



## **Instruction and Operation Manual Solid fuel boiler BM series**

Solid fuel boiler  
BM series



# THERMOLEV

- Thank you for your trust to Thermolev products.
- For the effective use of this boiler it is necessary to read carefully the present guidance manual, before the operation of the boiler.
- Keep the guidance manual in a safe place with the guarantee of the boiler, for any possible use

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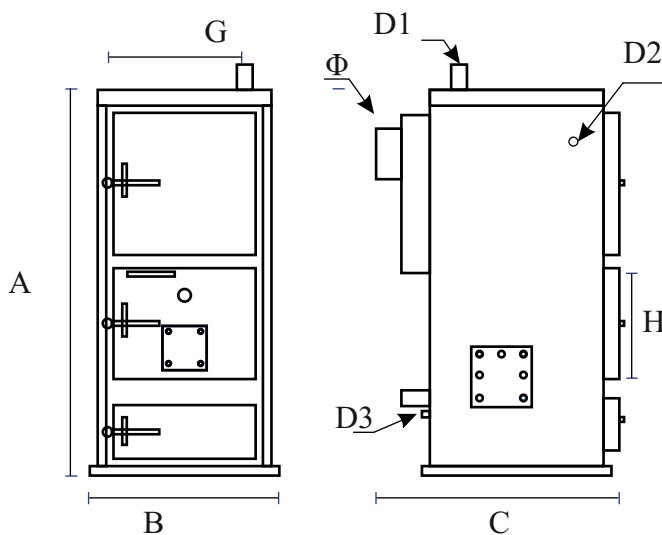
## 01. Technical data of BM series - Table[A]

Type	A [ mm ]	B [ mm ]	C [ mm ]	G [ mm ]	H [ mm ]	D1 [ in ]	D2 [ in ]	D3 [ in ]	Φ [ mm ]	Dimension		
										Πλάτος [ mm ]	Βάθος [ mm ]	Ύψος [ mm ]
BM 45	1220	605	885	455	320	1 1/4''	3/4''	1/2''	198	455	500	430
BM 65	1220	605	985	455	320	1 1/2''	3/4''	1/2''	198	455	600	430
BM 90	1440	855	1010	655	425	2''	3/4''	1/2''	218	660	600	555
BM 110	1440	855	1110	655	425	2''	3/4''	1/2''	218	660	700	555

**Solid fuel boiler over than 110,000 kcal/h are manufactured under request**

Type	Output [ kcal/h ]		Output [ kw ]		Weight [ kg ]	Max.operation pressure [ bar ]
	Min	Max	Min	Max		
BM 45	40000	50000	46,3	57,9	270	3
BM 65	60000	70000	69,4	81,0	320	3
BM 90	80000	100000	92,6	115,7	380	3
BM 110	100000	120000	115,7	138,9	450	3
BM 130	120000	140000	138,9	162,0	510	3
BM 150	140000	160000	162,0	185,2	555	3
BM 170	160000	180000	185,2	208,3	615	3

### Diagramm of BM solid fuel boiler



Connection flange  
 Ventilator  
 Pellet  
 Cleaning chimney wicket  
 Cleaning wicket  
 Wicket fuel catering  
 Wicket for removing the ashes

Hydraulic connection

D1A: boilers water exit (ζεστό)

D1B: return water facility (κρύο)

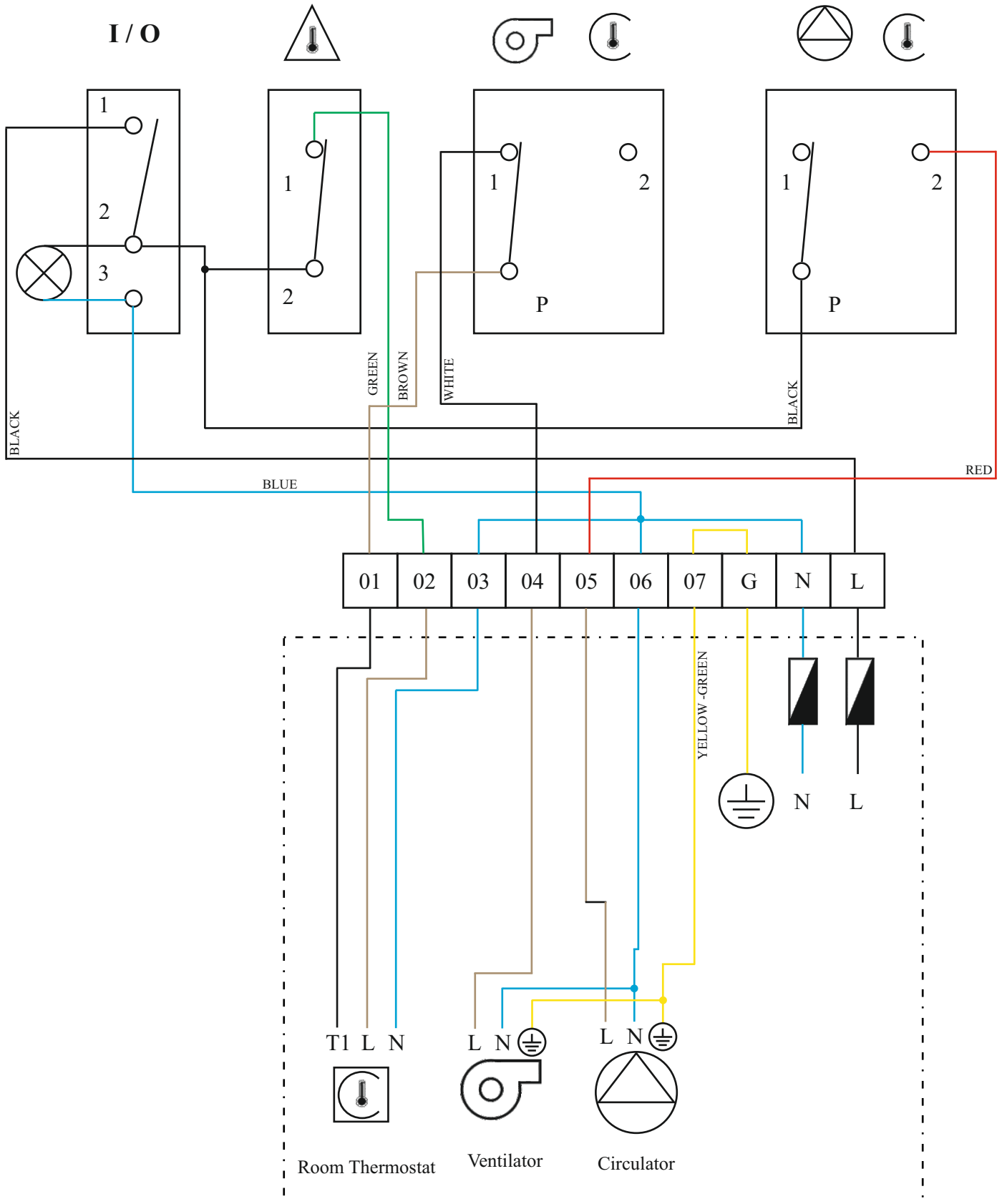
Φ: chimney connection

D2A: Thermostatic safety valve connection

D2B: metal thermostat connection

D3: Automatic filling and cleaning valve connection

## 02 .Boiler `s control panel - Wiring diagram of BM boiler



----- TO BE WIRED BY THE INSTALLER

## **General description**

Steel solid fuel boiler BM of Thermolev is manufactured with high quality steel type ST 37-2. BM boilers have four way fumes and the movement of the fumes is through rhomboid diaphragms for the best efficiency of the boiler. The innovative design of the boiler with accesible large openings for the movement of the fumes has as a result of the boiler's rare cleaning.

### **03. Placement**

Select the installation place.

- Select the right place for the placement of the boiler, where the water and the electricity supply are available.
- The existence of correct ventilation apertures is necessary in the boiler's room.
- The room must be spacious to make easy the installation and the annual services.
- No inflammable and any other kind of things must be stored in the boilers room.

Steel solid fuel boiler BM series can operate:

- either with close circuit: it is necessary to have expansion vessel. Also must be placed safety valve for the heating system 1/2'and thermostatic safety valve T90 3/4"
- or with open circuit: it is necesssry to have open circuit vessel or tank

### **04. Protection**

#### ➤ Before the use

- 1.It is prohibit the use of any other fuel except wood and oil
- 2.There should be no leaking fumes from the boiler's doors.
- 3.There should be no leaking fumes from the chimney.

#### ➤ Checkpoints before the operation

- 1.Check if there is any leak at the pipe connections
- 2.Check the water amount in the heating installation.
  - 8a check the amount of water in the expansion tank, for open circuit installation
  - 8b check the water pressure (adjust the settle up valve), for close circuit installation
- 3.Turn on the circulator and take the air out from all the radiators.

➤ Remarks during the operation

1. Keep the boiler's room tidy and never store flammable materials!!
2. Check of the flame in short periods
3. If the boiler is going to be for long time stopped, it is good to disconnect the power Supply.

## **05. Operation**

Steel solid fuel boiler BM series can operate with two ways:

1. either with ventilator and control panel in order to achieve controlled burning and low fuel cost.

Security measures of BM boiler: in case of blackout ventilator stops working and lowers the flame.

2. Or with metal thermostat with chain for the movement of the wicket and analogic thermometer.

Checkpoints before the operation of the boiler:

1. Check the existence of water in the heating circuit by opening the clearing valve.
2. Be sure that the pipes are full of water.
3. Be sure that the burner is earthed.
4. Settle the boiler thermostat in the desired temperature.
5. In case that boiler series BM works with oil, fill the tank with oil before it will be completely empty. Otherwise air will exist in the circuit and there is a possibility of flaming weakness.

## **06. Security systems**

➤ Water low level

If the level of the water or the pressure of the water faults down of the permissible level then:

- ✓ Boiler must stop working.
- ✓ Check for any leaks in the circuit.
- ✓ When the quantity of the water comes again to normal levels then the boiler can start working.

➤ Overheating

When the boiler's temperature overrun the maximum thermostat temperature, then the burner stop working for safety reasons.

If this happen again, call authorized technician.

➤ Danger in case of oil leak

## **07. Necessary check**

### **Steel boiler series BM oil-gas**

#### ➤ **Regular check**

1. Take away the flammable materials from the boiler's room.
2. Keep the boiler and the parts around it, clean.
3. Often check for gas or oil leaking.
4. Check the connections of the chimney pipe and look if they are fixed correct and if there is any fume's leaking.
5. Check if there is any water leaking in the boiler or in the pipes.

## **08. Service and cleaning**

Maintenance of the boiler is easy fast. At the bottom of the boiler there is a special drawer for the export of the ash. The amount of ash generated by the use of the boiler and the type of wood used. It's type of wood leaves different residue during the combustion for this reason there is an exclusion in the calculation of the ash.

Steel solid fuel BM needs cleaning about once in 25 days :

## **09. BM boiler operates with oil-oil use**

1. First check for any fume leak that may exist in the installation of the boiler. This is very important so it is good to be really careful.
2. Check boiler's door to be very well closed in case of fume leak.
3. Clean very well the oil that can be found outside the oil tank
4. Be sure that you close really well the top of the oil tank before the operation of the boiler.
5. Check if the spark and the combustion are right (from the flame checkpoint) only for oil use.
6. Check regularly for oil leaks in the oil tank or in the pipes
- 6.1 Often clearing out the water from the oil tank, this helps for the right operation of the boiler (avoiding unpleasant complications)

### Cleaning of the oil filter

- 6.2 In case, the oil filter needs to get clear, you should close the oil supply from the provider valve.
- 6.3 Clean very good the oil filter and the inside part where the filter lay with light oil or oil.

### Cleaning the oil tank

- 6.4 It is possible to gather some quantity of water in the oil tank or in the oil supply pipe, especially after a long time without clearing them. In this situation open the clear up valve of the tank and let the water to run out of it until oil start to run out.

**➤ Check fume's exit**

5. It is necessary to check the chimney pipe one time per year. If you find something faults, call authorized technician.

**10. Part replacement**

1. There isn't any part of the boiler which can be broken down in a small term time, but if it is necessary the replacement of any boiler's part, call our commercial Representative.

2. For any intervene to the boiler, please call only authorized technician.

3. Intervene to the boiler from someone who isn't authorized technician may cause to you more problems.

**11. Locate and problem solve**

a) For solid fuel boiler BM series

If you notice a problem call an authorized technician.

B) For BM boiler operation with oil

If you notice a problem call an authorized technician.

**12. Audit card**

B) For boiler series solid fuel boiler BM

Date	Repair and Replacement parts	Technician



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