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Hospitality Equipment 2020 P/L
Unit 6/6 Tennyson Street, Clyde, NSW, 2142 Tel.02 9637 3737 Fax.02 9637 3434







INSTRUCTIONS MANUAL



CE



# INTRODUCTION AND SAFETY NORMS

**ENGLISH** 

### INTRODUCTION

- The machines are Industrial pot-washing machines.
- The machine is in conformity to the **European Norms 89/336/CEE** for the radio noises.
- According to EEC directive nr.23 of 19/02/1973 and the law of actuation nr.791 of 18/10/1987, our appliances are buil-up according to the good technique norms in force in Italy and abroad.
- Noise level of the machine, less than 70 dB(A).

### PRELIMINARY OBSERVATION

Carefully read the instructions reported in the present user manual, as it gives important indications about safety of installation, operation and maintenance:

- carefully keep the present manual for further consultations;
- the illustrations and drawings showing the machine are intended for general reference only and are not necessarily accurate in every particular;
- the dimensions and characteristics of the machine, given in this Manual, are not to be considered binding and may be changed without prior notice;
- having removed the packing material, check that all the equipment is present. If there is any doubt, do not use it and contact qualified personnel. The packing elements (plastic bags, nails, etc.) should be kept away from children, because they are dangerous.

#### **GENERAL SAFETY REGULATIONS**

THIS SAFETY CODE HAS BEEN COMPILED IN YOUR INTEREST. Strict adherence to these rules will reduce the risks of injury both to yourself and to others;

Personnel working with this machine must adhere strictly to all statutory safety regulations as well as the specific rules listed below. Failure to do so may result in personal inyury and damage to the machine;

- DO NOT attempt to move, install, set-up or operate this machine until you have read and fully understood this Manual. If doubt persists, ask your supervisor;
- never leave tools, parts or other loose material on or in the machine;
- Before switching the equipment the equipment on, make sure that the model plate data conforms to that of the electrical and water distribution network;
- remember that even with the mains isolator in the "OFF" position, the incoming cables are still live;
- BEFORE starting machine o cycle, after any maintenance or repair work, make sure all protective are correctly installed;
- be vigilant at all times, remember that your safety and that of your fellow workers depend on you;
- when moving or lifting the machine, care must be taken to comply with all the relevant regulations governing such operations;
- installation should be carried out by qualified personnel according to the manufacturer's instructions.
- this equipment should be destined to the use which it has been conceived for. Any other application should be considered improper and consequently dangerous;
- the equipment should only be used by personnel trained for its use;

### SPECIAL SAFETY REGULATIONS

- adjustement and repairs must be carried out only by personnel qualified. Repair carried out by unskilled personnel may be dangerous;
- perfect washing-up results as far as hygiene concerns and a correct operation of the washing machine can be assured only in case the instructions reported in the present handbook are carefully followed;
- the machine must be only used by authorized personnel which must comply with sanitary measures;
- do not leave the machine in environment with temperatures inferior to 0°C;
- the machine protection degree is IP21, therefore it should not be washed with direct high pressure jets of water;





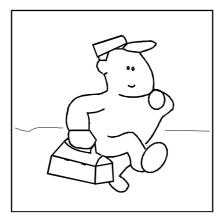




# **INSTRUCTIONS FOR THE INSTALLER**

The following instructions are addressed to a qualified personnel, the only one authorised to carry-out checks and repair, if any.

The Manufacturer declines any responsibility in the case of interventions made by a non qualified personnel.













**ENGLISH** 

# Second Section - FOR THE INSTALLER

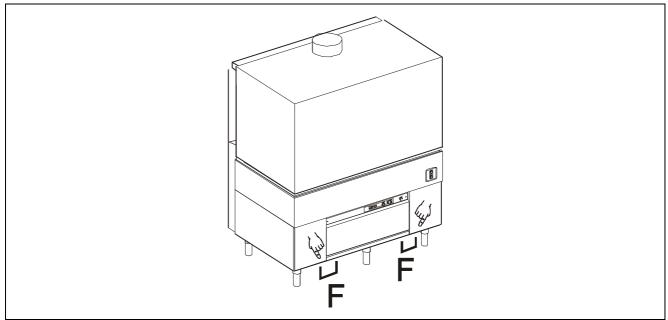
## **UNPACKING AND DELIVERY CHECKS**

When the case with the machine has been received, unpack it as follows:

- Remove the upper cover and the wooden case side walls, take care not to damage the machine,
- Remove possible accessories boxes,
- Remove the protecting cellophane,
- Make sure that the machine has not been damaged during transport,
- Make sure that all covers and panels have been correctly fixed and that no loosen part is present,
- Visually inspect that all electrical components are integral.

## TRANSPORT AND INSTALLATION

- To lift and transport the machine, insert the truck forks under the frame connected to the points indicated by the yellow adhesives applied on the machine front side (see draw below).



łraw "Δ"

- Before plugging the machine, make sure that the supply voltage of the domestic wiring system and the water supply from water connection corresponds to the ones reported on the rating plate
- Installation should be carried out by qualified personnel according to the manufacturer's indications

During instalation, it is recommended to level the machine in order to ensure a correct operation.

The Manufacturer cannot assume any responsability for any damage to persons or property deriving from the non-observance of the above-specified norms.

For correct installation see draw page 13-14.









# **ELECTRICAL CONNECTION**

Before connecting the machine, check to make sure the voltage outlet of the mains is the same as the voltage specified on the data plate of the machine.

A main switch must be installed between the mains and the machine. This safety measure also requires that the minimum distance between the switch contacts is at least 3 mm and the disconnection on all poles according to **EN 60204 (VDE 113)**.

Fuses on the main switch must be 20 A.

The mains must be wired to be able to handle the current drawn by the machine. The system must also be provided with a proper ground lead in accordance with the existings norms. The electric cable must be of the following type **H07RN-F**.

For the right choice of the cross section area refer to the following table:

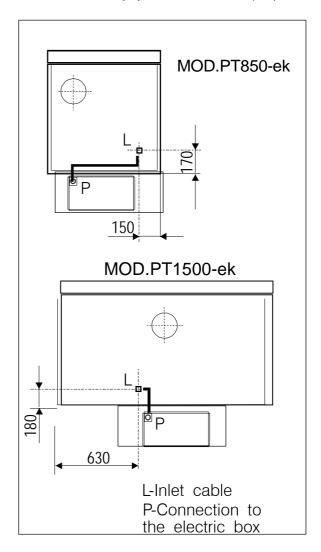
mod.	Volt	total power (kW)	Current intensity max (A)	Cable (mm²)
PT850-ek	400/3			
	electric	13	20	2,5
	steam	4	8	2,5
PT1500-ek	400/3			
	electric	26	38	10
	steam	6	12	2,5
	•			•

The electrical safety of this equipment is only assured if it is connected as follows.

It is necessary to connect the equipment to an effective ground installation, as specified by the electrical safety regulations in force.

Chack that this basic requirement is complied with and, in case of doubt, ask for a careful check of the installation by a qualified personal. In addition, the equipment shall be part of an equipotential system, the effectiveness of which should be checked according to the regulations in force.

The connection should be made at the screw marked by the respective label located on the equipment back side ( $\stackrel{\downarrow}{\vee}$ ).



THE MACHINE SHALL BE CONNECTED WITH AN EFFECTIVE GROUND CLAMP.

The manufacturer declines any responsibility for any damages caused by lack of an effective ground installation.









### WATER CONNECTIONS

Carefully comply with any national or regional regulations in force.

Water installation must have the following characteristics:

Temperature: 55°C

**Dynamic Pressure** 2 ÷ 4 bar (200÷400 kPa).

If the dynamic pressure is lower than 2 bar, it is advisable to install a Pump for pressure

increase. If the dynamic pressure is higher than 4 bar, it is advisable to install a pressure reduction.

Hardness: between 7,2 and 12,5 °French.

If the hardness values are higher than those mentioned above, it is advisable to install a

water-softener.

## **TEMPERATURES**

Water temperature 55°-60°C

Rinse temperature 80°-85°C

# DO NOT TAMPER WITH THE THERMOSTAT CALIBRATION

#### **ATTENTION!**

At the first test, be sure the boiler is full of water, make four (n.4) one minute complete cycles (**WASHING** + **RINSING**).

#### WATER DRAIN

Reachable from the machine front side after opening the front panel (to do this turn the two front screws out);

Arrange a discharge at floor level provided with siphon and connect to the floor drain by means of a hose provided with an adequate inclination. Make sure the drain hose is not choked in any way.

Make sure the drain hose is resistant to a temperature of 70 °C.

Carefully comply with any national or regional regulations in force.

### **STEAM FEEDING \***

As far as steam feeding is concerned, connect to the machine fittings indicated in the installation drawings. In order to make the equipment independent from the general steam distribution network, it is necessary to use gate and 1" gas on/off valves.

This type of feeding should be supplied at a pressure ranging from 1bar (100°C) to 2bar (121°C).

The steam used should be absolutely saturated and dry.

### **STEAM EXHAUST \***

The condensed steam exhaust shall have an appropriate slope toward the recovery installation or a blow-by pump, in order to guarantee an autonomous scavenging of the condensed steam.









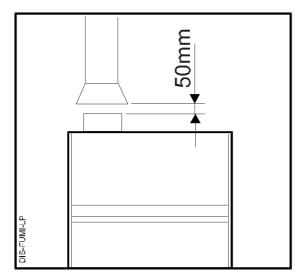
<sup>\*</sup> for steam machines only

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# **VAPOUR EXHAUST \***

During washing and rinsing cycles, vapours come out of the upper chimney.

To convey these vapours, connect with the cap as showed in the drawing.











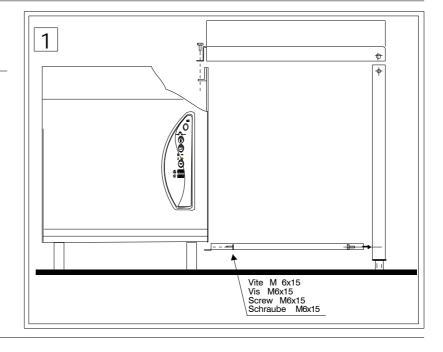
# TABLES FITTING PLAN

mod.PT850-ek



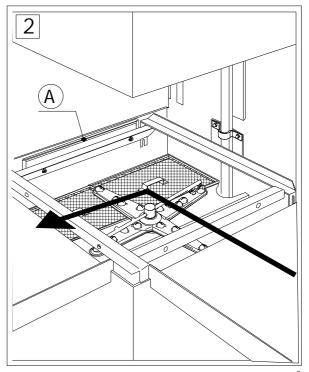
The machine is endowed with tables for baskets on request.

The fitting plan in on the draw N.°1.



# Corner version

For corner version machines to assembly the Stop/basket "A" as show on the draw 2 .









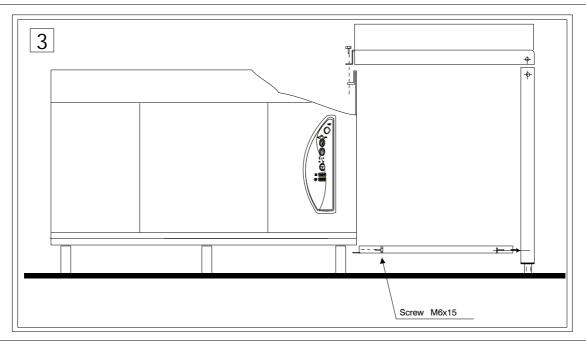




# TABLES FITTING PLAN

mod. PT1500-ek





The machine is endowed with tables for baskets on request.
The fitting plan in on the draw N.°3.



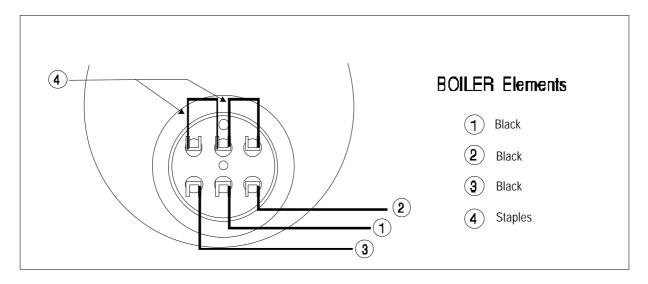


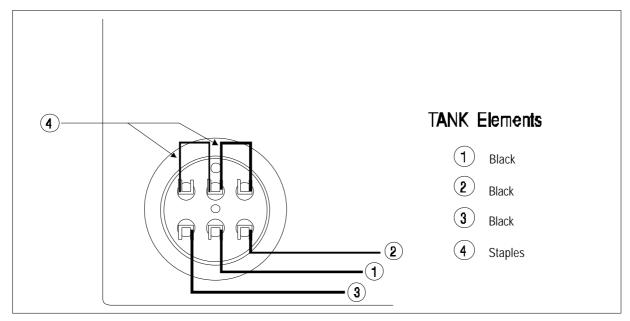




# **CONNECTIONS SCHEME**













# A LIST OF DRAWBACKS POSSIBLY OCCURRING WITH THE USE OF THE POT-WASHING MACHINE, THEIR CAUSES AND POSSIBLE REMEDIES

## DRAWBACK

# POSSIBLE CAUSES AND REMEDIES

Lamp "C" does not turn on

- a) check that the wall-mounting switch is ON and the respective fuses are not burnt.
- b) check that fuses FS1,FS2,FS3 of the transformer TR1 are not burnt.

Lamp "G" of overload cut-out devices turning ON.

- a) check the overload cut outs of the individual remote switches and replace those disconnected. If this drawback occurs several times in the same device, it is suggested to increase the current rate through the graduated cursor.
- b) check that the power supply voltage is not subject to variations in excess of 6% of the nominal value.
- c) check that the current drained by the motor does not exceed the rated values.

The tank does not fill up

- a) check that pressure switch CP1,CP2 is not calibrated or out of service.
- b) check that the overflow is in the respective position.
- c) check that the overflow is in the respective position.
- d) check that the coil of the solenoid valve is not broken and that voltage is fed there to.









# DRAWBACK

# POSSIBLE CAUSES AND REMEDIES

The tank does not stop being filled upon reaching the desired level

- a) check that the traps of the pressure switch has no porosities and the connection pipe is not disconnected.
- b) check that the pressure switch is in good conditions and is not calibrated.
- c) check that there is no dirty in the solenoid valve. This drawback can be noted because the machine continues to load water, whilst the main on/off switch is off.

# Insufficient washing

- a) check that the detergent is effective, is of the type recommended for industrial potwashing machines, and it is proportioned for the right concentration.
- b) check that the detergent container, if installed, is not empty and operates correctly.
- c) check that the jets of the washing swivels are not clogged. If necessary, clean them.
- d) check that the tank temperature is the specified one.
- e) one or several pumps don't operate, in this case check that:
- the overload cut-out did not switch the pump in question and, if necessary, restore it (this drawback is displayed by lamp "G" turning ON).
- the coil of the respective remote swirch is not broken.
- the pump is not blocked or rotates in the reverse direction.









# DRAWBACK

# POSSIBLE CAUSES AND REMEDIES

### Tank temperature insufficient

- a) check that the thermostat is not faulty or not calibrated.
- b) check that the temperature of the feeding water is in the range from 50°-0/10°C, as specified.
- c) check that the thermostat is set to the right temperature and operates correctly.
- d) check that the coil of the remote switch relevant to the tank resistor is not broken (this applies to electric heating machines only).
- e) check that the heater element is effective.

## Insufficient rinsing

Prior to checking the rinsing system make sure that the washing system operates correctly, as a matter of fact an effective rinsing also depends on a correct washing. Having ascertained that washing takes place correctly, check that:

- a) the dynamic pressure of the feeding water is not less than 2 bar (200 kPa).
- b) the jets are not clogged by calcareous residuals.
- c) solenoid valve EV4 and EV5 operate correctly.
- d) the water inlet filter is not clogged.
- e) the booster is not scaled to such an extent as to limit the water flow rate.

Insufficient rinsing temperature

- a) the thermometer is broken or not calibrated.
- b) the temperature of the feeding water is in range from 55° to 65°C, as specified.
- c) the dynamic pressure of the feeding water does not exceed 2 bar (200 kPa).









# DRAWBACK

# POSSIBLE CAUSES AND REMEDIES

If the drawback is not due to any of the causes listed here above, proceed as follows:

### In the case of electrical heating machines

- 1) check that the coil of remote switch MT3 is not broken.
- 2) check that the safety thermostat MT4 did not trigger.
- 3) check all elements of boiler heater R1.

In the case of steam heating machines

- 1) check that the steam inlet gate is open and is present at a pressure not less than 0,5 bar (50 kPa).
- 2) check that the condensed steam drainage filter is not clogged.
- 3) check that the steam solenoid valve EV7 operates correctly.
- 4) check that the inlet steam filter is not clogged to such an extent as to prevent the normal flow rate.
- 5) check that the condensed steam outlet pipe can freely drain by drop.
- 6) check that the pipe coil is not scaled to such an extent as to limit heat exchange thereof.

The manufacturer declines any responsibility for any printing errors contained in this booklet. The manufacturer also reserves the right to make any modifications to its products that don't affect the basic characteristics thereof.

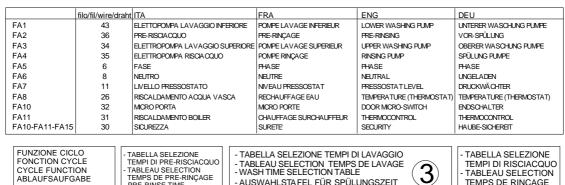








## SCHEDA ELETTRONICA • FICHE ELECTRONIQUE P.C.BOARD **ELEKTRONISCHE STEURUNG**









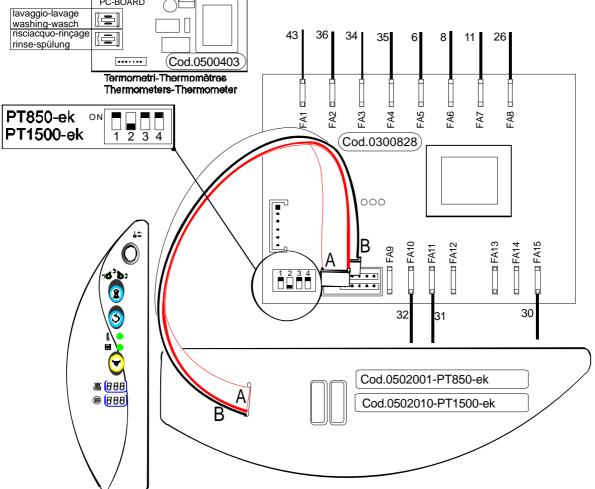
- TABELLA SELEZIONE TEMPI DI LAVAGGIO
- TABLEAU SELECTION TEMPS DE LAVAGE

 WASH TIME SELECTION TABLE - AUSWAHLSTAFEL FÜR SPÜLUNGSZEIT

DIP	LED1=ON	LED2=ON	LED1+2=ON
ON [] [] [] [] [] [] [] [] [] [] [] [] []	120"	180"	240"
ON 1 2 3 4	180"	300"	420"

TEMPI DI RISCIACQUO TABLEAU SELECTION TEMPS DE RINÇAGE RINSE TIME SELECTION TABLE **AUSWAHLSTAFEL** 













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# LEGENDA SCHEMA ELETTRICO

# LEGENDE SCHEMA ELECTRIQUE WIRING DIAGRAM LEGEND ELEKTROSCHALTSCHEMA



(PT 850ek - PT1500ek)

(LP6ek-LP8ek-LP31ek-LP38ek)

IN1	Interruttore generale Main switch	Intérrupteur général Hauptschalter
Ad 13	Filtri antidisturbo Suppressors	Filtres ante-ennui Entstörfilter
CP1-CP2	Pressostato Pressure switch	Pressostat Druckwächter
LS1	Lampada spia di linea Main switch lamp	Lampe de ligne Netzkontrollampe
LS2	Lampada temperatura Temperature lamp	Lampe température Temperaturkontrollampe
LS3	Lampada spia livello vasca e cio	clo Lampe de cycle
	Cycle lamp	Zykluskontrollampe
LS4	Lampada spia termica salvamo Motor protection indicator lamp	ori Lampe témoin thermiques protection Kontrollampe Motorschutz ausgelöst
CT1	Termostato di sicurezza Security thermostat	Thermostat de sureté Schützthermostat
CT2	Termostato boiler Boiler thermostat	Thermostat surchauffeur Boilerthermostat
СТЗ	Termostato vasca Tank thermostat	Thermostat cuve Tankthermostat
CT4	Termostato di sicurezza 2 Security thermostat 2	Thermostat de sureté 2 Schützthermostat 2
СТ5	Termostato boiler 2 Boiler thermostat 2	Thermostat surchauffeur 2 Boilerthermostat 2
R1	Resistenza boiler Boiler elements	Résistance surchauffeur Boilerheizung
R2	Resistenza vasca Tank elements	Résistance cuve Tankheizung
R3	Resistenza boiler 2 Boiler elements 2	Rèsistance surchauffeur 2 Boilerheizung 2
M2	Elettropompa lavaggio superiore Upper washing-pump	Electropompe lavage supérieur Waschpumpenmotor
М3	Elettropompa lavaggio inferiore Lower washing-pump	Electropompe lavage inférieur Waschpumpenmotor









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# LEGENDA SCHEMA ELETTRICO

# LEGENDE SCHEMA ELECTRIQUE WIRING DIAGRAM LEGEND ELEKTROSCHALTSCHEMA

PT- LP

(PT 850ek - PT1500ek)

(LP6ek-LP8ek-LP31ek-LP38ek)

M4 Elettropompa risciacquo Pompe rinçage

Rinsing pump Nachspülpumpenmotor

M5 Elettropompa lavaggio superiore 2 Electropompe lavage sup. 2

Upper wasching-pump 2 Waschpumpenmotor 2

M6 Elettropompa lavaggio inferiore 2 Electropompe lavage inf. 2 Lower wasching-pump 2 Waschpumpenmotor 2

FS1...FS3 Fusibili Fusibles

Fuses Sicherungen

TR1 Transformatore Transformator Transformer Transformator

**SL1** Selettori tempo lavaggio Selecteurs temps lavage

Selectors Selektor der Reinigungszeit

T1 Timer Timer Timer Timer

FC1..FC3 Finecorsa Microinterrupteur

Limit switch Hauptschalter

FC4...FC5 Finecorsa meccanico Fin de course

Stop micro-switch Endschalter

**EV3** Elettrovalvola carico Electrovanne chargement

Loading solenoid valve Elektrisches Wassereinlaufventil

**EV4** Elettrovalvola risciacquo Electrovanne rinçage

Rinsing solenoid valve Elektrisches Spülventil

**EV5** Elettrovalvola prerisciacquo Electrovanne prérinçage

Prerinsing solenoid valve Elektrisches Vorspülventil

**EV6** Elettrovalvola vapore boiler Electrovanne vapeur surchauffeur

Boiler steam solenoid valve Elektrisches-Dampf Boilerventil

**EV7** Elettrovalvola vasca Electrovanne cuve

Tank solenoid valve Elektrisches Tankventil

**EV8** Elettrovalvola livello acqua soll. Electrovanne niveau eau

Water level solenoid valve Elektrischesventil

RM1...RM6 Protezione termica Protection thermique

Electric pump thermal Motorschütz

IR1...ID1 Contatto temporizzato Concact temporisé

IR2...ID2 Time-contact Zeit-Schaltshutz

DD1 Dosatore di lavaggio Doseur produit lavage
Detergent pump Waschspülmitteldosiergerät









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# LEGENDA SCHEMA ELETTRICO

# LEGENDE SCHEMA ELECTRIQUE WIRING DIAGRAM LEGEND ELEKTROSCHALTSCHEMA

PT- LP

(PT 850ek - PT1500ek)

(LP6ek-LP8ek-LP31ek-LP38ek)

МТ3	Contattore controllo livello Level control contactor	Contacteur control niveau Schütz für Niveaukontrolle
MT4	Contattore di sicurezza Security contactor	Contacteur de sureté Schütz
МТ5	Contattore resistenza boiler Boiler elements contactor	Contacteur rés.surchauffeur Schütz für Boilerheizung
МТ6	Contattore resistenza vasca Tank elements contactor	Contacteur résistance cuve Schütz für Tankheizung
MT7	Contattore pompa lavaggio superion Upper washing-pump contactor	ore Contacteur pompe lavage sup Schütz Waschpumpenmotor
МТ8	Contattore pompa lavaggio inferior Lower washing-pump contactor	ce Contacteur pompe lavage inf Schütz Waschpumpenmotor
MT9	Contattore pompa risciacquo Rinsing pump contactor	Contacteur pompe rinçage SchützNachspülpumpenmotor
MT10	Contattore pompa lavaggio superiore 2 Upper wasching-pump contactor 2	Contacteur pompe lavage sup 2 Schütz Waschpumpenmotor 2
MT11	Contattore pompa lavaggio inferiore 2 Lower wasching-pump contactor 2	Contacteur pompe lavage inf 2 Schütz Waschpumpenmotor 2
MT12	Contattore di sicurezza 2 Security contactor 2	Contacteur de sureté 2 Schütz 2
MT13	Contattore resistenza boiler 2 Boiler elements contactor 2	Contacteur rés.surchauffeur 2 Schütz für Boilerheizung 2









