



YEARS **ELTERM**[®]

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

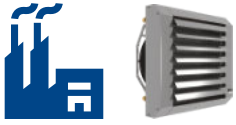
- environmental protection
- no exhaust emissions
- human and animal friendly

STOP
CO₂

Ideal for use with a gas boiler,

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





for industry and continuous operation

for industry and continuous operation

- electronic SSR relays
- Increased component durability
- disconnecter with trigger
- advanced cooling system

Watch Dog
processor monitoring system

PID
proportional-integral differential regulator

BM
non-volatile programme memory

SC
protection against excessive boiler switching frequency

OSC
quadruple overheat protection

PAS
ANTI STOP pump safety system

In boiler price included

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

OPTION

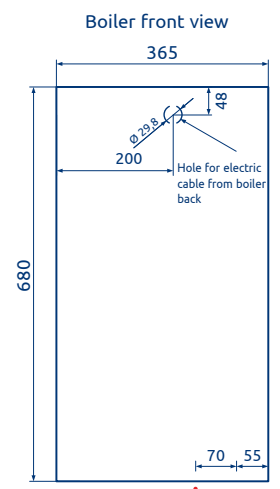
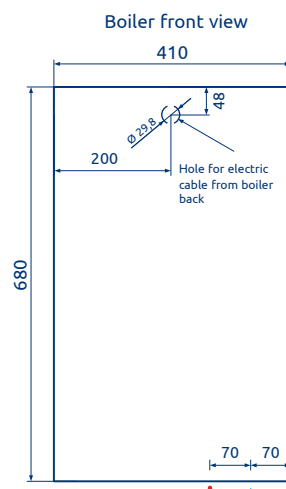
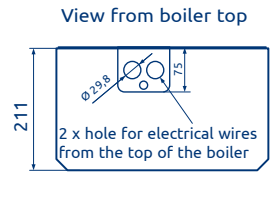
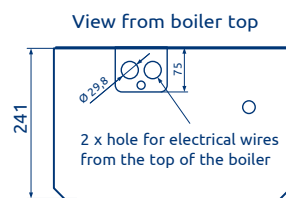
	DHW package code 100003		DHW priority On/Off		Threeway solenoid valve + servo motor		DHW temp. sensor for storage tank
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Basic LED automation Hussar

- wire control included
- expansion vessel
- pump
- air vent
- manometer
- safety valve

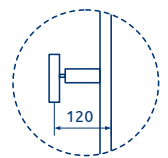
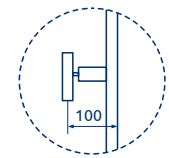
power from 15 to 24 kW

power from 4 to 12 kW



3/4" Ext. ↓ ↑ 3/4" Ext.

3/4" Ext. ↓ ↑ 3/4" Ext.



max. power	6 / 4 kW	9 kW	12 kW	15 kW	18 kW	24 kW	equipment
Hussar - code	134006	134009	134012	134015	134018	134024	

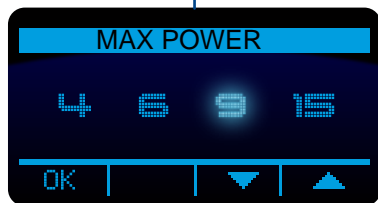
factory electronic functions

model	boiler power	max power	Qty. heaters	electronic modulation	manual modulation			
Hussar	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.

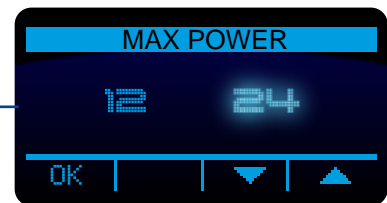
Max power lock
Adjustment of the boiler output to the PV installation output. Particularly useful in summer when the maximum boiler output is higher than the PV installation output (on the control panel).



Hussar 15 kW



Hussar 18 kW



Hussar 24 kW

Selecting the boiler output for the building area

Boiler output selection table		50m ²	75m ²	100m ²	125m ²	150m ²	200m ²	250m ²	300m ²		
A+	A	Energy efficient building 20-25cm insulation EUco approx. 50kWh/m ² /year approx. 40W/m ²		4 kW	4 kW	6 kW	6 kW	9 kW	9 kW	12 kW	15 kW
B	C	Standard building 10-15cm insulation EUco approx. 90kWh/m ² /year approx. 70W/m ²		4 kW	6 kW	9 kW	9 kW	12 kW	15 kW	18 kW	24 kW
D	E	Energy-intensive building 0-5cm insulation EUco approx. 150kWh/m ² /year approx. 120W/m ²		6 kW	9 kW	12 kW	15 kW	18 kW	24 kW	30 kW	36 kW

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 phases	3 phases	3 phases	3 phases	3 phases
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 ²)	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 24kW (from 30kW to 1.5MW) available at 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
Hussar	●	●	○	○	○	●	●	●	○	●	●	○	○	○	○	●