



Heat technology since 1959

Setting instruction Manual for boilers with **SM 30001**

Printed Circuit board
mod.

RBC 24 (open chamber)

RBS 24 (room sealed)



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CONTROL PANEL



1
ON / OFF POWER BUTTON



2
HEATING TEMPERATURE ADJUSTMENT KNOB



3
DOMESTIC HOT WATER TEMPERATURE ADJUSTMENT KNOB



4
STABLE LIGHT: POWER ON
FLASHING LIGHT: FLAME ON



5
STABLE LIGHT: 40°C TEMPERATURE
FLASHING LIGHT: WATER DEFICIENCY
LIGHT OFF: WATER PRESSURE LEVEL 1 bar



6
STABLE LIGHT: 50°C TEMPERATURE
FLASHING LIGHT: FLUE SAFETY THERMOSTAT LOCK-OUT (for open chamber model only)



7
STABLE LIGHT: 60°C TEMPERATURE
FLASHING LIGHT: FLAME LOCK-OUT

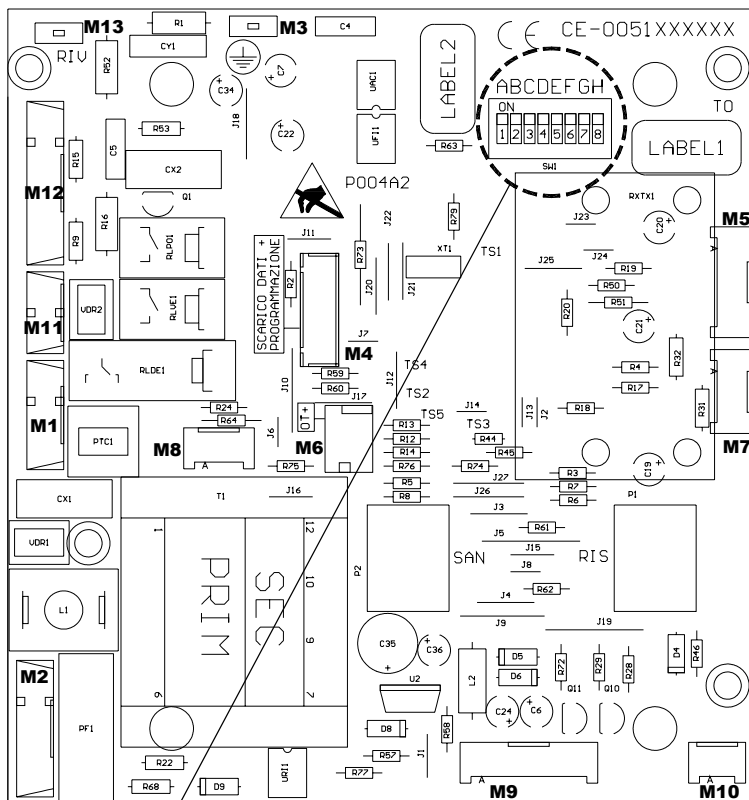


8
STABLE LIGHT: 70°C TEMPERATURE
FLASHING LIGHT: HIGH LIMIT THERMOSTAT LOCK-OUT



9
STABLE LIGHT: 80°C TEMPERATURE
FLASHING LIGHT: D. HOT WATER / HEATING SENSOR FAILURE

SM 30001 PRINTED CIRCUIT BOARD cod. 7666LA

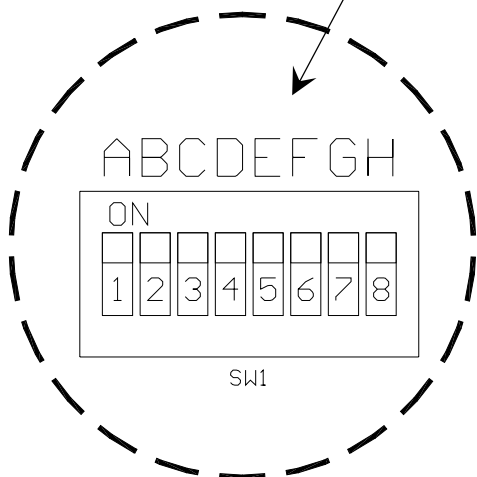


FUNCTIONS SETTING

- | | | |
|---|---|---|
| <p>1-A STANDARD 30-80°C - OFF
REDUCED 25-40°C - ON</p> | <input type="checkbox"/>
<input checked="" type="checkbox"/> | <p>HEATING TEMPERATURE
SETTING</p> |
| <p>2-B ACTIVE - OFF
DISCONNECTED - ON</p> | <input type="checkbox"/>
<input checked="" type="checkbox"/> | <p>SHORT-CYCLING Function
TIMER (3 min.)</p> |
| <p>4-D 64-65°C - OFF
58-61°C - ON</p> | <input checked="" type="checkbox"/>
<input type="checkbox"/> | <p>WATER-HAMMER Prevention
tion</p> <p>HOT WATER
PERATURE SETTING</p> |

BOILER TYPE SETTING

- | | | |
|-------------------|--|---|
| <p>5-E</p> | <p>OFF <input type="checkbox"/>
ON <input checked="" type="checkbox"/></p> | <p>NOT APPLICABLE
DUAL CIRCUIT EXCHANGER type</p> |
| <p>6-F</p> | <p>OFF <input checked="" type="checkbox"/>
ON <input type="checkbox"/></p> | <p>INSTANTANEOUS TYPE BOILER
NOT APPLICABLE</p> |
| <p>6-F</p> | <p>OFF <input type="checkbox"/>
ON <input checked="" type="checkbox"/></p> | <p>NATURAL GAS OPERATION
L.P.G. OPERATION</p> |



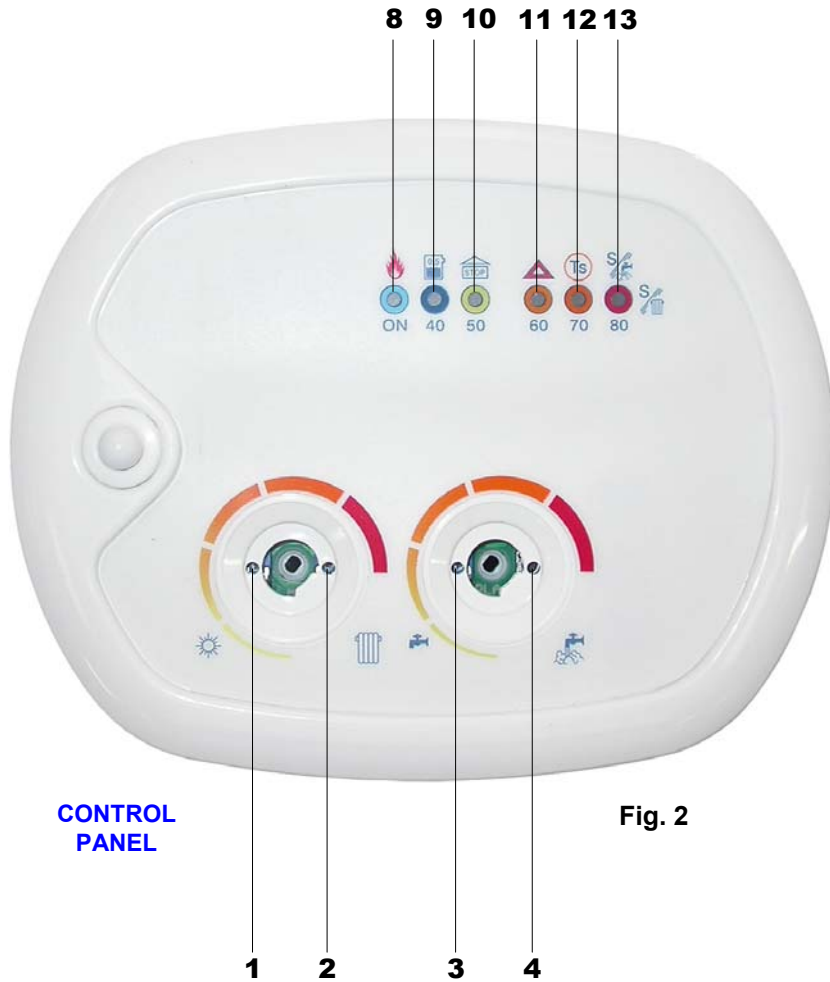


Fig. 2

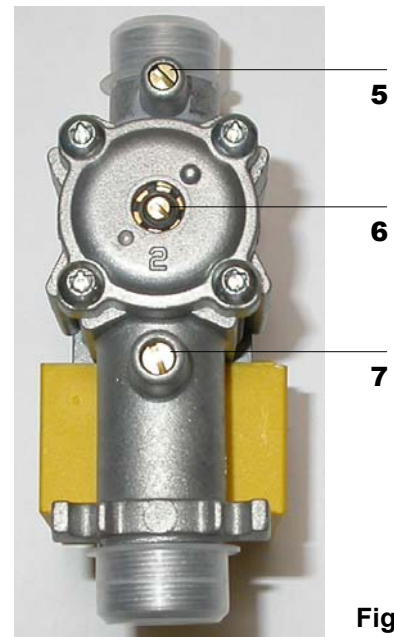


Fig. 1

GAS VALVE
NORDGAS
NV0111122901

CONTROLS (fig. 1-2)

1. "MAXR" MAXIMUM HEATING POTENTIOMETER
2. "MIN" MINIMUM GAS POTENTIOMETER
3. "RLA" STARTING STEP POTENTIOMETER
4. "SPAZ" CHIMNEY-SWEEPER FUNCTION
5. GAS PRESSURE POINT - OUTLET
6. GAS ADJUSTMENT SCREW
7. GAS PRESSURE POINT – INLET
8. STABLE LIGHT: POWER ON
FLASHING LIGHT: FLAME ON
9. STABLE LIGHT: 40°C TEMPERATURE
FLASHING LIGHT: WATER DEFICIENCY
LIGHT OFF: WATER PRESSURE LEVEL 1.2 bar
10. STABLE LIGHT: 50°C TEMPERATURE
FLASHING LIGHT: FLUE SAFETY THERMOSTAL LOCK-OUT (for open chamber model only)
11. STABLE LIGHT: 60°C TEMPERATURE
FLASHING LIGHT: FLAME LOCK-OUT
12. STABLE LIGHT: 70°C TEMPERATURE
FLASHING LIGHT: HIGH LIMIT THERMOSTAT LOCK-OUT
13. STABLE LIGHT: 80°C TEMPERATURE
FLASHING LIGHT: D. HOT WATER / HEATING SENSOR FAILURE

MAXIMUM GAS PRESSURE SETTING

- Unscrew **5** gas pressure point screw (fig. 1) on the gas valve and insert a manometer;
- Turn heating and domestic hot water setting knobs to the maximum and remove the 2 knob by extracting them with a pliers;
- Use a $\varnothing 2.5 \div 3$ mm cross-type screwdriver and turn “maxR” **1** potentiometer (fig. 2) clockwise to the maximum;
- Switch the boiler ON;
- Keep **4** potentiometer (chimney sweeper function) (fig. 2) pressed for 10 seconds;
- The manometer will show the maximum gas pressure value; if that value is different than the one stated on the Data Plate (see Gas pressure adjustment table pag. 6), modify it as follows: turn the **6** gas adjustment screw (fig. 1) clockwise to increase gas pressure and counter clockwise to decrease gas pressure to reach the data Plate pressure value.

MINIMUM GAS PRESSURE SETTING

- Turn “maxR” **1** potentiometer (fig. 2) counter clockwise to the minimum;
- Turn **2** potentiometer (minimum gas) (fig. 2) clockwise to increase or counter clockwise to decrease the gas pressure;
- Turn **3** potentiometer (starting step) (fig. 2) to the middle position of its full setting;

HEATING OUTPUT SETTING

- Turn the “maxR” **1** potentiometer (maximum heating) (fig. 2) clockwise and set the pressure value according to the system requirement. (see Heating Output Pressure Diagram at page 6);
- Remove the silicon pipe from the pressure point **5** (fig. 1);
- **Close tightly the pressure point screw and make sure there are no gas leaks;**
- Fit the 2 plastic knobs back to position;
- Put ON/OFF button in OFF and then ON position.

CENTRAL HEATING / DOMESTIC HOT WATER MODE OPERATION

If the boiler has to operate on both central heating and domestic hot water mode, do NOT set the central heating and d.h. water knobs to the minimum (zero);

- Set the domestic hot water knob to ‘0’ (zero) for a HEATING ONLY mode;
- Set the central heating knob to ‘0’ (zero) for a WATER ONLY mode;

RESET PROCEDURE

In case of a ‘Flame Lock-out’ (indicator **11** or **12** fig. 2 page 3), reset the boiler by putting the ON/OFF button in OFF and then ON position.

TECHNICAL SPECIFICATION

New generation printed circuit board with easy settings of boiler parameters.

Special features:

Main functions / features

- Chimney-sweeper function (15 minutes)
- Pump over-run function (2 minutes)
- Pump inactivity protection system
- Water-Hammer prevention function
- Suitable for outside temperature sensor connection
- Suitable for remote control system connection
- Self-diagnostic
- Continuous electronic modulation for central heating and domestic hot water
- Adjustable heating output
- Adjustable starting step

Exclusively for technicians settings

- Standard / reduced heating temperature from 30 to 80 °C / 25 to 40°C
- Water-Hammer prevention function
- Short cycling function-3 minutes stand-by, heating circuit
- Maximum gas pressure setting
- Minimum gas pressure setting
- Heating output setting

User Settings

- On / Off operation
- Heating temperature adjustment from 30 to 80 °C / 25 to 45°C
- Domestic Hot Water adjustment from 35 to 65 °C
- Mode selection knob: summer/winter/heating only
- Lock-out
- Normal water pressure
- Water deficiency safety switch
- Temperature indicator

GAS DATA TABLE

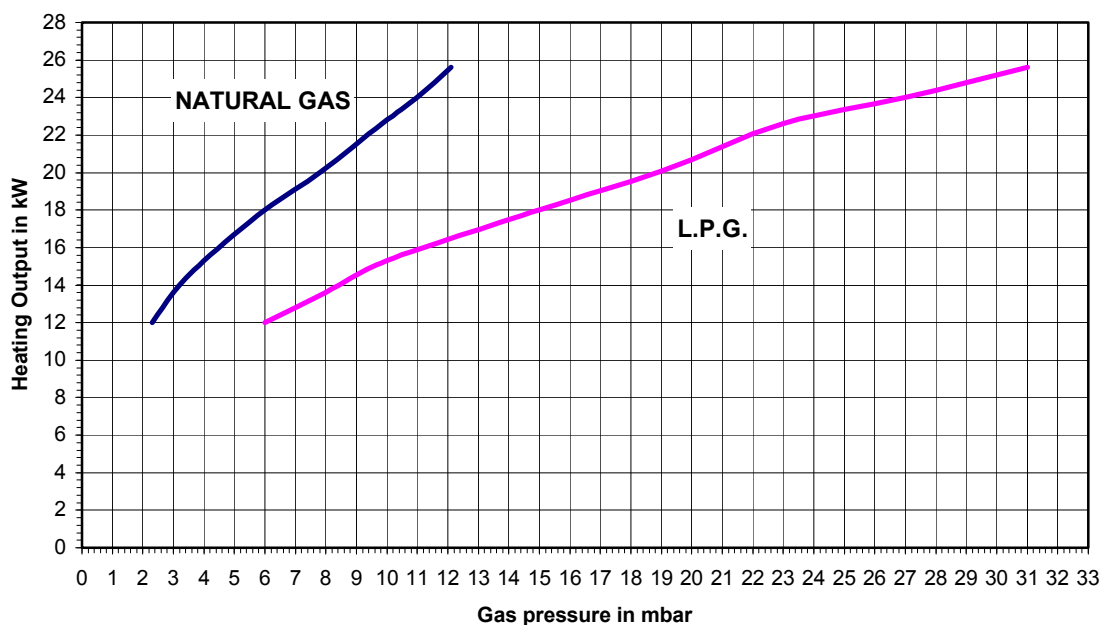
model: RBC 24 RBS 24		NATURAL GAS G 20	LIQUID BUTAN GAS G 30	LIQUID PROPANE GAS G 31
Lower Wobbe index (15°C; 1013 mbar)	MJ/Nm ³	45.67	80.58	70.69
Rated feed pressure	mbar	20	30	37
Minimum feed pressure	mbar	17	20	25
Main burner: 12 Jets - Ø jet	mm	1.30	0.77	0.77
Consumption (15°C; 1013 mbar)	m ³ /h	2.71	-	-
Consumption (15°C; 1013 mbar)	kg/h	-	2.019	1.99

GAS PRESSURE SETTING

models		Natural Gas G 20		G.P.L. G 30/31	
		min.	max.	min.	max
RBC 24	mbar	2.2	10.8	5	30
RBS 24	mbar	1.5	10.4	5	30

HEATING OUTPUT MAXIMUM PRESSURE DIAGRAM

(G20 Natural Gas - G30/31 L.P.G.)



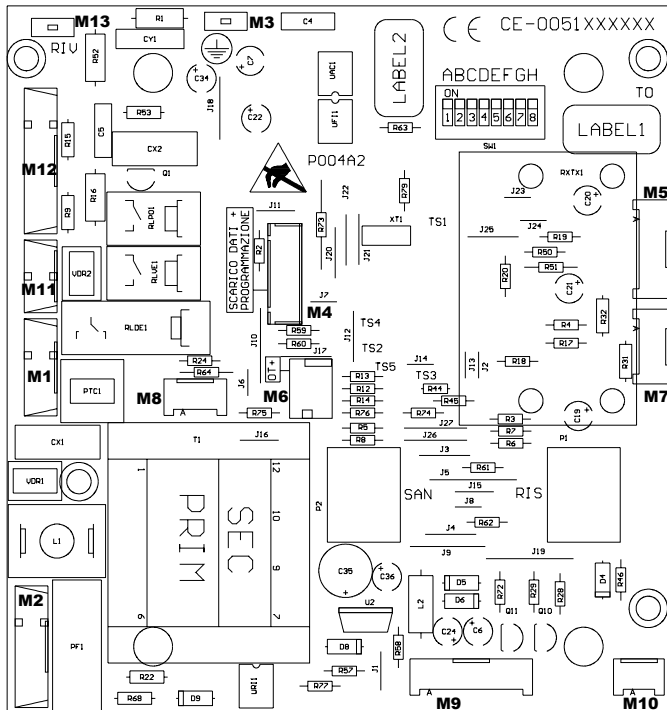
mod.

RBC 24
(open
chamber)

RBS 24
(room
sealed)

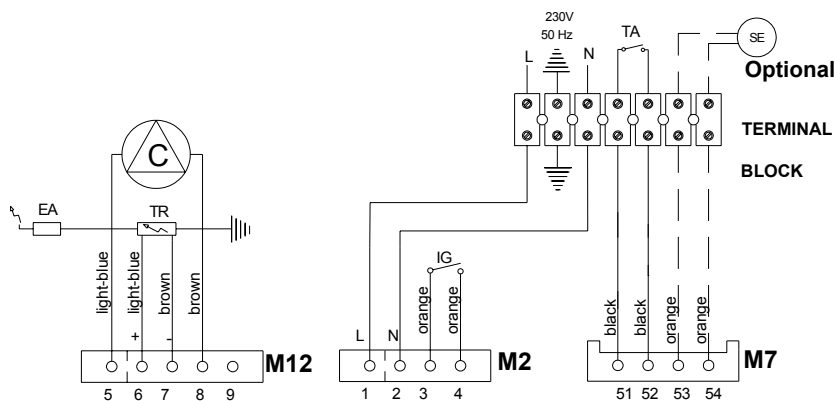
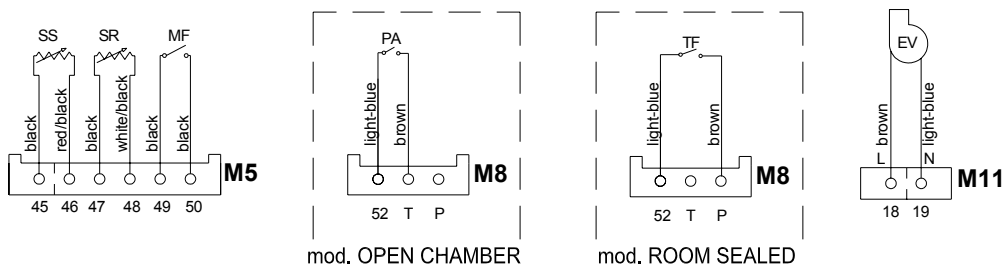
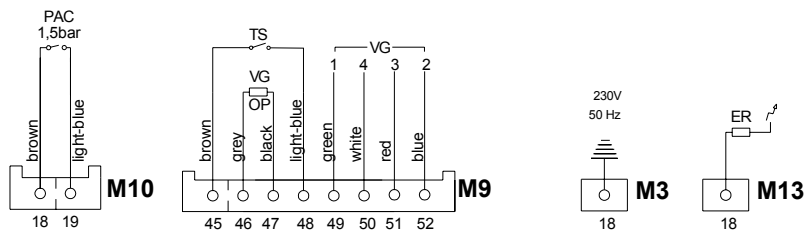
WIRING DIAGRAM

PRINTED CIRCUIT BOARD SM30001 (COD. 76666LA)



KEY

- L - LINE
- N - NEUTRAL
- PAC - WATER PRESSURE SWITCH
- IG - MAIN SWITCH
- SS - D.H. WATER SENSOR
- SR - HEATING SENSOR
- C - CIRCULATION PUMP
- TS - SAFETY THERMOSTAT
- M.F. - ELECTRONIC FLOWSWITCH
- TA - ROOM THERMOSTAT
- TF - SAFETY FLUE THERMOSTAT
- PA - AIR PRESSURE SWITCH
- EV - FAN
- VG - GAS VALVE
- EA - IGNITION ELECTRODE
- ER - IONISATION ELECTRODE
- TR - TRANSFORMER





Heat technology since 1959

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