



30 YEARS **ELTERM**<sup>®</sup>

## Electric heating boilers Basic **LED** automation

- 30 years experience
- more than 500,000 satisfied customers throughout Europe

30  
YEARS

### High efficiency of boiler operation

99,5%



Operation counter



max. power lock



NC contact 0V  
Detachable contact



PV  
Ready

### Ideal for central heating systems.

- in energy-efficient buildings
- awaiting the gas connection
- alternative, supportive, temporary



### No connection to chimney

- environmental protection
- no exhaust emissions
- human and animal friendly

STOP  
CO<sub>2</sub>

### Ideal for use with a gas boiler

the boiler operating counter switches the gas boiler On when the energy consumption limit set on the Bosman LED panel is reached



Comply with the directives

- LVD - low voltage - electrical safety
- RoHS - restriction of the use of certain hazardous substances
- EMC - electromagnetic compatibility
- WEEE - on waste equipment, GIOŚ Register no: E0001767W
- ErP - energy efficiency of heat sources  
- energy efficiency class D

<b>Watch Dog</b> processor monitoring system	<b>PID</b> proportional-integral differential regulator	<b>BM</b> non-volatile programme memory
<b>SC</b> protection against excessive boiler switching frequency	<b>OSC</b> quadruple overheat protection	<b>PAS</b> ANTI STOP pump safety system

#### In boiler price included

	<b>PV Ready</b> Operation counter <ul style="list-style-type: none"> <li>• heating boiler operation counter</li> <li>• stop heating</li> <li>• adjustable energy consumption</li> <li>• boiler stop signalling</li> </ul>
	<b>PV Ready</b> Max power lock Adaptation of the boiler power to the output of the PV installation (function available on the boiler panel)
	<b>PV Ready</b> NC contact 0V Possibility to operate the boiler with: <ul style="list-style-type: none"> <li>• any voltage-free room controller</li> <li>• automation of another heat source or inverter</li> </ul>
	<b>PV Ready</b> Disconnectable contact Disconnects the second heat source when the electric boiler is switched ON. Switches the second source ON when the electric boiler switches OFF.
	<b>PV Ready</b> PID On/Off Equal phase load of heating boiler operation (boiler operation with or without PID function)

#### OPTION

	DHW package code 100003		Priority DHW On/Off		Threeway solenoid valve + servo motor		DHW temp. sensor for storage tank
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### Basic LED automation

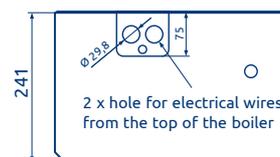
Major

#### In boiler price included



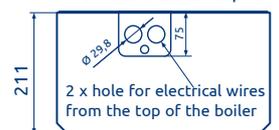
#### power from 15 to 24 kW

View from boiler top

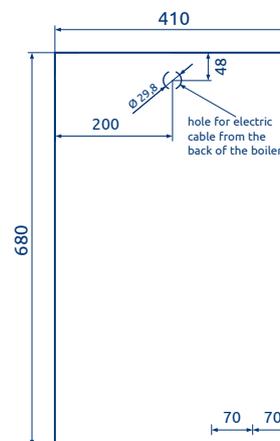


#### power from 4 to 12 kW

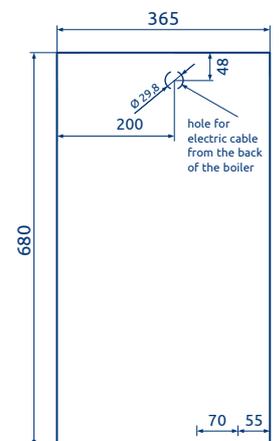
View from boiler top



Boiler front view

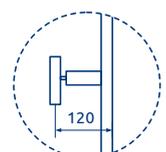
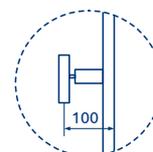


Boiler front view



3/4"Int. ↓ ↑ 3/4"Int.

3/4"Int. ↓ ↑ 3/4"Int.



max. power	6 / 4 kW	9 kW	12 kW	15 kW	18 kW	24 kW	equipment
<b>Major - code</b>	<b>124006</b>	<b>124009</b>	<b>124012</b>	<b>124015</b>	<b>124018</b>	<b>124024</b>	

## Factory electronic functions

model	Boiler output	max power	Qty. heaters	electronic modulation	manual modulation			
Major	6 / 4 kW		3 pcs.	in 1/3 (1/2) power	6 = 2-2-2 kW	4 = 2-2 kW		
	9 kW		3 pcs.	in 1/3 power	3-3-3 kW			
	12 kW		3 pcs.	in 1/3 power	4-4-4 kW			
	15 kW	4-6-9-15 kW	6 pcs.	in 1/3 power	15 = 5-5-5 kW	9 = 3-3-3 kW	6 = 2-2-2 kW	4 = 2-2 kW
	18 kW	4-6-12-18 kW	6 pcs.	in 1/3 power	18 = 6-6-6 kW	12 = 4-4-4 kW	6 = 2-2-2 kW	4 = 2-2 kW
	24 kW	12-24 kW	6 pcs.	in 1/3 power	24 = 8-8-8 kW	12 = 4-4-4 kW		

**Max. power regulation**

Possibility to reduce the maximum boiler output on the control panel

**Algorithm PID**

Electronic optimisation of heater operation and boiler output independent of the set maximum output.

**Max power lock**

Adjustment of the boiler output to the PV installation output. Particularly useful in summer when the maximum boiler output is higher than the PV installation output (on the control panel).



Major 15 kW



Major 18 kW



Major 24 kW

## Selecting the boiler power according to the building area

Boiler power selection table		250m <sup>2</sup>	300m <sup>2</sup>	400m <sup>2</sup>	500m <sup>2</sup>	600m <sup>2</sup>	700m <sup>2</sup>	800m <sup>2</sup>	1000m <sup>2</sup>		
<b>A+</b>	<b>A</b>	Energy efficient building 20-25cm insulation EUco approx. 50kWh/m <sup>2</sup> /year - approx. 40W/m <sup>2</sup>		<b>12 kW</b>	<b>15 kW</b>	<b>18 kW</b>	<b>24 kW</b>	<b>24 kW</b>	<b>30 kW</b>	<b>36 kW</b>	<b>42 kW</b>
<b>B</b>	<b>C</b>	Standard building 10-15cm of insulation EUco approx. 90kWh/m <sup>2</sup> /year - approx. 70W/m <sup>2</sup>		<b>18 kW</b>	<b>24 kW</b>	<b>30 kW</b>	<b>36 kW</b>	<b>42 kW</b>	<b>54 kW</b>	<b>60 kW</b>	<b>72 kW</b>
<b>D</b>	<b>E</b>	Energy-intensive building 0-5cm of insulation EUco approx. 150kWh/m <sup>2</sup> /year - approx. 120W/m <sup>2</sup>		<b>30 kW</b>	<b>36 kW</b>	<b>48 kW</b>	<b>60 kW</b>	<b>72 kW</b>	<b>84 kW</b>	<b>96 kW</b>	<b>126 kW</b>

## Selection of protection to boiler power

Protection selection	4 kW	4 kW	6 kW	6 kW	9 kW	12 kW	15 kW	18 kW	24 kW
	1 phase	2 phases	1 phase	3 phases	3 phase				
Fuses (A)	1 x 20	2 x 10	1 x 32	3 x 10	3 x 16	3 x 20	3 x 25	3 x 32	3 x 40
Power cord (mm <sup>2</sup> )	3 x 4	5 x 2.5	3 x 4	5 x 2.5	5 x 2.5	5 x 4	5 x 4	5 x 6	5 x 10

\* The exact cross-section of the power cord is selected by the electrician on the basis of an analysis of the local conditions.

\*\* protection table for boilers above 24 kW (from 30 kW to 1.5 MW) available at [www.elterm.pl](http://www.elterm.pl)

	Control automation	DHW external tank	Instantaneous water heater	Built-in storage tank 100L	Webb application	Air vent	manometer	pump x1	pump x2	Safety valve	Expansion vessel	Room control	Weather compensation	Radio control of the boiler	max. operation temp. 70°C	max. operation temp. 90°C
Major	●	●	○	○	○	●	●	●	○	●	●	○	○	○	●	○