[2019-05]

MOD:D-270-272

DSL TECH

WENZHOU DSL MACHINE CO.,LTD.

INTRODUCTION

DSL MACHINE is designed and constructed according to the latest standards, and guarantee optimal reliability and performance.
This manual contains all information required for correct installation and the procedures for operation and maintenance.
Carefully read the instruction manual before carrying out any work on the machine.
The manufacturer declines all liability for damage or physical injury caused by incorrect installation or use of the machine.

The illustrations and information in this manual are to be considered guideline only. The manufacturer reserves the right to modify MACHINE at any time without notice, when deemed neceeesary for design or commercial purposes.

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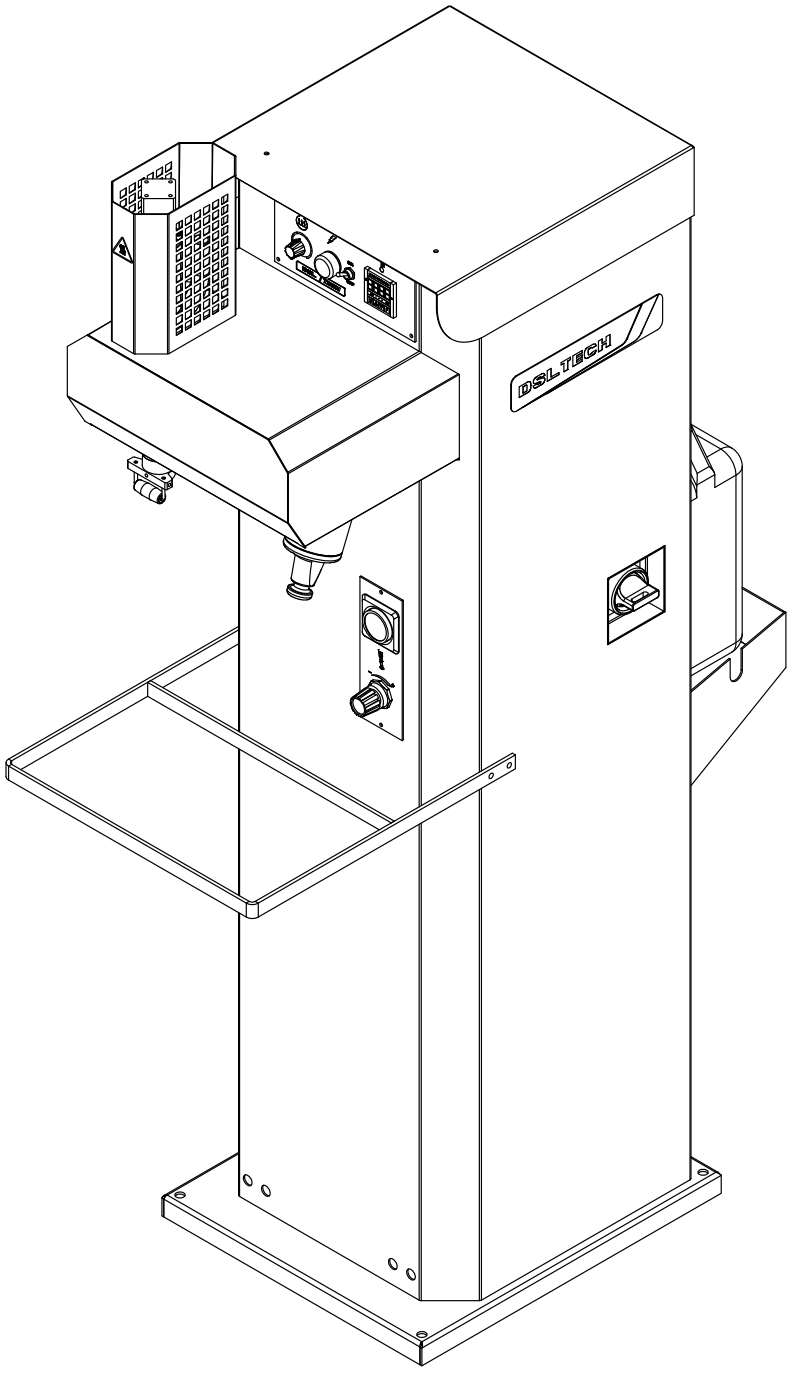
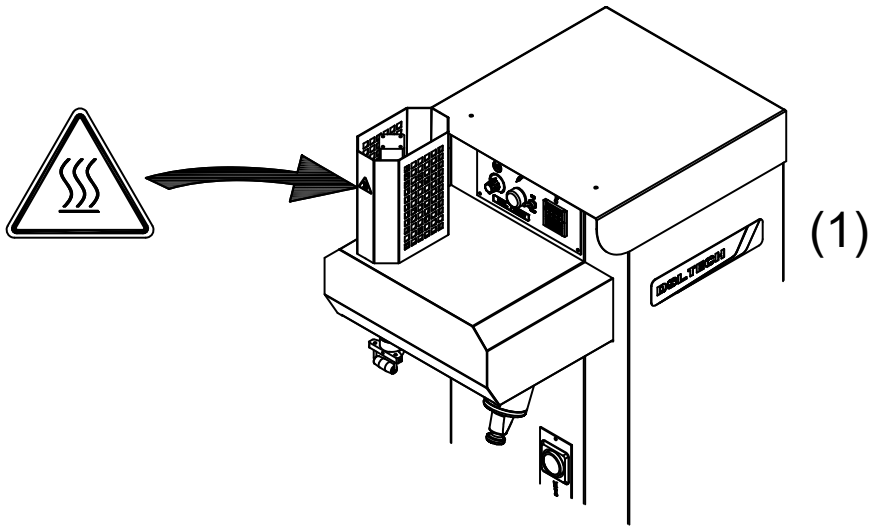
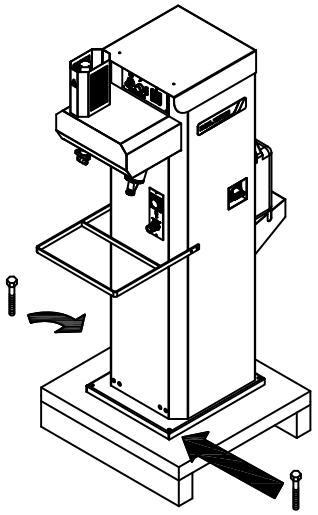

DSL TECH



(1)

Fig.1



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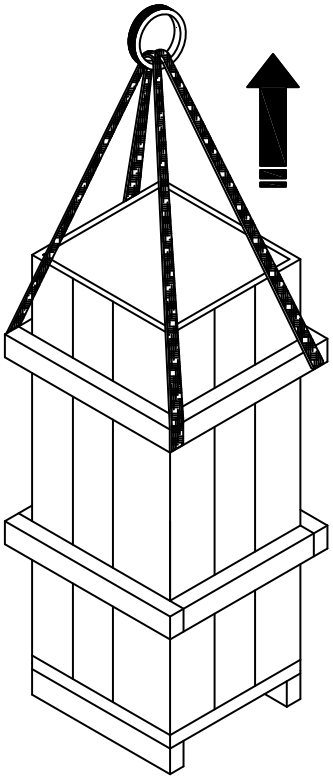

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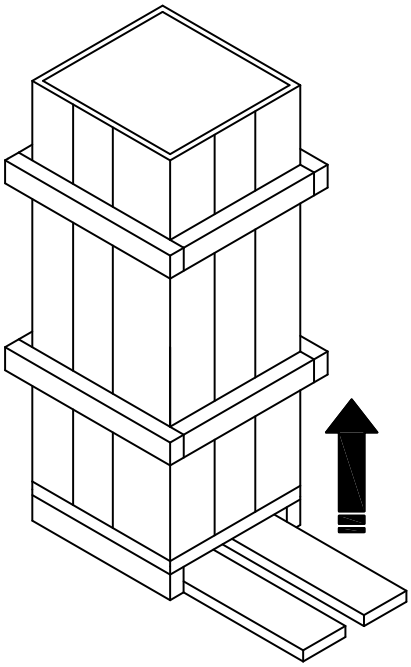


(4)

1) GENERAL INFORMATION (Fig. 1)

<u>CAUTION:</u> the heat setting machine must be used by a single operator exclusively for the heat setting of articles in leather, fabric and synthetic materials. The manufacturer declines all responsibility for consequences deriving from improper use of the machine.
All hot parts of the machine are well protected, and therefore the operator needs only to avoid exposing the hands or other parts of the body in the area surrounding the outlet of hot air mixed with steam (see 1, fig. 1), bearing the warning symbol:

<u>Danger: heat emission. Do not touch hot unit:</u> this unit can reach temperatures up to 550°C (1022°F): burning hazard.

The heat setting operation is performed by subjecting the article to a jet of hot air and steam delivered from a special nozzle; the operation is facilitated by the presence of a setting roller below the nozzle.
The machine is supplied with an air temperature control and regulator for the quantity of steam, generated by a special boiler inside the machine.

2) HANDLING THE MACHINE (Fig. 1)

The machine is usually delivered without packaging. If delivered packaged in a crate or on a stand or pallet, remove all packaging material and the securing screws at the base, and lift by means of the relative eyebolt (see 2, Fig.1).
The machine is tall and narrow, and remains a similar form when packed. If the packed machine is to be handled using chains or ropes, connect the latter to the upper part of the pack (see 3, Fig.1).
If the packed machine is to be handled by means of a lift truck or pallet truck, see 4, Fig 1.

3) MACHINE OVERALL DIMENSIONS AND POSITIONING (Fig.2)

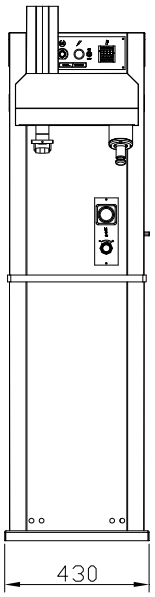
OVERALL DIMENSIONS

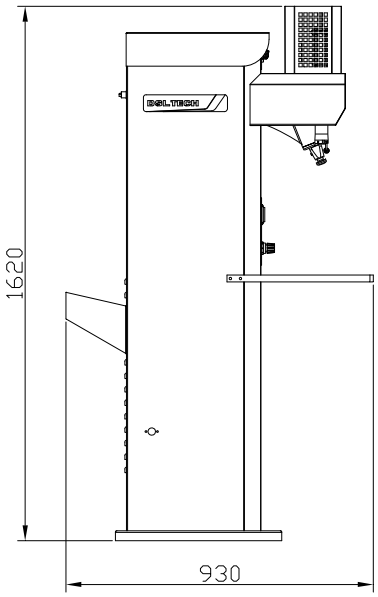
For the overall dimensions of the machine ready for operation, see 1-2 Fig.2.
The figure also shows the minimum clearances required for maintenance operations and operator control. (see 3 fig.2).

POSITIONING

The heat setting machine does not need to be anchored to the ground. However, ensure that the machine support surface is flat and that there are no flammable liquids present in the area or in the vicinity.

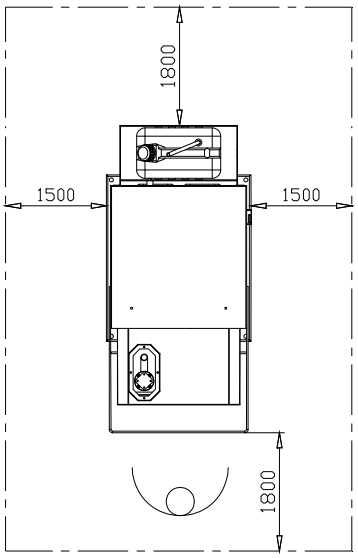
(1)





(2)

Fig.2



(3)

4) PRELIMINARY OPERATIONS

AIR DEFLECTOR ASSEMBLY (Fig.3)

1) Move frame (1) next to the machine to align the fixing holes.
2) Secure the frame by means of the four screws (2).
3) Place sheet (3) on frame (1) as shown in the figure.

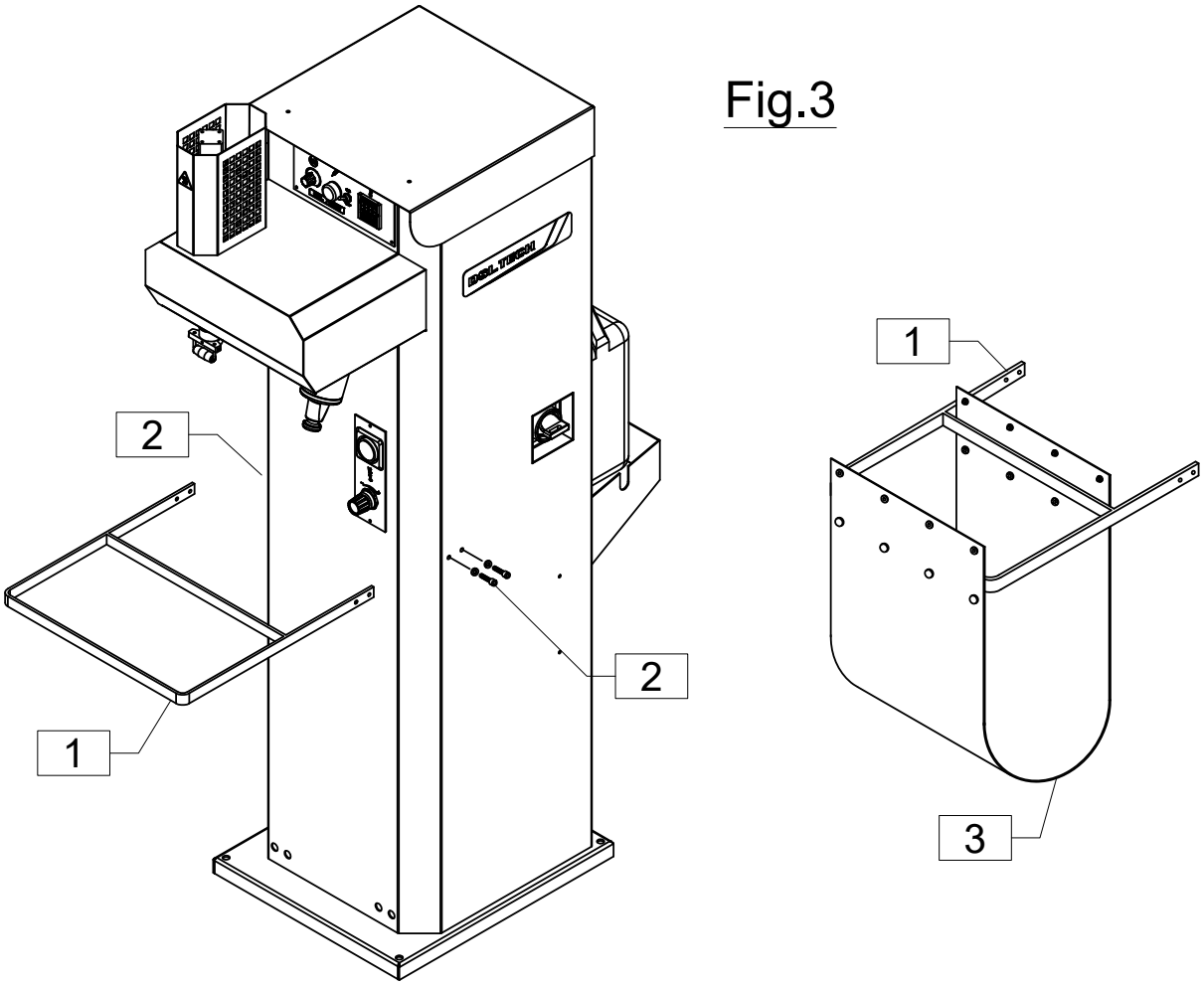


Fig.3

4) PRELIMINARY OPERATIONS (Fig.4)

Fill tank 1 (**Fig.4**) with water.
The use of purified water is recommended to limit the formation of lime scale inside the steam generator.
On completion of filling, close the tank by tightening the relative cap (2).

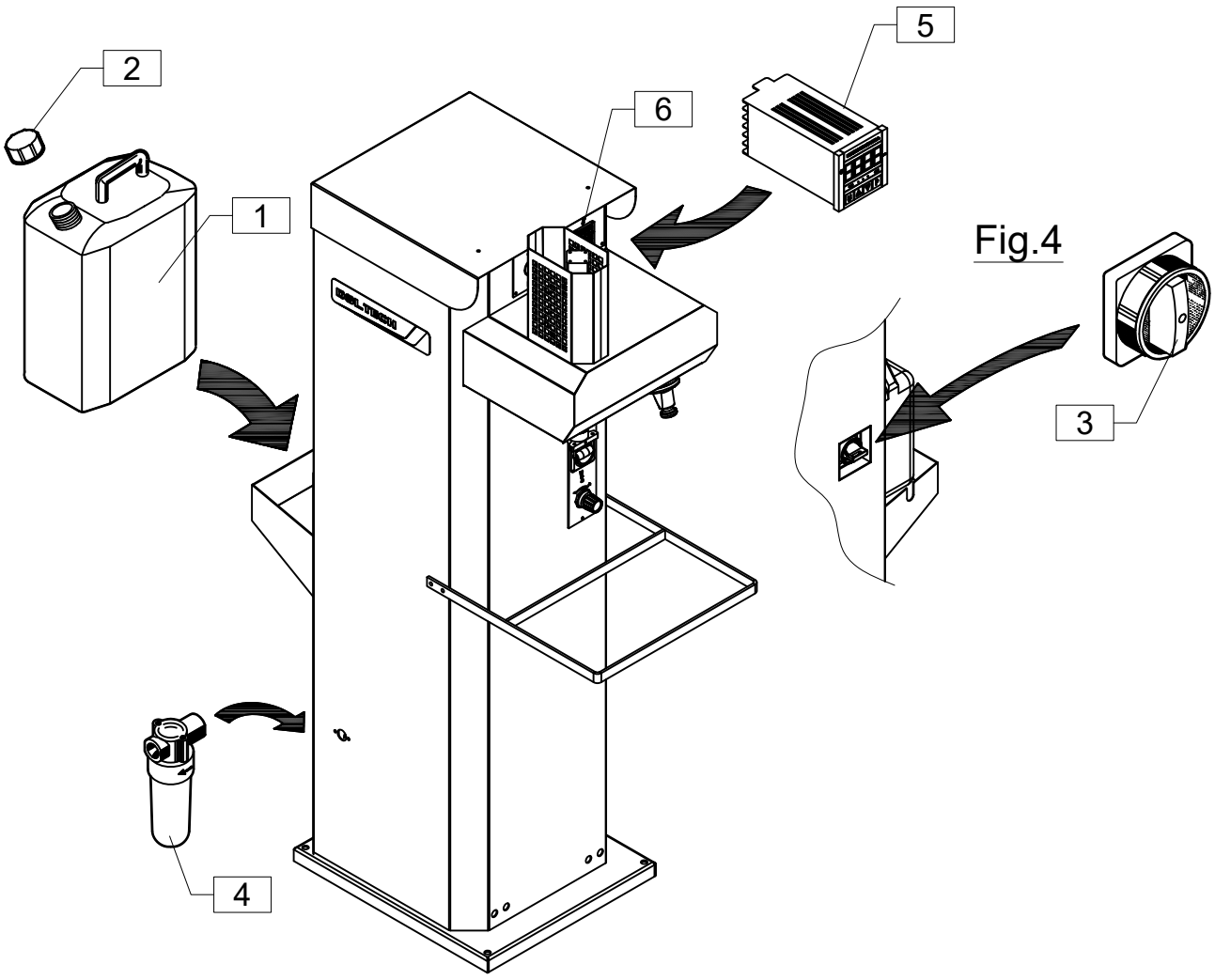
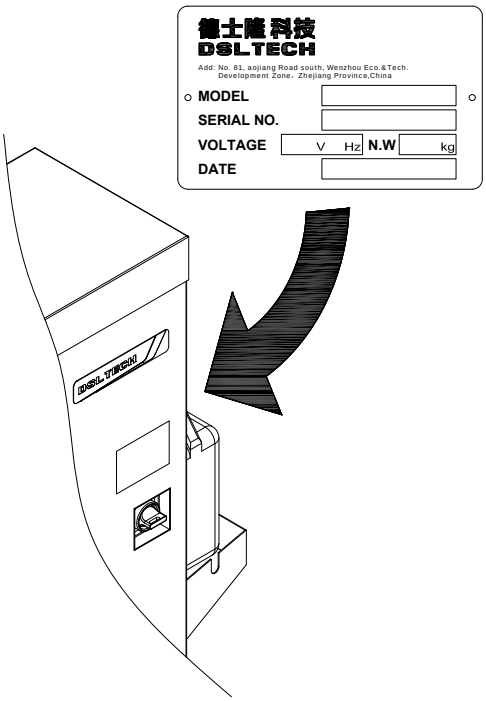


Fig.4

5) ELECTRICAL - PNEUMATIC CONNECTIONS (Fig.4/Fig.5)

ELECTRICAL CONNECTION

Fig.5



Due to incompatibility, the machine is supplied without the plug fitted on the power line.
Ensure that no parts are live before operating on the electrical circuit.
Before making the electrical connections, make sure that the voltage specified on the machine data plate corresponds to mains voltage (**Fig.5**).
Connect the machine power line (3 wires + earth) to the power supply (see page 21 paragraph 12 for installed power).
It is indispensable that the machine is connected to an efficient earthing system. Always observe relevant electrical safety regulations.
Check the correct direction of motor rotation as follows:

1. Turn main switch (3) to position "I";
2. Press the white button (6) marked with the letter "I" for a few seconds;
3. If the machine shuts down on release of the button, this means that the motor is rotating in the opposite direction: in this case invert 2 of the 3 wires connected to the plug.

PNEUMATIC CONNECTIONS

The machine is supplied without a coupling on the compressed air inlet; therefore connect the compressed air coupling to air filter (4), in observance of relevant current standards.
Check that the input pressure is **no lower than 6 bar** and does not exceed regulation limits.

The company **DSL MACHINE** declines all liability for failure to observe current standards related to electrical and pneumatic connections.

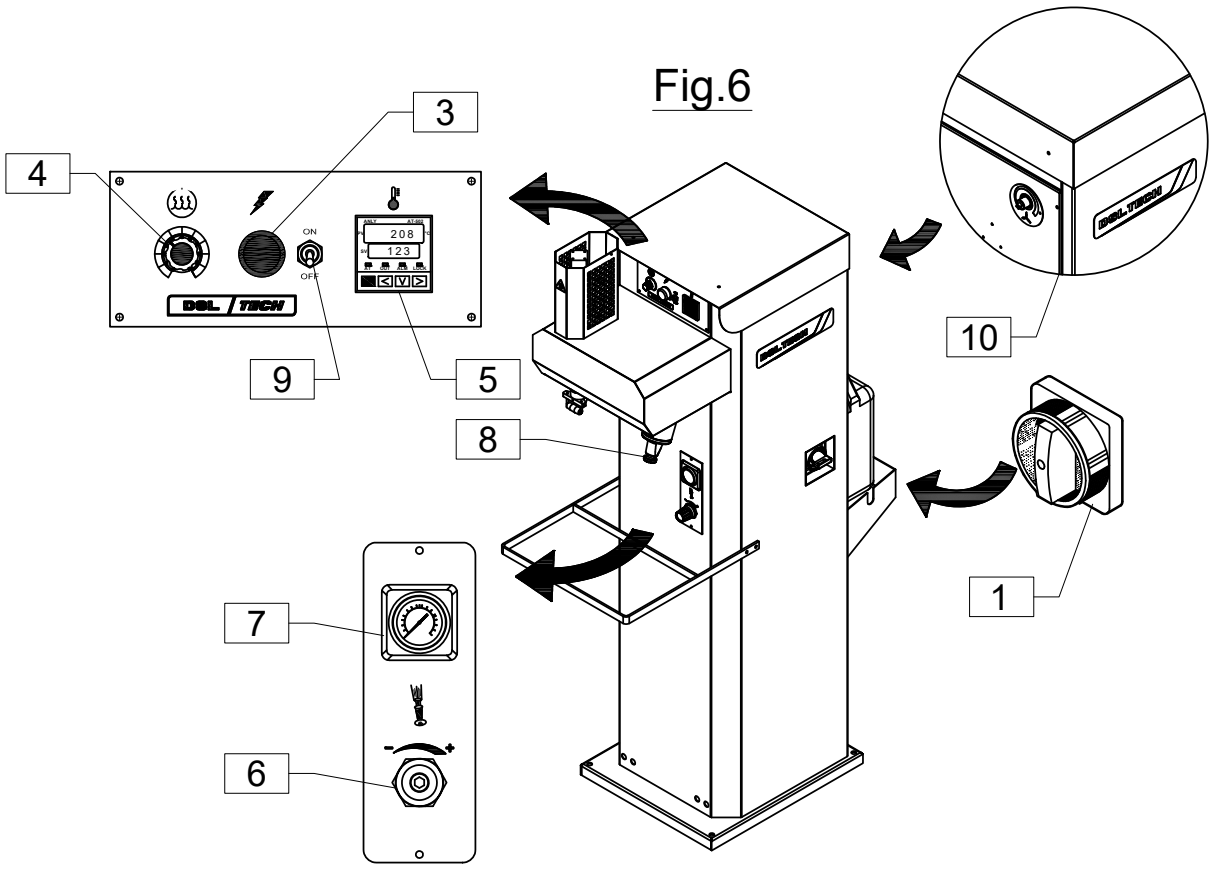
6) OPERATION (Fig.6)

a) Turn main switch (1) to position I to power up the machine;
b) Press the white button (9) marked with the letter "I" for a few seconds;
c) Set the air temperature by means of the digital temperature control (5);
To do this, proceed as follows with reference to the temperature control (see 5, fig. 6):

- briefly press pushbutton P; the text **SP1** is displayed intermittently with the set temperature value;
- press the button with the UP arrow ▲ to increase the temperature or the DOWN arrow ▼ to decrease;
- press button P again to confirm the new temperature setting;
- if not confirmed, the new value is automatically validated after 20 seconds;
- after entering the temperature setting, the data disappears to show the actual operating temperature until the set temperature is reached.
The temperature control is set with a maximum value of 550°C (1022°F).

d) Set the steam quantity by means of the relative knob (4) with a graduated scale from 0 to 10, bearing in mind that the steam is only delivered when the boiler has reached the operating temperature.
Only at the time of initial installation will the user need to wait around 40 minutes to obtain steam delivery.
This time interval is required to ensure that the water reaches the correct level in the boiler for subsequent heating to the set temperature.
e) Select the operating mode of the hammer (8) according to requirements, by means of selector (2).

Fig.6



7) CONTROL DEVICE OPERATION (Fig.6)

The heat setting machine is supplied with a pneumatic pedal, which when pressed enables the separation of the hot air from the steam, and enable the use of steam only for softening the part to be treated.
On release of the pedal, the machine resumes use of the hot air mixed with steam, to enable the operator to complete the heat setting procedure by means of the setting roller.

The upper control panel is fitted with the following:
- a lamp (3) to indicate that the machine is ON;
- a knob (4) for control of the steam quantity;
- a temperature control (5) to enable the operator to set and display both the set temperature and the actual operating temperature values;
- a pushbutton panel (9) with double I-O switch, to enable the STAND-BY function or to reset all machine functions; the STAND-BY function enables significant energy savings, keeping only the water pre-heating function active in the steam boiler. Press pushbutton I (2) to restart the machine and completely reset all original data (air temperature – steam quantity).
- a 3-position selector (4), used for the pneumatic hammer (8) for the following functions:
  AUT: the hammer is enabled only if there is an object present below;
  0: the hammer remains off while the other machine functions continue operation as normal.
  1: the hammer remains permanently ON.

The lower control panel is fitted with the following:
- an input pressure regulator for the hammer (6);
- a pressure gauge (7) indicating the air pressure on board the machine.

- the left side panel (viewed from operator side) is fitted with the main switch in yellow and red (1);
- the rear section gives access to the knob (10) that enables control of the air output quantity.

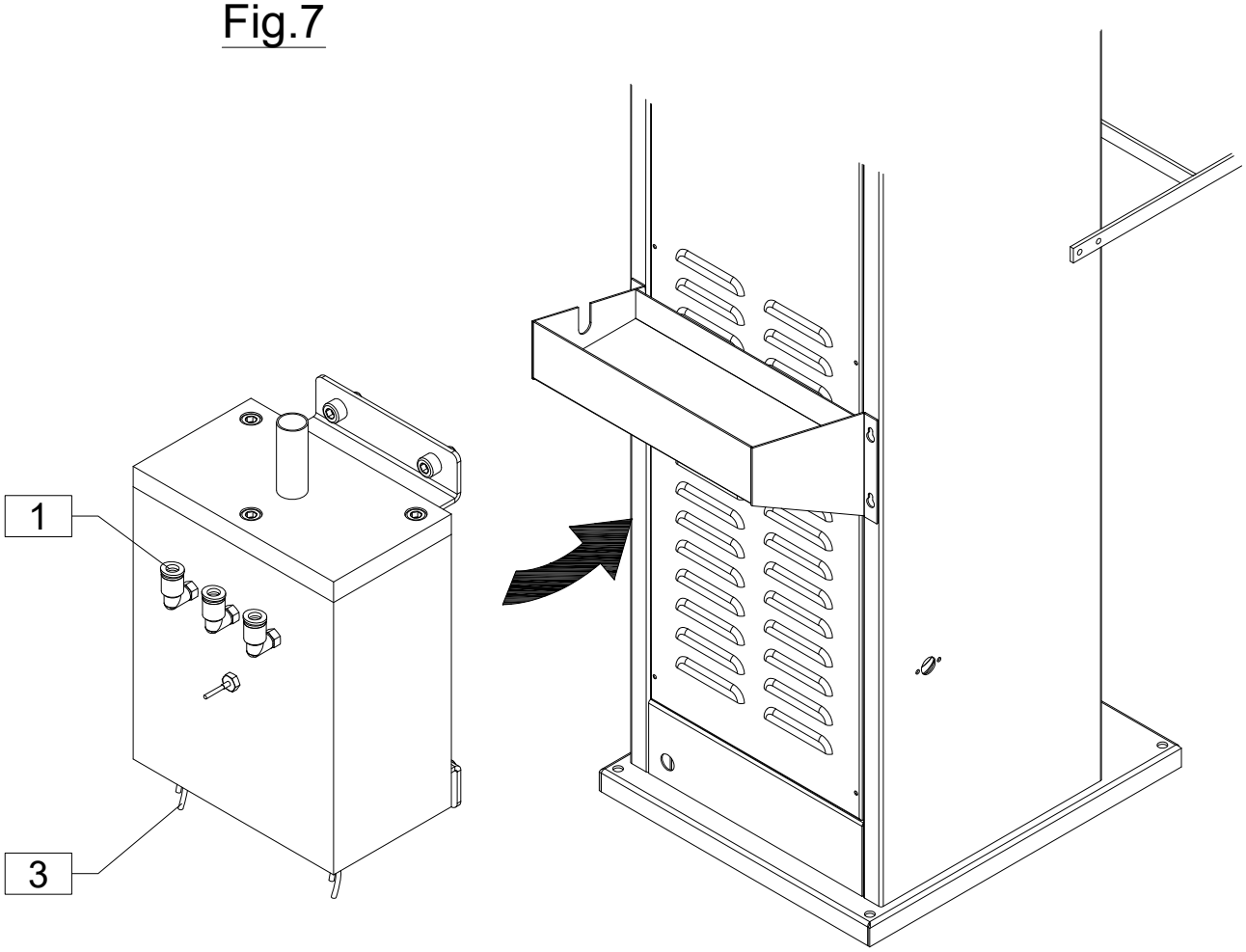
8) MAINTENANCE PROCEDURES (Fig.7)

All maintenance operations must be performed with the machine switched off and disconnected from the power supply.
The maintenance schedule is as follows:

Weekly: completely empty the steam boiler, by means of the relative hose (1) at the base of the unit.

Every 3 months: clean the steam boiler, steam heating element (3).

Fig.7



8) MAINTENANCE PROCEDURES (Fig.8)

Always disconnect the hammer from the pressure circuit before performing maintenance or cleaning operations.
Thoroughly clean the hammer at least once a year.
This operation is also fundamental in the event of ingress of water or impurities in the hammer.
To clean the hammer, proceed as follows:

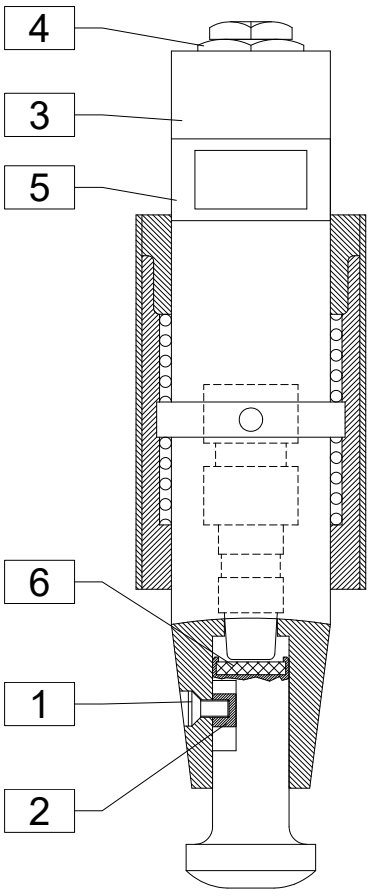
- unscrew the reducer (4) and remove the silencer (3);
- unscrew the cap (5) using a fixed wrench suited to the specific model;
- use naphtha to thoroughly clean the interior of the hammer and the piston;
- reassemble all parts and run the hammer under no-load without the silencer to drain all naphtha residue and impurities from the drain holes;
- refit the silencer after cleaning it with compressed air or washing with a neutral detergent.

A number of checks are also recommended, to be carried out **periodically**:

- every 100 hours of operation, check the condition of the screw (1) and internal plastic guide block (2). Replace in the event of excessive wear.
- Every 100 hours of operation, lightly grease the interior of the head.
- Every 2000 hours of operation, replace silencer (3).

PROBLEM	*CAUSE*	*REMEDY*
Drop in hammering power	Hammer dirty	Clean
	Silencer (3) clogged	Clean/replace
	Internal head block (6) worn	Replace

Fig.8

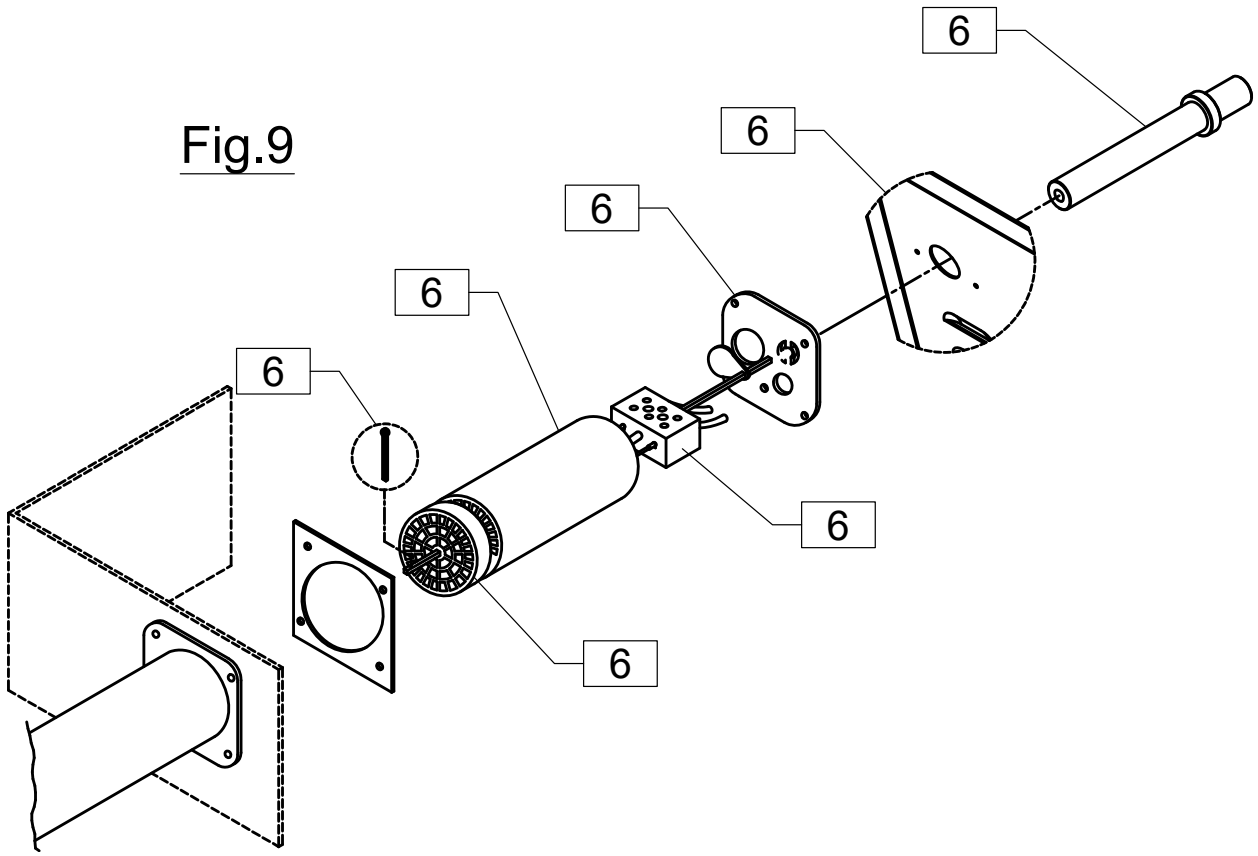


9) REPLACING THE HEATING ELEMENT(Fig.9)

Action:
a) Remove the handwheel (1).
b) Remove the guard (2).
c) Carefully withdraw the holder (3) with relative heating element (4).
d) Remove the split pin (5) and base plate of the heating element (6).
e) Loosen the two screws of terminal (7) and remove the heating element (4).

For re-assembly, perform the above in reverse order.

Fig.9



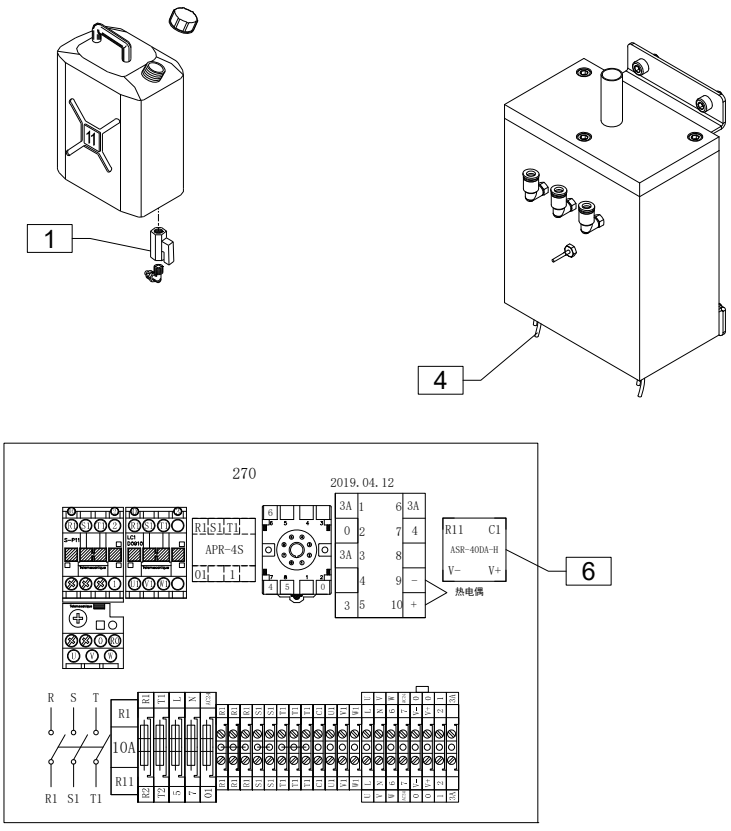
10) TROUBLESHOOTING (Fig.10)

NO STEAM DELIVERED

Action:

a) Check that valve (1) on the water tank is in the vertical position and open;
b) Low the water level regulator lever (2) and check that water comes out of solenoid valve (3). If no water comes out, clean the transit hole inside the body of the solenoid valve using compressed air.
c) Check operation of the solenoid valve coil (3) and replace if necessary.
d) Ensure voltage delivery to the steam heating element (4) and replace if necessary.
e) Check correct operation of the microswitches (5) of the level regulator (2) and replace if necessary;
f) Replace the triac (6) powered by wires W2, L32, 4 observing the connections shown in the figure. If the 2 power wires W2 and L32 are inverted, no power will be supplied to the steam heating element (4).
g) Replace the steam electronic card (7).

Fig.10



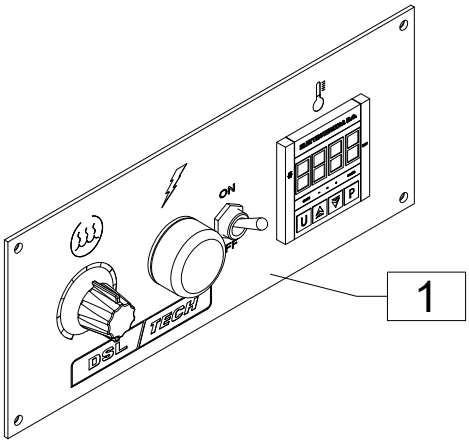
10) TROUBLESHOOTING (Fig.11)

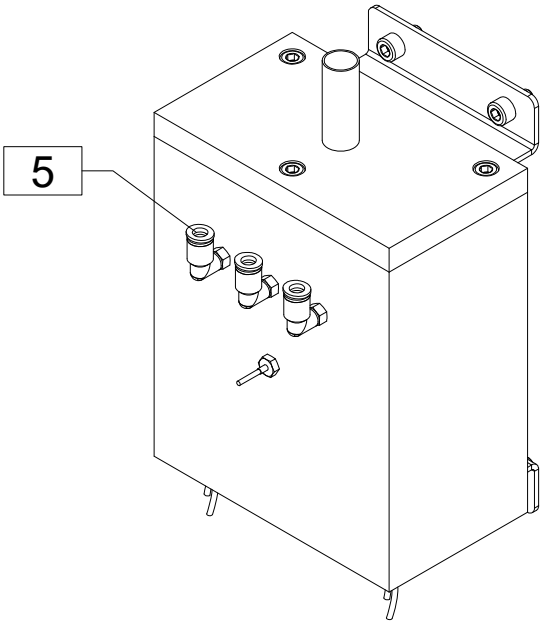
WATER DELIVERED BUT NO STEAM

Action:

a) Check that the temperature set on the temperature control (1) is no lower than 150°C (302°F).
b) Check that solenoid valve (2) closes off water delivery correctly, by raising the water level regulator lever (3).
c) Check that the water level regulator lever (3) moves freely and that there is no scale formation.
d) Check that the ball (4) of level regulator (3) is not full of water.
e) Check water delivery from hose (5). If excessively dirty, empty and refill the boiler several times until the water delivered is clean. If delivery is slow, clean the boiler interior to remove any lime scale present.

Fig.11



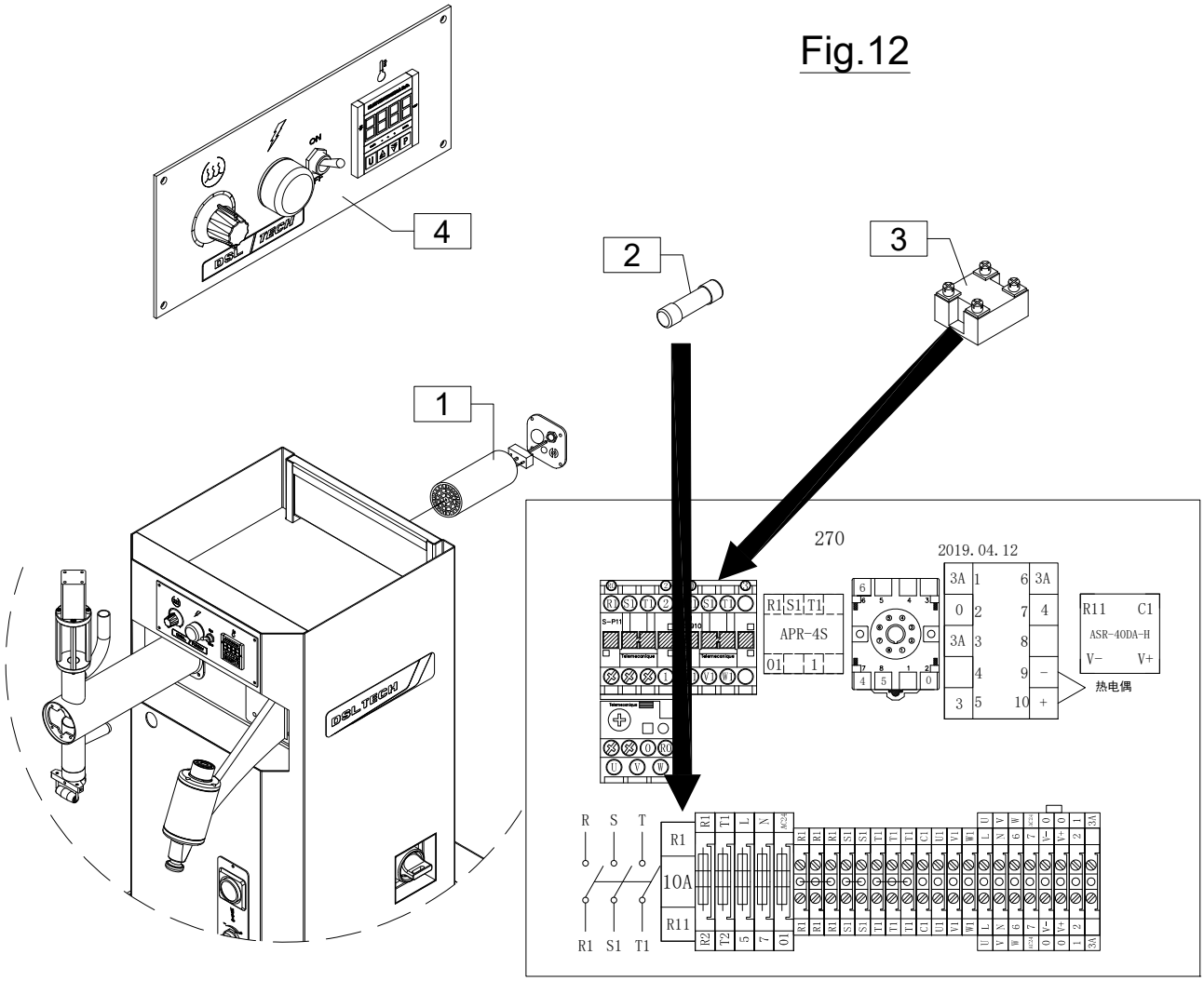


10) TROUBLESHOOTING (Fig.12)

WATER DELIVERED COOL

Action:
a) Ensure voltage delivery to the air heating element (1)
b) Check fuses F/C 16A-F/C 6A (2) and replace if necessary.
c) Check the static relay (3) and replace if necessary.
e) Check operation of the temperature control (4) and replace if necessary.

Fig.12



10) TROUBLESHOOTING (Fig.13)

AIR TEMPERATURE REMAINS CONSTANTLY AT MAXIMUM

Action:
a) Check the static relay (1) and replace if necessary.
b) Check operation of the sensor (2) and replace if necessary.
c) Replace the temperature control (3).

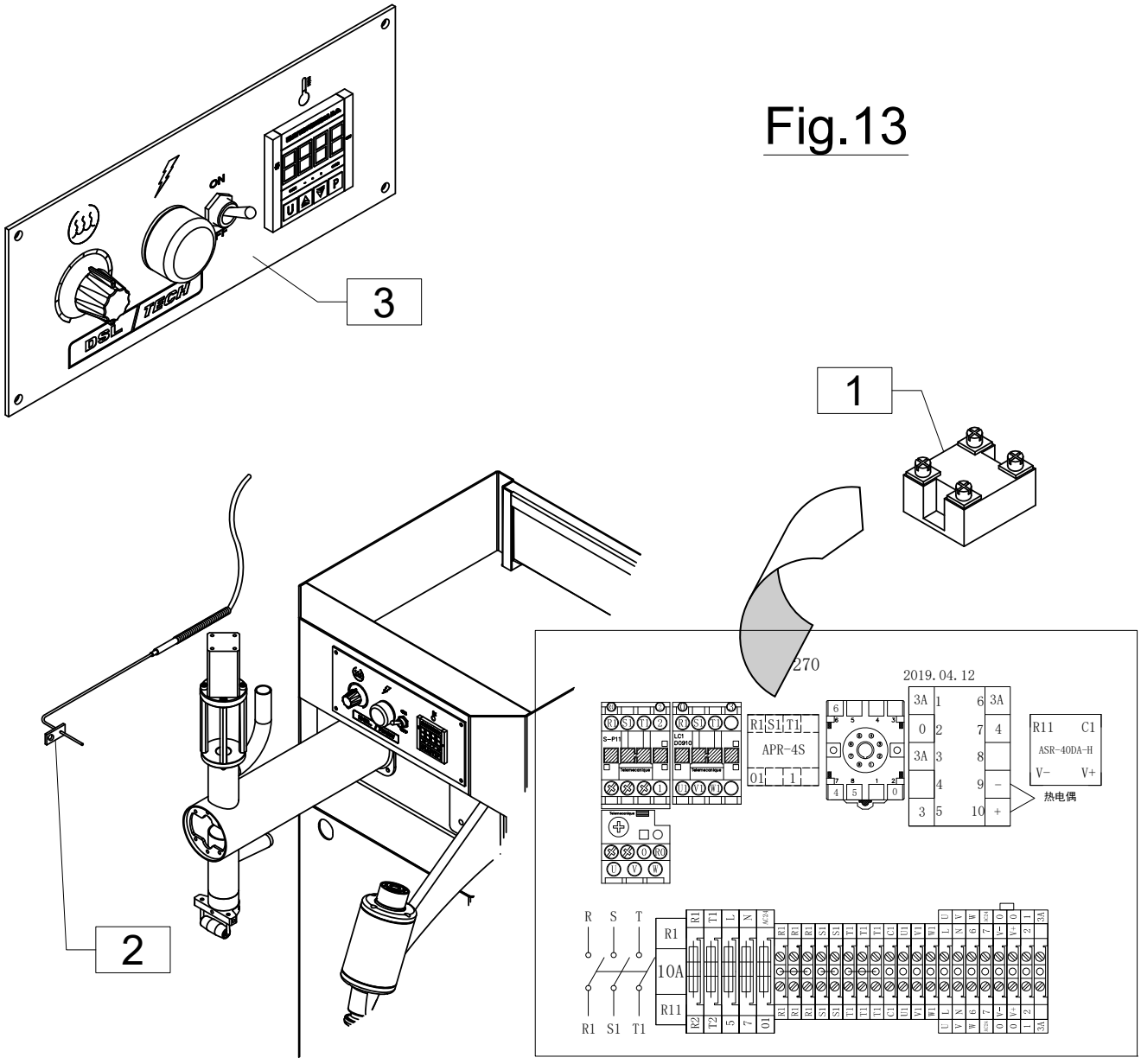


Fig.13

10) TROUBLESHOOTING (Fig.14)

THE CYLINDER DOES NOT WORK

Action:
a) Ensure air delivery to the filter (1).
b) Check operation of the solenoid valve in the pedal (2).
c) Check operation of the cylinder (3).

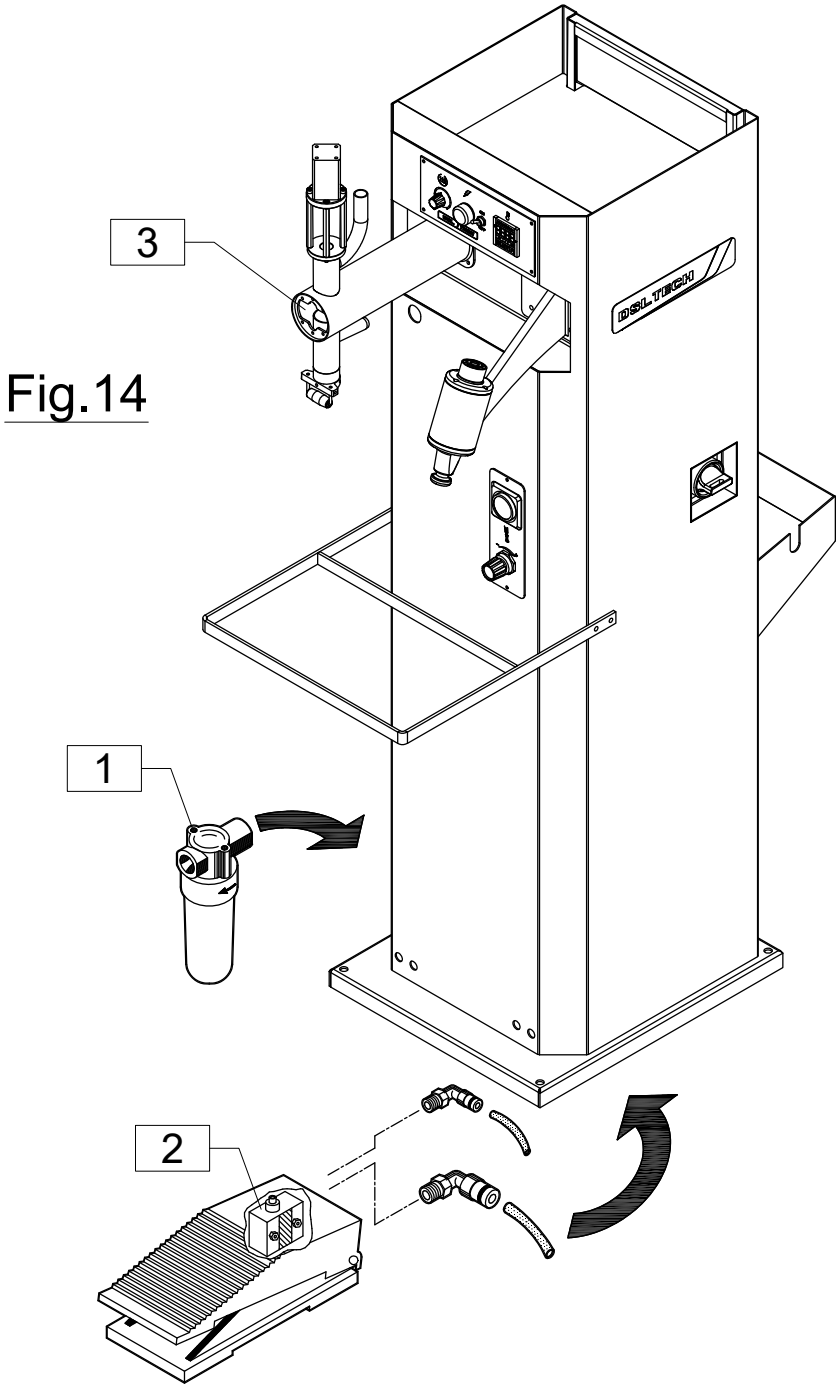


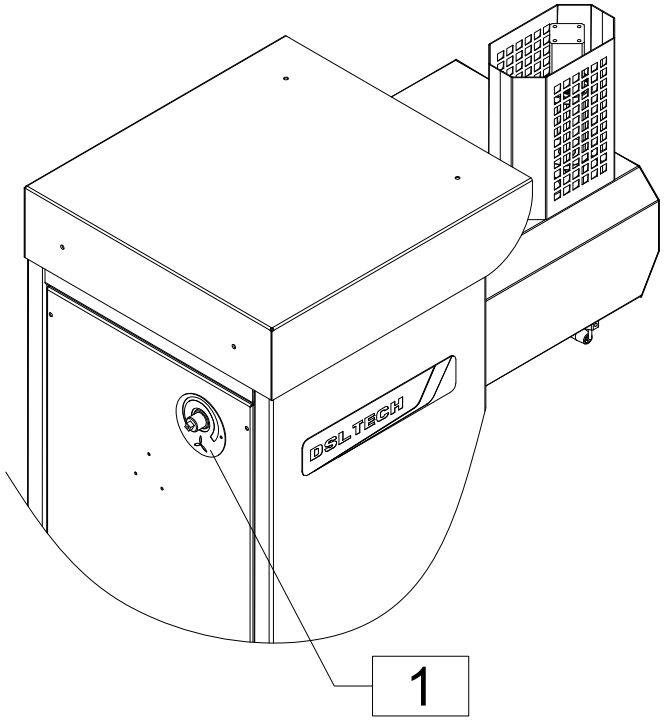
Fig.14

10) TROUBLESHOOTING (Fig.15)

LOW AIR QUANTITY DELIVERED

Action:
- Check that air regulator (1) is not closed.

Fig.15



10) TROUBLESHOOTING (Fig.16)

THE MACHINE DOES NOT START; THE TEMPERATURE CONTROL REMAINS OFF

Action:
a) Check connection of the air delivery hoses (1).
b) Check the pressure switch (2).

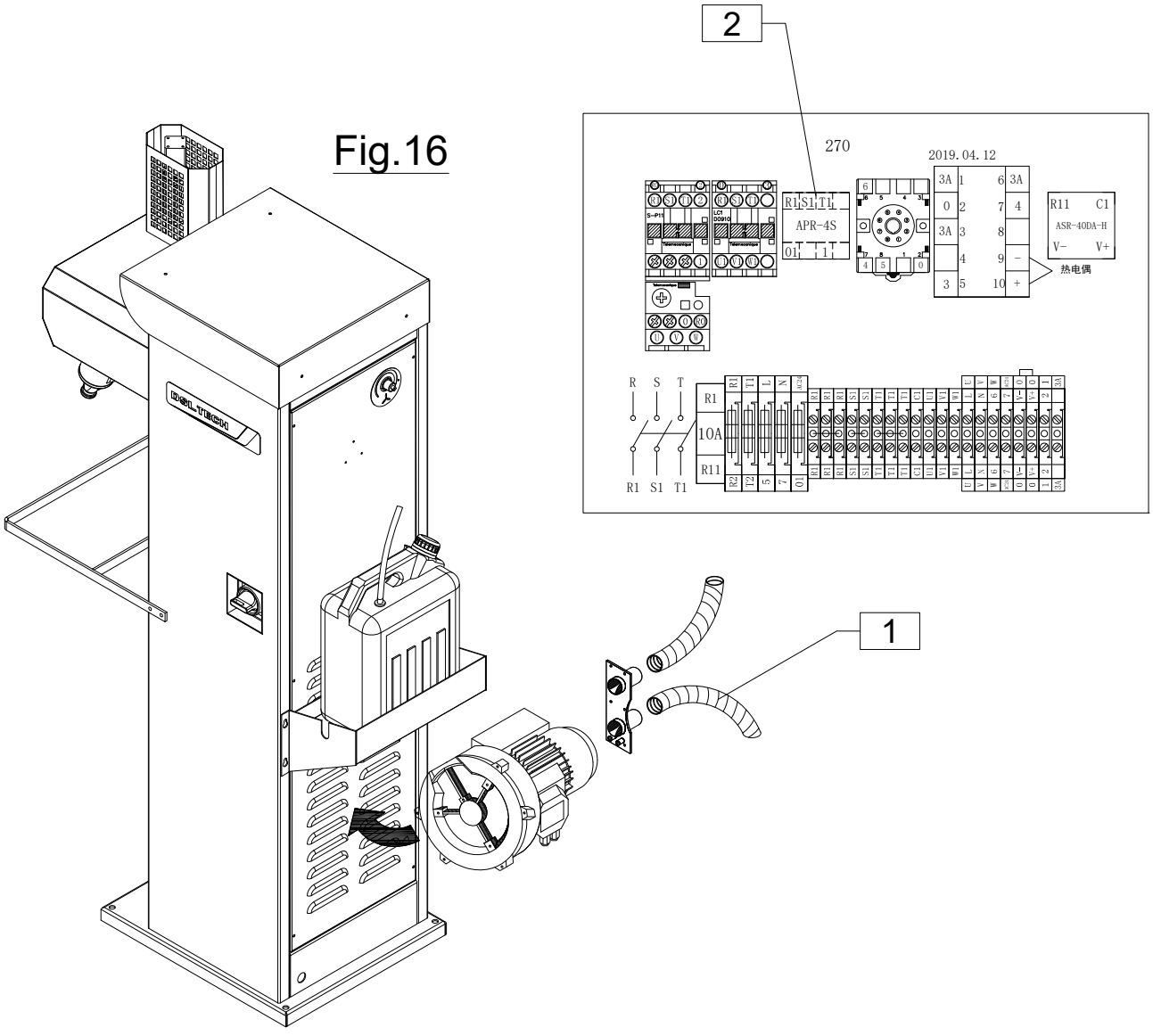


Fig.16

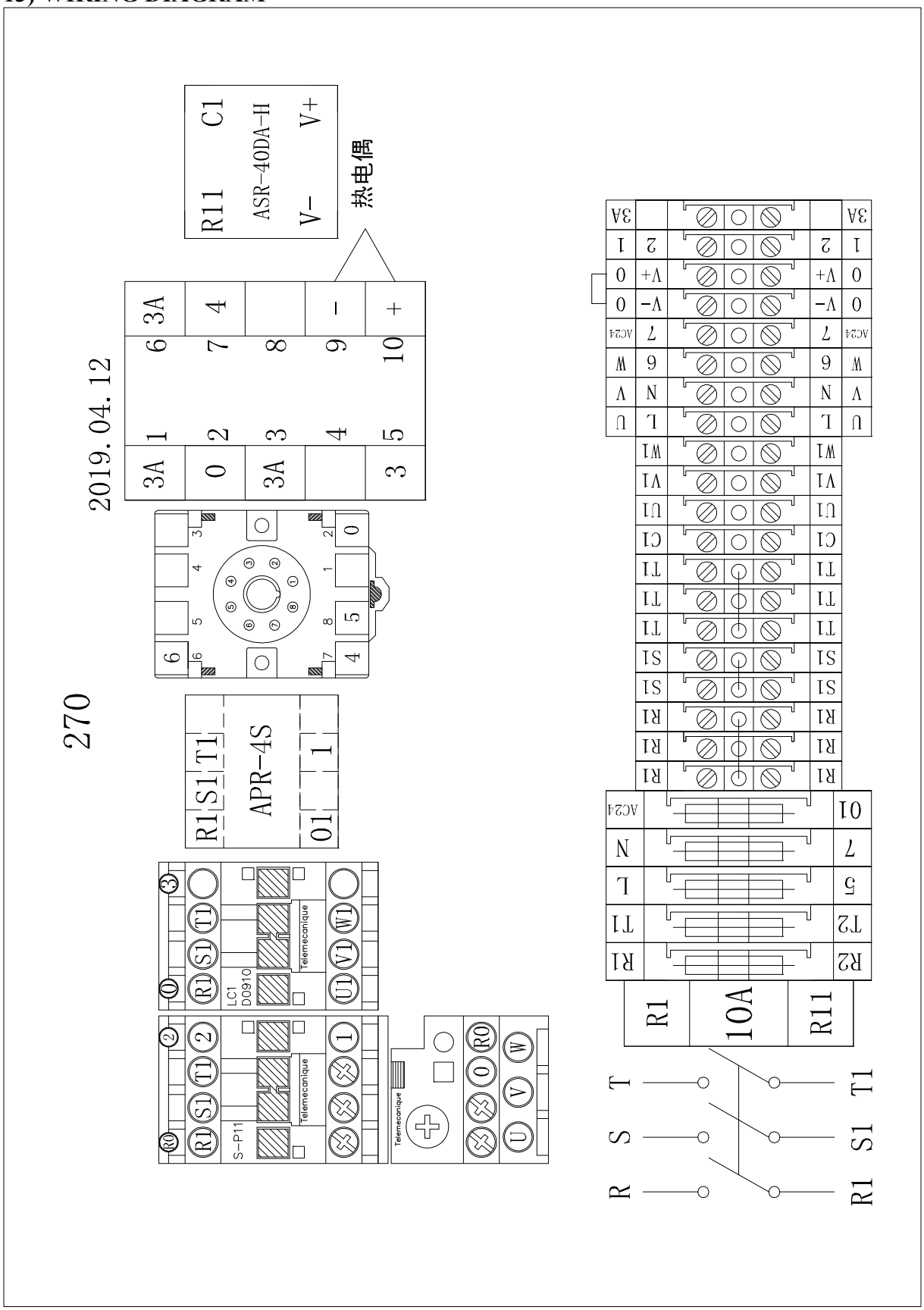
11) ORDERING SPARE PARTS

For prompt delivery of spare parts, the following information is required:
- Quantity of pieces;
- Piece identification code, marked on the following tables;
- machine model;
- serial number and voltage of the machine.

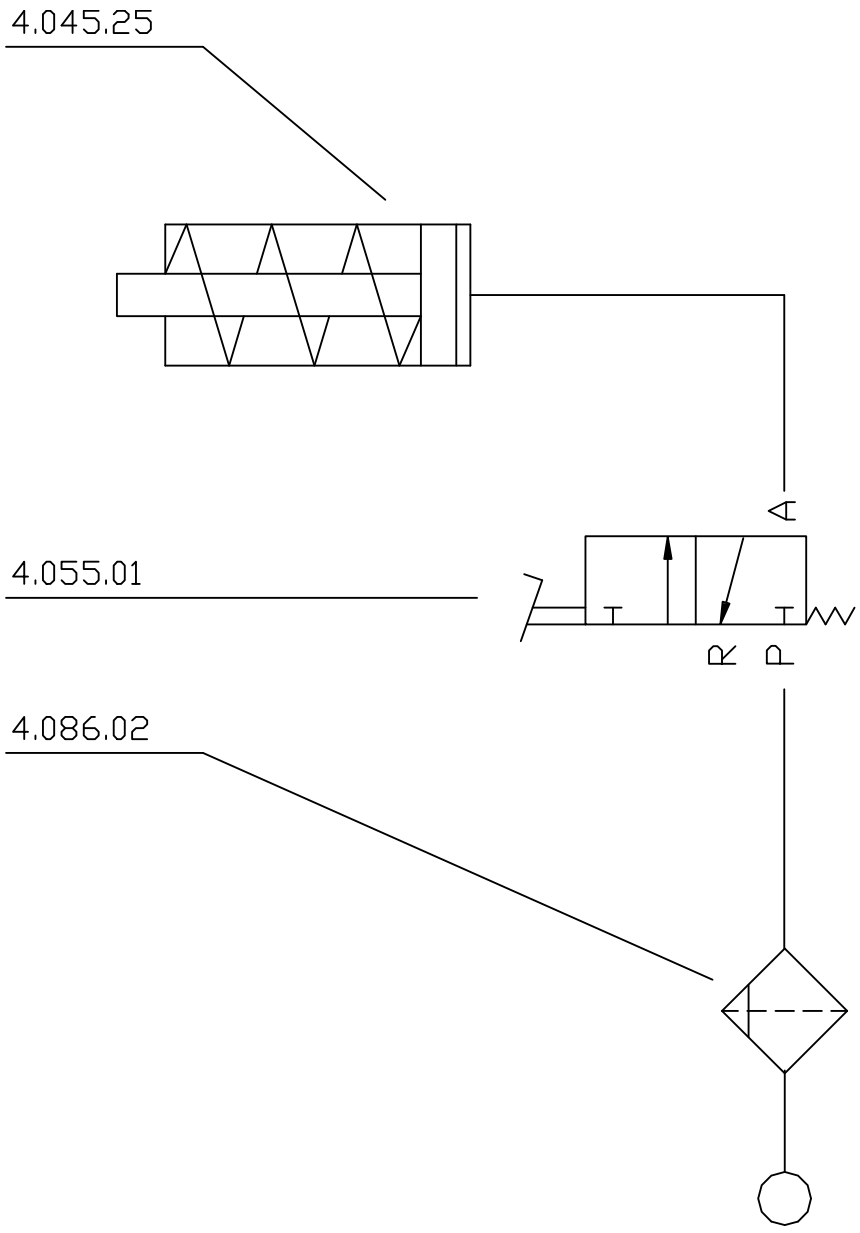
12) SPECIFICATIONS OF MACHINE MODEL 270

DESCRIPTION	VALUES
Total power	6.2 kW
Motor output	0.2 kW
Air heating element output	4.5 kW
Steam heating element output	1.5 kW
Net weight	77 kg
Gross weight with crate	112 kg
Dimensions	
Depth	64.5 cm
Width	48 cm
Height	163 cm
Maximum hot air temperature	550°C (1022°F)
Maximum steam production	3000 cm^3/h
Compressed air consumption 3 bar	6 L/min

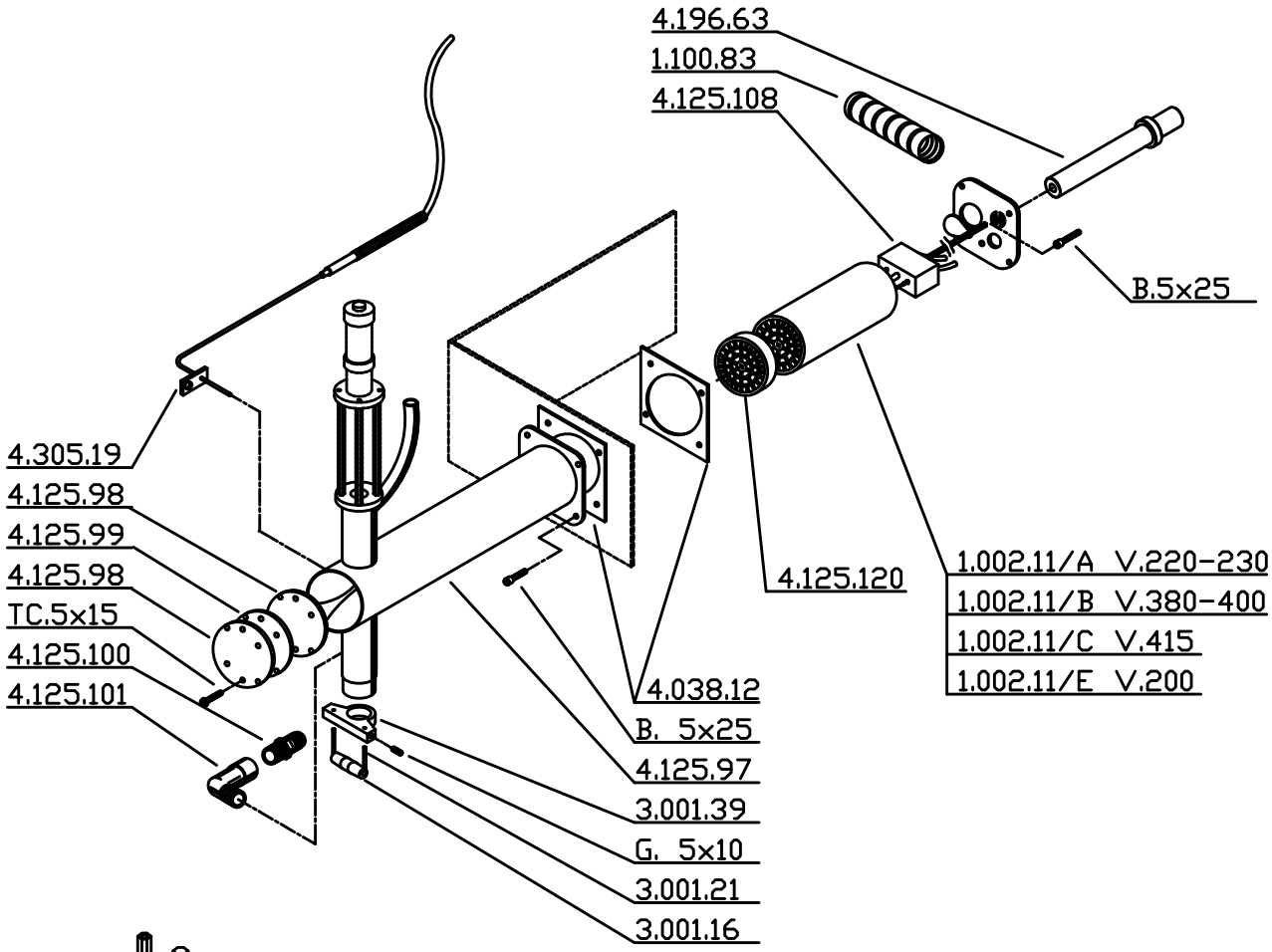
13) WIRING DIAGRAM

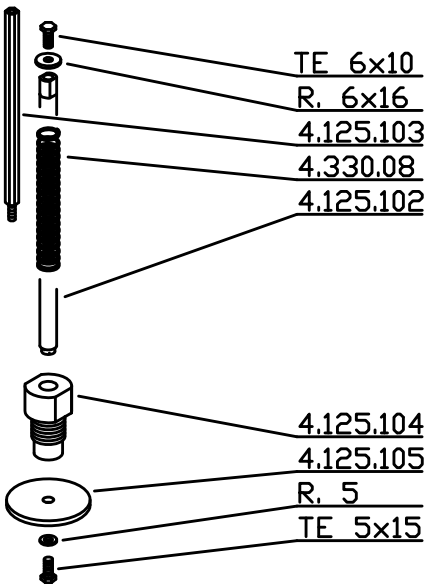


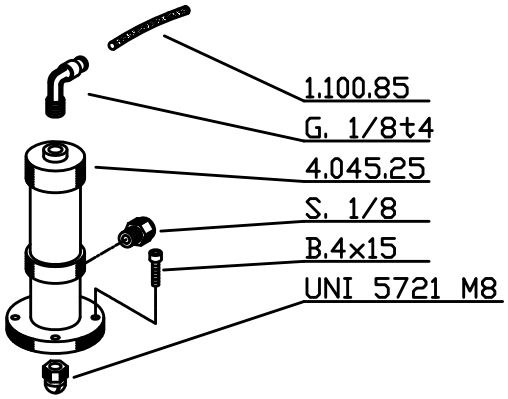
14) PNEUMATIC CIRCUIT DIAGRAM



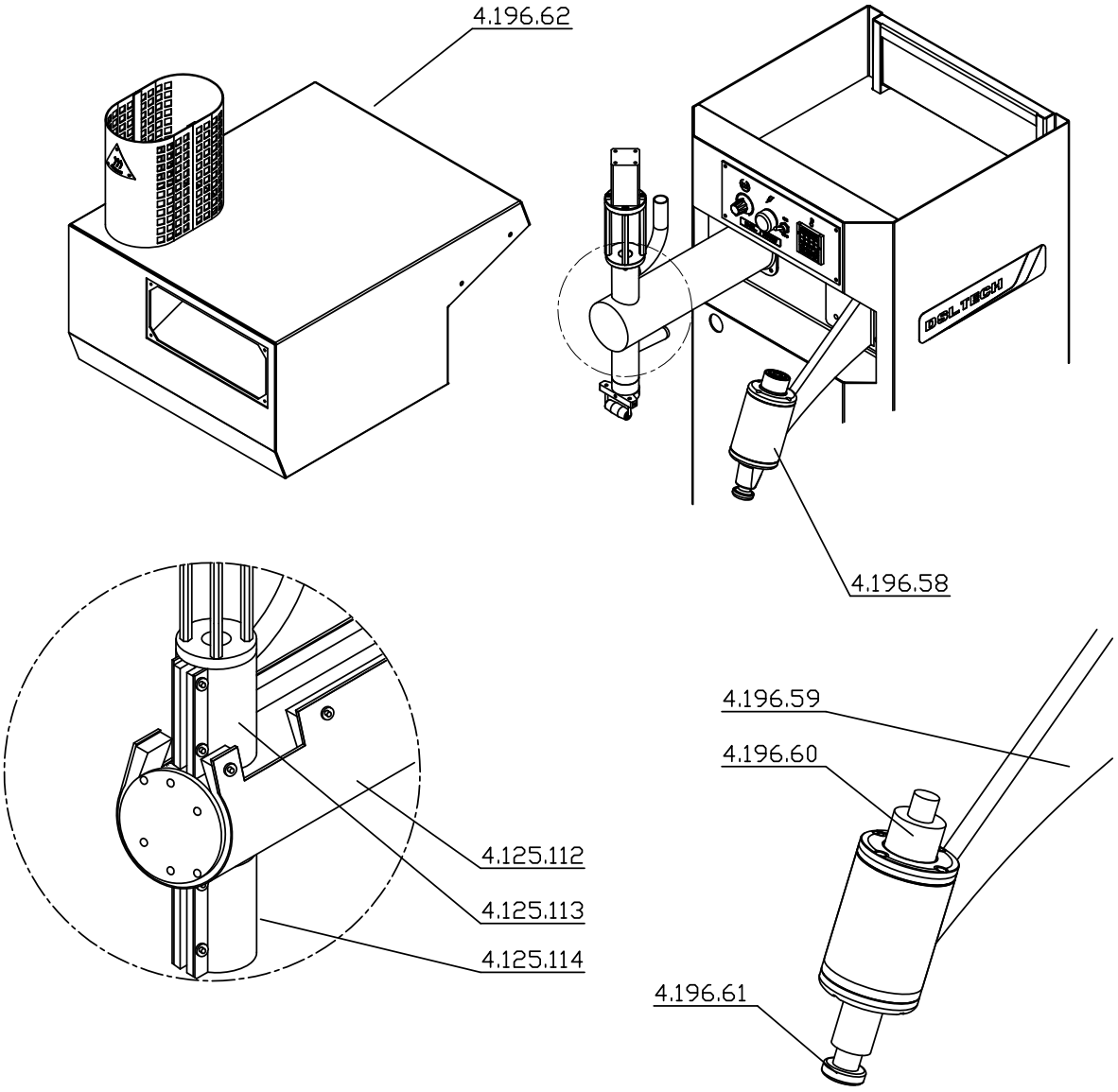
15) SPARE PARTS



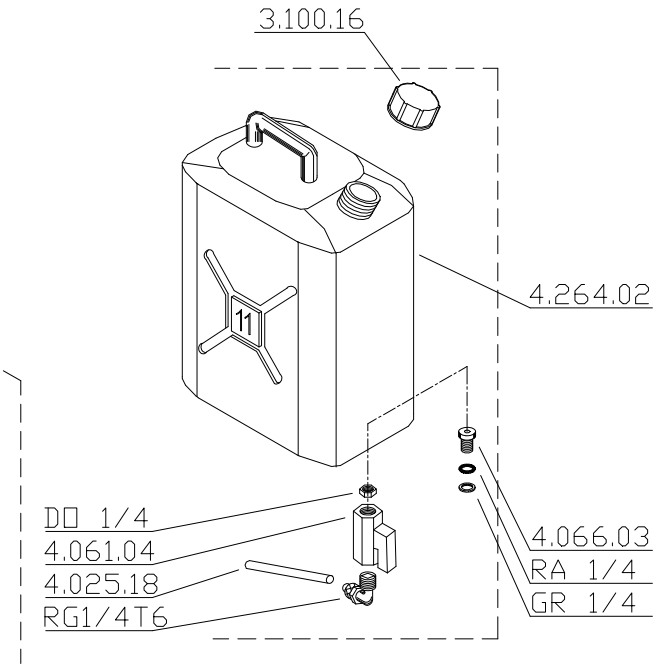


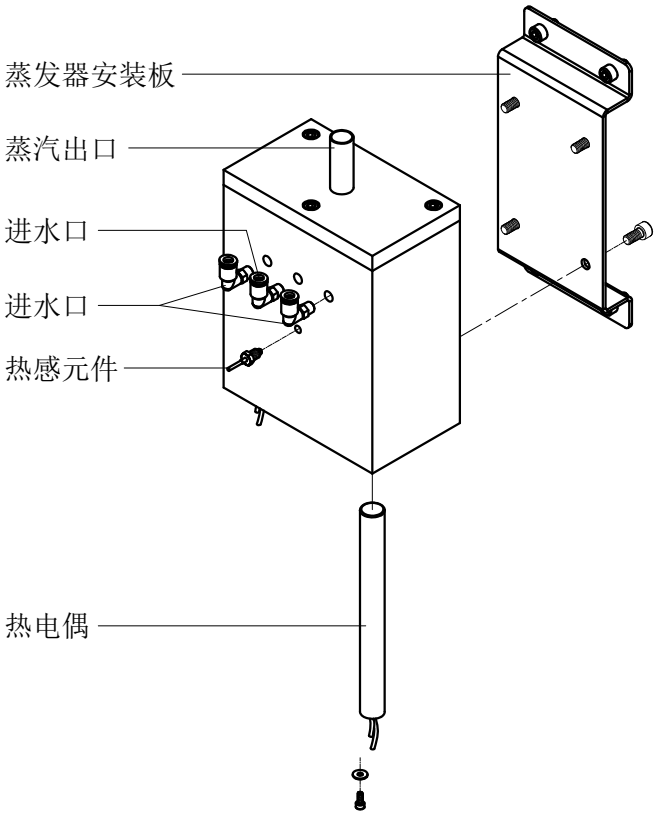


15) SPARE PARTS

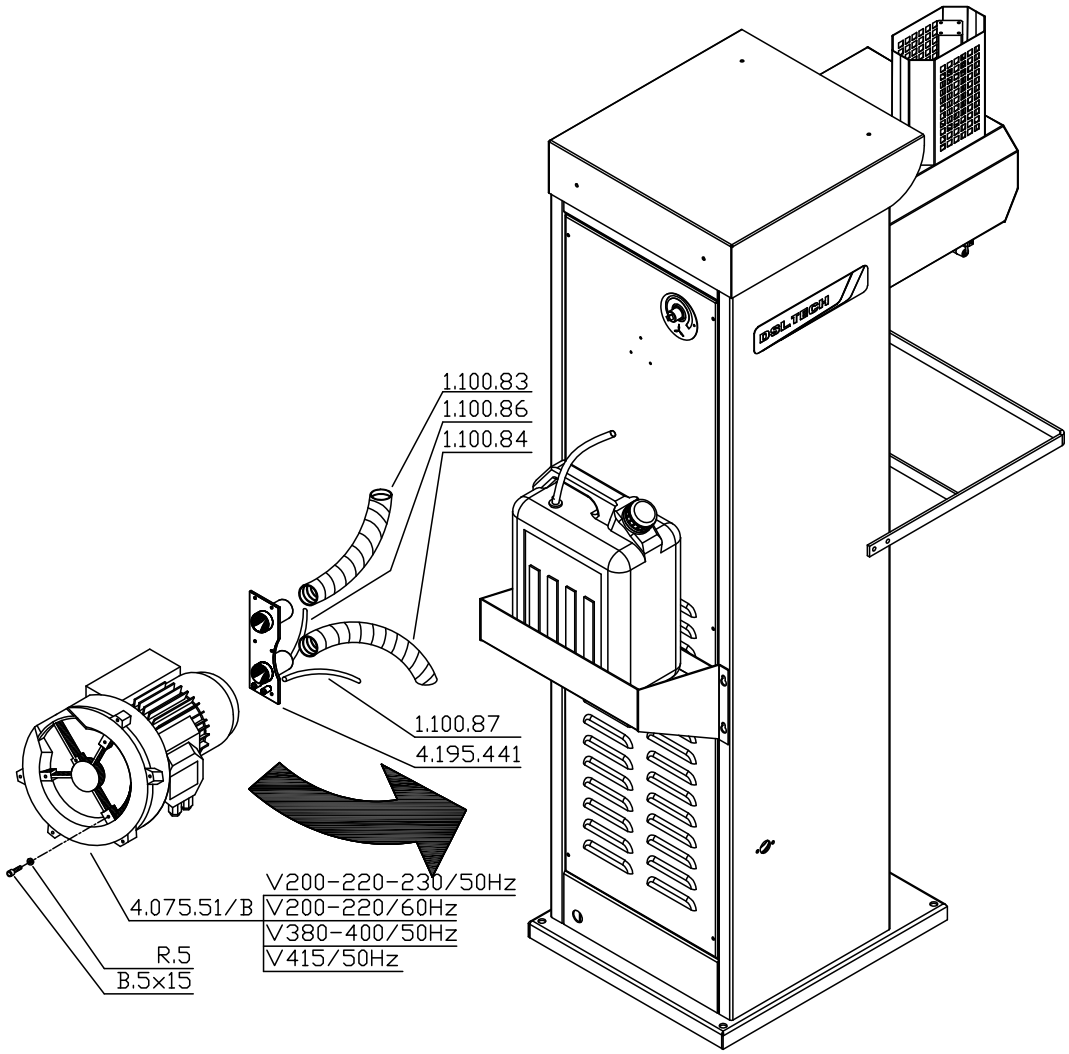


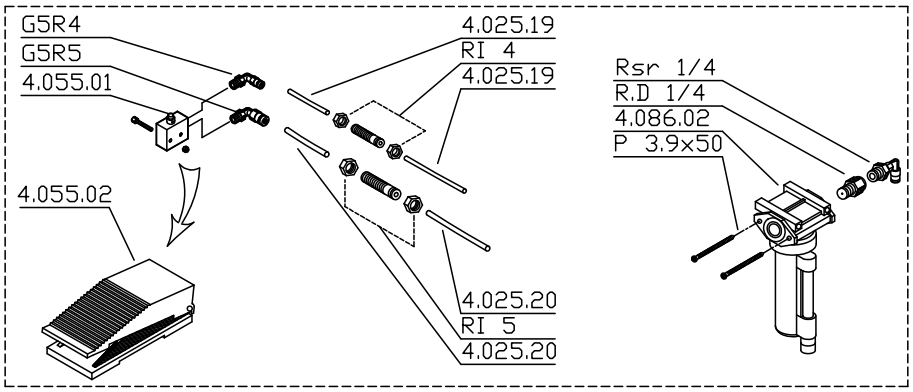
15) SPARE PARTS



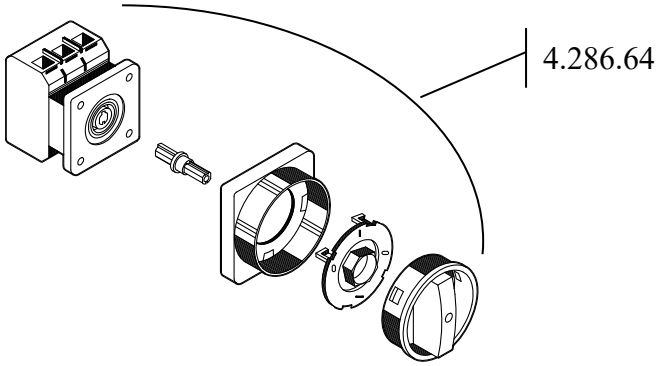


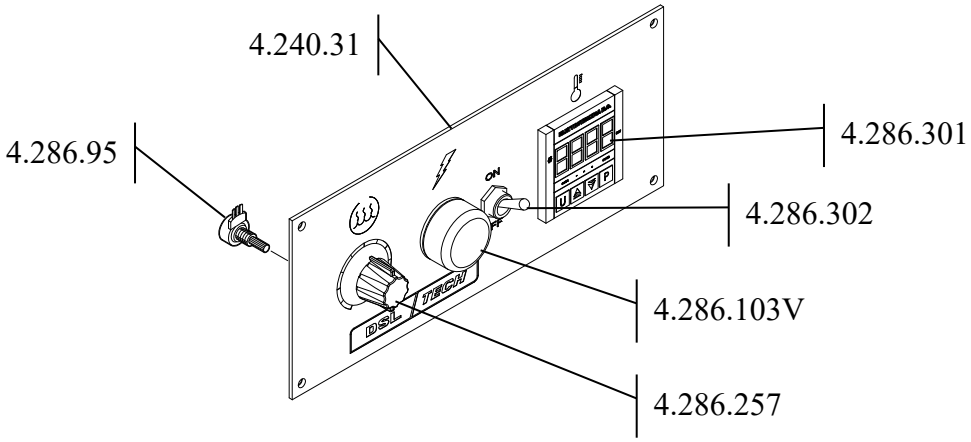
15) SPARE PARTS





15) SPARE PARTS





15) SPARE PARTS