
6	Manometer Pumpe	6	Manómetro bomba	6	Manómetro da bomba
8	Heißwasserausgabe	8	Erogador agua caliente	8	Distribuidor de água quente
9	Dampfausgaberohr	9	Tubo vapor	9	Tubo do vapor
9a	Dampfausgaberohr turbosteam	9a	Tubo vapor turbosteam	9a	Tubo do vapor turbosteam
11	Filterhalter	11	Portafiltro	11	Porta-filtro
12	Heißwasser-Drucktaste	12	Botón erogación agua caliente	12	Botão de erogação água quente
13	Wahlschalter Turbosteam	13	Selector turbosteam	13	Selectador turbosteam
14	Drehknopf Hauptschalter	14	Empuñadura interruptor general	14	Manípulo interruptor geral
15	Auffangschale	15	Bandeja	15	Tabuleiro
16	Graphisch Display	16	Display gráfico	16	Display gráfico
18	Taste Dampfabgabe	18	Botón erogación vapor	18	Botão de erogação vapor
19	Boiler Kaffee	19	Boiler café	19	Boiler café
20	Drehknopf Dampfabgabe	20	Empuñadura erogación vapor	20	Manipulo erogação do vapor
22	Elektrischer Tassenwarmer shäler	22	Botón calientatazas electrico	22	Botão esquenta-chavanas electrico
23	Tassenerwärmer	23	Calientatazas	23	Grelha para esquentar chávenas
24	Taste "RES" (Absprung von Programmierung / Löschen der eingegebenen Daten)	24	Tecla "RES" (salir de la programación / invalidación datos introducidos)	24	Tecla "RES" (sair da programação / invalidação dos dados introduzidos)
26	Taste zum Durchspülen des Kaffeekreislaufs	26	Tecla lavado circuito café	26	Tecla de lavagem de circuito café
27	Taste „I“ (Anzeige der Zyklus-Nr.)	27	Tecla "I" (visualización número ciclos)	27	Tecla "I" (visualização do número de ciclos)
28	Nicht belegt	28	No Usado	28	Não Usado
29	Taste „PRG“ (Zugriff zu Programmierung / Menü)	29	Tecla "PRG" (entrar en programación / menú)	29	Tecla "PRG" (entrar na programação / menu)
30	Taste „+“ (Parameter / Uhrzeit ändern)	30	Tecla "+" (modificar parámetros / reloj)	30	Tecla "+" (modificar parâmetros / relógio)
31	Taste „-“ (Parameter / Uhrzeit ändern)	31	Tecla “-“ (modificar parámetros / reloj)	31	Tecla “-“ (modificar parâmetros / regógio)
34	Taste „KUNDENPARAMETER“	34	Tecla "PARAMETROS USUARIO"	34	Tecla "PARAMETROS CLIENTE"
35	Taste "STOP-KONTINUIERLICHE" Heißwasserabgabe	35	Tecla "STOP-CONTINUO" agua caliente	35	Tecla "STOP-CONTÍNUO" água quente
36	Hebel manuelle füllung Wasser in Kessel	36	Palanca llenado manual agua en la caldera	36	Alavanca de enchimento manual da água na caldeira
OK	Taste zur Aktivierung / Deaktivierung des Heizelements Wasserkessel - Bestätigung der eingegebenen Daten	OK	Botón activación / desactivación resistencia caldera - confirmación datos introducidos	OK	Botão activação / desactivação resistência caldeira - confirmação dos dados introduzidos

27. Data flow chart - Technician programming

English

English

KEY MENU

Press  SELECTION KEY

Type



Water dose

PRESSURE PROFILE

CONFIGURATION

Press 

Boiler pressure



TURBOSTEAM

MESAUREMENT UNITS

Drying

Time control

Buzzer

Customer prog.

Program. block

Dispensing Stop

Paym system

WASHING OPTIONS

SOFTNER REGENER.

MAINTENANCE

DATA IN/OUT

Standard data

COFFEE BOILER

Archive reset

TESTING

Press 

MANUAL COMMANDS



CUSTOMER

Press



SERVICE TIME



DATE AND TIME

ON time

OFF time

Day off

Night ON

Night OFF

WASH 1

WASH 2

WASH 3

ITALIANO

ENGLISH

FRANCAIS

DEUTSCH

NEDERLANDS

ESPANOL

PORTUGUES

漢語

DATA MENU

Press



COUNTERS



N° coffee ..

N° water

N° steam

N° steam TS

N° steam + air TS

N° tot. coffee

WASH 1 ARCHIVE

REQUIRED

PERFORMED

MALFUNCT. ARCHIVE

INFO

SERIEL N°

VERSION SW

SETUP

DIP SETTINGS

EXITING THE PROGRAMMING MENU

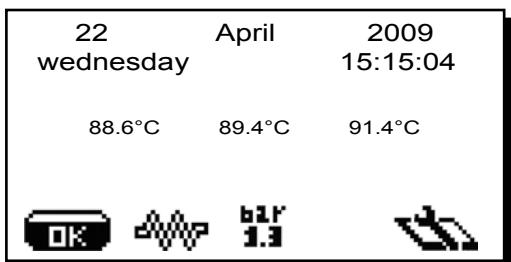
Before exiting the menu:

- Press the OK key to confirm any changes to settings;
- Press the RES key to leave settings unchanged

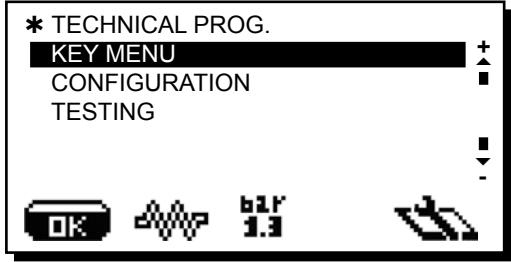
The icons below appear alternately in the bottom part of the display:



28. Programming

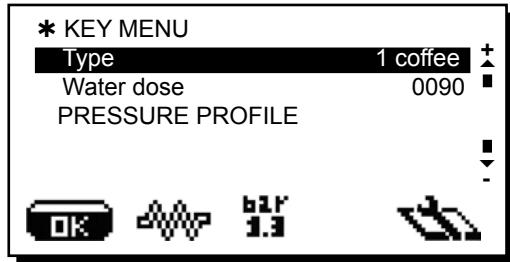


Display of available menus: Press the PRG (29) key.



Access to menus: Use the "+" (30) and "-" (31) keys to position the cursor on the desired line, then press the PRG (29) key (press a selection key if the "SELECT KEY" menu appears).

Access and modification of sub-menus: Use the "+" (30) and "-" (31) keys to position the cursor on the desired line, then press the PRG (29) key.



Use the "+" (30) and "-" (31) keys also to modify the message or number.

Note: When modifying data, the cursor changes to "→", or a slide bar with maximum and minimum settings will appear:



Exiting the programming menu: there are two possibilities:

- 1) Press the **OK** key to confirm changes
- 2) Press the **RES** key to leave settings unchanged and exit the menu

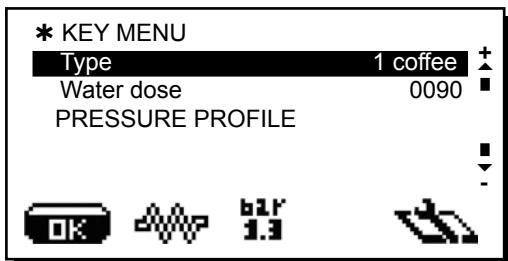
29. Electric heating

Service personnel can switch on or switch off the electric heating (service boiler and groups boilers) in this way:

- 1) enter in the technical programming;
- 2) press the **OK** key and keep it pressed for a few seconds in order to switch on or switch off the resistance.

30. Key menu - Coffee selection

Press one of the coffee dispensing keys (the relative led will remain on, not flashing). The following message will appear on the display:



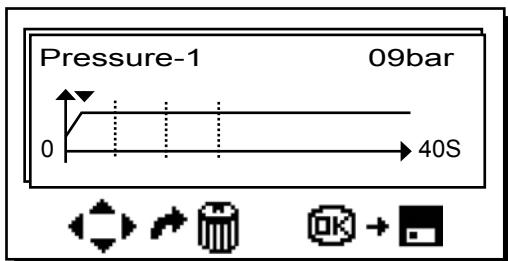
The following coffee selection parameters can be modified:

- **type** (key personalizing, e.g.: 1 coffee, 2 coffee, stop, null);
- **water dose** (volumetric dosage pulses, from 0 to 1999, with increments of 1);
- (*) **PRESSURE PROFILE** (lets you divide the dispensing cycle into different phases and to set each pressure and duration. See paragraph below).

(*) only on machine "HD"

Pressure profile (only on "HD" machines)

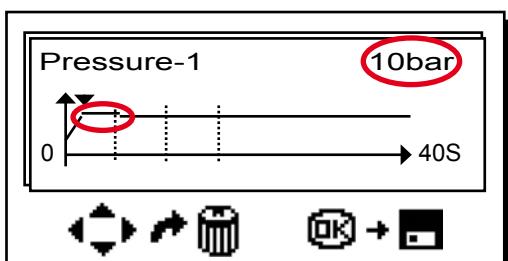
Use the "+" (30) and "-" (31) keys to move the cursor to the "PRESSURE PROFILE" line. Press the PRG (29) key. The following will appear on the display screen:



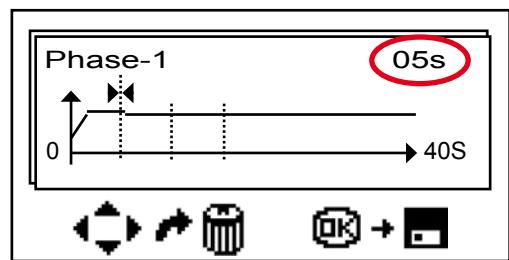
The graph on the display shows the time (expressed in seconds) on the X-axis and the pressure (in bars) on the Y-axis.

The vertical dotted lines divide the dispensing cycle into different phases.

In the screen above, the triangle ▼ indicates that the pressure of phase 1 can be modified. Press keys "+" (30) and "-" (31) to change (with increments of 1 bar), the pressure during Phase 1 of dispensing. The following will be displayed:

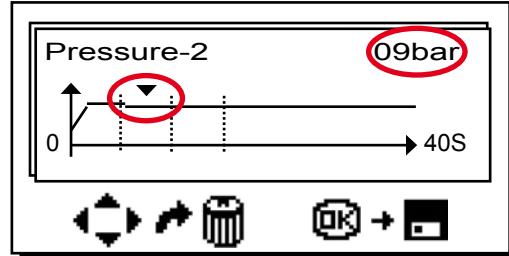


Press key (29) PRG to view the duration of Phase 1:



The arrows ►◀ on the vertical dotted line indicate that the time interval of Phase 1 can be increased or decreased using keys "+" (30) and "-" (31). The duration of the phase is indicated in the top right corner of the display (in the example, 05 seconds).

Press key (29) PRG to set the pressure for Phase 2:

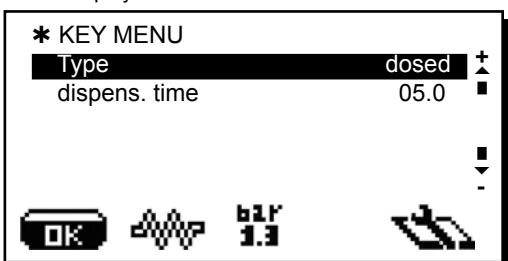


Phase 2 and all other phases are set the same way as illustrated for Phase 1.

When done, confirm the changes made by pressing the **OK** key or press the **RES** key to exit the menu and leave the settings unchanged.

30.1 Key menu - Hot water selection

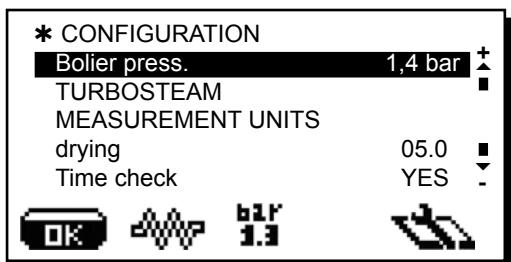
Press the hot water dispensing key (12). The following message will appear on the display:



The following hot water selection parameters can be modified:

- **water dispensing time** (dispensing time in seconds.).

31. Configuration menu



Boiler pressure – indicates the boiler pressure: 0,8 ÷ 1,6 bar (11 ÷ 23 psi)

TURBOSTEAM - includes 2 sub-menus

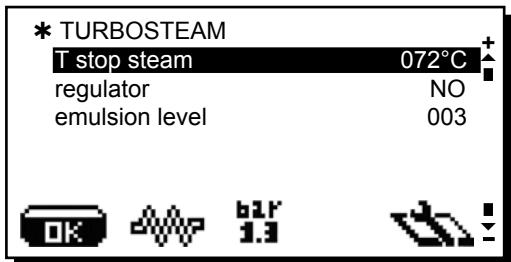
Stop steam temperature – indicates the automatic stop steam temperature (Turbosteam). Can be set between a minimum of 40 and a maximum of 85° C (104 – 185 ° F).

Regulator - flow regulator: YES/ NO.

YES - the machine has the flow regulator on the turbosteam circuit

NO - the machine does not have the flow regulator; it is therefore possible to set 4 different levels of emulsion.

If "NO" is set, a third line, "*emulsion level*", appears: here 4 levels can be chosen, where **001** is less emulsion and **004** is continuous emulsion.



See paragraph "Turbosteam" on the following pages.

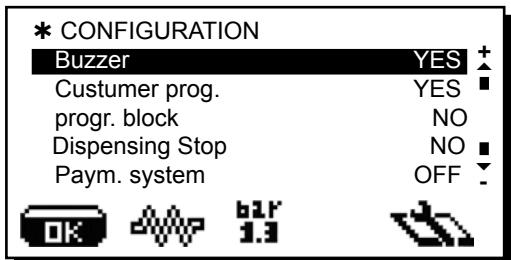
MEASURING UNIT – includes 2 sub-menus

Temperature – can be set to °C Celsius centigrade or °F Fahrenheit degrees.

Pressure – can be set to bar or psi.

Drying (pod drying time, from 0 to 5, with increments of 0.1 seconds);

Time check - view dispensing time on the display: YES/NO



Buzzer - Enable/disable all acoustic warnings both when keys are pressed and when messages appear on the display

Customer programming – YES/ NO

Programming block - programming block: YES/NO.

With the function active (YES) the use of the programming keyboard is allowed with the technician card; "i" key remains always active.

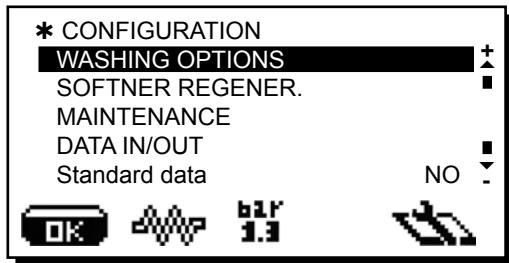
Dispensing Stop: YES/ NO

YES - each dispensing key functions as a *start/stop* key.

This means that when you press the key during the dispensing phase, it will be interrupted

NO - If the same key is pressed during the dispensing phase, the repeat function is activated.

Payment system – permits configuration of payment system, when connected.



WASHING OPTIONS - See paragraph "Washing options" on the following pages.

REGENERATION - includes the parameters for the softner regeneration: liters of resin (da 0,1l a 25l), hardness (da 0 a 45 °F).

MAINTENANCE - contains five entries to setting maintenance parameters:

Max cycles - the number of cycles initially set: 40,000.

Max days - the number of days initially set: 185.

N° cycles - the number of cycles remaining before the next maintenance session.

N° days - the number of days remaining before the next maintenance session.

Reset - options are:

NO, countdown of cycles and days remaining before the next maintenance session.

YES, the settings for number of cycles (40,000) and remaining days (185) are reset **OFF**, all controls for programmed maintenance are disabled, and the "N. cycles" and "N. days" counters are zeroed.

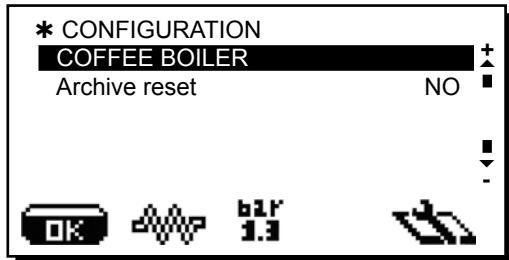
DATA IN/OUT – contains three entries:

Key – indicates the key number from 0 to 60.

Data IN transfer from smart card to machine. OUT transfer from machine to smart card.

TX/RX – to start data transfer

Standard data – loads standard data. YES/NO

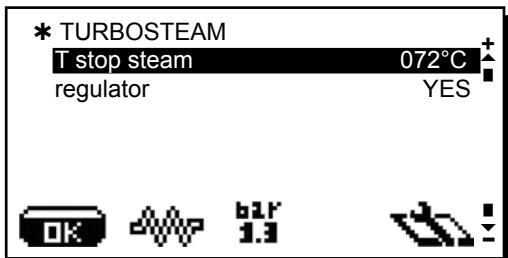


COFFEE BOILER - This parameter includes boiler temperature settings, which can be set between 60 and 110 °C (140 – 230 °F), with increments of 0.5 °C.

Archive reset – zeros the error log (Wash 1 Archive and malfunctions archive) stored on the machine: YES/NO

Turbosteam Programming function

Once you have selected TURBOSTEAM, use the "+" and "-" keys to position the cursor on the T STOP STEAM line, and press the PRG key.



You may now program the automatic steam function, by setting a "xxx°C" temperature value for either hot or whipped milk.

Setting options:

"0" setting:

- manual steam stop

Any number between "40°C ÷ 85°C" (104°F ÷ 185°F)

- automatic steam stop

"OFF" setting:

- steam stop disabled

Use the "+" and "-" keys also to modify the message or number.

Note: When modifying data, the cursor changes to a slide bar with the minimum and maximum limits:



Automatic steam knob programming

The automatic steam knob (13) can be programmed in two ways:

MODE 1, STEAM AUTOMATIC STOP

Set a temperature value on item "T steam xxx°C", by using keys "+" and "-". The range for "xx" is from 40°C (104°F) minimum to 85°C (185°F) maximum.

Steam dispensing is controlled by the knob (13).

In particular:

- when the knob is turned to the left, the milk is heated.
- When the knob is turned to the right, the milk is frothed.

Once the knob has been turned (13), it automatically returns to the "O" position.

When the drink to be heated exceeds +20°C, the message "T steam xxx°C" appears on the display - this indicates the temperature read by the probe.

Note.: When the set temperature is reached, steam supply stops automatically and the display continues indicating steam value for the next 3 seconds.

Steam supply can be interrupted at any time (even if the set temperature was not reached), by again turning the automatic steam knob (13) in the same direction used for activating supply.

MODE 2, STEAM MANUAL STOP

Set the temperature value on item "T steam xxx°C" at "000" zero.

Steam dispensing and the choice of milk type are performed as in MODE 1

Turn the knob (13) and the message "T steam xxx°C" immediately appears on the display, indicating the temperature read by the probe.

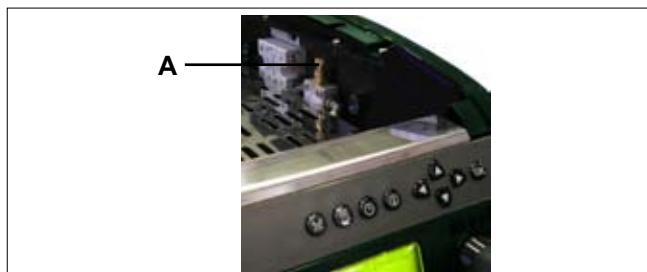
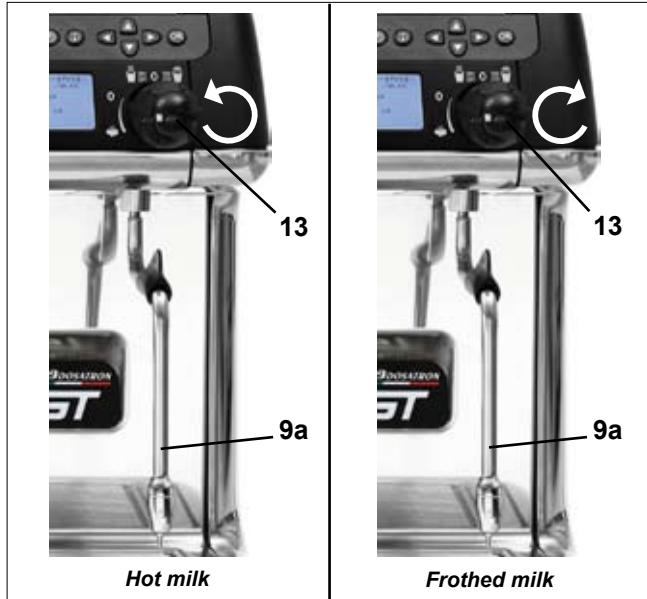
Note: The user controls when steam dispensing is stopped.
When the desired temperature is reached, the user will turn the automatic steam knob (13) in the same direction used to start the steam dispensing process.

For the next 3" after steam dispensing has stopped, the display shows the milk temperature that has been reached.

Time out is set at 180" for both the programming modes.

If, when the machine is powered up, the probe does not detect any temperature value (thermo-couple not operating), the STOP STEAM function is disabled and "----" is shown in the setting square instead of "xx°C". The latest set temperature value is, however, saved until thermo-couple operation is restored.

The machine works as if the STOP STEAM function does not exist. Frothed milk and hot milk are available, but the temperature read by the probe will not appear on the display.



(Where is present)

The ideal setting for milk frothing is set in the factory. If additional adjustments must be made, turn the flow adjustment valve (A) underneath:

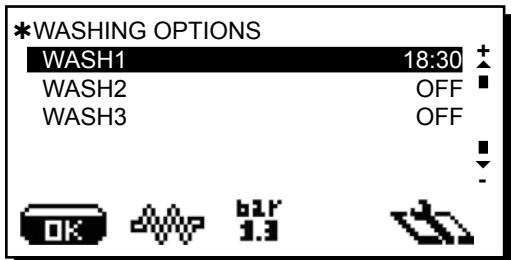
M39: the shelf on the right side of the machine:

- counterclockwise: more air > more frothy milk
- clockwise: less air > less frothy milk

Note: even slight turns of the valve (A) can make a great difference in how the milk is frothed.

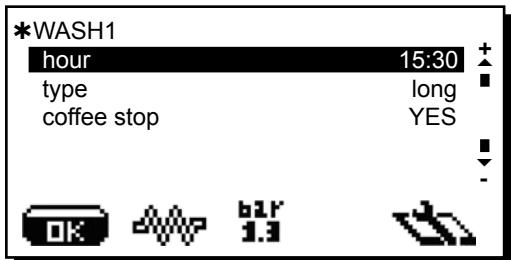
Washing options

WASHING OPTIONS - includes three sub-menus for setting washing parameters:



Wash 1, 2, 3

These are wash cycles set at programmable times, each with four changeable parameters, which are:



- **hour**: when the wash cycle must be performed. WASH cycles can be disabled and set to OFF.
- **type**: indicates type of wash cycle that will be performed. Long wash (coffee circuit).
- **coffee stop**: when the function (YES) is set, if the wash cycle does not take place within 60' (30' if short washing) from the moment that the "EXECUTE WASHING GROUP" message appears, the machine is blocked and all selections for coffee are disabled.

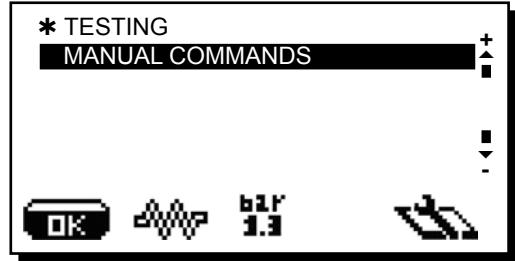
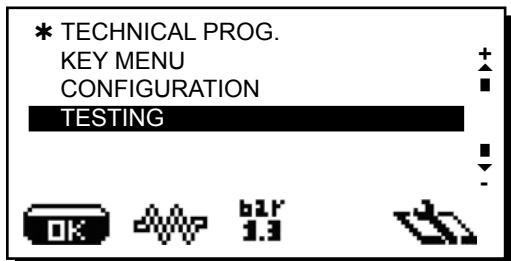
NOTE: wash cycles that are not carried out are recorded in the WASH 1 LOG, as "failed".

32. Manual control panel

Move the cursor to the "manual" line with the "+" (30) and "-" (31) keys to access the manuals control panel.

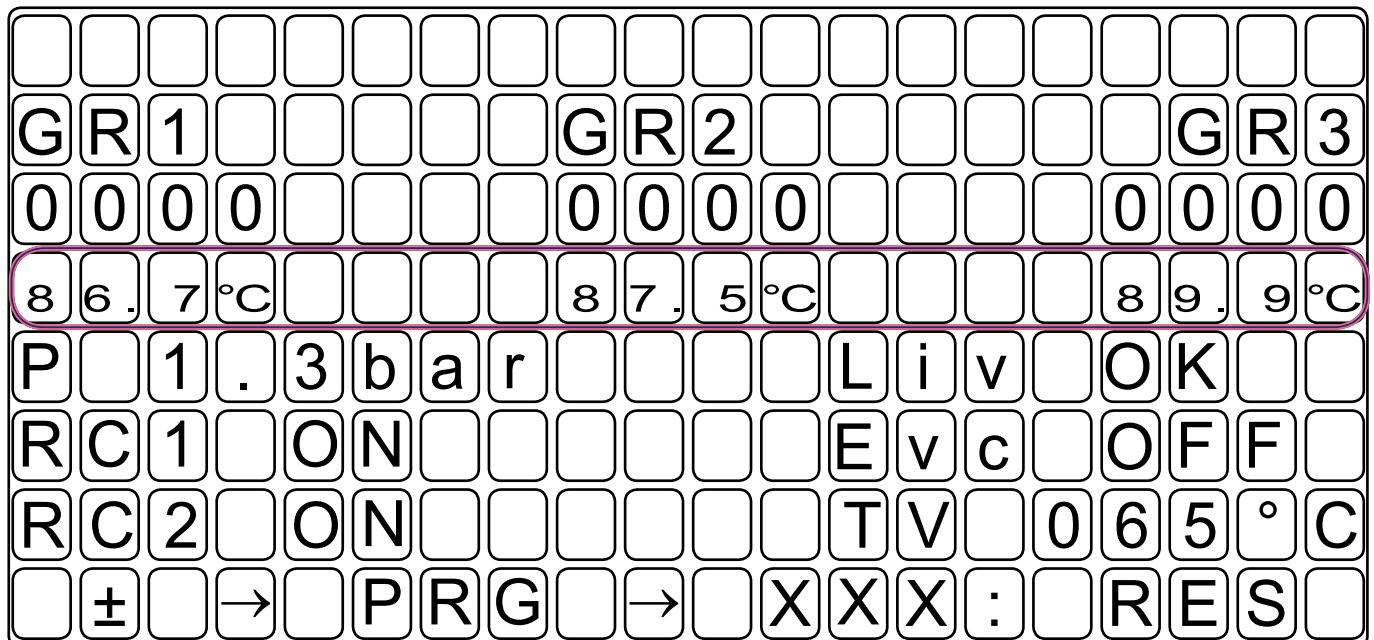
MANUAL CONTROLS – permit parts to be manually operated using the "+" and "-" keys.

Press the "PRG" key (29) key, the following message appears on the display:



A successive pressure of "PRG" key (29), visualizes on display the following panel:

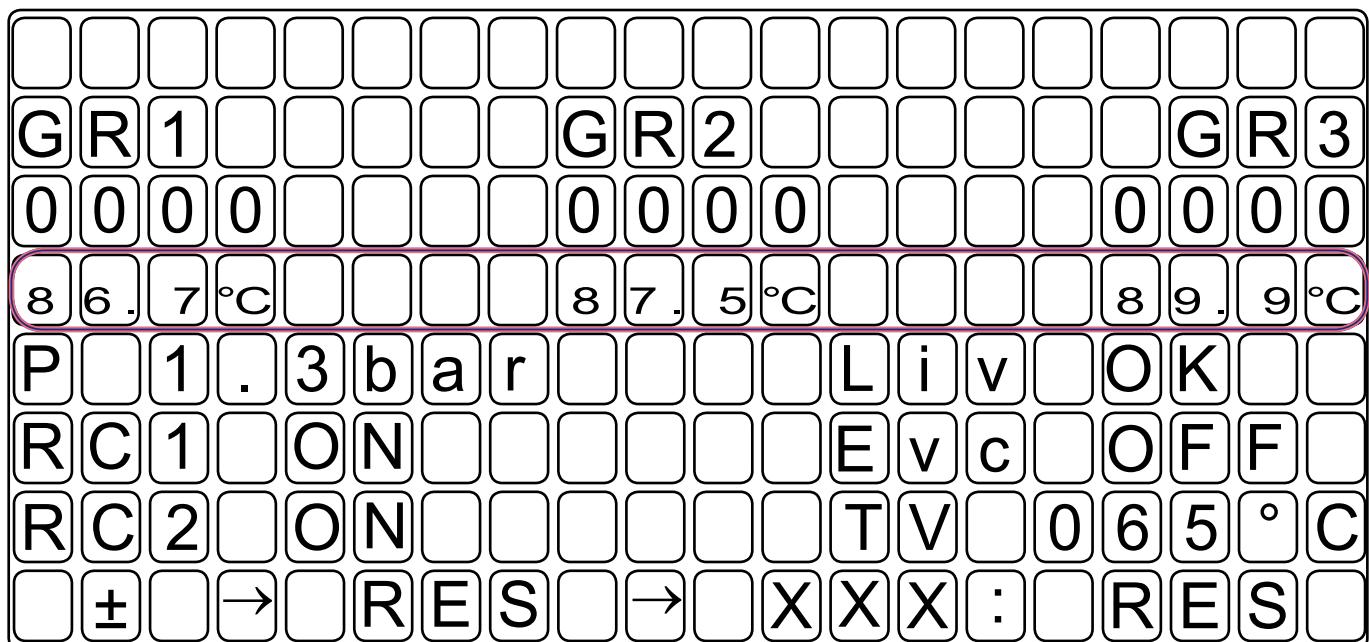
Panel 1



In the "MANUAL CONTROLS" boxes, a line on the display shows the boiler temperature.

- Press "+" (30) or "-" (31) to display the various components;
- Press "PRG" (29) to select the component to activate and to switch to the next panel M2;
- Press "RES" (24) to quit manual mode.

Panel 2



English

English

- Press "+" (30) or "-" (31) to activate the components, if they have a direction, use "+" (30) and "-" (31) to alternate the activations (+Lh/-Rh or +Up/-Down, +Widen/-Narrow the grinders) and to switch to the next panel M3.
- Press "RES" (24) to return to panel M1.

Legend

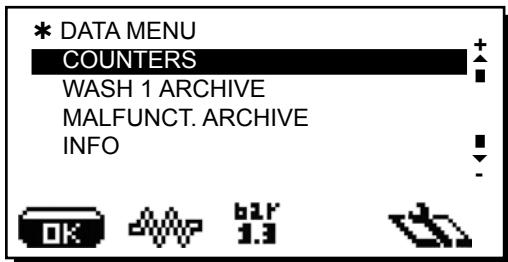
1. **GR..** Volumetric meter, displays incremental count, zeroed on entry of M1 menu
P Boiler pressure, displayed in "bar" or "psi".
Liv Water level in boiler
RC1/2 Boiler resistance
TV Steam temperature (if the Turbosteam system is **not** present, this parameter is not displayed)
2. **xxx** defines the moving part that can be accessed.

Here is the table of symbols used to define the moving parts that can be accessed:

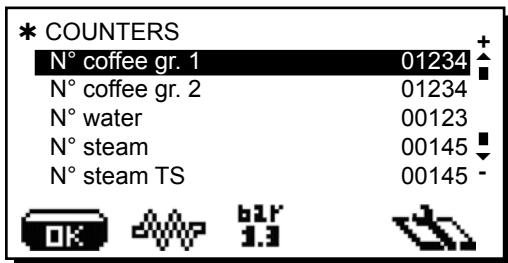
MP	Pump motor
G1÷G3	Coffee dispensing solenoid valve
Eac	Hot water solenoid valve
Evc	Boiler load solenoid valve
Ets	Steam solenoid valve (Turbosteam)
MC	Turbosteam compressor motor
Eds	EDS solenoid valve
Ev	Steam solenoid valve
Em	Anti-suction solenoid valve
Gp1÷Gp3	Proportional solenoid valve

33. DATA menu: COUNTERS

Once you have entered the programming menu, access the DATA MENU, pressing the "i" (27) key. The following will be displayed:



Use the "+" (30) and "-" (31) keys to position the cursor on the COUNTER line, then press the PRG (29) key. The following will appear on the display:



Parameters calculated are:

- **N. coffee** (number of coffee beverages)
- **N. water** (number of times water is dispensed)
- **N. steam** (number of times steam is dispensed using the steam button)
- **N. steam TS** (number of times steam is dispensed using the turbosteam function)
- **N. steam + air TS** (number of times steam and air are dispensed using the turbosteam function)
- **N. tot coffee** (total number of coffee beverages).

The "Nr. Coffee" line appears as many times as the number of groups on the machine.

Counters can be zeroed by aligning the cursor on the selected entry, pressing the PRG (29) key, and then pressing the "+" (30) or "-" (31) key.

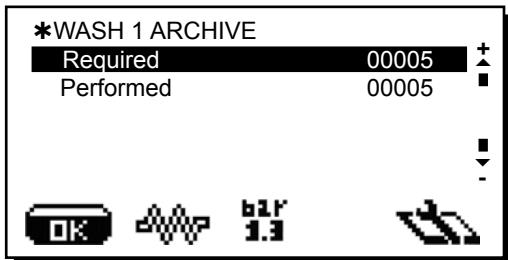
Note: Parameters that cannot be zeroed are:

- **N. tot coffee**

33.1 DATA menu: Wash 1 Archive

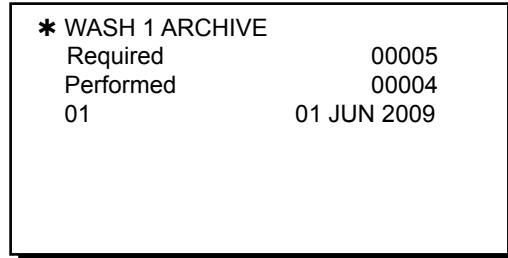


Press the "PRG" key (29) key, the following message appears on the display:



The parameters for the WASH 1 log that can appear on the display are:

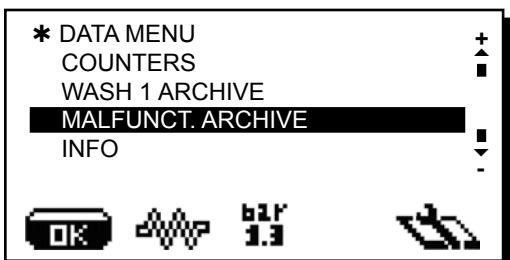
- **Requests**: number of wash cycles that have been requested by the machine.
- **Executed**: number of wash cycles that were performed within the timeout time of 60'.



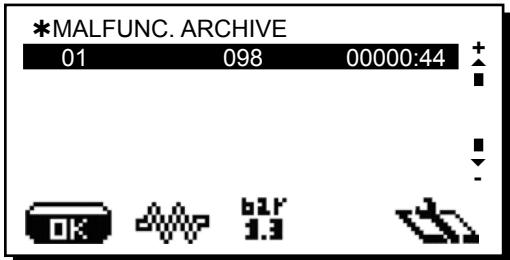
NOTE: If the wash cycles requested occur during the timeout, under the entry "Executed" you will also see a list of the last 10 "failed" wash cycles, with progressive number and date. The first line refers to the most recent date.

Use the "+" (30) and "-" (31) keys to scroll through the failed wash cycles, then press the RES (24) key to pass to another menu.

33.2 DATA menu: MALFUNCTIONS ARCHIVE



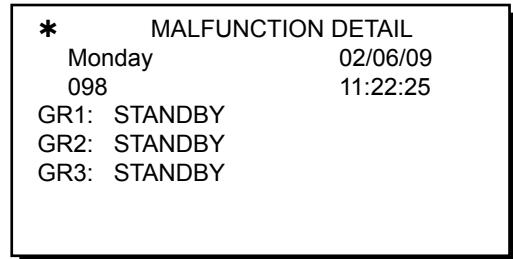
If the PRG (29) key is pressed when the cursor is on the "error log" line, the following appears on the display:



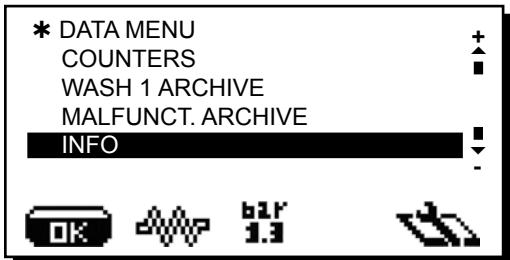
The figures appearing after the "error code" indicate, in hours and minutes, the time that has passed since the last recorded error.

If the PRG (29) key is pressed again, the details page is accessed. The following appears on the display:

- day and hour when the error occurred
- machine groups status when the error occurred.

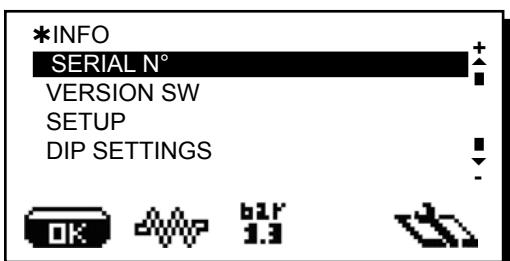


33.3 DATA menu: INFO

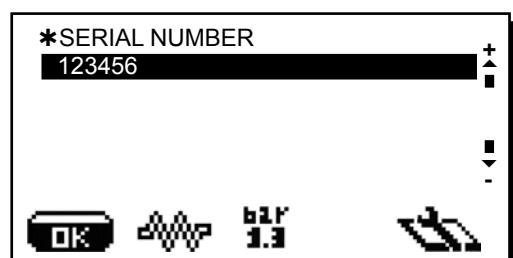


Serial number

Use the "+" (30) and "-" (31) keys to position the cursor on the INFO line, then press the PRG (29) key. The following will be displayed.

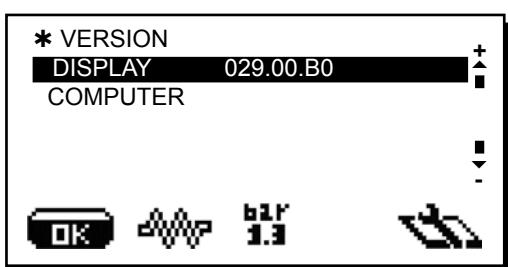


Press the PRG (29) key on the "serial n." line. The following will appear on the display.

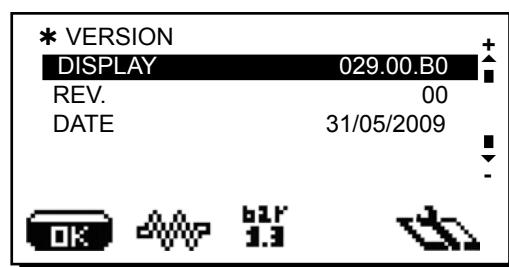


Version

The sub-menu of the Version entry shows the memory display version and, if present, also the remote control:

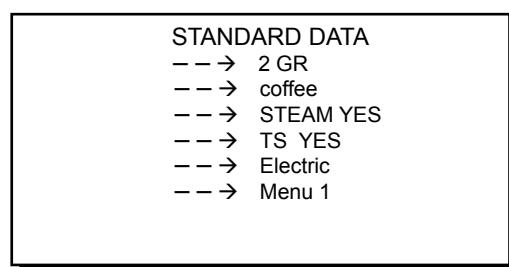


When the PRG (29) key is pressed when the cursor is on each of the two lines, besides showing the version, it also displays the data for the revision and memory date.



Setup

The "Setup" entry displays the setup settings introduced during the Data Standard insertion phase:



Entering Standard Data

Before performing this operation, switch off the machine and position dipswitch 1 on display screen = ON, then switch on the machine. If the procedure described above is not performed (dip1=ON), this message will appear on the display:



Using the "+" key (30) and the "-" key (31), select the parameters, then press the "PRG" key (29) to confirm the details.

After this operation, switch off the machine and reset the dipswitch 1 display screen to OFF.

Then:

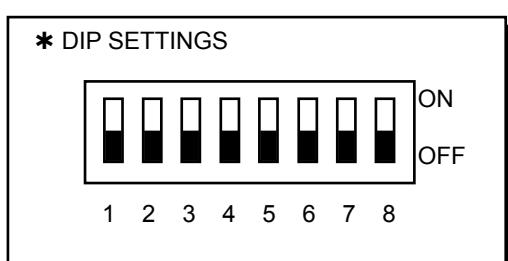
- Switch on the machine again
- Reset date and time, and reset the desired language, if needed.
- if wished, reset maintenance parameters (see "Configuration menu - Maintenance")
- Zero the error log.

When inputting the Standard Data, you are prompted to input data regarding model and type of machine:

- **MODEL:** 2, 3 groups;
- **TYPE:** coffee;
- **STEAM:** YES / NO (steam button);
- **TURBOSTEAM:** YES / NO;
- **FEEDING:** electric;
- **MENU:** different types of drinks

Dip settings

The "dip setting" entry displays the dipswitch settings.



Under standard conditions, the dip-switches are positioned on OFF.

- DIP 1 = OFF - ON Input of standard data
- DIP 2 = OFF
- DIP 3 = OFF - ON Simulation of engineer's key
- DIP 4 = OFF - ON Bookkeeping
- DIP 5 = OFF - ON allows keys sequence to enter programming
- DIP 6 = OFF
- DIP 7 = OFF
- DIP 8 = OFF

For more details, please consult the technical manual at the "Setting - CPU Dip-Switch" paragraph.

34. Check-control messages

MALFUN. CODE	DESCRIPTION	POSSIBLE CAUSES	VERIFICATIONS and SOLUTIONS
x21	Group boiler pressure sensor x out of range (x = 1, 2, 3) Note: the group number is the one on the "user side". It does not refer to numbering on the wiring	<ul style="list-style-type: none"> Sensor failure Card failure 	<ul style="list-style-type: none"> Check cabling Replace the sensor Replace the card
051	Pressure sensor signal out of range	<ul style="list-style-type: none"> Sensor failure Card failure 	<ul style="list-style-type: none"> Check cabling Replace the sensor Replace the card
x51	Group boiler temperature sensor x out of range (x = 1, 2, 3) Note: the group number is the one on the "user side". It does not refer to numbering on the wiring	<ul style="list-style-type: none"> Thermocouple disconnected Sensor failure <i>Boiler Control Interface</i> card failure 	<ul style="list-style-type: none"> Check cabling Replace the sensor Replace the <i>Boiler Control Interface</i> card.
052	Boiler heating timeout - 45 minutes	<ul style="list-style-type: none"> The safety thermocouple has been triggered The resistance is interrupted (cabling defect) The Triac card is malfunctioning 	<ul style="list-style-type: none"> Check if the safety thermostat has been triggered, and reset it if necessary Check if there are interruptions or detached fastons on the cabling Check that the boiler resistance is not interrupted and replace it if necessary Replace the Triac card
x52	Group x boiler heating timeout - 10 minutes (x = 1, 2, 3)	<ul style="list-style-type: none"> The group x boiler safety thermostat has been triggered The resistance is interrupted (cabling defect) The <i>Boiler Control Interface</i> card is malfunctioning 	<ul style="list-style-type: none"> Check if the safety thermostat of the group x boiler has been triggered, and reset it if necessary Check if there are interruptions or detached fastons on the cabling Check that the group x boiler resistance is not interrupted and replace it if necessary Replace the <i>Boiler Control Interface</i> card
053	Turbosteam thermocouple signal out of range	<ul style="list-style-type: none"> Thermocouple disconnected Wrong configuration during standard data insertion 	<ul style="list-style-type: none"> Enter in the programming mode and insert the correct standard data.. Check connections. Replace Turbosteam probe.
058	Boiler overpressure alarm (only for machines with a pressure sensor)	<ul style="list-style-type: none"> Level probe failure; boiler overfilled. Resistance always powered. 	<ul style="list-style-type: none"> Check cabling
059	Boiler: Refill timeout - 15 minutes	<ul style="list-style-type: none"> No water Refill EV failure Wiring interrupted Card failure 	
066	Irregular dose coffee cycle	<ul style="list-style-type: none"> No water Flowmeter failure Water circuit blocked Wiring interrupted/grounded 	<ul style="list-style-type: none"> Check water is supplied from the main line. Check there are no fitting obstructions or leakage. Check flowmeter electrical connections. Replace the broken flowmeter. Replace the broken board.
067	Group wash: Irregular dispensing EV dispensing	<ul style="list-style-type: none"> No water Flowmeter failure Water circuit blocked Wiring interrupted/grounded 	<ul style="list-style-type: none"> See code 66. Check the G solenoid valve is working. Replace the valve when broken.
068	Irregular dose during installation coffee boiler	<ul style="list-style-type: none"> No water Flowmeter failure Water circuit blocked Wiring interrupted/grounded 	<ul style="list-style-type: none"> Check water is supplied from the main line. Check there are no fitting obstructions or leakage. Check flowmeter electrical connections. Replace the broken flowmeter. Replace the broken CPU board.

English

English

MALFUN. CODE	DESCRIPTION	POSSIBLE CAUSES	VERIFICATIONS and SOLUTIONS
080	Loss of master boiler control interface card configuration Note: The malfunction is only recorded in the log and does not appear on the display screen	• Temporary interruption of communication (due to electrical disturbances) between the CPU card and the <i>Boiler Control Interface</i> card.	• No particular intervention is required because registration of the code indicates that the system was able to restore normal operating conditions. Nevertheless, repeated entries in the error log require a checkup by a technician and inspection of wiring and card replacement, if necessary. • Check cabling • Replace the <i>Boiler Control Interface</i> card/s.
081	Interrupted communication between the master and slave boiler control interface Note: only appears for machines with 3 groups	• Cabling interrupted. • Boiler Control card <i>Malfunctioning slave interface</i> . • Interface card malfunction <i>Master boiler control on the secondary communication channel</i>	
096	Maintenance needed		• The machine is displaying a message to advise the user that maintenance is needed. Carry out maintenance operations.
098	Historical malfunctions and wash 1 reset	• Breakdown log initialization.	
099	Default data input		

35. Display info and messages

- “COFFEE DISPENSING BLOCKED – BOILER CARD KO!” message

This means that communication was interrupted between the CPU card and the master boiler control interface. To try to re-establish communications between the CPU card and the Boiler Control Interface (BCI), the machine must be switched off and back on. If the problem persists, check the wiring and replace the card if needed.

- Cold machine icon** 

This also indicates the boiler heating situation, meaning that it appears if one or more boilers are still in the first heating phase or if their temperature has fallen below 55°C.

- Disabled heating icon** 

This indicates that not only the heating resistance, but also the boiler resistances have been disabled.

English

English

Smontaggio - Disassembly - Demontage - Abmontierung - Desmontaje - Desmontage

Pag. - Page - Page
Seite - Pag. - Pag.

Smontaggio fiancate - Removal of the side panels - Démontage des côtés Abnahme der Seitenpaneele - Desmontaje paneles laterales - Desmontagem lados	20
Scaldatazzze - Cup Warmer - Chauffe-Tasses Tassenwärmer - Calientatazas - Escalda-Chávenas	20
Pannello posteriore - Back panel - Panneau postérieur Abnahme des hinteren Paneels - Panel posterior - Painel traseiro	21
Pannello frontale inox - Stainless steel front panel - Panneau frontal inox - Abnahme des vorderen Paneels aus Edelstahl Panel frontal inoxidable - Painel dianteiro inoxidável	22
Scatola elettrica - Junction Box - Boite électrique Elektrokasten - Caja eléctrica - Caixa eléctrica	22
Boiler caffè - Coffee boiler - Boiler café Boiler Kaffee - Boiler café - Boiler café	23

Regolazioni - Setting - Reglages - Einstellungen - Regulaciones - Regulações

Pag. - Page - Page
Seite - Pag. - Pag.

Pressostato elettrico - Electrical pressurestat - Pressostat électrique Elektrischer Druckschalter - Pressostato electrico - Pressostato electrico	24
Temperatura dell'acqua calda - Hot water temperature - Température de l'eau chaude Heisswassertemperatur - Temperatura del agua caliente - Temperatura del agua quente	24
Termostato di sicurezza - Safety thermostat - Thermostat de sûreté Sicherheitsthermostat - Thermostato de seguridad - Thermostato de segurança	25
Pompa volumetrica - Volumetric pump - Pompe volumétrique Volumetrische Pumpe - Bomba volumetrica - Bomba volumetrica	25
Contrasto display - Display contrast - Contraste du display Kontrasts der Display - Contraste del display - Contraste do display	26
Dip-Switch CPU - CPU dip-switch - Dip-Switch CPU Dip-Switch-Schalter CPU - Dip-Switch CPU - Dip-Switch CPU	27

Questi capitoli del manuale sono ad uso del personale tecnico qualificato e autorizzato.

These chapters in the manual are to be used by qualified, authorized technical staff.

Ces chapitres du manuel sont à l'usage du personnel technique qualifié et autorisé.

Diese Kapitel des Handbuchs wenden sich an qualifizierte und offiziell befugte Fachtechniker.

Estos capítulos del manual son para su uso por parte del personal técnico cualificado y autorizado.

Estes capítulos do manual são para serem utilizados pelo pessoal técnico qualificado e autorizado.

TUTTE LE OPERAZIONI DEVONO ESSERE EFFETTUATE A MACCHINA SPENTA.
ALL OPERATIONS MUST BE PERFORMED WITH THE MACHINE OFF.
TOUTES LES OPERATIONS DOIVENT ETRE EFFECTUEES AVEC LA MACHINE
ETEINTE.

BEI ALLEN NACHSTEHENDEN ARBEITEN MUSS DIE STROMZUFUHR ZUM GERÄT
UNTERBROCHEN SEIN.
TODA LAS OPERACIONES DEBEN SER EFECTUADAS CON LA MÁQUINA APAGADA.
TODAS AS OPERAÇÕES DEVEM SER REALIZADAS COM A MÁQUINA
DESLIGADA.

Smontaggio - Disassembly - Demontage - Abmontierung - Desmontaje - Desmontage

I FIANcate

- Rimuovere la bacinella.
- Allentare le viti di fissaggio (A) e (B) del pannello laterale.
- Inclinare il pannello, sollevarne leggermente la parte posteriore e rimuoverlo. **N.B.:** prestare particolare attenzione al perno (P).

GB SIDES

- Remove the cup tray.
- Loosen the screws (A) and (B) on the side panel.
- Tilt the panel, lightly raise its rear part and remove it. **NOTE:** paying particular attention to the pivot (P).

! COTES

- Enlevez le bassin appuie-tasses.
- Dévisser les vis (A) et (B) de fixation du panneau latéral.
- Incliner le panneau, en soulever légèrement la partie postérieure et l'enlever. **N.B.:** prêter une attention particulière au axe (P).

SEITENWÄNDE

- Entfernen Sie den tassen-einsatzschale.
- Lösen Sie die Schrauben (A) und (B) zur Befestigung der Seitenpaneele.
- Neigen Sie das Paneel, heben Sie seinen hinteren Teil an und nehmen Sie es ab.
- Zu beachten:** dem Bolzen (P) eine besondere Aufmerksamkeit zu schenken.

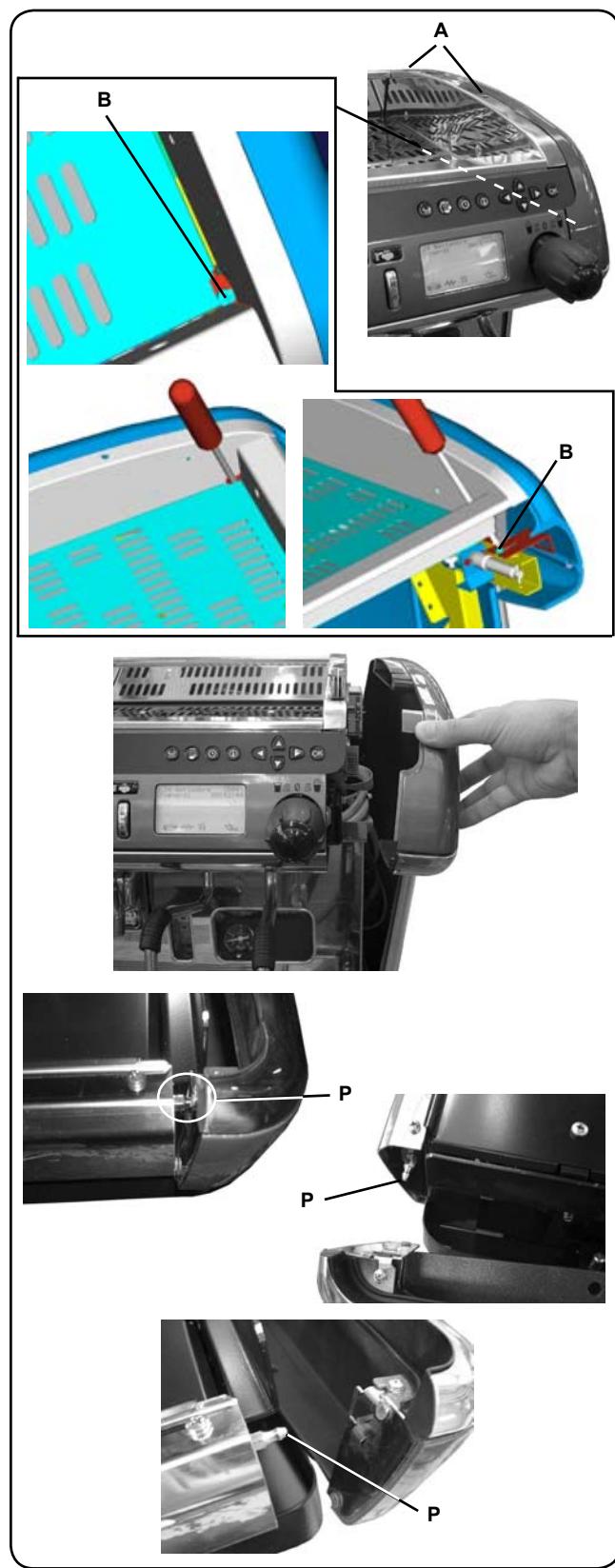
! COSTADOS

- Quite la bandeja apoya-tazas.
- Aflojar los tornillos (A) y (B) de fijación del panel lateral.
- Inclinar el panel, levantar ligeramente su parte posterior y extraerlo. **NOTA:** prestar atención particular al perno (P).

E PAINEIS LATERAIS

- Remova o tabuleiro apoya-chávenas.
- Afrrouxar os parafusos (A) e (B) de aperto do painel lateral.
- Inclinar o painel, levante levemente sua parte traseira e retirá-lo. **N.B.:** emprestar uma atenção específica ao perno (P).

P



I SCALDATAZZE

Svitare le 4 viti (**S**) e scollegare il connettore.
Sfilare alzando.

GB CUP WARMER

Loosen the 4 screws (**S**) and disconnect the connector.
Raise and take away.

F CHAUFFE-TASSES

Dévisser les 4 vis (**S**) et débranchez le connecteur.
Oter en soulevant.

D TASSENWÄRMER

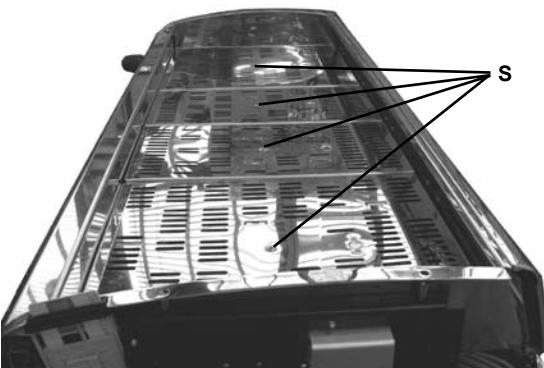
Lösen Sie die 4 Schrauben (**S**) und trennen Sie den Stecker.
Anheben und abnehmen.

E CALIENTATAZAS

Destornillar los 4 tornillos (**S**) y desconecte el conectador.
Levantar y deshebrar.

P ESCALDA-CHÁVENAS

Afrouxar os 4 parafusos (**S**) e desconecte o conector.
Retirar levantando.

**I PANNELLO POSTERIORE**

Lo smontaggio del pannello posteriore deve essere eseguito solo dopo aver rimosso lo scaldatazzze.
Svitare le (n°..) viti di fissaggio (**P**) e rimuovere il pannello.

GB BACK PANEL

The back panel may be removed only after the cup warmer has been removed.
Loosen the (n°..) screws (**P**) and remove the panel.

F PANNEAU POSTÉRIEUR

Le démontage du panneau postérieur ne doit être fait qu'après avoir enlevé le chauffe-tasses.
Dévisser les (n°..) vis (**P**) de fixage et enlever le panneau.

D ABBAHME DES HINTEREN PANEELS

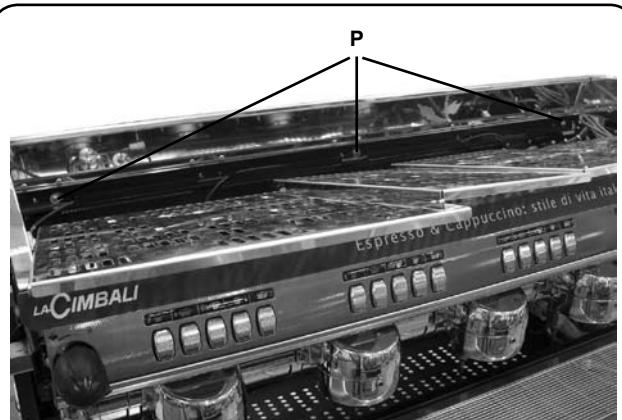
Vor der Abnahme des hinteren Paneels müssen TAENWÄRMER abgenommen werden.
Lösen Sie die (Anz...) Schrauben (**P**) zur Befestigung, und nehmen Sie das hintere Paneel ab.

E PANEL POSTERIOR

El desmontaje del panel posterior se tiene que efectuar sólo después de haber quitado lo calientatazas.
Destornillar los (n°..) tornillos (**P**) de fijación y quitar el panel.

P PAINEL TRASEIRO

Proceder à desmontagem do painel traseiro só depois de ter tirado o escalda-chávenas.
Afrouxar os (n°..) parafusos (**P**) de aperto e tirar o painel.



I PANNELLO FRONTALE INOX

Togliere la bacinella appoggiatezze (15).

Svitare le due viti di fissaggio (F) e rimuovere il pannello frontale inox.

GB STAINLESS STEEL FRONT PANEL

Remove the cup tray (15).

Loosen the two fixing screws (F) and remove the stainless steel front panel.

F PANNEAU FRONTAL INOX

Enlever le petit bassin appuie-tasses (15).

Dévisser les deux vis (F) de fixation du panneau frontal et démonter le panneau frontal en inox.

D ABAHME DES VORDEREN PANEELS AUS EDELSTAHL

Nehmen Sie die Wanne zur Tassenaufsetzung (15). Lösen

Lösen Sie die beiden Schrauben (F), und nehmen Sie das vordere Edelstahlpanteel ab.

E PANEL FRONTAL INOXIDABLE

Quitar la bandeja apoya-tazas (15).

Destornillar los dos tornillos de fijación (F) y quitar el panel frontal inoxidable.

P PAINEL DIANTEIRO INOXIDÁVEL

Retirar o tabuleiro para apoiar as chávenas (15).

Afrouxare os dois parafusos de aperto (F) e tirar o painel dianteiro inoxidável.

I SCATOLA ELETTRICA

Togliere la bacinella appoggiatezze.

Svitare la vite (C) e togliere il coperchio (D) della scatola elettrica.

GB JUNCTION BOX

Remove the cup tray.

Loosen screw (C) and remove cover (D) from the junction box.

F BOITE ÉLECTRIQUE

Enlever le petit bassin appuie-tasses.

Défisser la vis (C) et enlever le couvercle (D) de la boite électrique.

D ELEKTROKASTEN

Nehmen Sie die Wanne zur Tassenaufsetzung.

Lösen Sie die Schraube (C), und nehmen Sie den Deckel (D) des Elektrokastens ab.

E CAJA ELÉCTRICA

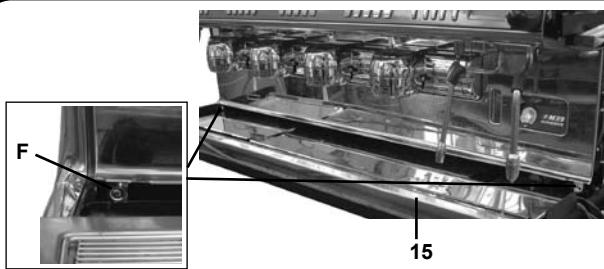
Quitar la bandeja apoya-tazas.

Aflojar el tornillo (C) y quitar la tapa (D) de la caja eléctrica.

P CAIXA ELÉCTRICA

Retirar o tabuleiro para apoiar as chávenas.

Desapertar o parafuso (C) e retirar a tampa (D) da caixa eléctrica.



BOILER CAFFÈ - COFFEE BOILER - BOILER CAFÉ - BOILER KAFFEE - BOILER CAFÉ - BOILER CAFÉ



Regolazioni - Setting - Réglages - Einstellungen - Regulaciones - Regulações

Chiudere il rubinetto di alimentazione idrica.

Close the water tap.

Fermer le robinet d'alimentation hydrique.

Sperren sie den hahn zur wasserversorgung ab.

Cerrar el grifo de alimentación hídrica.

Fechar a torneira de alimentação hídrica.

I REGOLAZIONE DELLA TEMPERATURA DELL'ACQUA CALDA

Per aumentare la temperatura, dell'acqua sostituire l'ugello (A) da 0,8 montato, con quello da 0,6 in dotazione.

GB ADJUSTMENT OF HOT WATER TEMPERATURE

To increase the water temperature substitute the mounted 0.8 (A) with the 0.6 nozzle supplied.

F REGLAGE DE LA TEMPERATURE DE L'EAU CHAUDE

Pour augmenter la température de l'eau, remplacer la tuyère (A) de 0,8 montée avec celle de 0,6 prévue à cet effet.

D REGELUNG DER HEISSWASSERTEMPERATUR

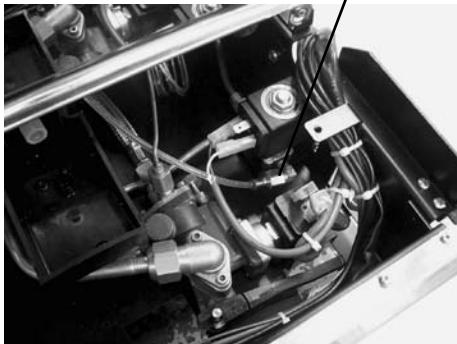
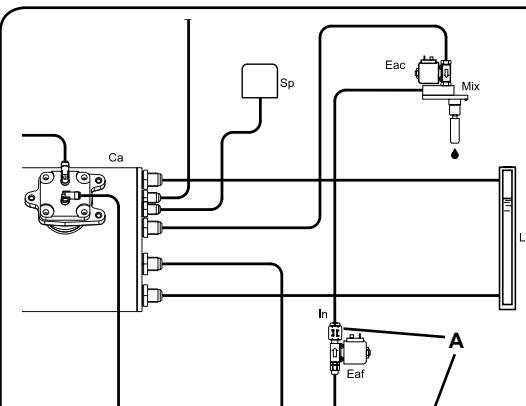
Zur Steigerung der Wasser-temperatur muß die auf dem Gerät installierte Düse 0,8 (A) gegen die mit dem Gerät mitgelieferte Düse 0,6 ausgetauscht werden.

E REGULACIÓN DE LA TEMPERATURA DEL AGUA CALIENTE

Para aumentar la temperatura del agua, sustituya la boquilla (A) de 0,8 montada por la de 0,6 que se suministra en el equipamiento

P REGULAÇÃO DA TEMPERATURA DA ÁGUA QUENTE

Para aumentar a temperatura da água substituir o injector (A) de 0,8 montado, por o de 0,6 em dotação.



I MACCHINA EQUIPAGGIATA CON THERMOSTATO DI SICUREZZA

In caso di intervento del termostato (T), riarmare

- 1 Il termostato di sicurezza è situato sotto la macchina nella parte sinistra (vista frontale).
- 2 Il termostato di sicurezza è situato nella scatola elettrica.

GB MACHINE EQUIPPED WITH SAFETY THERMOSTAT

In case of thermostat (T) intervention, switch on again.

- 1 The safety thermostat is situated under the left side of the machine (front view).
- 2 The safety thermostat is located inside the electric box.

F MAQUINE EQUIPÉE DE THERMOSTAT DE SURETÉ

En cas d'intervention du thermostat (T), brancher de nouveau.

- 1 Le thermostat de sûreté est situé sous le côté gauche de la machine (vue de face).
- 2 Le thermostat de sûreté est situé dans la boîte électrique.

D MIT SICHERHEITSTHERMOSTAT AUSGESTATTETE MASCHINE

Falls der Thermostat (T) ausgelöst wird, ihn wieder einschalten.

- 1 Der Sicherheit Thermostat wird unter der linken Seite der Maschine aufgestellt (Vorderansicht).
- 2 Der Sicherheit Thermostat ist in der Elektrokastens angesiedelt.

E MAQUINAS EQUIPADAS CON THERMOSTATO DE SEGURIDAD

En caso de intervención del termostato (T), reencender de nuevo.

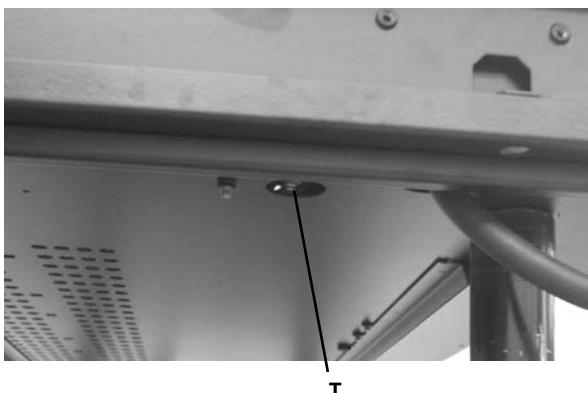
- 1 El termostato de seguridad se sitúa bajo lado izquierdo de la máquina (vista delantera).
- 2 El termostato de seguridad está situado en la caja eléctrica.

P MAQUINA EQUIPADA COM TERMOSTATO DE SEGURANÇA

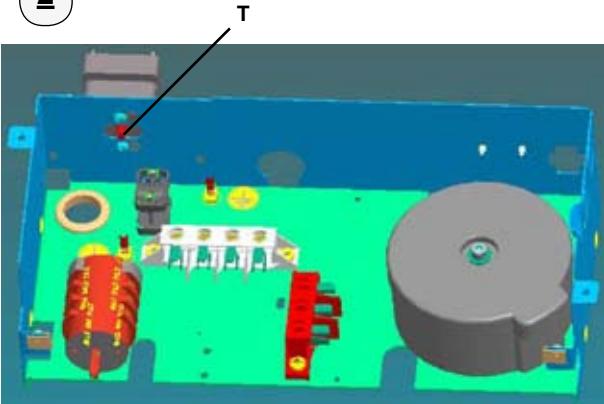
En caso de incarvenção do termostato (T), reacender de novo.

- 1 O termostato de segurança situated sob o lado esquerdo da máquina (vista dianteira).
- 2 O termostato de segurança encontra-se na caixa eléctrica.

1



2



I POMPA VOLUMETRICA CON FILTRO

All'insorgere della rumorosità pulire il filtro F

BY-PASS

A - Dado di regolazione pressione pompa

GB VOLUMETRIC PUMP WITH FILTER

If there is noise, clean the filter F

BY-PASS

A - Nut for adjusting the pump pressure

F POMPE VOLUMETRIQUE AVEC FILTRE

Nettoyer le filtre lorsqu'elle commence à devenir bruyante F

BY-PASS

A - Ecrou de réglage pression pompe

D VOLUMETRISCHE PUMPE MIT FILTER

Bei Geräuschen den Filter reinigen F

BY-PASS

A - Pumpendruck-Einstellschraube

E BOMBA VOLUMETRICA CON FILTRO

Cuando hace ruido limpiar el filtro F

BY-PASS

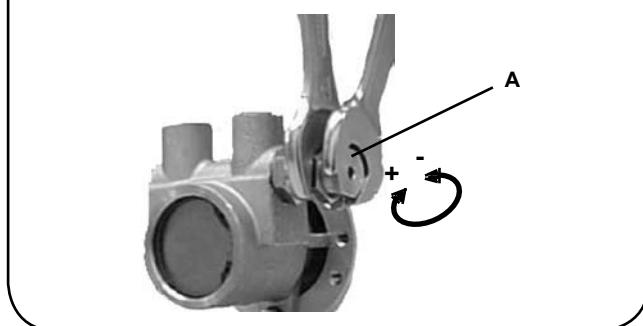
A - Tuerca de regulación bomba

P BOMBA VOLUMETRICA COM FILTRO

Quando começa a fazer barulho,limpar o filtro F

BY-PASS

A - Porta de regulação pressão bomba



I REGOLAZIONE CONTRASTO DISPLAY

Agire sul trimmer (A) posto sulla scheda elettronica affinchè sul display si leggano i messaggi in modo chiaro.

GB DISPLAY CONTRAST SETTING

Adjust trimmer (A) located on the electronic card until the messages may be clearly read on the display.

F REGLAGE DU CONTRASTE DU DISPLAY

Agir sur le trimmer (A) placé sur la fiche électronique afin de pouvoir lire clairement les messages qui apparaissent sur le display.

D EINSTELLUNG DES KONTRASTS DER DISPLAY

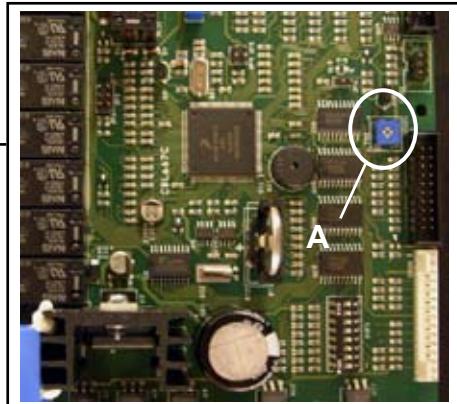
Stellen Sie den auf der Elektronikkarte installierten Reger (A) so ein, daß die Meldungen auf der Anzeige in gutem Kontrast abgebildet werden und gut abgelesen werden können.

E REGULACIÓN DEL CONTRASTE DEL DISPLAY

Utilizar el trimmer (A) situado en la tarjeta electrónica para que se lean los mensajes claramente en el visualizador.

P REGLAGE DO CONTRASTE DO DISPLAY

Utilizar o trimmer (A) colocado sobre a ficha electrónica para que sobre o mostrador se leiam as mensagens de modo claro.



I DIP-SWITCH CPU

Attenzione!

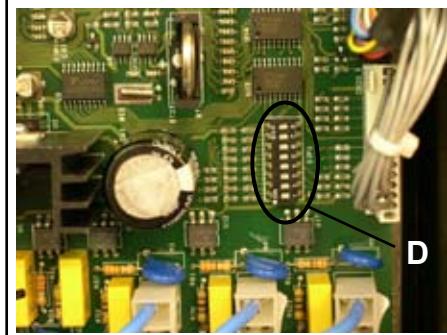
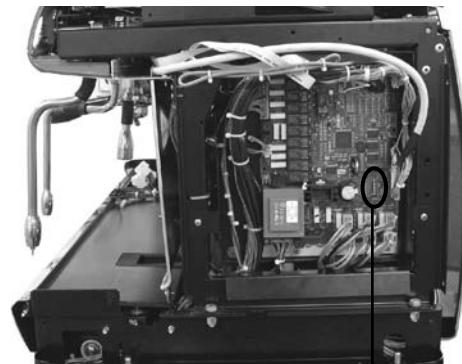
Il cambiamento di posizione dei Dip-Switch deve essere effettuato RIGOROSAMENTE a macchina SPENTA.

Nelle condizioni standard i Dip-Switch sono posizionati su OFF.

Agendo sui Dip-Switch (D) si attivano le seguenti funzioni:

- DIP 1 = OFF - ON inserimento dati standard
- DIP 2 = OFF
- DIP 3 = OFF - ON simulazione chiave tecnico
- DIP 4 = OFF - ON contabilità
- DIP 5 = OFF - ON abilitazione sequenza tasti per ingresso in programmazione
- DIP 6 = OFF
- DIP 7 = OFF
- DIP 8 = OFF

(*) Al termine delle operazioni di inserimento dati standard, riportare il DIP 1 sulla posizione OFF.



GB CPU DIP-SWITCH

CAUTION!

When changing the position of the Dip-Switch, the machine MUST BE SWITCHED OFF.

Under standard conditions, the dip-switches are positioned on OFF.

The dip-switches (D) have the following functions:

- DIP 1 = OFF - ON Input of standard data
- DIP 2 = OFF
- DIP 3 = OFF - ON Simulation of engineer's key
- DIP 4 = OFF - ON Bookkeeping
- DIP 5 = OFF - ON allows keys sequence to enter programming
- DIP 6 = OFF
- DIP 7 = OFF
- DIP 8 = OFF

(*) Upon completion of the standard data input operations, position DIP 1 to OFF again.

F DIP-SWITCH CPU

Attention!

Le changement de position des Dip-Switch doit être RI-GOUREUSEMENT effectué lorsque la machine est ETEINTE.

En phase de standard, les Dip-Switch sont placés sur OFF.

Utiliser les Dip-Switch (D) pour activer les fonctions suivante:

- DIP 1 = OFF - ON introduction informations standard
- DIP 2 = OFF
- DIP 3 = OFF - ON simulation clef technique
- DIP 4 = OFF - ON comptabilité
- DIP 5 = OFF - ON habile la séquence de touches pour entrer en programmation
- DIP 6 = OFF
- DIP 7 = OFF
- DIP 8 = OFF

(*) à la fin des opérations d'introduction des informations standard, remettre le DIP 1 sur la position OFF.

D DIP-SWITCH-SCHALTER CPU

Achtung:

Die Verstellung der Dip-Switch-Schalter darf nur bei AB-GESCHALTETER Maschine vorgenommen werden!

Bei normalen Betriebsbedingungen müssen die Dip-Switch-Schalter auf OFF gestellt sein. Nachstehend werden die Funktionen bei entsprechender Einstellung der Dip-Switch-Schalter (D) aufgeführt:

- DIP 1 = OFF - ON Eingabe Standarddaten
- DIP 2 = OFF
- DIP 3 = OFF - ON Simulation Monteurschlüssel
- DIP 4 = OFF - ON Buchführung
- DIP 5 = OFF - ON ermächtigen Sie die Anschlagsequenz, um in Programmierung hinzugezogen
- DIP 6 = OFF
- DIP 7 = OFF
- DIP 8 = OFF

(*) Nach Abschluß der Eingabe der Standarddaten muß der Dip-Switch-Schalter 1 auf OFF zurückgestellt werden.

E DIP-SWITCH CPU

¡Atención!

El cambio de posición de los Dip-switch (O) se tiene que efectuar RIGUROSAEMENTE con la máquina APAGADA.

En condiciones estándares los Dip-switch están colocados en OFF.

Por medio de los Dip-Switch (D) se activan las siguientes funciones:

- DIP 1 = OFF - ON introducción datos estándares
- DIP 2 = OFF
- DIP 3 = OFF - ON simulación llave técnico
- DIP 4 = OFF - ON contabilidad
- DIP 5 = OFF - ON habilita la secuencia de teclas para entrar en programación
- DIP 6 = OFF
- DIP 7 = OFF
- DIP 8 = OFF

(*) Al final de las operaciones de introducción datos estándares, restablecer el DIP 1 a la posición OFF.

P DIP-SWITCH CPU

Atenção!

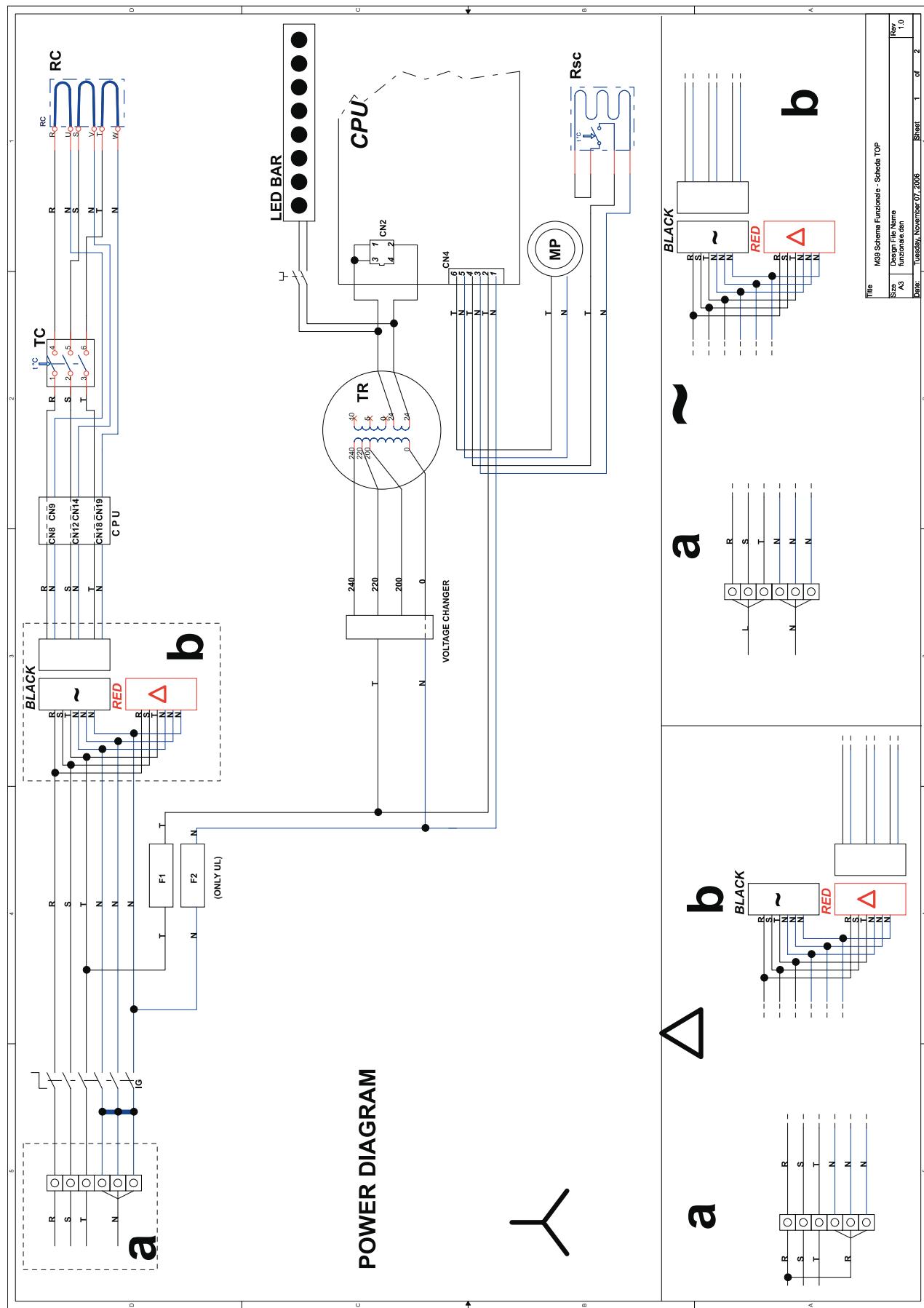
A mudança de posição dos Dip-Switch deverá ser efectuada RIGOROSAMENTE com a máquina DESLIGADA.

Nas condições standard os Dip-Switch estão posicionados em OFF. Actuando nos Dip-Switch (D) activam-se as funções a seguir indicadas:

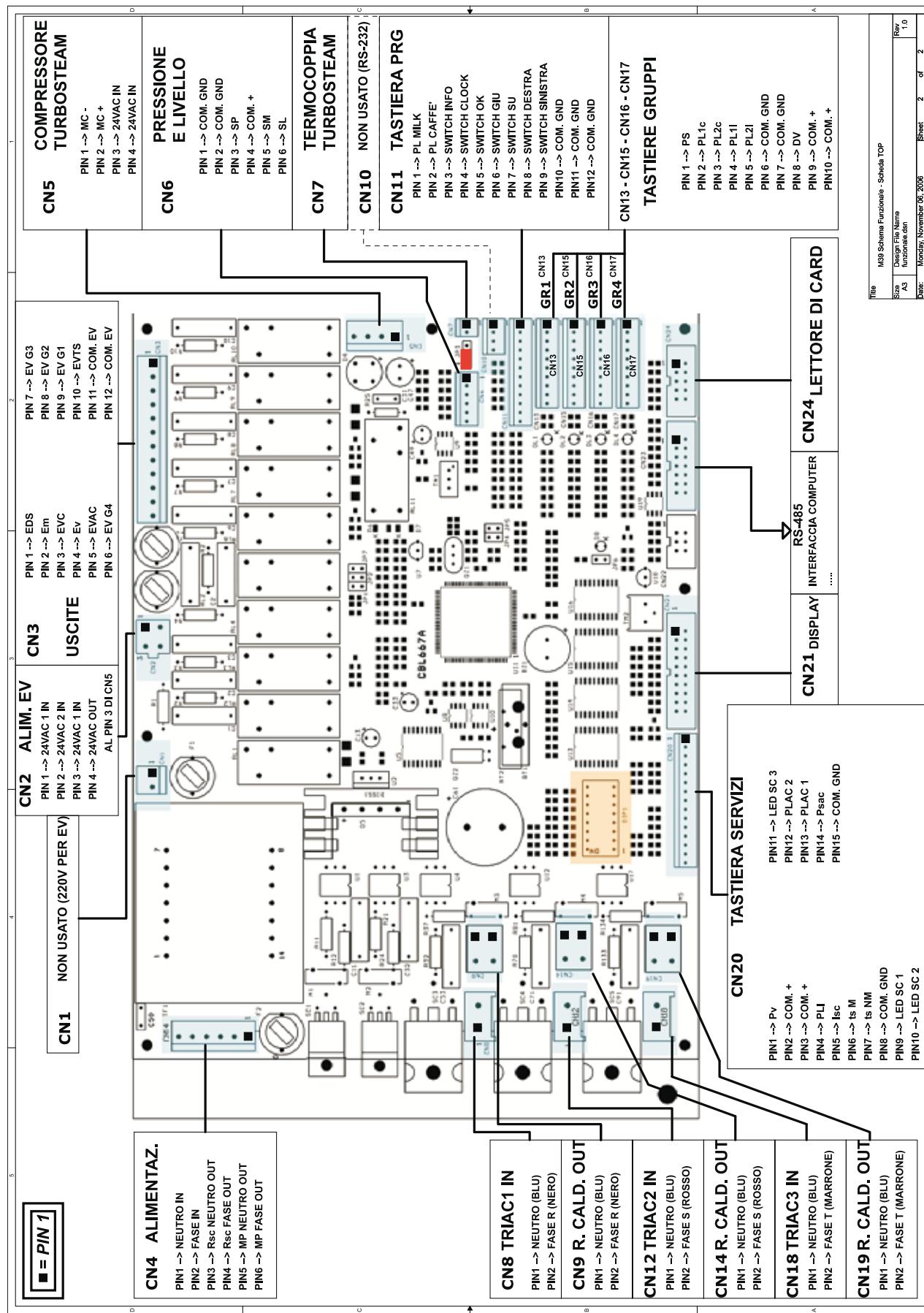
- DIP 1 = OFF - ON introdução dados standard
- DIP 2 = OFF
- DIP 3 = OFF - ON simulação chave técnico
- DIP 4 = OFF - ON contabilidade
- DIP 5 = OFF - ON habilita a sequência das teclas para entrar em programação
- DIP 6 = OFF
- DIP 7 = OFF
- DIP 8 = OFF

(*) No fim das operações de introdução dos dados standard, recolocar o DIP 1 na posição OFF.

**Schema elettrico - Wiring diagram - Schéma électrique -
Elektrischer Shaltplan - Esquema electrico - Esquema eléctrico**



**Schema elettrico - Wiring diagram - Schéma électrique -
Elektrischer Shaltplan - Esquema electrico - Esquema eléctrico**



LEGENDA SCHEMA ELETTRICO

LEGENDE SCHEMA ÉLECTRIQUE

WIRING DIAGRAM LEGEND

F

F	= Fusibile
IG	= Interruttore generale
MP	= Motore pompa
RC	= Resistenza caldaia
Rsc	= Resistenza scaldatazze
TC	= Termostato di sicurezza caldaia servizi
TR	= Trasformatore

Elenco connettori

CN1	= Non Usato
CN2	= Alimentazione elettrovalvole
CN3	= USCITE elettrovalvole
CN4	= Alimentazione scheda
CN5	= Compressore Turbosteam *
CN6	= Sensore Pressione / Sonda livello
CN7	= Termocoppia Turbosteam *
CN8	= Triac 1
CN9	= Resistenza caldaia
CN10	= Non Usato
CN11	= Tastiera programmazione
CN12	= Triac 2
CN13	= Tastiera gruppo 1
CN14	= Resistenza caldaia
CN15	= Tastiera gruppo 2
CN16	= Tastiera gruppo 3 *
CN17	= Triac 3
CN18	= Triac 3
CN19	= Resistenza caldaia
CN20	= Tastiera servizi
CN20	= Display

I componenti * - sono applicati solo in alcune configurazioni di prodotti..

LEGENDE ZUM SCHALTPLAN

LEGENDA ESQUEMA ELÉCTRICO

P

F	= Fusibile pompe
IG	= Interrupteur général
MP	= Moteur pompe
RC	= Résistance chaudière
Rsc	= Résistance chauffe-tasses
TC	= Thermostat de sûreté de la chaudière
TR	= Transformateur

Les détails - * - ne sont appliqués qu'à certaines configurations de produit.

LEYENDA ESQUEMA ELÉCTRICO

F

F	= Fusible bomba
IG	= Interruptor general
MP	= Motor bomba
RC	= Resistencia caldera
Rsc	= Resistencia calienta-tazas
TC	= Termostato de seguridad caldera
TR	= Transformador

Items marked - * - are fitted in some product configurations only.

CN1	= Non utilisé
CN2	= Alimentación electroválvulas
CN3	= Salidas electroválvulas
CN4	= Alimentación tarjeta
CN5	= Compresor Turbosteam *
CN6	= Sensor presión / Sonda nivel
CN7	= Termopar Turbosteam *
CN8	= Triac 1
CN9	= Resistencia caldera
CN10	= No Usado
CN11	= Teciado de programación
CN12	= Triac 2
CN13	= Teciado grupo 1
CN14	= Resistencia caldera
CN15	= Teciado grupo 2
CN16	= Teciado grupo 3 *
CN17	= Triac 3
CN18	= Resistencia caldera
CN19	= Resistencia servicios
CN20	= Display

Les détails - * - ne sont appliqués qu'à certaines configurations de produit.

CN1	= Non utilisé
CN2	= Alimentación electroválvulas
CN3	= Salidas electroválvulas
CN4	= Alimentación tarjeta
CN5	= Compresor Turbosteam *
CN6	= Sensor presión / Sonda nivel
CN7	= Termopar Turbosteam *
CN8	= Triac 1
CN9	= Resistencia caldera
CN10	= Não Usado
CN11	= Teciado de programação
CN12	= Triac 2
CN13	= Teciado grupo 1
CN14	= Resistência da caldeira
CN15	= Teciado grupo 2
CN16	= Teciado grupo 3 *
CN17	= Triac 3
CN18	= Resistência da caldeira
CN19	= Teciado serviços
CN20	= Display

Os pormenores - * - se pueden aplicar solo en algunas configuraciones del producto.

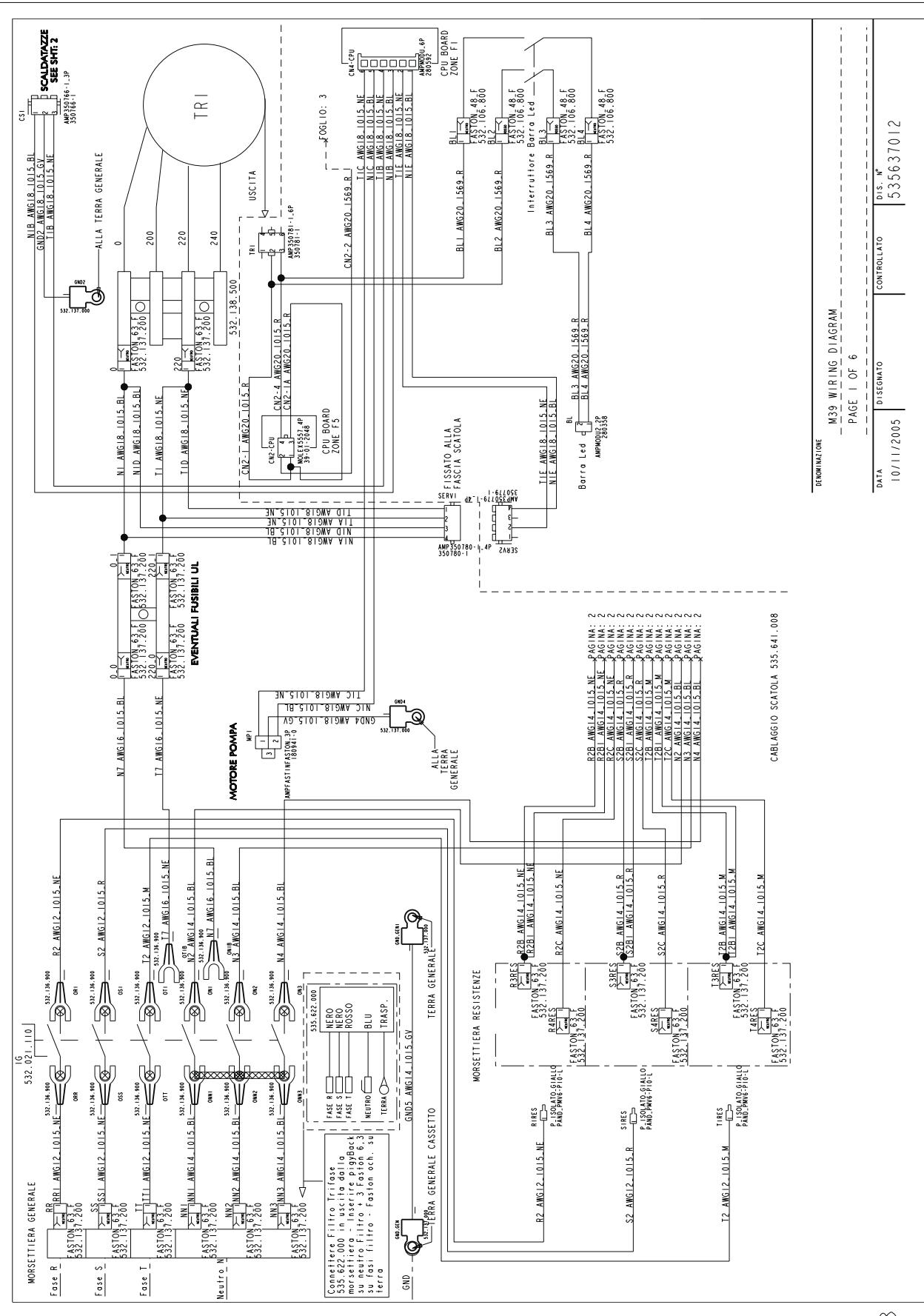
CN1	= Non utilisé
CN2	= Alimentación electroválvulas
CN3	= Salidas electroválvulas
CN4	= Alimentación tarjeta
CN5	= Compresor Turbosteam *
CN6	= Sensor presión / Sonda nivel
CN7	= Termopar Turbosteam *
CN8	= Triac 1
CN9	= Resistencia caldera
CN10	= Não Usado
CN11	= Teciado de programação
CN12	= Triac 2
CN13	= Teciado grupo 1
CN14	= Resistência da caldeira
CN15	= Teciado grupo 2
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Los detalles - * - se pueden aplicar solo en algunas configuraciones del producto.

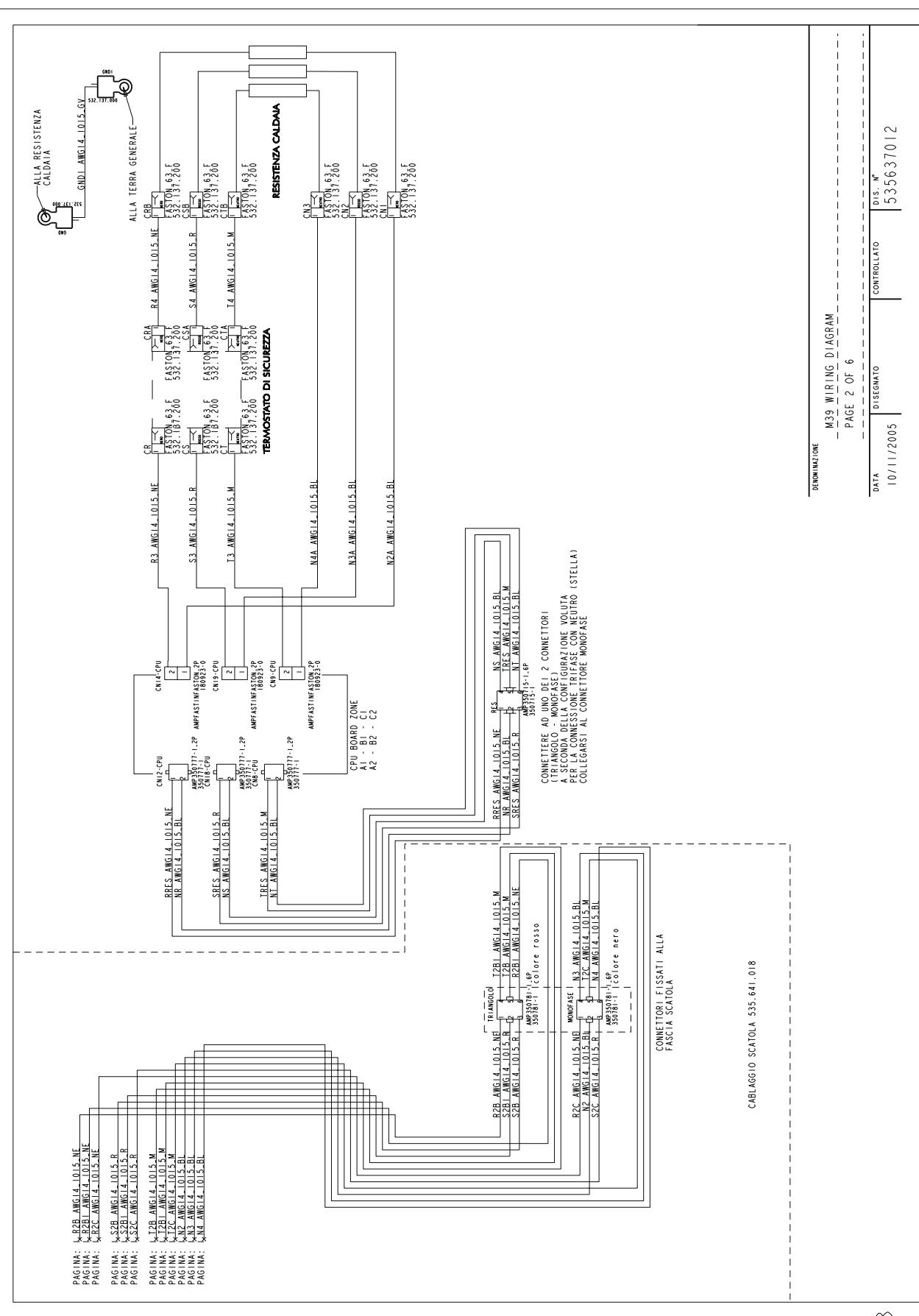
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CN4	= Alimentación tarjeta
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CN7	= Termopar Turbosteam *
CN8	= Triac 1
CN9	= Resistencia caldera
CN10	= Não Usado
CN11	= Teciado de programação
CN12	= Triac 2
CN13	= Teciado grupo 1
CN14	= Resistência da caldeira
CN15	= Teciado grupo 2
CN16	= Teciado grupo 3 *
CN17	= Triac 3
CN18	= Resistência da caldeira
CN19	= Teciado serviços
CN20	= Display

Die mit - * - gekennzeichneten Komponenten sind nur in bestimmten Modellen installiert.

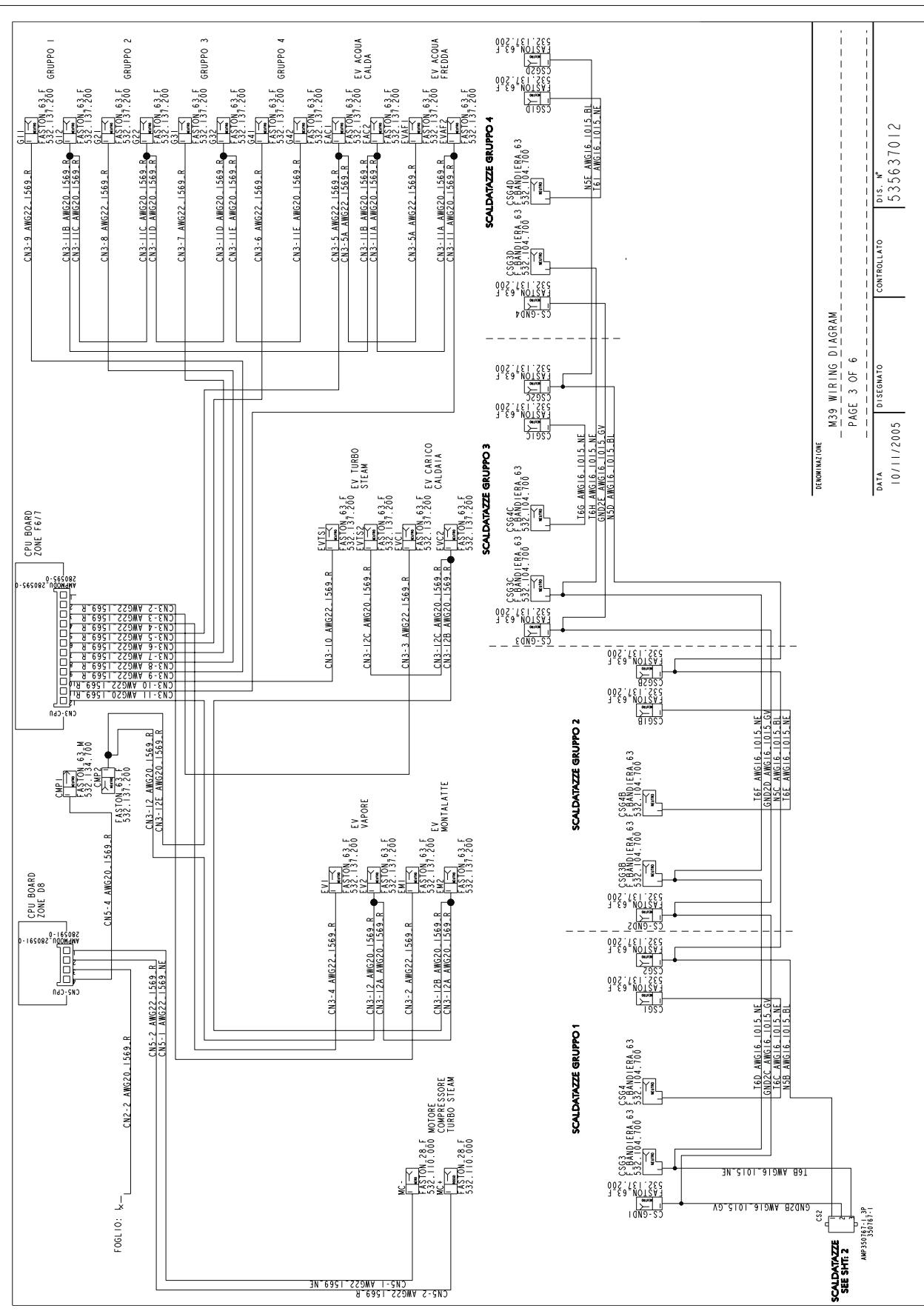
**Schema elettrico - Wiring diagram - Schéma électrique -
Elektrischer Shaltplan - Esquema electrico - Esquema eléctrico**



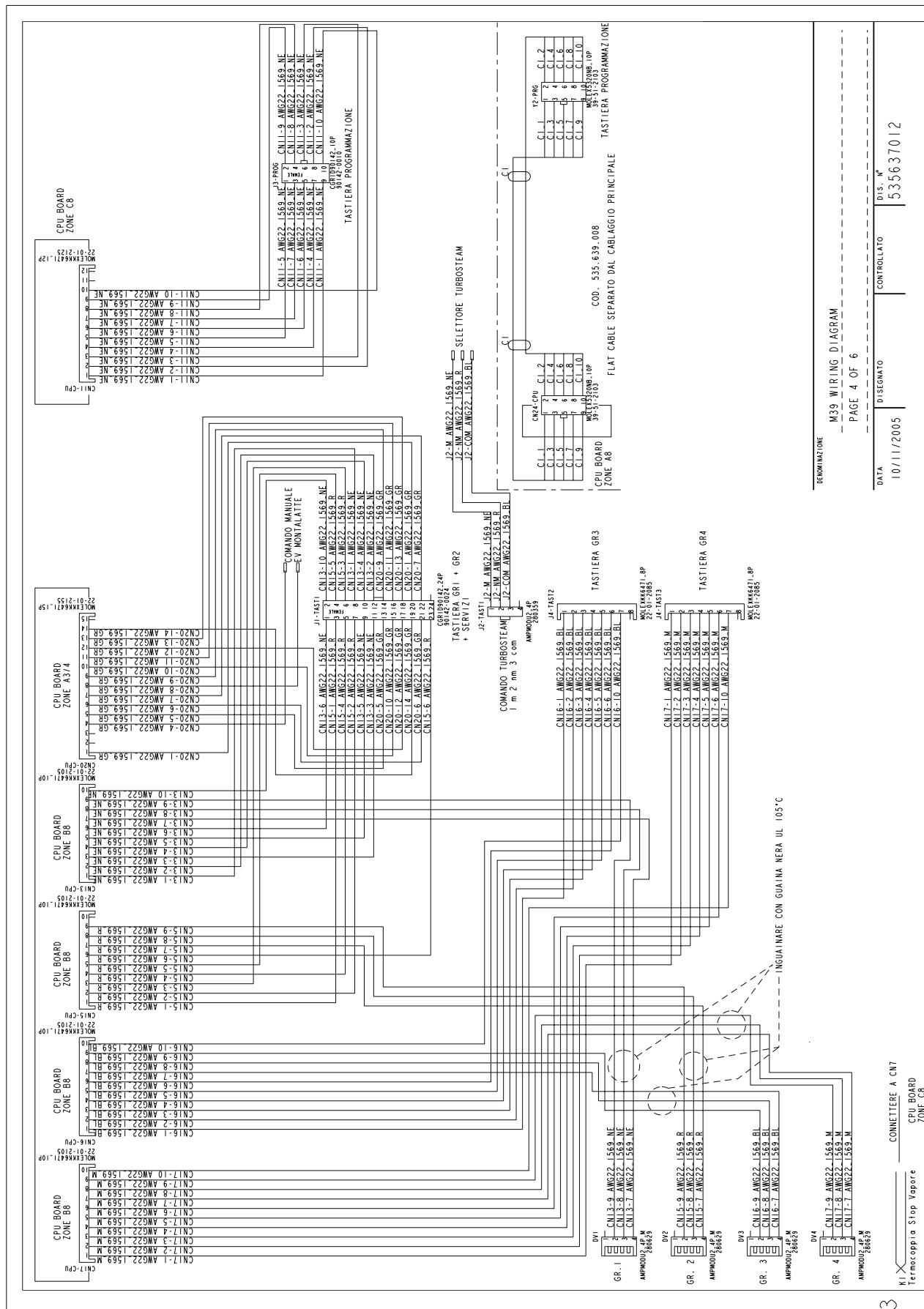
Schema elettrico - Wiring diagram - Schéma électrique - Elektrischer Shaltplan - Esquema electrico - Esquema eléctrico



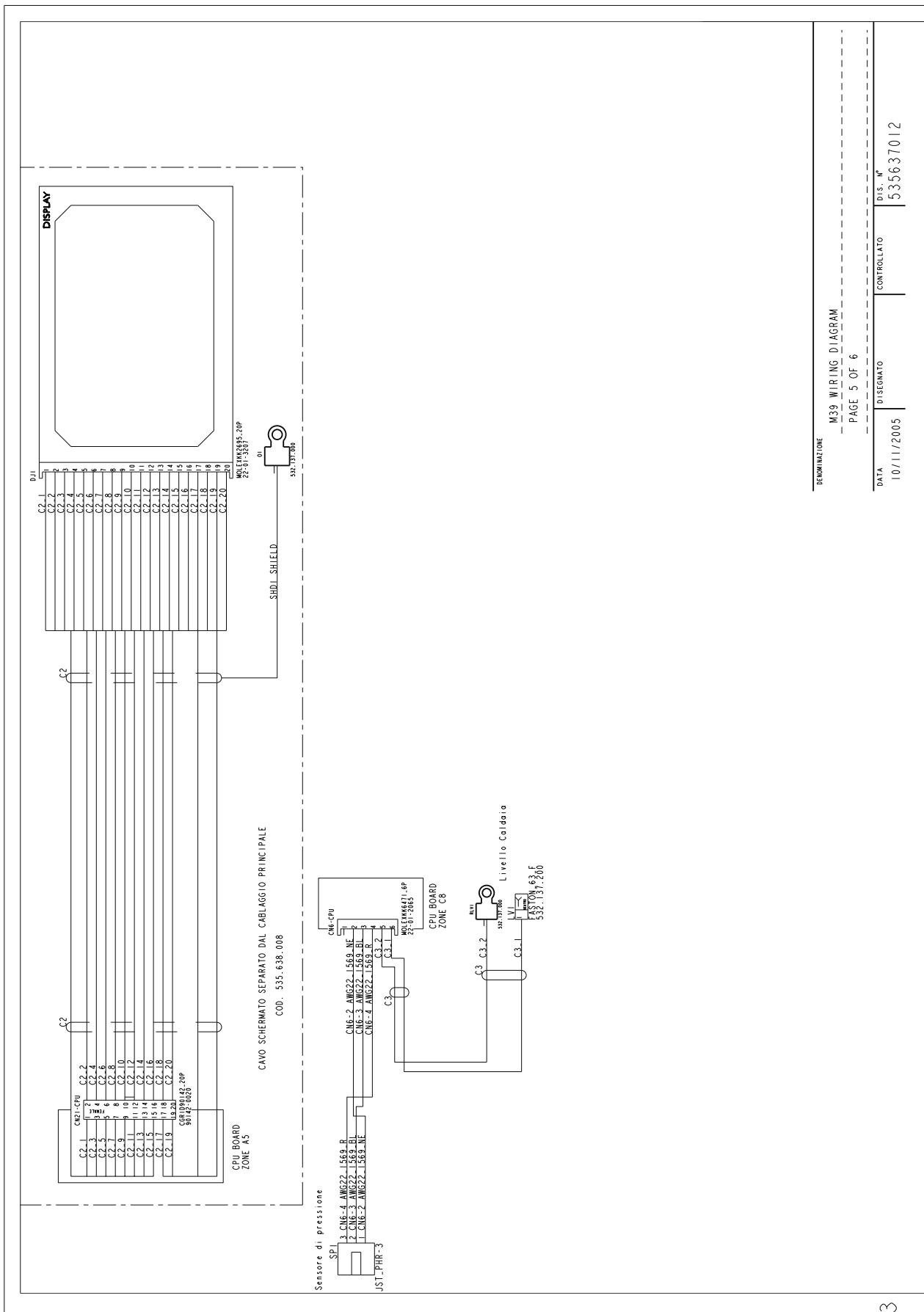
Schema elettrico - Wiring diagram - Schéma électrique - Elektrischer Shaltplan - Esquema electrico - Esquema eléctrico



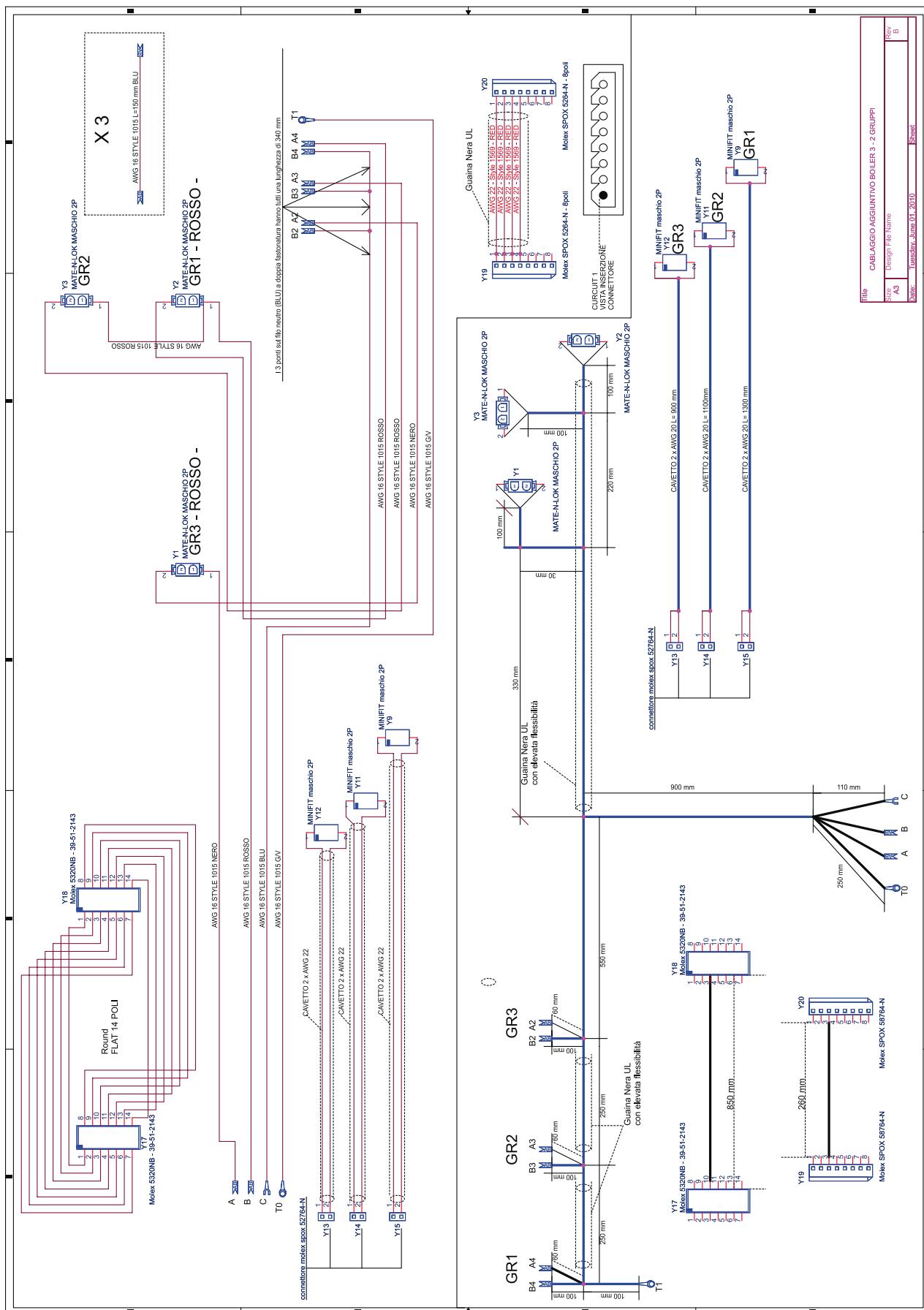
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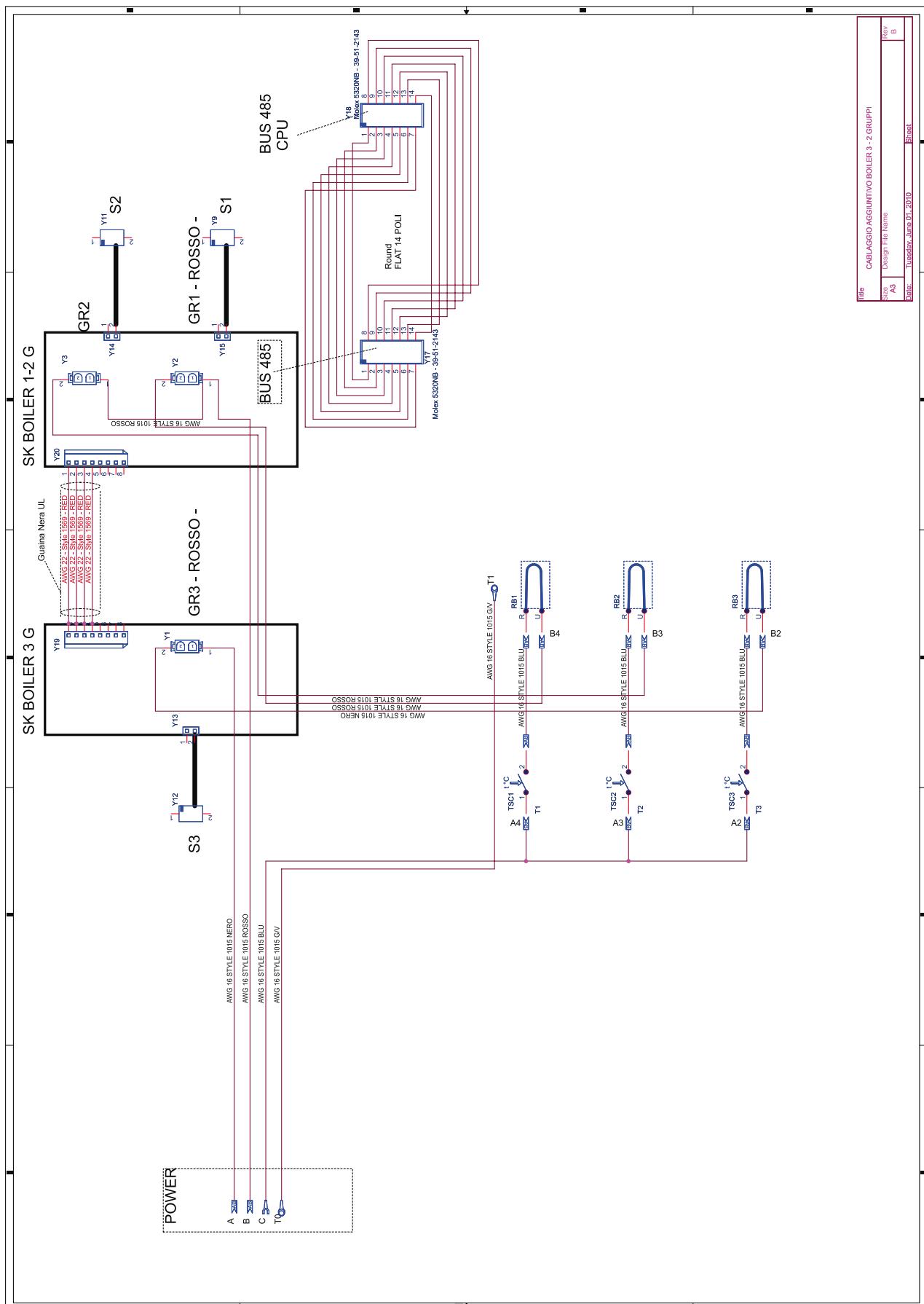
**Schema elettrico - Wiring diagram - Schéma électrique -
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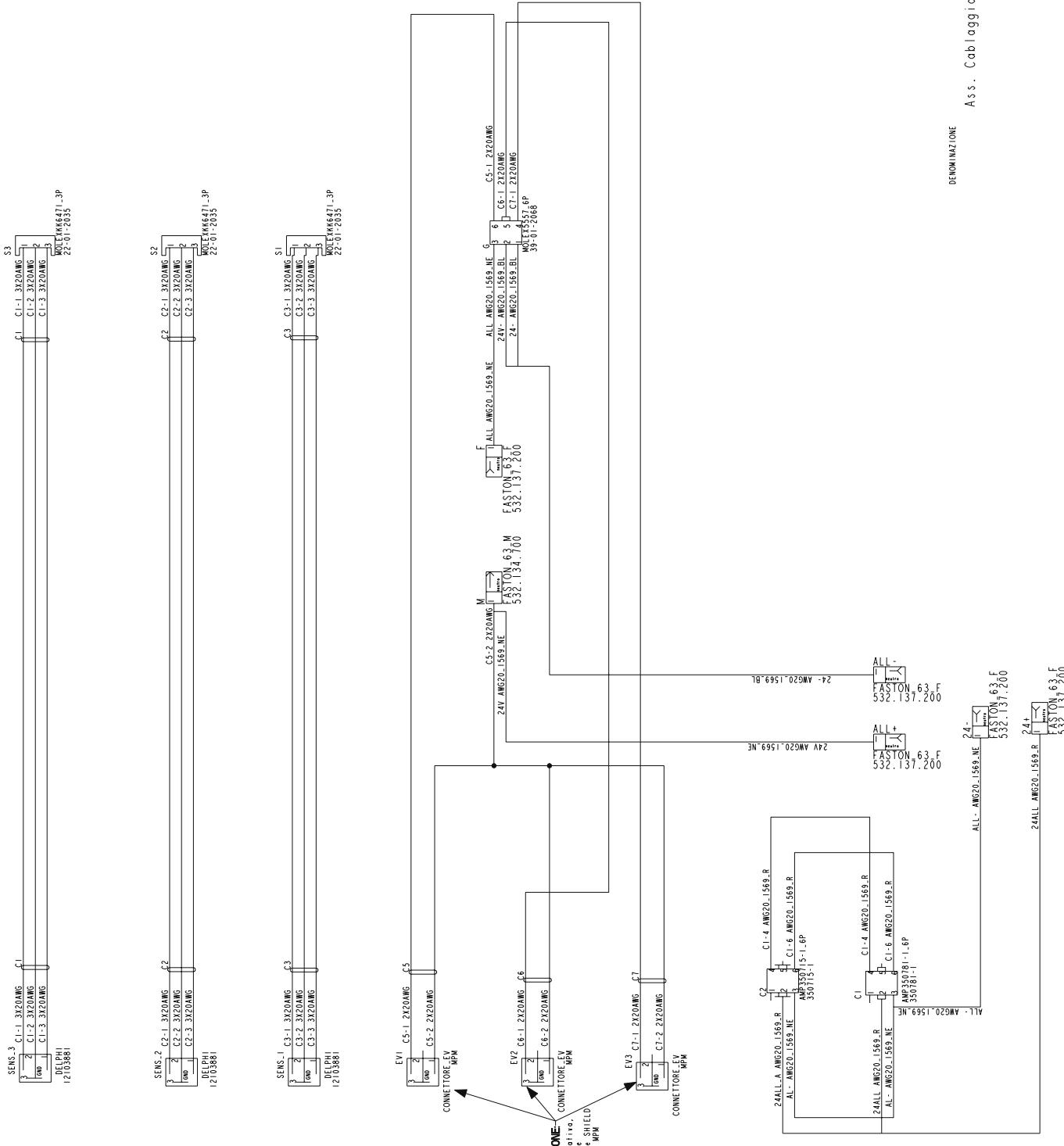
Schema elettrico - Wiring diagram - Schéma électrique - Elektrischer Shaltplan - Esquema electrico - Esquema eléctrico



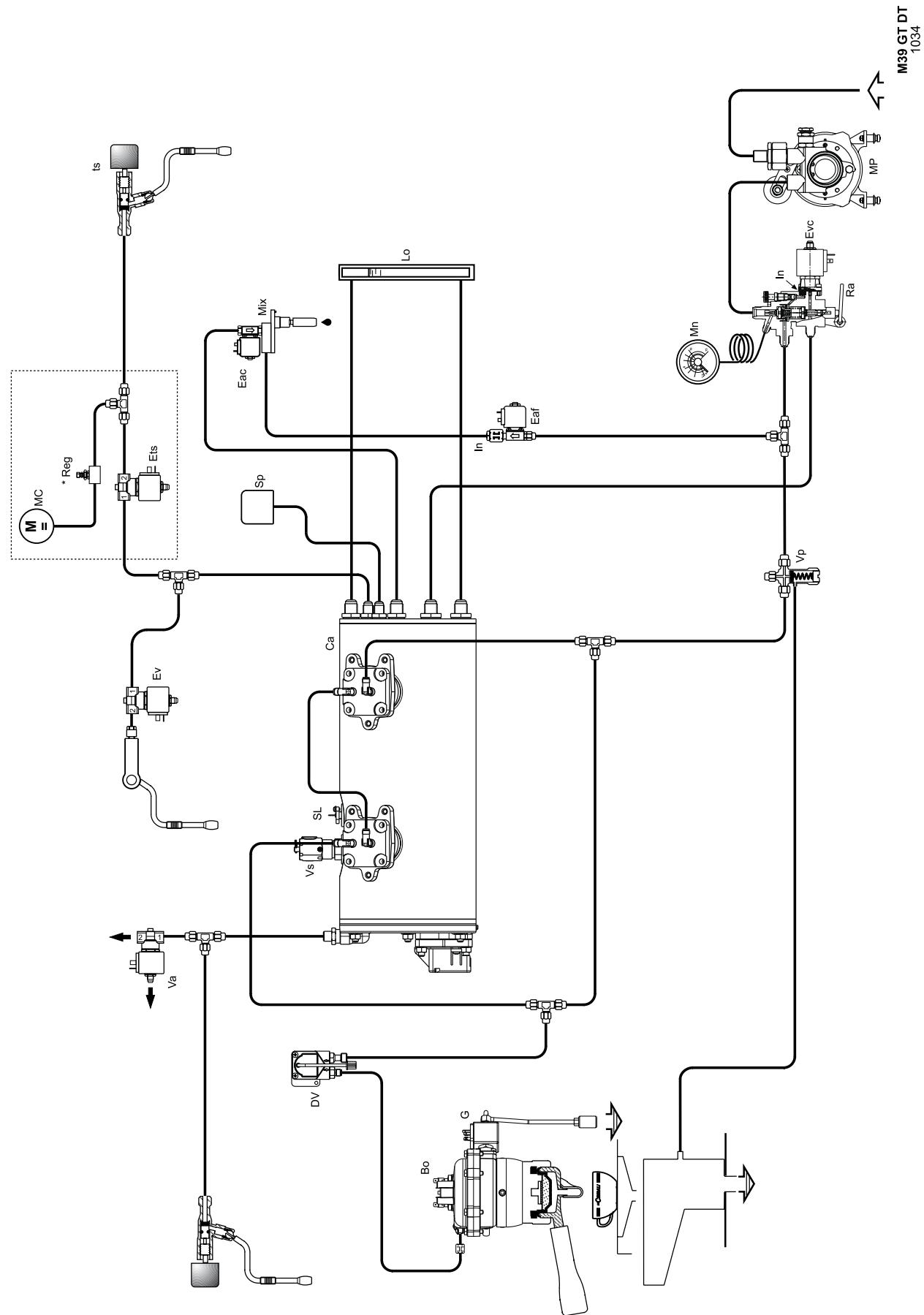
Schema elettrico - Wiring diagram - Schéma électrique - Elektrischer Shaltplan - Esquema electrico - Esquema eléctrico



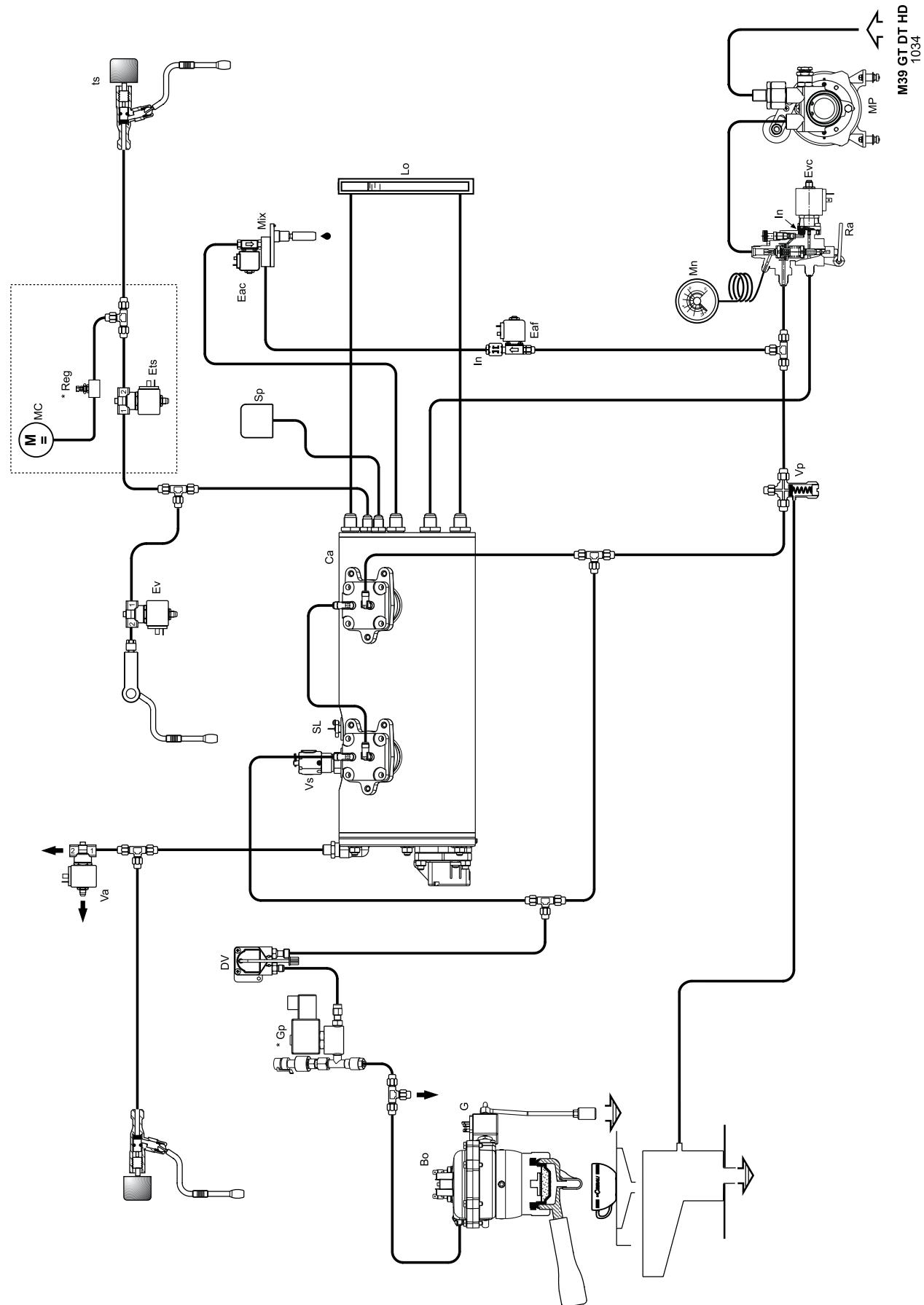
Wiring diagram



**Circuito idraulico - Hydraulic circuit - Circuit hydraulique
Hydraulikplan - Circuito hidraulico - Circuito hidráulico**



**Circuito idraulico - Hydraulic circuit - Circuit hydraulique
Hydraulikplan - Circuito hidraulico - Circuito hidráulico**



LEGENDA SCHEMA IDRÁULICO

HYDRAULIC DIAGRAM LEGEND

LEGENDE DU SCHEMA HYDRAULIQUE

LEGENDA SCHEMA IDRAULICO

F

Bo	= Boiler caffè	Bo	= Boiler café
Ca	= Caldaia	Ca	= Chaudière
DV	= Dosatore volumetrico	DV	= Doseur volumétrique
Eac	= Elettrovalvola acqua calda	Eac	= Electrovanne eau chaude
Eaf	= Elettrovalvola acqua fredda	Eaf	= Electrovanne d'eau froide
* Ets	= Elettrovalvola turbosteam	* Ets	= Eléetrovanne turbosteam
Ev	= Elettrovalvola vapore	Ev	= Electrovanne de la vapeur
Evc	= Elettrovalvola carico caldaia	Evc	= Electrovanne de remplissage chaudière
G	= Elettrovalvola caffè	G	= Electrovanne du café
* Gp	= Elettrovalvola proporzionale	* Gp	= Souape électrique proportionnelle
In	= Iniettore	In	= Injecteur
Lo	= Indicatore di livello	Lo	= Indicateur niveau
* MC	= Motore compressore	* MC	= Moteur compresseur
Mix	= Miscelatore acqua	Mix	= Mélangeur eau
Mn	= Manometro	Mn	= Manomètre
MP	= Pompa volumetrica	MP	= Pompe volumétrique
Prm	= Pressostato	Prm	= Pressostat
Ra	= Rubinetto alimentazione acqua	Ra	= Robinet alimentation eau
* Reg	= Regolatore aria	* Reg	= Régulateur de l'air
Mix	= Miscelatore acqua	Mix	= Mélangeur eau
SP	= Sensore di pressione	SP	= DéTECTEUR de pression
* ts	= Selettore turbosteam	* ts	= Sélecteur turbosteam
Va	= Elettrovalvola antisucchio	Va	= Electrovanne antirétreous
Vp	= Valvola di sovrappressione	Vp	= Souape de surpression
Vs	= Valvola di sicurezza caldaia	Vs	= Souape de sécurité chaudière

I componenti * - sono applicati solo in alcune configurazioni di prodotti.

Les détails - * - ne sont appliqués qu'à certaines configurations de produit.

Items marked * - are fitted in some product configurations only.

LEGENDE ZU WASSERKREIS

LEYENDA ESQUEMA HIDRÁULICO

LEGENDA ESQUEMA HIDRÁULICO

P

Bo	= Boiler caffè	Bo	= Boiler café
Ca	= Caldaia	Ca	= Caldera
DV	= Dosador volumétrico	DV	= Dosador volumétrico
Eac	= Electroválvula agua caliente	Eac	= Electroválvula água quente
Eaf	= Electroválvula agua fria	Eaf	= Electroválvula água fria
* Ets	= Electroválvula turbosteam	* Ets	= Válvula solenoíde turbosteam
Ev	= Dampf-Magnetventil	Ev	= Válvula solenoíde do vapor
Evc	= Wasserzugabe-Magnetventil	Evc	= Eléetroválvula de carga caldera
G	= Kaffee-Magnetventil	G	= Electroválvula café
* Gp	= Proportional-Magnetventil	* Gp	= Electroválvula proporcional
In	= Duse	In	= Injetor
Lo	= Wasserstandsanzeiger	Lo	= Nível óptico
* MC	= Motor Kompressor	* MC	= Motor compressor
Mix	= Wassermischer	Mix	= Economizador
Mn	= Manometro	Mn	= Manômetro
MP	= Volumetrische Pumpe	MP	= Bomba volumétrica
Prm	= Druckschalter	Prm	= Pressostato
Ra	= Wasserversorgungshahn	Ra	= Grifo alimentación agua
* Reg	= Lüftregler	* Reg	= Regulador aire
Mix	= Wassermischer	Mix	= Economizador
SP	= Drucktäucher	SP	= Sensor presión
* ts	= Wahlschalter Turbosteam	* ts	= Selecteur turbosteam
Va	= Rücksaugschutzventil	Va	= Eléetroválvula eliminação depressão
Vp	= Überdruckventil	Vp	= Válvula de sobrepressão
Vs	= Heizkessel-Sicherheitsventil	Vs	= Válvula de segurança de mola

Los detalles - * - se pueden aplicar sólo en algunas configuraciones del producto.

Os pormenores - * - são aplicados apenas em algumas configurações de produto.

CIRCUITO IDRÁULICO - HYDRAULIC CIRCUIT - CIRCUIT HYDRAULIQUE - Hydraulikplan - Circuito hidráulico - Circuito hidráulico