



Instruction and operation manual

Master boiler series
Steel hot water boiler



Technical manual and user manual of hot water boiler Master Boiler (Heating and hot water)

THERMOLEV company thanks you for your trust in our products.

This manual is referred to the technical characteristics of the boiler and provides information on installing and using the boiler.

Please read very carefully the warranty booklet and follow all the conditions.

After installation, certified technician should sign the guarantee and the correct coupon must be returned in our company.

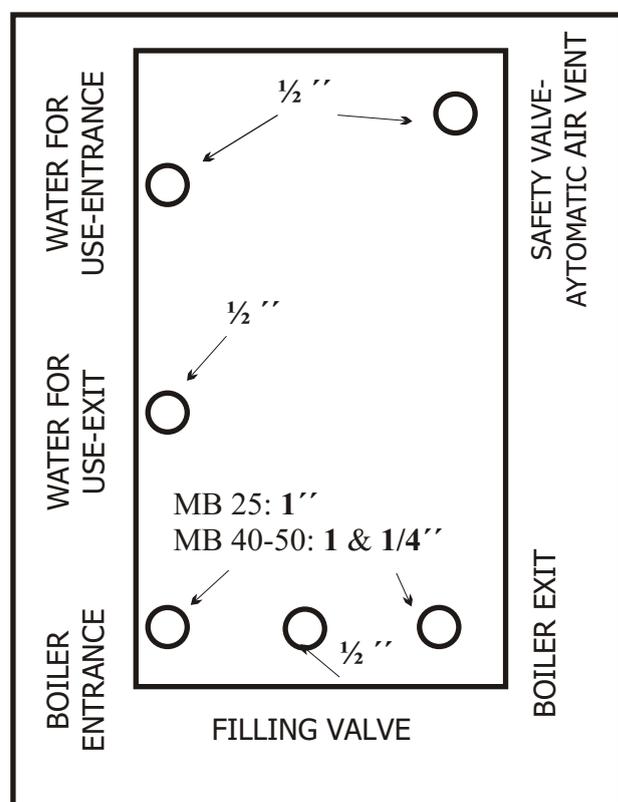
Master Boiler is an individual boiler for heating and for the production of hot water.

Master boiler includes:

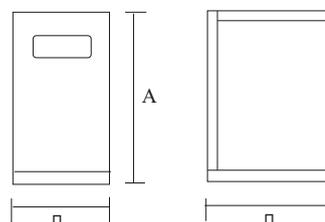
- burner
- circulator
- electronic control panel
- thermostat

Notice: Furthermore a silencer chimney can be fitted where it is not possible the existence of an internal chimney.

Hydraulic connection of Master Boiler



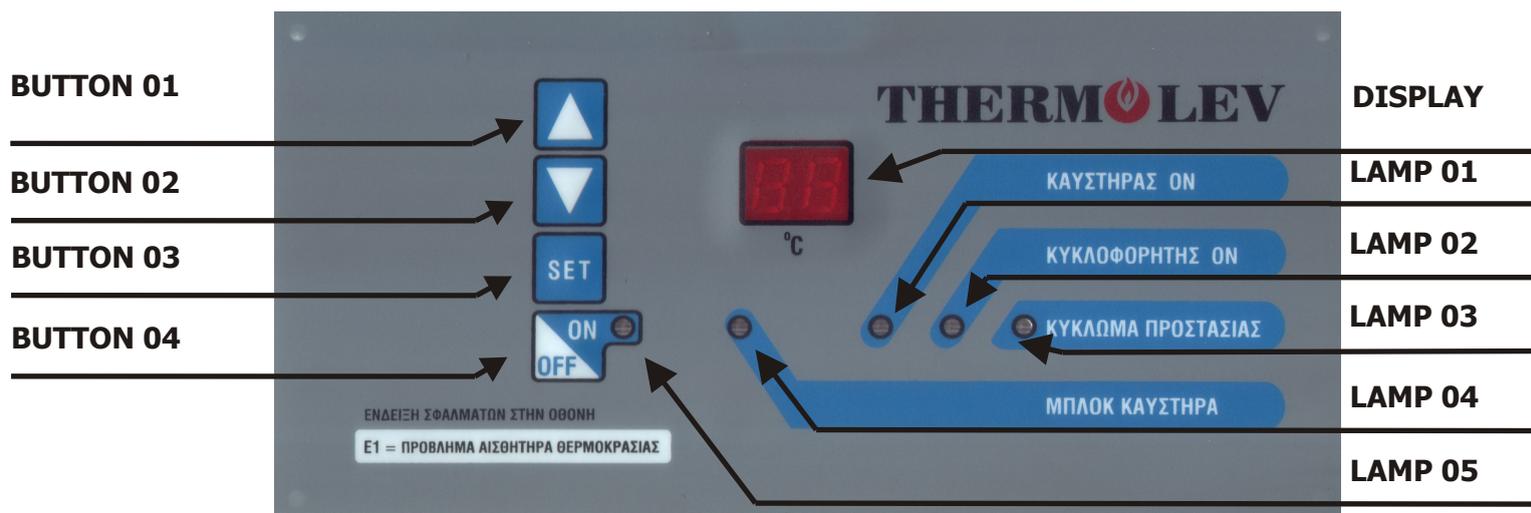
Technical characteristics and External dimensions



Technical Characteristics	Μονάδα Μέτρησης	Type		
		MB.25	MB.40	MB.50
Nominal output	Kcal/h	25,500	40,400	50,200
	Kw	30.1	47	58.1
Hot water use	Kcal/h	25,500	40,400	50,200
	Kw	30.1	47	58.1
Production Hot water (ΔΘ : 40°C)	L/H	700	750	800
Pressure operation	Bar	3	3	3
Voltage operation	Volt / Hz	220 / 50		
Engine power Burner	Watt	90		
Room thermostat		SIEMENS RAA 30.26		
Three speed Circulator	Watt	52-77-110		
Fuel type		Heating oil		
Heigh. (A)	MM	930	954	954
Length. (B)	MM	420	500	500
Depth. (Γ)	MM	620	715	715
Chimney Weigh (κενό)	MM Kgr	102 120	102 135	102 160

* Technical characteristics can change without warning.

Operating instructions and electrological connection of control panel Master Boiler



DISPLAY shows : - the temperature of the boiler when it is standing
 - Parameters in the programming
 - any damages of the boiler

BUTTON 01: Increases the indication we wish to regulate.

BUTTON 02: Decreases the indication we wish to regulate.

BUTTON 03: Choose the parameter to regulate it.

PARAMETERS: t 1 : Temperature where the burner stops.
 d 1 : Low hysteresis of the burner temperature t1.
 t 2 : Temperature where the circulator starts
 The operation of heating
 d 2 : Low hysteresis of the circulator temperature t2
 t 3 : temperature where the circulator starts the
 Operation of hot water and heating
 simultaneously
 d 3 : Low hysteresis of the circulator temperature t3
 S t : Application

BUTTON 04: Switch ON / OFF of the boiler

LAMP 01: lights when the boiler operates

LAMP 02: lights when the circulator operates

LAMP 03: lights when the circuit protection is activated

LAMP 04: lights when the burner block

LAMP 05: lights when the boiler is activated

Programming: Press for 2" continuously SET to enter the programming. With up and down arrows adjust the parameters. To go to the next parameter press SET. When you get to sign S t has finished programming. After this procedure, temperature appears again on the display.

Recommended parameter values :

t 1 : 72°C	d 1 : 2°C
t 2 : 45°C	d 2 : 2°C
t 3 : 64°C	d 3 : 2°C

Notice: All the control panels are preset from the factory

Protection Circuit:

Warm protection: If for some reason overcome 92°C circulator is activated and lowers the temperature of the boiler 88°C.

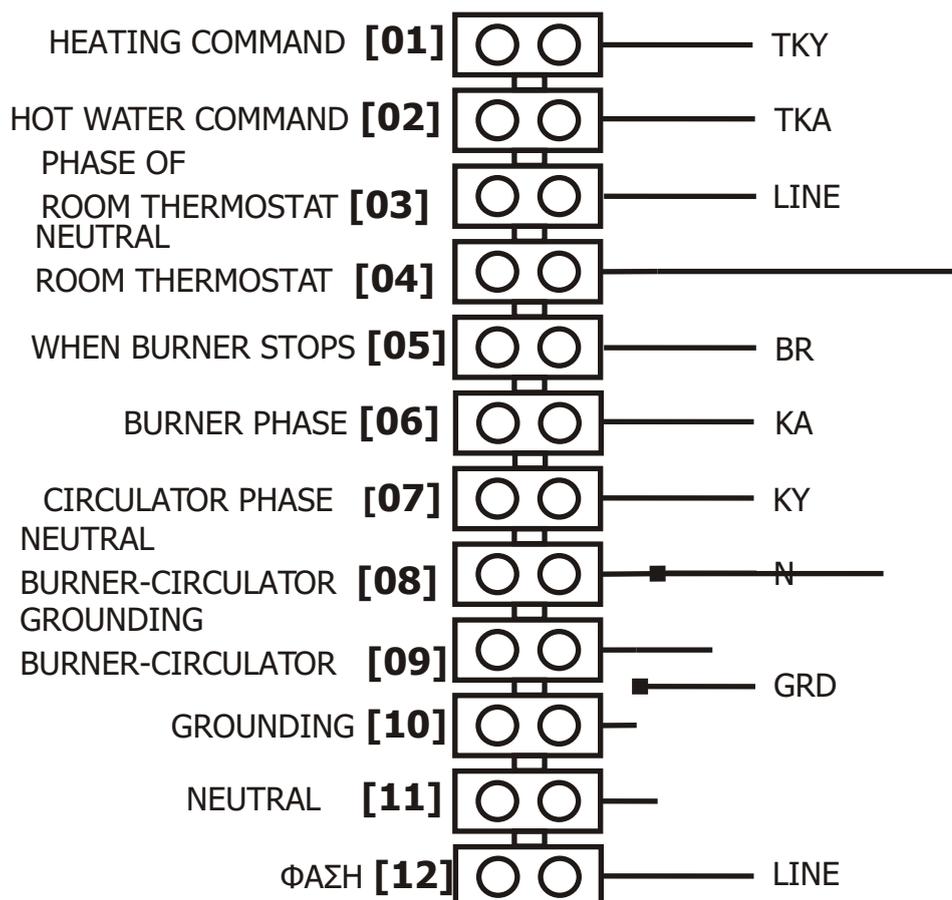
Burners off:

- If short-circuit fault appears in the sensor.
- If sensor is being cut.
- If sensor for any reason stops working.

Temperature variation [sensor is removed from its position).

Frost protection: If the boiler temperature drops to +2°C the burner is automatically activated and raises the temperature of the boiler to +8°C.

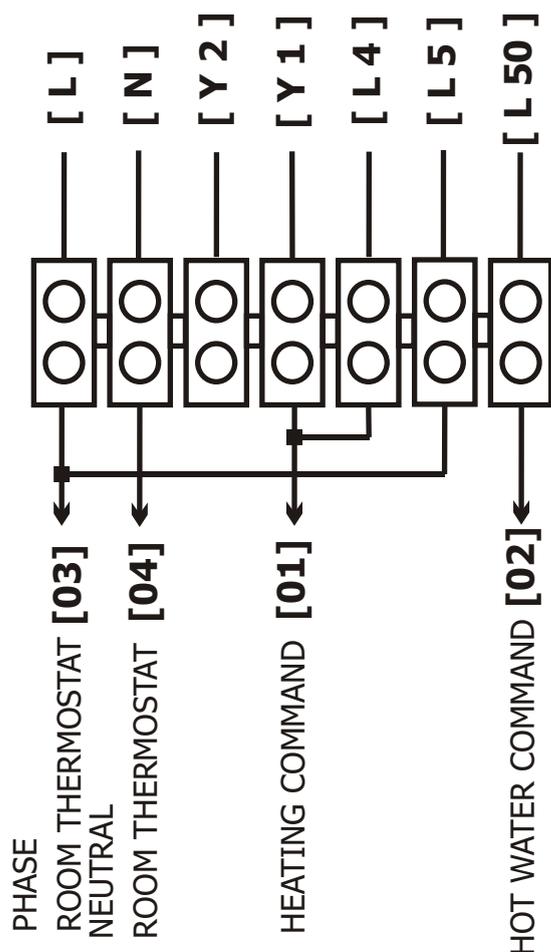
Circulator protection: Automatic activation of the circulator at time periods in order to avoid obstacles

Master Boiler Control panel link

Feeding voltage: AC 220V - 50Hz

Internal safety of the control panel: F 5A / 220V

Room thermostat connection drawing [SIEMENS RAA 30.26]



Instructions:

- Before connecting the thermostat, you should remove the bridge [1],[2]&[3] of the terminal block panel MASTER BOILER
- You should make the bridge in the thermostat terminal block [YI]-[L4] & [L]-[L5], As shown in the diagram
- Can connect more than one room thermostat, in parallel

Boiler operation of the room thermostat

- With the electronic table and the room thermostat can operate in three different independent functions:
1. Boiler for heating.
 2. Boiler for hot water production.
 3. For heating and hot water simultaneously.

Operation of the room thermostat

- The top switch activate the operation of hot water production.
- The bottom switch activate the operation of heating. (With rotary switch, select the room temperature you wish for).
- Activating both switches we have heating and hot water simultaneously.

Faults indication and solutions

- **[E 1]** Sensor problem:
 - short- circuit sensor
 - cut sensor
 - Unable temperature sensor to read
 - [Possible exit of the sensor from its position]
 After you identify and solve the problem activate again the boiler
- **[when the burner stops]:** Gearing of the burner.
After we identify and solve the problem, we activate the burner from the red switch which is located on the burner.

Notice: For any problem of the boiler you must contact your certified technician. Do not interfere other people.

Installation instructors

For the installation of _Master boiler the following hardware need to be connected:

1. Expansion tank (24lt) in the heating circuit or bigger than that if it is required by the installation.
2. Safety valve 1/2" 3BAR.
3. Automatic air vent of 2 pieces or more depending on the installation.
4. Filling valve 1/2" with manometer.
5. Magnesium anode for protection against salt.
6. Blackflow prevender in hot water circuit.
7. Expansion tank (8lt) in hot sanitary water circuit.
8. Pressure reducer in hot sanitary water circuit since we have increased pressure in our network.

Master Boiler connection

1. The hydrylic connection of the boiler is based on a project and you can find it on this booklet as well as at back side of the boiler.
2. You should avoid connecting the boiler tuborama with the hot water circuit.
3. The electrical cinnection is based on the diagram of the manual.

Boiler settings

1. The pressure of the heating circuit should be regulated by 1-1,5 BAR.
2. For proper and economical operation the setting of the burner should be done by a licensed technician.
3. The temperature at which the burner stops is preset.
4. The temperature at which the circulator stops is preset.

Boiler maintenance

1. It is necessary the annual cleaning of the boiler as well as cleaning and adjusting the burner by a licensed burner technician.
2. It is also necessary a periodic cleaning of the heat exchanger (coil) to prevent icing salts. Otherwise, alternator will be blocked. The cleaning is done by special liquids that you can find in the market. Time of regular cleaning depends on the hardness of the water and the frequency of use of the boiler.

Room thermostat installation

1. Thermostat should be placed in the room that concerns us more the changes in temperature.
2. Thermostat should not be placed near a radiator, in front of a wall that just behind a radiator is located or in a wall that tubes exists.
3. Also not to be placed near a window or a balcony door.

