

## ELECTRIC HEATING KIT INSTALLATION INSTRUCTIONS MANUAL

### SAFETY INSTRUCTIONS



#### WARNING!

##### INSPECTION, MAINTENANCE OR REPAIR.

- The installation and/or connection of the heating kits, as well as any intervention that modifies the values of the machine features nameplate must be performed by **AUTHORIZED SERVICE PERSONNEL**, adequately trained by Girbau S.A. or by a Girbau S.A. dealer.
- Likewise, it is the A.S.P.'s responsibility to check that the exterior installation of the washer has been modified and adapted to the new requirements specifically to those regarding electrical conduction and protection.
- Once the corresponding operation has been performed, the dealer's A.S.P. must perform the final machine inspection and update the features nameplate, adapting it to the new conditions.
- The company responsible for the Authorized Service Personnel fully assumes liability for the intervention and any possible consequences that may derive from it.
- Compliance with the safety warnings listed in the Installation Manual is obligatory. Read them before servicing the washer.
- Avoid taking any action on the machine without having first carefully read the washer's installation and operating manuals, paying special attention to the safety instructions.
- Conducting inspections, maintenance or repairs without taking safety measures or having the necessary technical competence can cause **ELECTRICAL SHOCK OR SERIOUS ACCIDENTS**.
- **COMPLETELY** disconnect the washer from the power source and prevent accidental reconnection.
- Disconnect the electrical connection from the external dosing unit on the washer. These circuits are independent of the power supply to the washer.
- Moving the **ON** switch to the OFF position is not sufficient.
- Wait a minimum of five minutes to eliminate the risk of residual voltage.
- Close and mechanically lock the water supply valves and check that the bath has **COMPLETELY** drained, all parts have cooled down and that no parts are moving due to inertia.

##### INTRODUCTION.

Any incorporation or modification of the heating systems after the washer has left the plant can substantially change the machine's installation conditions, especially as regards the electrical features.

For this reason, the following steps are very important:

- Request that an authorized installer adapt the washer installation to the new operating conditions: automatic protection switch, electrical conductors...
- Completely disassemble the washer heating system components.
- Install the new heating system KIT paying careful attention to correctly connect and mount the components and electrical conductions.
- Verify that the new heating system operates correctly.
- Assemble and secure ALL the covers and washer protections.
- Update the labels and features nameplate.



#### IMPORTANT

**CHECK THE NEW ELECTRICAL INSTALLATION VALUES IN THE TABLE AT THE END OF THE MANUAL.**

**Supplement the following instructions with the diagram and the corresponding parts view of the washer.**

## PRE-INSTALLATION STEPS.

### Disassembly of the existing heating system.

Close and mechanically lock the water inlet valves.

Close and mechanically lock the external automatic protection switch.

Disconnect the electrical supply cables from the switch breaker input terminal on the washer.

Disconnect any possible external dosing signalling connections on the washer.

Remove the back and top covers.

### Machines without a heating system:

Disassemble the heater housing plugs.



### Machines with steam heating systems:

Disconnect the electrical wiring from the electro valve, terminal strip X2 and the earth connection on the front panel. Re-tighten the nut on the ground connection.

Remove the installation.

Dismantle the coupling joining the hose to the heater. Dismantle the electro valve support and remove it together with the electro valve and the hose.

Dismantle the steam heater and remaining plugs from the heater housings.



## KIT ASSEMBLY.

Assemble the heaters to the corresponding housings.



### Caution!

For easier assembly, wet the rubber joint on the heaters with soapy water.

**Do not use lubricants.**

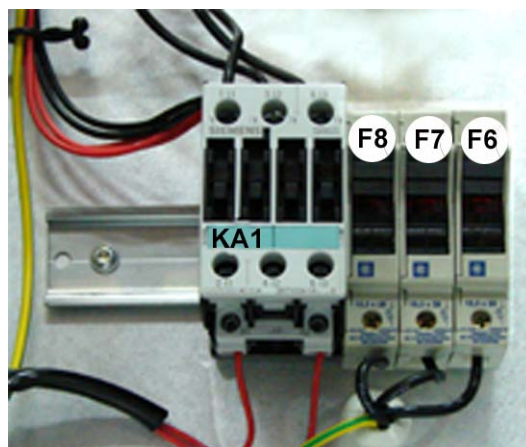


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The heaters must be secured by the internal clamps in the outer drum.



Assemble the fuse holders onto the rail. Number them **F8**, **F7**, **F6** (from left to right) with a permanent marker. Disconnect the inverter power cables from the contactor unit **KA1** and connect them to the fuse carriers (check the connection order in the electrical diagram).



Connect cables **1L1**, **1L2**, **1L3** supplied with the kit between the contactor **KA2** terminals and the fuse holder openings.

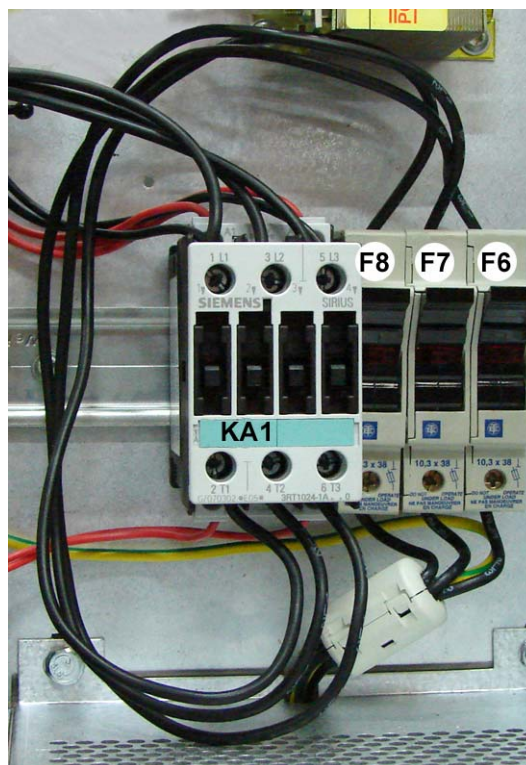
Connection order (check electrical diagram):

Cable **1L1** between **KA1-6** and **F8**

Cable **1L2** between **KA1-4** and **F7**

Cable **1L3** between **KA1-2** and **F6**

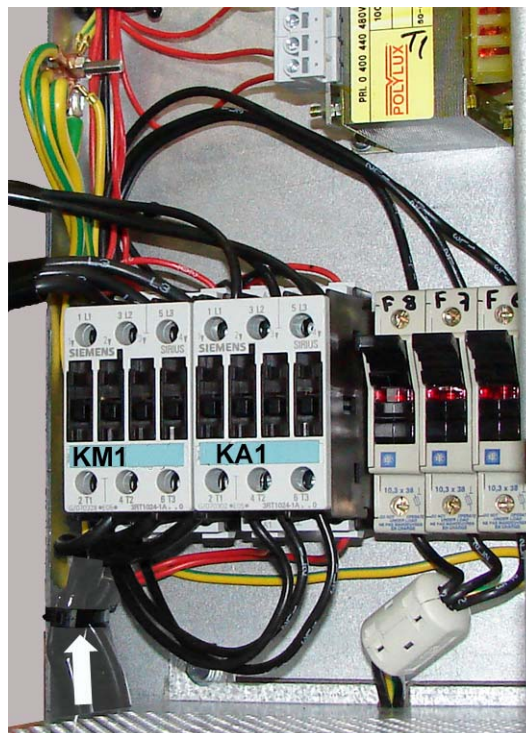
Insert the fuses into their housings.





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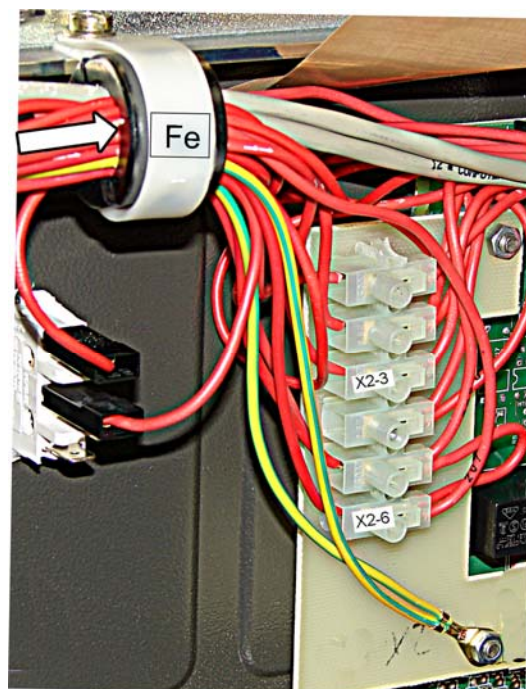
Mount the heating contactor **KM1** on the rail. Secure the ground cables to the corresponding screw.



Pass the heater installation cables between the side cover of the washer and the inverter support and fix using the clamps.



Pass the contactor coil power cables **KM1** through the strip (**Fe**) on the front of the washer. Connect the cables to terminals **5** and **6** on the terminal strip **X2**. This terminal strip is located on the front of the washer, next to the microprocessor board.



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Connect the electrical installation to the heaters.



**Caution!**  
Adjust the heater connections to suit the machine voltage.  
Check the electrical diagram.



Secure the installation using the clamp.

Replace the existing switch breaker in the machine with the new switch breaker supplied with the kit.

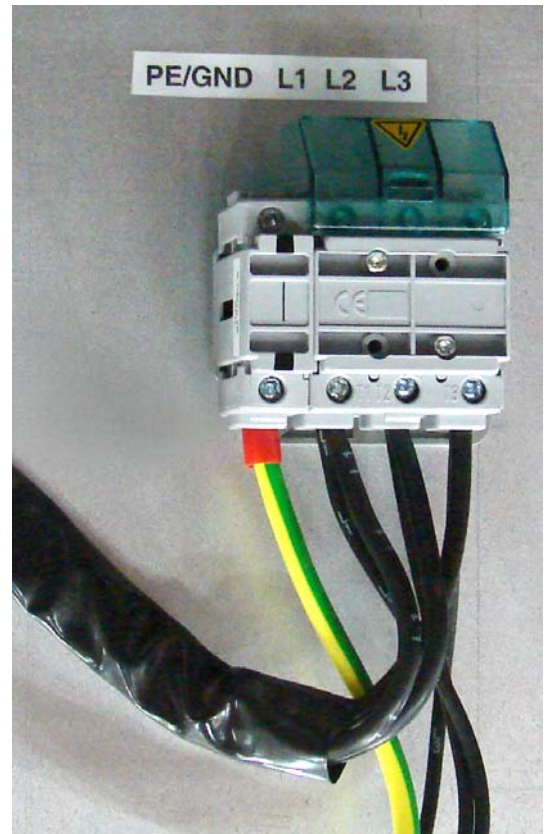
Connect together the power circuit cables leading from contactors **KM1** and **KA1** to the outgoing terminals of the section switch.

Connect the **GROUND** cable.



**Caution!**  
When connecting the cables to the switch terminals pay careful attention to:  
- Insert all the threads that make up the cable.  
- Only insert the uncovered tip. Do not press the cable insulation.  
- Tighten the screws firmly.

**Non-compliance with these warnings causes the premature deterioration of the cables and increases the risk of a short circuit.**



Assemble the covers on the back and top.  
Verifying heating system operation can be performed through the electrical terminal box door.

Secure the back cover.

If a steam heating system has been previously removed, assemble the steam conduction input protection device using the cover supplied.

To secure the self-threading screws, drill to  $\varnothing 4\text{mm}$ .



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**VERIFICATION AND FINISHING THE KIT ASSEMBLY.****VERY IMPORTANT!**

**CHECK THAT THE ELECTRICAL INSTALLATION AND THE AUTOMATIC SWITCH HAVE BEEN UPDATED IN COMPLIANCE WITH THE NEW POWER INSTALLED IN THE MACHINE. CHECK THE TABLE AT THE END OF THIS MANUAL.**

**OTHERWISE, DO NOT START THE MACHINE.**

**THERE ARE VOLTAGE AREAS OF UP TO 415V INSIDE THE WASHER. PERFORM CURRENT MEASURING OPERATIONS WITH MAXIMUM CARE WHEN USING AN AMMETER CLAMP.**

Check that the drainpipe outlet is inserted and secured correctly.

Connect any possible external dosing signalling connections on the washer.

Connect the electric supply cables to the switch breaker input terminals on the washer.

**VERY IMPORTANT!**

**If the heater kit installation requires a modification to the electrical supply cable, adapt the fastening elements of the new cable in the washer input.**

Connect the external automatic protection switch and the switch breaker.

Open the water inlet valves.

Load the washing machine with linen and close the door.

Run a washing cycle, preferably at a high temperature.

During the heating process, visually verify the heater contactor connection and measure the heater consumption. Check the values in the attached table.

Once the washing cycle has finished, disconnect the external automatic protection switch.

Disassemble the back cover and check that no leaks from the bath have occurred while running the washing cycle.

If the test result is satisfactory, assemble and secure all the covers.

**UPDATING THE CONTENTS OF THE FEATURES NAMEPLATE**

**Model HS-4022.**

An extra features nameplate without values is included in the kit.

Cut on the dotted line and use the fragment in the same language as the features nameplate.

Fill in the empty boxes with a permanent marker.

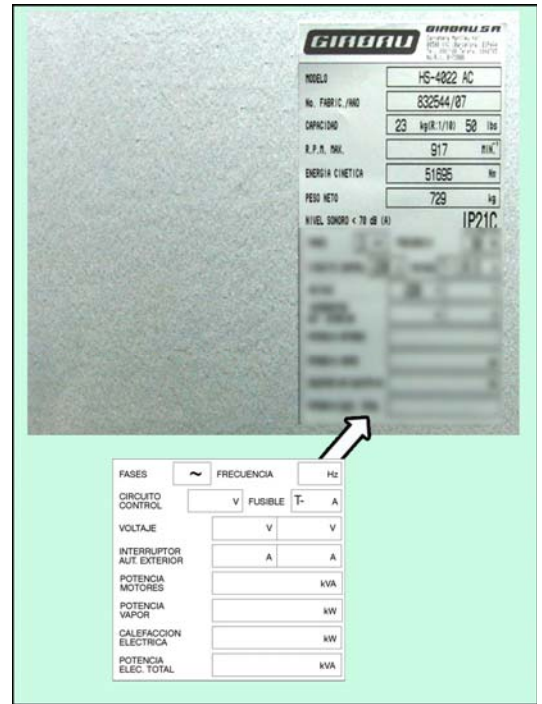
1. Copy the values from the old plate in the following boxes:

- PHASES
- FREQUENCY
- CONTROL CIRCUIT (V)
- FUSES
- VOLTAGE
- MOTOR POWER

This information does not change when the kit is assembled.

2. Fill in the rest of the boxes according to the values of the attached table.

3. Affix the extra features nameplate with the new values over the current plate.



**Electrical wiring technical features table**

Power source		Electric heating	External automat. switch	Cable	Total electrical power
Ph	Volts	(kW)	(A)	(* x mm <sup>2</sup> )	(kWA)
3	200	13.61	63	3x10+	14.3
	208	14.72	63	3x10+	15,4
	220	16.47	63	3x10+	17,2
	230	18.00	63	3x10+	18,7
	240	18.00	63	3x10+	18,7
	380	16.47	32	3x6+	17,2
	400	18.00	32	3x6+	18,7
	415	18.00	32	3x6+	18,7
	440	20.10	32	3x6+	20,8

**Remarks:**

Cable features:

* x mm <sup>2</sup>	* mm <sup>2</sup>	number of cables section of the cable
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**Model H2055.**

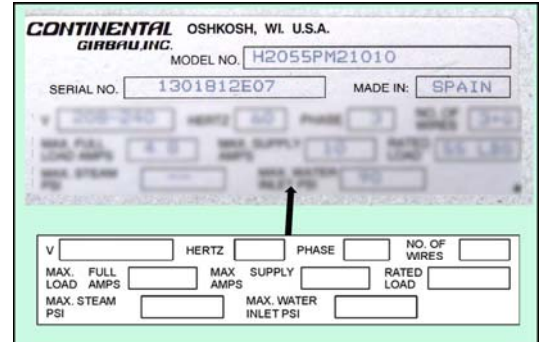
An extra features nameplate without values is included in the kit.

Fill in the empty boxes on the extra features nameplate with a permanent marker.

1. Copy the values from the old plate in the following boxes:
  - VOLTS (V)
  - HERTZ
  - PHASE
  - NO. OF WIRES
  - RATED LOAD (LBS)
  - MAX WATER INLET (PSI)

This information does not change when the kit is assembled.

2. Fill in the rest of the boxes according to the values in the attached table.
3. Affix the extra features nameplate with the new values over the current plate.



**Electrical wiring technical features table**

Power source:		Max supply	Wires	Max full load
Ph	Volts	Amps	num x AWG	Amps
3	208 240	60	3 x 6 + GND	45

**Remarks:**

Max. supply	external protection rate (fuse or automatic switch)
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