HS-4040 / H2090

STEAM 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 block the water supply valves and check that the tub 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 protection devices.
- 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.

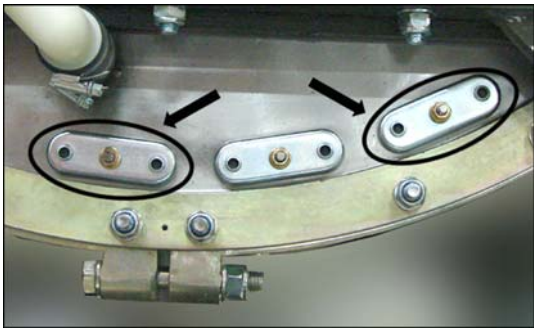
PRE-INSTALLATION STEPS.

Disassembly of the existing heating system.

Close and mechanically block the water inlet valves.
Close and mechanically block 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.
Disassemble the central back cover, the inverter protection covers and the electric terminal box cover.

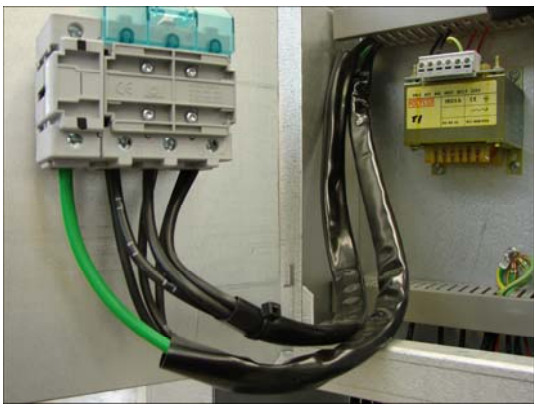
Machines without a heating system:

Disassemble the outer housing plugs.



Machines with electric heating systems:

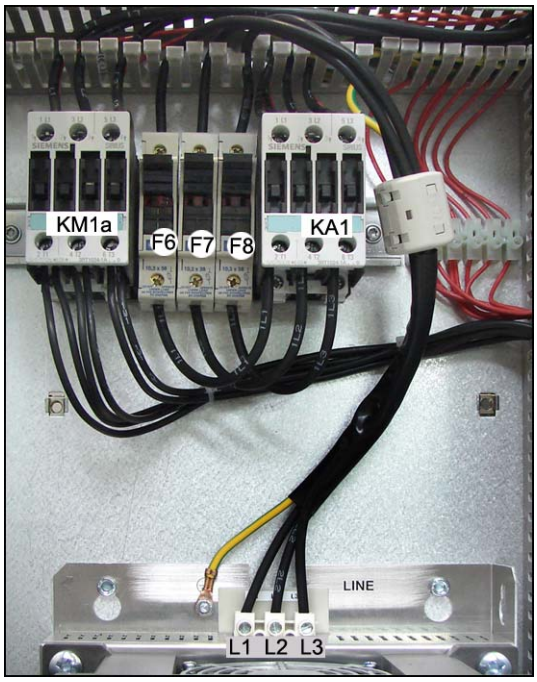
Disconnect the cables from the heaters.
Disassemble the outer drum heaters.
Assemble the central plug.



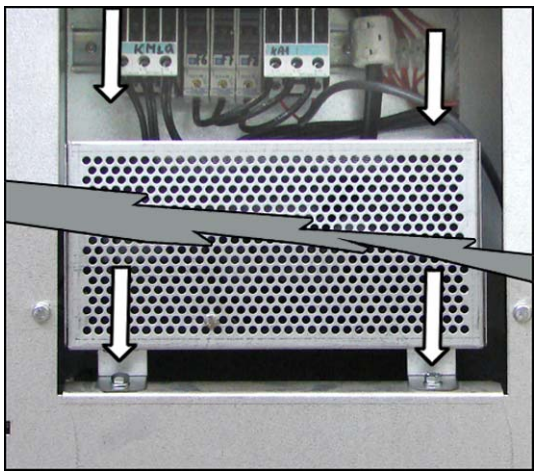
Disconnect the power contactor circuit cables **KM1a** (200/240V machines use two contactors), from the washer switch breaker output terminals and re-connect the rest of the installation.

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

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



Disconnect the ground cables from the fixing screw.
Disconnect the **KM1a** power contactor coil cables from terminal strip **X1**.
Disassemble the mounting clamps and remove the installation.



For access to the grooved canals it is necessary to disassemble the inverter protection covers. In machines with fans on the cover, disconnect the fan cable first.

Once the electrical wiring has been removed, cover the cable conduction ducts.
Assemble the inverter protection cover and connect the fan.

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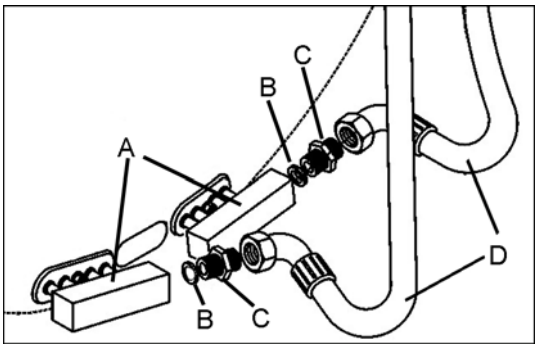
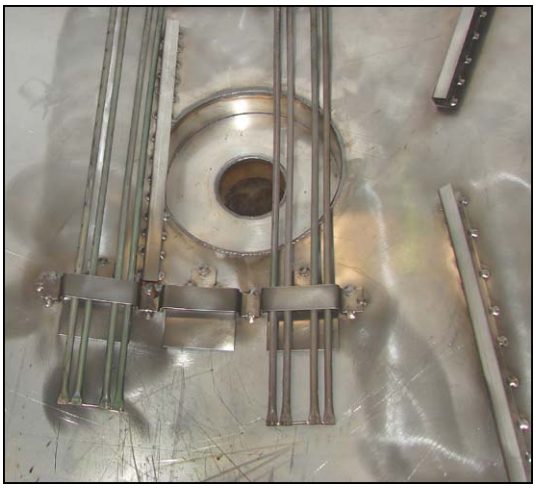
KIT ASSEMBLY.
Assemble the steam inlet couplings (**C**) to the distributors (**A**).
Seal the joints with copper joints (**B**).
Assemble the distributors to the housings at the ends of the outer drum.
Assemble the steam inlet joining tubes (**D**) in the joining couplings. Do not tighten the nuts.

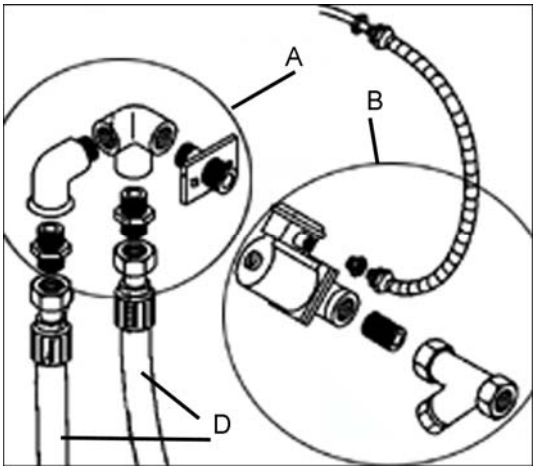


Caution!
For easier assembly, wet the rubber joint on the distributors with soapy water.
Do not use lubricants.

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



Assemble the steam conduction pipe connection coupling set (**A**) to the back cover.
Assemble the electrovalve and filter set (**B**) to the steam inlet.
Connect the steam conduction pipes (**D**) and tighten the couplings at both ends.



Caution!
Seal the joints with sealing paste that is appropriate for steam pipe conducts.

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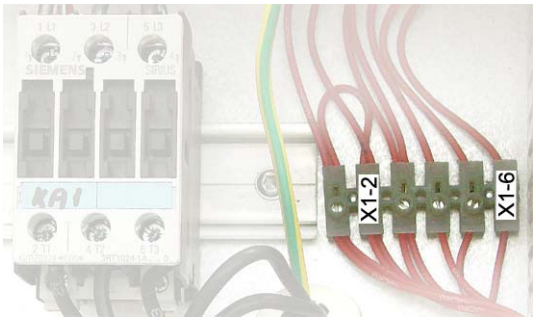
Remove the plastic gland from the electrovalve terminal box and secure the wiring with the metal glands supplied with the kit. Connect the installation cables to the electrovalve terminals. Secure the installation to the back cover.

Connect the electrovalve power coil cables to terminals **2** and **6** on terminal strip **X1**.

Secure the installation avoiding moving parts and high temperature areas.

Close the terminal box door.



CONNECTION TO THE STEAM CIRCUIT ON THE INSTALLATION.

CAUTION!
Request that an authorized installer connect the washer to the steam circuit on the installation.

- Washer B.S.P. steam filter entry thread (inch) 3/4.
- Supply pressure: 2-6kg/h (PSI 29-87 lbs/h)
- Before connecting the installation to the electrovalve, purge the conduit pipes.
- Insert a mechanically lockable manual bypass valve into the steam inlet in an accessible place.
- Safeguard the installation against accidental contact. Insulating the installation to prevent heat loss is recommended.

VERIFICATION AND FINISHING THE KIT ASSEMBLY.

VERY IMPORTANT!

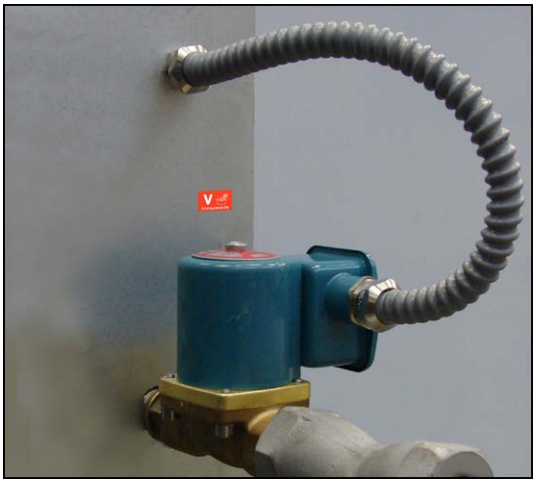
CHECK THAT THE ELECTRICAL INSTALLATION AND THE AUTOMATIC SWITCH HAVE BEEN UPDATED IN COMPLIANCE WITH THE NEW POWER INSTALLED IN THE MACHINE. CHECK THE TABLE AT THE END OF THIS MANUAL.
OTHERWISE, DO NOT START THE MACHINE.

Verification of the steam circuit watertightness requires operating the washer without the protection of the back cover.
For this reason:

- **TAKE MAXIMUM SAFETY MEASURES**
- **STAY AT A MINIMUM DISTANCE OF 0.5m. FROM THE BACK SIDE OF THE WASHER**
- **NEVER TOUCH ANY INSIDE COMPONENT**

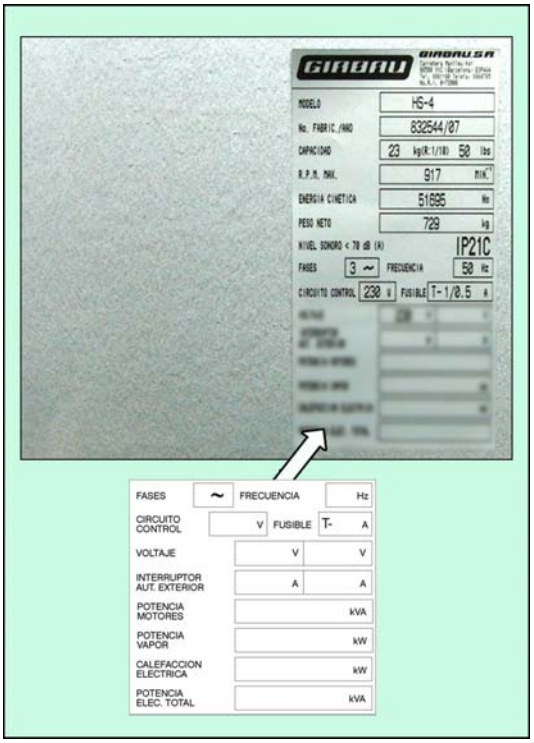
Check that the drainpipe outlet is inserted and secured correctly.
Connect any possible external dosing signalling connections on the washer.
Connect the electric supply cables to the switch breaker input terminals on the washer.

VERY IMPORTANT!
If the heating 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 and the steam circuit inlet valve.
Load the washing machine with linen and close the door.
Run a washing cycle, preferably at a high temperature.
Visually verify the watertightness of the steam pipe conduction threaded unions. **NEVER TOUCH ANY INSIDE WASHER COMPONENT**.
Once the washing cycle is finished, disconnect the external automatic protection switch and close the steam and water inlet valves.
If the test result is satisfactory, assemble and secure all the covers.
Stick the heating label next to the steam valve.

UPDATING THE CONTENTS OF THE FEATURES NAMEPLATE



Model HS-4040.

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:		External automat. switch	Steam power	Total steam power	Cable
Ph	**Volts**	**(A)**	**(kW)**	**kVA**	**(✶ x mm²)**
3	**200** **240**	16	135	4.8	3x2.5+ ⏚
	380 **480**	10	135	4.8	3x2.5+ ⏚

Remarks:

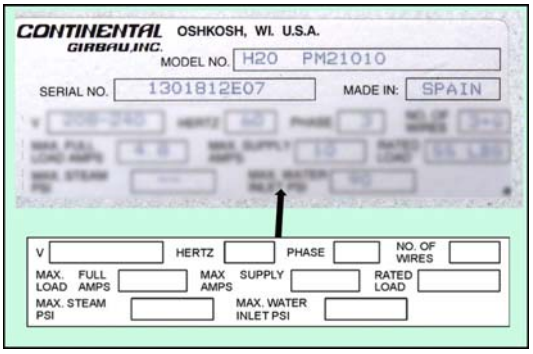
Cable features:

✶ x mm²	**✶**	number of cables
	mm²	section of the cable

Model H2090.

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)
   - HERTH
   - 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 full load	Max supply	Max steam	Wires
Ph	**Volts**	**Amps**	**Amps**	**PSI**	**num x AWG**
3	**208**	13.2	15	90	3 x 14 + GND
	240				
	440	6.3	10	90	3 x 14 + GND
	480				

Remarks:

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