



PREHEATER



IT

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EN

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6099

Heating system

**This manual is to be considered as an English language translation of the original manual in Italian.
The manufacturer shall bear no responsibility for any damages or inconveniences that may arise due to
the incorrect translation of the instructions contained within the original manual in Italian.**

Due to a constant product improvement program, the factory reserves the right to modify
technical details mentioned in this manual without prior notice.

PREHEATER

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**WE ADVISE THE USE OF THIS EQUIPMENT ONLY BY PROFESSIONAL OPERATORS.
ONLY USE THIS MACHINE FOR USAGE SPECIFICALLY MENTIONED IN THIS MANUAL.**

Thank you for choosing a **SAMOA** product.
As well as the product purchased, you will receive a range of support services
enabling you to achieve the results desired, quickly and professionally.

A WARNINGS

The table below provides the meaning of the symbols used in this manual in relation to using, earthing, operating, maintaining, and repairing of this equipment.

	<ul style="list-style-type: none"> • Read this operator's manual carefully before using the equipment. • An improper use of this machine can cause injuries to people or things. • Do not use this machine when under the influence of drugs or alcohol. • Do not modify the equipment under any circumstances. • Use products and solvents that are compatible with the various parts of the equipment, and read the manufacturer's warnings carefully. • See the Technical Details for the equipment given in the Manual. • Check the equipment for worn parts once a day. If any worn parts are found, replace them using ONLY original spare parts. • Keep children and animals away from work area. • Comply with all safety standards.
	<ul style="list-style-type: none"> • It indicates an accident risk or serious damage to equipment if this warning is not followed.
	FIRE AND EXPLOSION HAZARD <ul style="list-style-type: none"> • Solvent and paint fumes in work area can ignite or explode. • To help prevent fire and explosion: <ul style="list-style-type: none"> - Use equipment ONLY in well ventilated area. - Eliminate all ignition sources, such as pilot lights, cigarettes and plastic drop cloths (potential static arc). - Ground equipment and conductive objects. - Use only grounded hoses. - Do not use trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminium equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage. - Do not form connections or switch light switches on or off if the air contains inflammable fumes. • If electrical shocks or discharges are encountered the operation being carried out using the equipment must be stopped immediately. • Keep a fire extinguisher at hand in the immediate vicinity of the work area.
  	
	<ul style="list-style-type: none"> • It indicates wound and finger squashing risk due to movable parts in the equipment. • Keep away from moving parts. • Do not use the equipment without the proper protection. • Before any inspection or maintenance of the equipment, carry out the decompression procedure explained in this manual, and prevent any risk of the equipment starting unexpectedly.
 	<ul style="list-style-type: none"> • Report any risk of chemical reaction or explosion if this warning has not been given. • (IF PROVIDED) There is a risk of injury or serious lesion related to contact with the jet from the spray gun. If this should occur, IMMEDIATELY contact a doctor, indicating the type of product injected. • (IF PROVIDED) Do not spray before the guard has been placed over the nozzle and the trigger on the spray gun. • (IF PROVIDED) Do not put your fingers in the spray gun nozzle. • Once work has been completed, before carrying out any maintenance, complete the decompression procedure.
	<ul style="list-style-type: none"> • It indicates important recommendations about disposal and recycling process of products in accordance with the environmental regulations.
    	<ul style="list-style-type: none"> • Mark any clamps attached to earth cables. • Use ONLY 3-wire extension cords and grounded electrical outlets. • Before starting work make sure that the electrical system is grounded and that it complies with safety standards. • High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. • To help prevent injection, always: <ul style="list-style-type: none"> - (IF PROVIDED) Engage trigger lock when not spraying. - (IF PROVIDED) Do not put your hand over the spray tip. Do not stop or deflect leaks with your hand, body or other. - (IF PROVIDED) Do not point gun at anyone or at any part of the body. - (IF PROVIDED) Never spray without tip guard. - Do pressure relief if you stop spraying or being servicing sprayer and before any maintenance operations. - Do not use components rated less than sprayer Maximum Working Pressure. - Never allow children to use this unit - (IF PROVIDED) Brace yourself; gun may recoil when triggered. • If high pressure fluid pierces your skin, the injury might look like "just a cut", but it is a serious wound! Get immediate medical attention.
   	<ul style="list-style-type: none"> • It is obligatory to wear suitable clothing as gloves, goggles and face shield. • Wear clothing that complies with the safety standards in force in the country in which the equipment is used. • Do not wear bracelets, earrings, rings, chains, or anything else that may hinder the operator's work. • Do not wear clothing with wide sleeves, scarves, ties, or any other piece of clothing that could get tangled up in moving parts of the equipment during the work, inspection, or maintenance cycles.

E TRANSPORT AND UNPACKING

- The packed parts should be handled as indicated in the symbols and markings on the outside of the packing.
- Before installing the equipment, ensure that the area to be used is large enough for such purposes, is properly lit and has a clean, smooth floor surface.
- The user is responsible for the operations of unloading and handling and should use the maximum care so as not to damage the individual parts or injure anyone.

To perform the unloading operation, use only qualified and trained personnel (truck and crane operators, etc.) and also suitable hoisting equipment for the weight of the installation or its parts.

Follow carefully all the safety rules.

The personnel must be equipped with the necessary safety clothing.

- The manufacturer will not be responsible for the unloading operations and transport to the workplace of the machine.
- Check the packing is undamaged on receipt of the equipment. Unpack the machine and verify if there has been any damage due to transportation.

In case of damage, call immediately the manufacturer and the Shipping Agent. All the notices about possible damage or anomalies must arrive timely within 8 days at least from the date of receipt of the plant through Registered Letter to the Shipping Agent and to the manufacturer.



The disposal of packaging materials is a customer's competence and must be performed in accordance with the regulations in force in the country where the plant is installed and used. It is nevertheless sound practice to recycle packaging materials in an environment-friendly manner as much as possible.

F CONDITIONS OF GUARANTEE



The conditions of guarantee do not apply in the following situations:

- improper washing and cleaning of components causing malfunction, wear or damage to the equipment or any of its parts;
- improper use of the equipment;
- use that does not conform with applicable national legislation;
- incorrect or faulty installation;
- modifications, interventions and maintenance that have not been authorised by the manufacturer;
- use of non-original spare parts or parts that do not correspond to the specific model;
- total or partial non-compliance with the instructions provided.

G SAFETY RULES



Read carefully and entirely the following instructions before using the product. Please save these instructions in a safe place.



The unauthorised tampering/replacement of one or more parts composing the machine, the use of accessories, tools, expendable materials other than those recommended by the manufacturer can be a danger of accident.



The manufacturer will be relieved from tort and criminal liability.

- THE EMPLOYER SHALL TRAIN ITS EMPLOYEES ABOUT ALL THOSE RISKS STEMMING FROM ACCIDENTS, ABOUT THE USE OF SAFETY DEVICES FOR THEIR OWN SAFETY AND ABOUT THE GENERAL RULES FOR ACCIDENT PREVENTION IN COMPLIANCE WITH INTERNATIONAL REGULATIONS AND WITH THE LAWS OF THE COUNTRY WHERE THE PLANT IS USED.
- THE BEHAVIOUR OF THE EMPLOYEES SHALL STRICTLY COMPLY WITH THE ACCIDENT PREVENTION AND ALSO ENVIRONMENTAL REGULATIONS IN FORCE IN THE COUNTRY WHERE THE PLANT IS INSTALLED AND USED.
- KEEP YOUR WORK PLACE CLEAN AND TIDY. DISORDER WHERE YOU ARE WORKING CREATES A POTENTIAL RISK OF ACCIDENTS.
- ALWAYS KEEP PROPER BALANCE AVOIDING UNUSUAL STANCE.
- BEFORE USING THE TOOL, ENSURE THERE ARE NOT DAMAGED PARTS AND THE MACHINE CAN WORK PROPERLY.
- ALWAYS FOLLOW THE INSTRUCTIONS ABOUT SAFETY AND THE REGULATIONS IN FORCE.
- KEEP THOSE WHO ARE NOT RESPONSIBLE FOR THE EQUIPMENT OUT OF THE WORK AREA.
- **NEVER** EXCEED THE MAXIMUM WORKING PRESSURE INDICATED.
- (IF PROVIDED) **NEVER** POINT THE SPRAY GUN AT YOURSELVES OR AT OTHER PEOPLE. THE CONTACT WITH THE CASTING CAN CAUSE SERIOUS INJURIES.
- IN CASE OF INJURIES CAUSED BY THE GUN CASTING, SEEK IMMEDIATE MEDICAL ADVICE SPECIFYING THE TYPE OF THE PRODUCT INJECTED. **NEVER** UNDERVALUE A WOUND CAUSED BY THE INJECTION OF A FLUID.
- ALWAYS DISCONNECT THE SUPPLY AND RELEASE THE PRESSURE IN THE CIRCUIT BEFORE PERFORMING ANY CHECK OR PART REPLACEMENT OF THE EQUIPMENT.
- NEVER MODIFY ANY PART IN THE EQUIPMENT. CHECK REGULARLY THE COMPONENTS OF THE SYSTEM. REPLACE THE PARTS DAMAGED OR WORN.
- (IF PROVIDED) TIGHTEN AND CHECK ALL THE FITTINGS

FOR CONNECTION BETWEEN PUMP, FLEXIBLE HOSE AND SPRAY GUN BEFORE USING THE EQUIPMENT.

- ALWAYS USE THE FLEXIBLE HOSE SUPPLIED WITH STANDARD KIT.
- THE USE OF ANY ACCESSORIES OR TOOLING OTHER THAN THOSE RECOMMENDED IN THIS MANUAL, MAY CAUSE DAMAGE OR INJURE THE OPERATOR.
- THE FLUID CONTAINED IN THE FLEXIBLE HOSE CAN BE VERY DANGEROUS. HANDLE THE FLEXIBLE HOSE CAREFULLY. DO NOT PULL THE FLEXIBLE HOSE TO MOVE THE EQUIPMENT. NEVER USE A DAMAGED OR A REPAIRED FLEXIBLE HOSE.

Never spray over flammable products or solvents in closed places.

Never use the tooling in presence of potentially explosive gas.

Always check that the product is compatible with the materials composing the equipment (*pump, spray gun, flexible hose and accessories*) with which it can come into contact. Never use paints or solvents containing Halogen Hydrocarbons (as the *Methylene Chloride*). If these products come into contact with aluminium parts can provoke dangerous chemical reactions with risk of corrosion and explosion.



Avoid approaching too much to the pump piston rod when the pump is working or under pressure. A sudden movement of the piston rod can cause wounds or finger squashing.



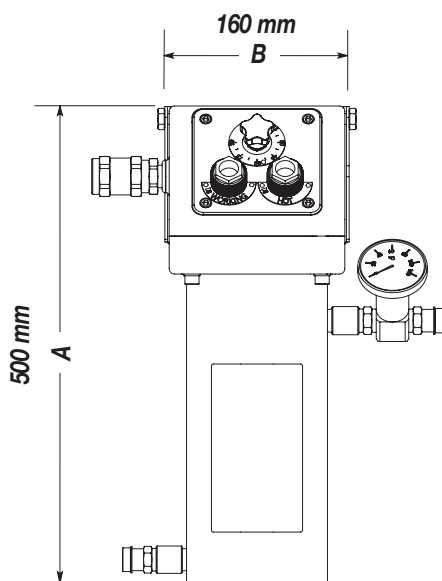
The high speed of travel of the product in the hose can create static electricity through discharges and sparks. It is suggested to earth the equipment. The pump is earthed through the earth cable of the supply. The gun is earthed through the high pressure flexible hose. All the conductors near the work area must be earthed.



If the product to be used is toxic, avoid inhalation and contact by using protection gloves, goggles and proper face shields.

Take proper safety measures for the protection of hearing in case of work near the plant.

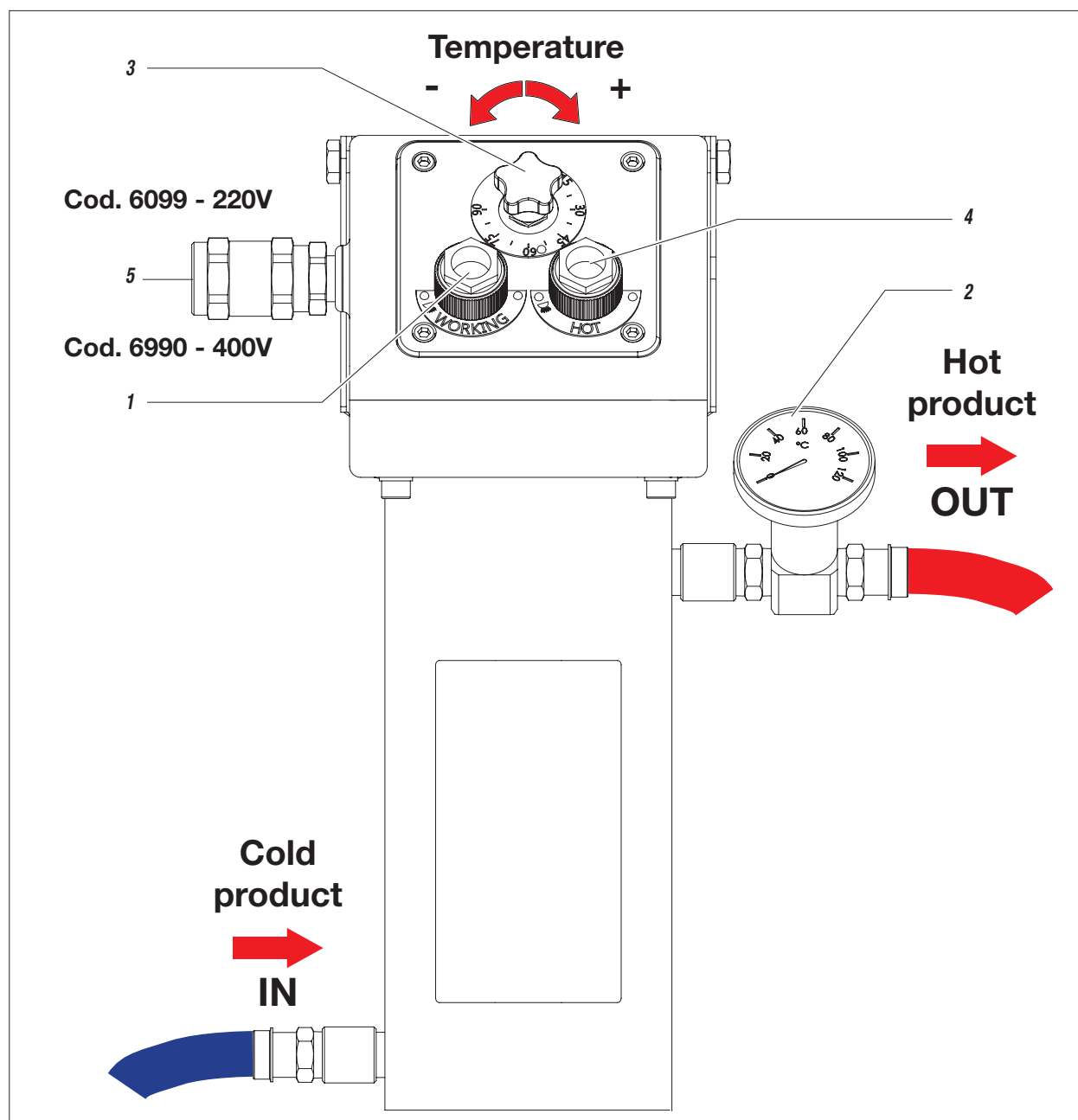
E TECHNICAL DATA



PREHEATER	
Supply voltage	230V
Current	10A
Power of the heating element	2200W
Max working pressure	300 bar
Weight	20Kg
Max working temperature	90°C
Temperature pressure range	T. amb-90°C
Inlet - Outlet	1/2" BSPT (M) 1/2" BSPP (M)
Delivery	60l/h at 60°C
Height (A)	500 mm
Width (B)	160 mm

F WORKING PRINCIPLE

The preheater is an electrically-operated explosion-proof equipment and can be combined with airless and air spray systems. A green indicator light (1) indicates that the connection to the power line has been made. The fluid is heated through an electrical resistor that sends the heat generated to the spiral stainless-steel tube that flows inside the preheater body. The temperature of the fluid detected by the thermometer (2) can be adjusted by acting on the appropriate adjustment knob (3). The switching on of the red temperature indicator light (4) indicates that the chosen temperature has been reached, while a thermostat ensures that its value remains constant. If the thermostat does not act due to a fault in itself or in the probe connected to it, when the temperature inside the preheater reaches 130°, the safety thermostat triggers and opens the electrical circuit, thus interrupting the supply of current.



Pos.	Description
1	Green indicator light (entered temperature)
2	Thermometer
3	Temperature adjustment knob

Pos.	Description
4	Red indicator light (temperature reached)
5	Electrical connection

G ROUTINE MAINTENANCE



Always disconnect the power supply before carrying out any type of check or replacement of the electrical components of the preheater.

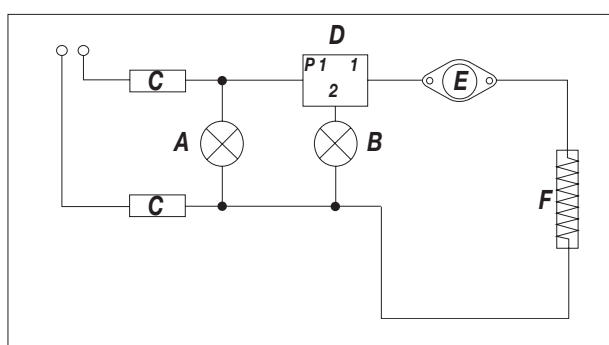
- Always remember to clean the preheater after use to prevent the fluid from solidifying inside it when it cools down.

- Disconnect the electrical connection and let the fluid circulate for a few minutes until the preheater has cooled down before using the solvent for washing, thus avoiding the sudden expansion of the solvent inside the preheater due to the heat with consequent increase of pressure.

H ELECTRICAL CONNECTION



Always disconnect the power supply before carrying out any type of check or replacement of the electrical components of the preheater.



Pos.	Description
A	Green indicator light (entered temperature)
B	Red indicator light (temperature reached)
C	Fuse
D	Thermostat
E	Manual reset safety thermostat
F	Heating element

Fig. 1H

ELECTRICAL CONNECTIONS

- To access the inside of the preheater, remove the front cover (H1).
- First of all, check the continuity of the electric cables and the fuses.
- To replace the indicator light bulb, if necessary, do not try to remove the front ring nut (H2), but unscrew the glass locking ring (H3).

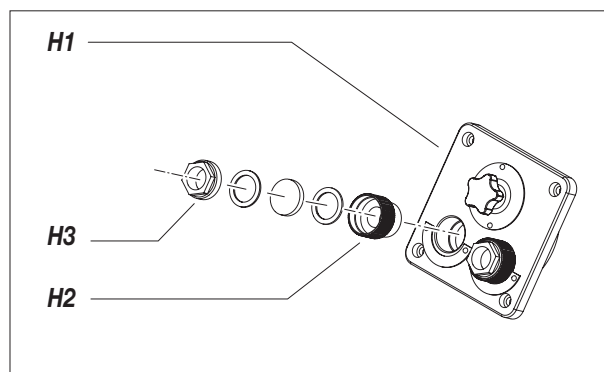


Fig. 2H

- To reset the safety thermostat (H4), press the special button (H5). Check the cause of the trigger: check that the thermostat probe has not come out of its seat and that the connection cable to the thermostat is not damaged. If necessary, replace the entire thermostat.

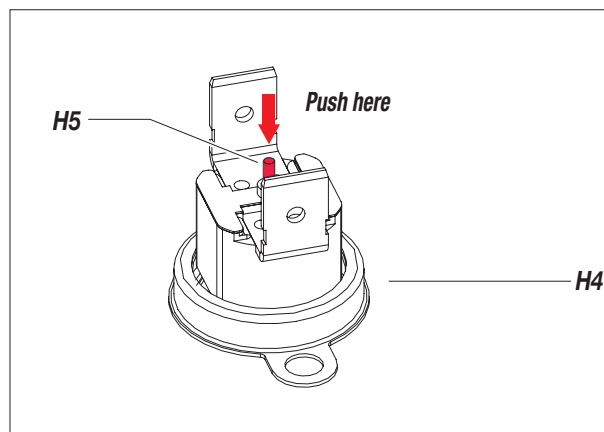


Fig. 3H

- To replace the heating element (**H6**), remove the case (**H7**).

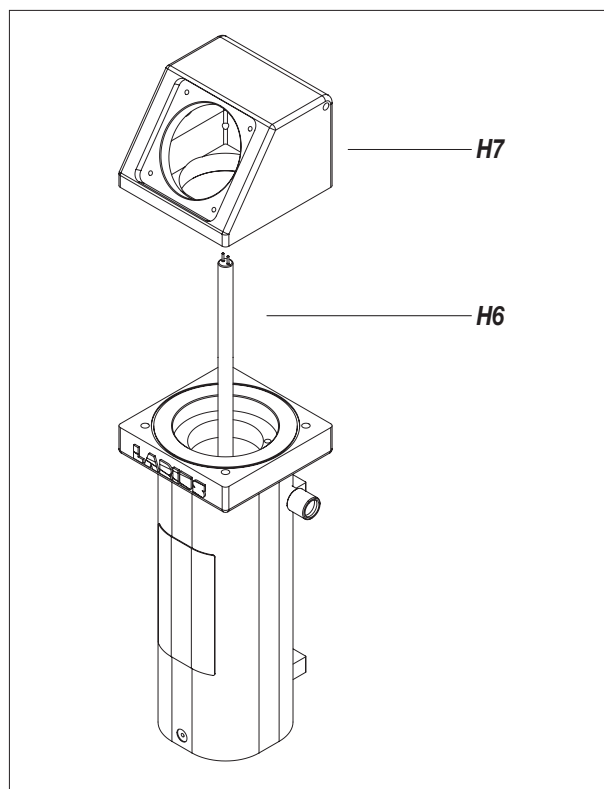


Fig. 4H

NOTE

After replacing each electrical component, check the correct connection of the cables.

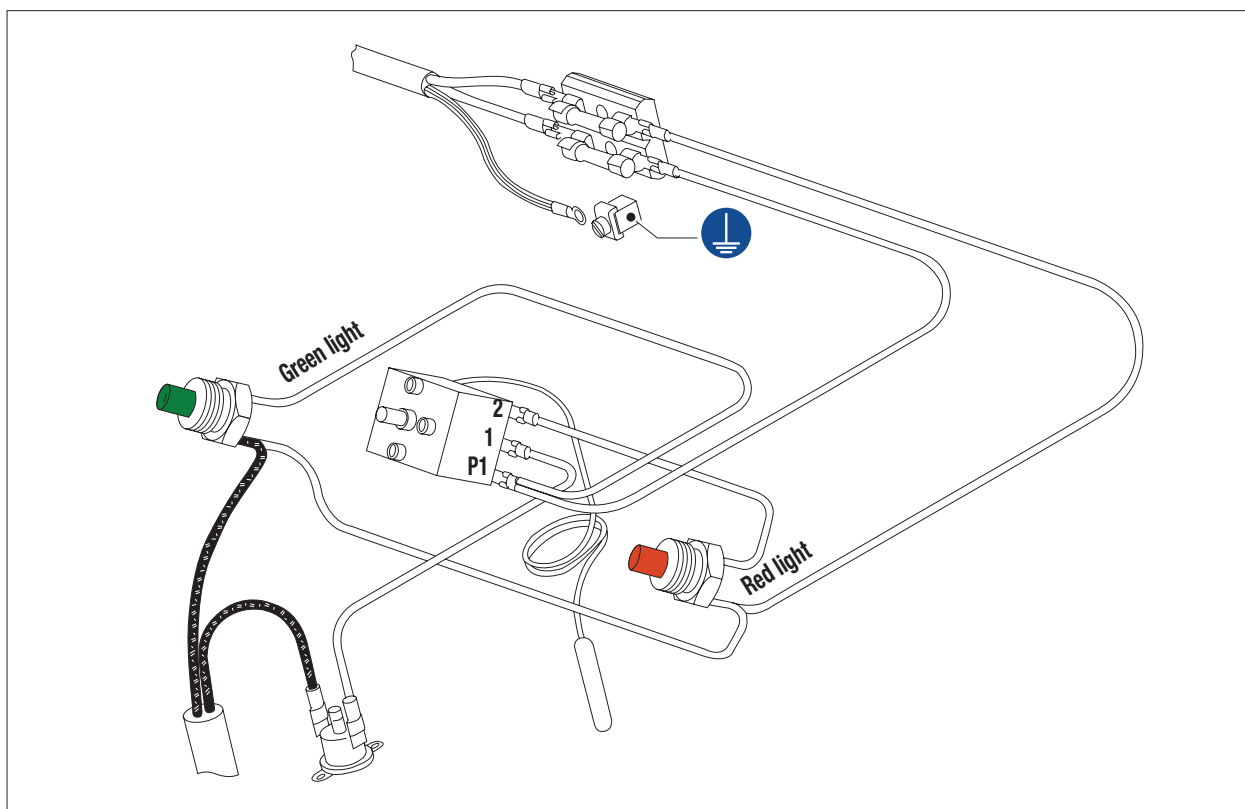
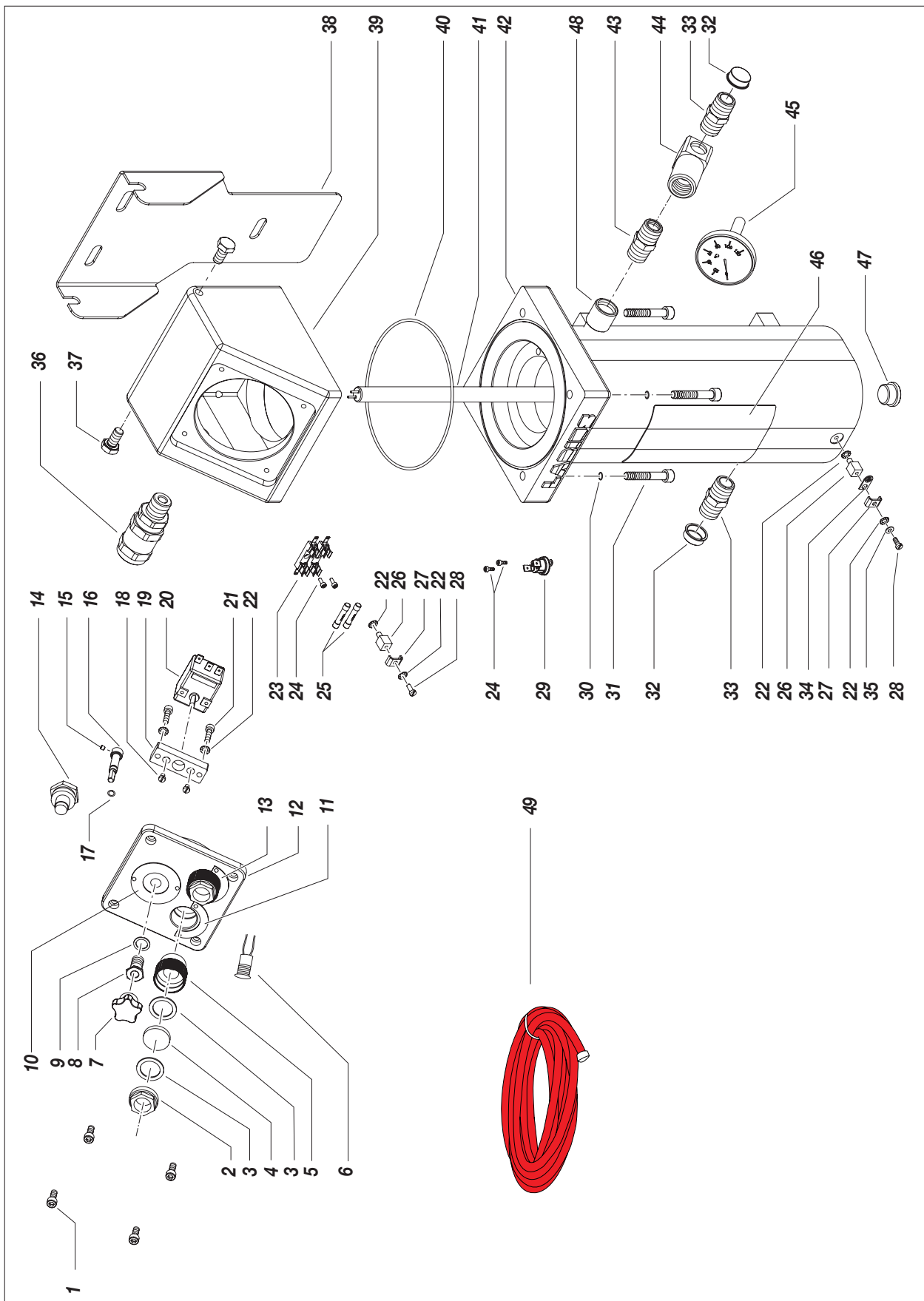


Fig. 5H

I EXPLODED VIEW OF THE PREHEATER



Pos.	Code	Description	Q.ty
1	54004	Screw	4
2	6121	Glass locking ring	2
3	6118	Glass PTFE gasket	4
4	6120	Protection glass	2
5	6119	Bulb housing	2
6	6115	Bulb 220V green - Vers. 220V	1
	6115/2	Bulb 400V green - Vers. 400V	1
	6116	Bulb 220V red - Vers. 220V	1
	6116/2	Bulb 400V red - Vers. 400V	1
7	6129	Handwheel	1
8	6125	Temperature regulator bush	1
9	6124	Seal ring	1
10	6131	Adhesive label thermostat temperature	1
11	6133	Operation indication label	1
12	6104	Cover	1
13	6132	Temperature indication label	1
14	6105	Light bulb holder bushing	2
15	6127	Stud bolt	1
16	6126	Thermostat control rod	1
17	6128	O-Ring	1
18	9220	Screw	2
19	6123	Thermostat plate	1
20	6122	Thermostat	1
21	5339	Screw	2
22	5737	Washer	6
23	6108	Fuse holder vers. 220V	2
	6108/1	Fuse holder vers. 400V	2
24	9308	Screw	4

Pos.	Code	Description	Q.ty
25	6109	Fuse vers. 220V	2
	6109/1	Fuse vers. 400V	2
26	6112	Grounding	2
27	6113	Grounding plate	2
28	6111	Screw	2
29	6138	Safety thermostat only vers. 220V	1
30	32024	Washer	4
31	6151	Screw	4
32	107	Plastic plug	2
33	8137-1	Nipple	2
34	96210	Grounding plate	1
35	5339	Washer	1
36	6140	Cable glands	1
37	6130	Screw	4
38	6137	Wall support	1
39	6103	Casing	1
40	6114	Gasket	1
41	6107	Resistor vers. 220V	1
	6107/2	Resistor vers. 400V	1
42	6100	Preheater body	1
43	8137-2	Nipple	1
44	6146	Fitting for thermometer	1
45	6139	Thermometer	1
46	6134	Technical data label vers. 220 V	1
	6134/2	Technical data label vers. 400 V	1
47	95216	Plug	1
48	6102	Fitting	2
49	6144	Red silicone rubber cable 3x1,5	1,5 mt

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