

Electric heating boilers and In-line heaters

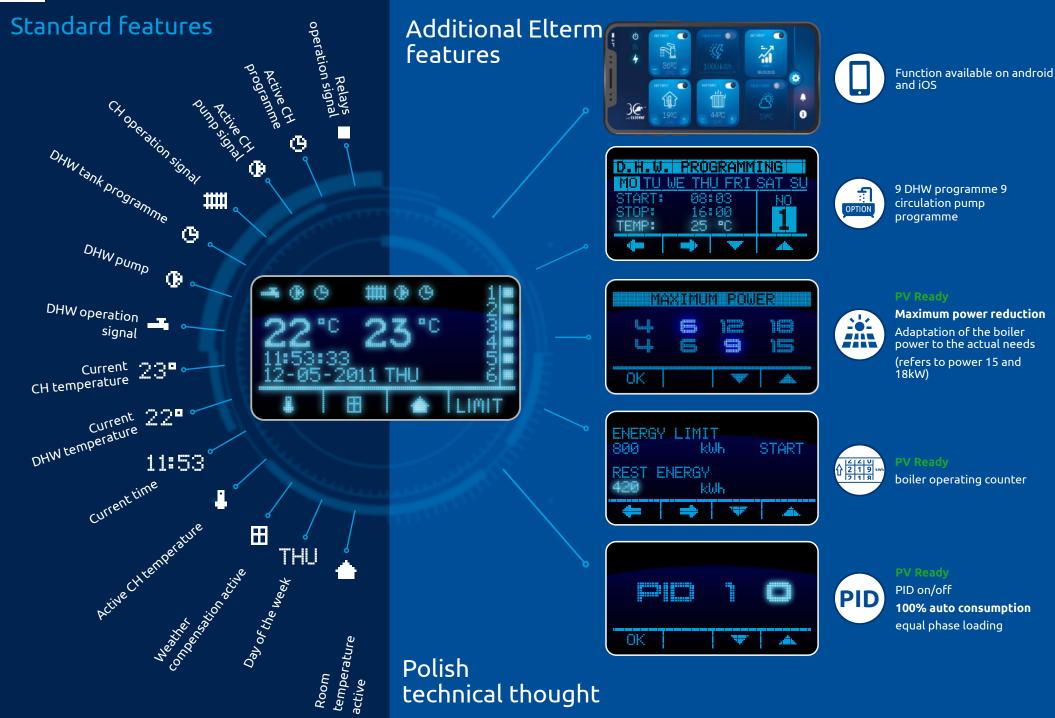
version 2023.04

The widest range of electric central heating boilers and in-line heaters.





# Function of the electronic system – advanced LCD automation





# Electric Elterm boilers PV ready – Colonel boiler 15kW



surplus

to network

4,5 kW

3,5 kW

for household purposes

## Example:

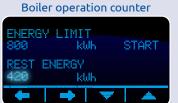
- single-family house 200m2
- PV installation 8kWp
- insulation 10-15 cm
- EUco 90 kWH/m2/year
- About 70 W/m2
- Hydraulic connections scheme simplified



Available on android and iOS



Boiler functions used in the winter









DHW installation

1. Weekly DHW programming

9 available programmes

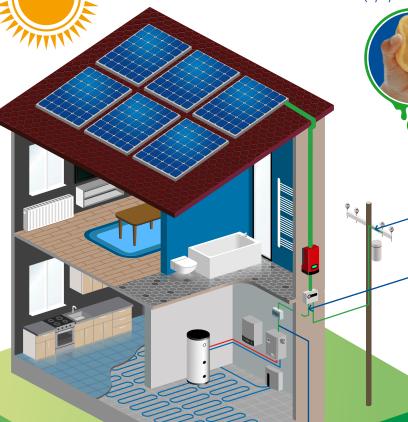


2. Weekly programming circulation pump

9 available programmes



Squeeze as much as you can out of photovoltaics with Colonel boiler 15kW (4/6/9 & 15 kW)





Maximum power reduction

adaptation of the boiler power to the actual needs





100% auto consumption equal phase loading









A+ Energy efficient building 20-25cm insulation EUco approx. 50kWh/m²/year approx. 40W/m² Standard building 10-15cm of insulation EUco approx. 90kWh/m²/year approx. 70W/m² Energy-intensive building 0-5cm insulation EUco approx. 150kWh/m²/year approx. 120W/m² D Ε

	ection elect	Boiler model	code	Fuses (A)	A+ A	ВС	D E
4 kW	1 Fuse	6/4kW	127006	1 x 20	to 75 m²	to 50 m²	-
4 kW	2 Fuses	6/4kW	127006	2 x 10	to 75 m²	to 50 m²	-
6 kW	1 Fuse	6/4kW	127006	1 x 32	to 125 m²	to 75 m²	to 50 m²
6 kW	3 Fuses	6/4kW	127006	3 x 10	to 125 m²	to 75 m²	to 50 m²
9 kW	3 Fuses	9 kW	127009	3 x 16	to 200 m²	to 125 m²	to 75 m²
12 kW	3 Fuses	12 kW	127012	3 x 20	to 250 m²	to 150 m²	to 100 m²
15 kW	3 Fuses	15 kW	127015	3 x 25	to 300 m²	to 200 m²	to 125 m²
18 kW	3 Fuses	18 kW	127018	3 x 32	to 400 m²	to 250 m²	to 150 m²
24 kW	3 Fuses	24 kW	127024	3 x 40	to 600 m²	to 300 m <sup>2</sup>	to 200 m²

## **HEATING SEASON**

DHW installation

1. Weekly DHW programming

9 available programmes

DHW	PRO	GRAMM	ING
MO TU	WE TH	U FRI	SAT SU
START:	98	03	NO
STOP:	16	:00	1
TEMP:	25	°C	
4	-	$\overline{}$	<b>A</b>

# 2. Weekly programming circulation pump

9 available programmes



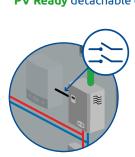
## **CH** installation

Boiler power select to max.



**Boiler operation counter Limit** - example

PV Ready detachable contact



set the limit (kWh) to be used by the Colonel boiler



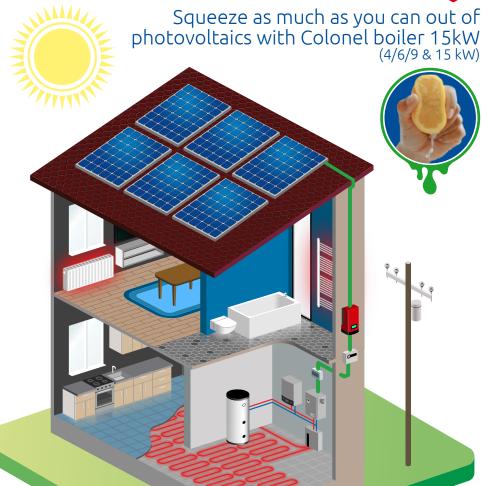
Colonel boiler operate gas boiler not working



The limit has been used up - the gas boiler is switched ON













## Why Elterm boilers?













- 1. Very low investment cost
- 2. Ideal as a peak heat source
- 3. Simple to install, no connection to chimney
- 4. Ideal for use with PV installations Boiler operating counter
- 5. Ideal as a temporary heat source, e.g.: awaiting for assembly main heat source
- 6. Ideal for warming small production halls
- 7. Ideal for modernised townhouses and multifamily buildings. No need to connect to chimney
  - a. Assembly of small boiler power for each flat separately
  - b. Assembly of one big unit for the entire building

## Advanced **LCD** automation

In boiler price included: Room and Weather control

Colonel up to 24kW Captain up to 24kW







## Basic **LED** automation















- 2. High work performance
- 3. Ideal for use with fan heaters
- 4. Ideal for warming small and large production halls
- 5. Possibility to combine up to 31 boilers in a cascade
- 6. Ideal as a peak heat source with monobloc heat pumps
  - a) for high performance heat pumps
  - b) for heat pumps cascade

## Advanced **LCD** automation

In boiler price included: Room and Weather control

Commander up to 24 kW

Division up to 1,5 MW (cascade)



## Basic **LED** automation

Hussar up to 24 kW

Division up to 48 kW



# Electric Elterm boiler's PV ready

Table of boiler output selection

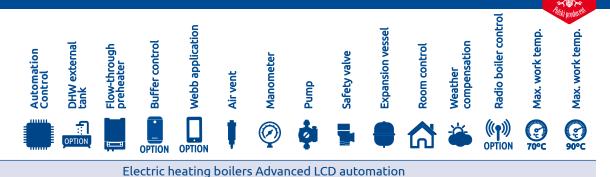
## CH + DHW Choice of 2 DHW preparation options











Captain			0							0					0
Colonel			0												0
Lieutenant		0													0
Commander			0											0	
Division			0							0				0	
				Electri	c heatii	ng boil	ers Ba	sic LED	autom	ation					
Corporal			0	0	0			0		0	0	0	0		0
Corporal Sergeant	•	•	0	0	0	•	•	0	•	0	0	0	0	•	0
	•	•	$\stackrel{\circ}{\sim}$	0	0	•	•	•	•		0	0	0	•	
Sergeant	•	•	0	0 0 0	0 0	•	•	•	•		0 0 0	0 0 0	0 0 0	•	0
Sergeant Major	•	• • •	0	0 0 0 0	0 0 0 0	•	•	•	•		0 0 0	0 0 0	0 0 0	•	0

250m<sup>2</sup> 300m<sup>2</sup> 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>

	gy efficient approx. 50				<b>4</b> kW	<b>4</b> kW	<b>6</b> kW	<b>6</b> kW	<b>9</b> kW	<b>9</b> kW	<b>12</b> kW	<b>15</b> kW	<b>12</b> kW	<b>15</b> kW	<b>18</b> kW	<b>24</b> kW	<b>24</b> kW	/ <b>30</b> kW	<b>36</b> kW	<b>42</b> kW
	dard buildir approx. 90				<b>4</b> kW	<b>6</b> kW	<b>9</b> kW	<b>9</b> kW	<b>12</b> kW	<b>15</b> kV	v <b>18</b> kw	<b>24</b> kW	<b>18</b> kW	<b>24</b> kW	<b>30</b> kW	<b>36</b> kW	<b>42</b> kw	/ <b>54</b> kw	/ <b>60</b> kW	<b>72</b> kW
D E Ener	gy-intensivo approx. 15	e building 0 i0kWh/m²/y	-5cm insul ear, appro	ation x. 120W/m²	. <b>6</b> kW	<b>9</b> kW	<b>12</b> kW	<b>15</b> kW	<b>18</b> kW	<b>24</b> kV	v <b>30</b> kw	<b>36</b> kW	<b>30</b> kW	<b>36</b> kW	<b>48</b> kW	<b>60</b> kW	<b>72</b> kv	/ <b>84</b> kw	<b>96</b> kW	<b>126</b> kW
Protection Select	4 kW	4 kW	6 kW	6 kW	9 kW	12 kW	15 kW	18 kV	N 24	kW	36 kW	42 kW	48 kW	54 kW	60 kV	V 66	kW .	72 kW	96 kW	144 kW
Protection select	1 Fuse	2 Fuses	1 Fuse	3 Fuses	3 Fuses	3 Fuses	3 Fuses	3 Fus	es 3 F	uses	3 Fuses	3 Fuses	3 Fuses	3 Fuses	3 Fuse	es 3 Fu	ıses 3	Fuses	3 Fuses	3 Fuses
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 3	2 3	x 40	3 x 63	3 x 80	3 x 80	3 x 100	3 x 10	0 3 x	125 3	3 x 125	3 x 160	3 x 240
Power cord (mm²)	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 5:	x 10	5 x 16	5 x 25	5 x 25	5 x 35	5 x 50	) 5 x	50	5 x 50	5 x 70	5 x 120
	* The ever	t cross soct	:E +b-	الماجم براج مينا	a ia aalaab	مطاء برطام	ala shekaka a	th h	iE -		ia af tha la	المحمد احد								

100m<sup>2</sup> 125m<sup>2</sup> 150m<sup>2</sup> 200m<sup>2</sup>

50m<sup>2</sup>

75m<sup>2</sup>

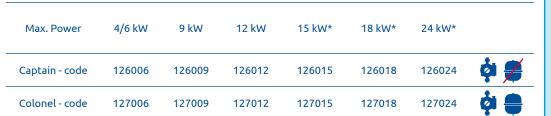
<sup>\*</sup> The exact cross-section of the supply cable is selected by the electrician on the basis of an analysis of the local conditions.

<sup>\*\*</sup> protection table for boilers above 24 kW (from 30 kW to 1.5 MW) available on www.elterm.pl





## Advanced **LCD** automation



In boiler price included: Control by cable



Circus.

Room







**Buffer set** code 100013



2 x buffer sensor



Weekly buffer programme



Module + web application code 100004

Controls every function of the boiler:

- Supervision all temperature
- possibility to change remote temperatures
- preview of temperature graphs

## **OPTION**





Piority On/Off DHW

In price included



Three-way solenoid valve + servo



Temp. sensor to DHW tank



Weekly programme DHW



Weekly programme circulation pump



Radio compensation Room and Weather code 100009



Radio compensation Room

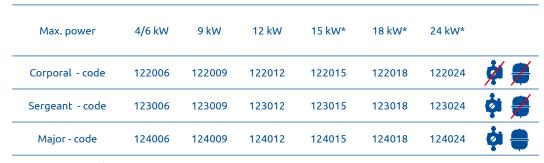
only code 100010



Radio compensation

Weather only code 100011

## Basic **LED** automation



Max. output regulation

## **OPTION**



DHW set code 100003



Piority On/Off DHW

In price included



Three-way solenoid valve + servo

Temp. sensor to DHW tank











Electrical efficiency class D

ETERM S

« di»

# Electric Elterm Boilers PV ready - integrated instantaneous water



## Advanced **LCD** automation Lieutenant



In boiler price: cable control





Weather

## **OPTION**



Module + web application code 100004

## Controls every function of the boiler:

- Supervision all temperature
- possibility to change remote temperatures preview of temperature graphs

## Radio control 3 variants of choice



Radio set Room and Weather

code 100009



Radio set Room only

code 100010



Radio compensation Weather only

code 100011

## Basic **LED** automation Ensign



Electrical efficiency class D

Boiler output	6 kW	9 kW	12 kW	6 kW	9 kW	12 kW
Power of instantaneous water heater	12 kW	12 kW	12 kW	15 kW	15 kW	15 kW
Lieutenant - code	118306	118309	118312	118406	118409	118412
Ensign - code	115306	115309	115312	115406	115409	115412
Boiler output	6 kW	9 kW	12 kW	 6 kW	9 kW	12 kW
Power of instantaneous water heater	18 kW	18 kW	18 kW	21 kW	21 kW	21 kW
Lieutenant - code	118506	118509	118512	118606	118609	11861
Ensign - code	115506	115509	115512	115606	115609	11561

# Admiral instantaneous water heater integrated in the boiler Lieutenant and Ensign



## Advantages:

- Digital display shows
  - current temperature
  - · set temperature
  - · consumed water
  - power consumption
- Electronical control of heating power
- Modern heating block
- Water regulation from 30°C to 60°C
- Power and water consumption counter
- Patented anti-scalding solution

### Protection

- against water leakage
- Integrated safety pressure valve
- Heater protection in case of lack of water





## Advanced **LCD** automation

Max. power	4/6 kW	9 kW	12 kW	15 kW*	18 kW*	24 kW*	
Commander - code	137006	137009	137012	137015	137018	137024	<b>ģi</b> 😩

## In boiler price: cable control

SRR Electronic relavs



Commander



Weather

## **NEW**



Buffer set code 100013

2 x buffer sensor



Weekly buffer programme

## **OPTION**





Piority On/Off DHW

In price included



Three-way solenoid valve + servo



tank

Weekly

DHW

programme



Weekly

programme circulation pump





## Radio control 3 variants of choice



Radio compensation Room and Weather code 100009



Radio compensation Room only code 100010



Radio compensation Weather only code 100011

# preview of temperature graphs

Module + web application

code 100004

Controls every function of the boiler:

possibility to change remote

Supervision all temperature

temperatures

## **OPTION**



DHW set code 100003



Piority On/Off DHW

In price included



Three-way solenoid valve + servo

Temp. sensor to DHW tank

## Basic **LED** automation

Increase components lifetime

Disconnector with tripping

Advanced cooling system

Max. power	4/6 kW	9 kW	12 kW	15 kW*	18 kW*	24 kW*	
Hussar - code	134006	134009	134012	124015	134018	134024	<b>†</b>

\* Maximum power regulation

## Hussar

- SRR Electronic relays
- Increase components lifetime
- disconnector with tripping
- Advanced cooling system



# Electric Elterm Boilers PV ready



# Advanced **LCD** automation Division



Maximum power	30 kW	36 kW	42 kW	48 kW	54 kW	60 kW	66 kW	72 kW	96 kW	144 kW	
Division - code	120030	120036	120042	120048	120054	120060	120066	120072	120096	120144	<b>∳ 筹</b>

## In boiler price: cable control





## Division

- SRR Electronic relays
- Increase components lifetime
- disconnector with tripping
- Advanced cooling system





Buffer set code 100013



2 x buffer sensor



Weekly buffer programme



Module + web application code 100004

Controls every function of the boiler:

- Supervision all temperature
- possibility to change remote temperatures
- preview of temperature graphs

Radio control 3 variants of choice



Radio compensation Room and Weather code 100009

Radio compensation Room

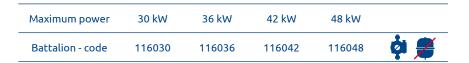


only code 100010



Radio compensation Weather only code 100011

# Basic **LED** automation Battalion





### Battalion

- SRR Electronic relays
- Increase components lifetime
- disconnector with tripping
- Advanced cooling system

## **OPTION**



DHW package code 100003



On/Off DHW

In price included



Three-way solenoid valve + servo



emp. sensor to DHW tank **NEW** 

summer 2023

First advanced in-line heater in Poland

ELIERM



# Additional Elterm features

## Advanced LCD automation





Function available on android



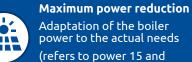


9 DHW programme 9 circulation pump programme





18kW)







boiler operating counter





PID on/off 100% auto consumption equal phase loading







Polish technical tought









## Function of Boatswain automation control





Controls CH pump





PV Ready

OV normally
open contact





Control Output 230V





PV Read; Break contact





In-line heater operation counter





Maximum power lock











DHW set (OPTION)



Boatswain LED + solid fluid boiler



Boatswain LED + fireplace with water mantle





## Basic in-line heaters of CH systems

Rifleman

Rifleman PRO



## Advanced in-line heaters of CH system

**Boatswain LED** 



Boatswain LED PRO



Uhlan LED / Uhlan LCD



## PV installation



## **Equal phase loading**

Max. power	Heating set
3 kW	1 + 1 + 1 kW
6 kW	2 + 2 + 2 kW
8 kW	2,7 + 2,7 + 2,7 kW
9 kW	3 + 3+ 3 kW
12 kW	4 + 4+ 4 kW

														Ideal for	use with		
	Maximum Power	Automation control	External D.H.W. tank	Air vent	Contactor required	Pump control	Low loss header function	Room control	Weather compensation	webb application	Radio boiler control	D.H.W. tank	Buffer	Heat pump	Gas boiler	Solid fluid boiler	PV installation
	kW		OPTION	Ţ		ģi	SHE	ঐ	*	OPTION	((†))) OPTION		bufor		<ul><li>♥</li><li>■</li></ul>		<b>**</b>
Uhlan LCD	to 12 kW			0	0		0										
Uhlan LED	to 12 kW			0	0		0	0	0	0	0						
Boatswain LED PRO	to 8 kW				0			0	0	0	0						
Boatswain LED	to 8 kW			0	0		0	0	0	0	0						
Boatswain HP *	to 8 kW		0	0	0		0	0	0	0	0	0	0		0	0	0
Rifileman	to 6 kW	0	0	0		0	0	0	0	0	0						
Rifileman PRO	to 6kW	0	0			0		0	0	0	0						

<sup>\*</sup> special version for use only with heat pumps as peak heat source





## Uhlan LCD



## Advanced **LCD** automation

4/6 kW

141006

cable control w komplecie

12 kW

141012

15 kW\*

9 kW

141009

\* available in 2024

Maximum power

18 kW\*



## Piority On/Off Weekly programme DHW :: :: 51.C



**OPTION** 



Weekly programme

circulation pump



Module + web application

Controls every function of the boiler: Supervision all temperature

- possibility to change remote temperatures
- preview of temperature graphs



9 circulation pump and D.H.W. programme



## Multifunction display



Operation counter





24 kW\*







## Uhlan LED



## Basic **LED** automation

Maximum power 4/6 kW 9 kW 12 kW 15 kW\* 18 kW\* 24 kW\* 140006 140009 140012

DHW tank code 100003



Three-way solenoid valve + servo

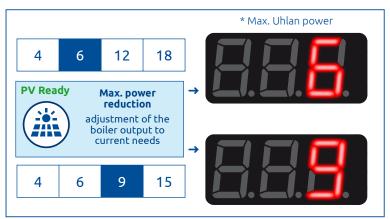
**OPTION** 

**Piority** 

On/Off DHW







PID on/off



**Energy Limit** 











## **Boatswain LED**





	code
Boatswain LED 3 kW 230/480 kW	234003
Boatswain LED 6 kW 230/480 kW	234006
Boatswain LED 8 kW 230/480 kW	234008

### Equal phase load

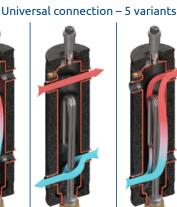
Max. power	Heating set
3 kW	1 + 1 + 1 kW
6 kW	2 + 2 + 2 kW
8 kW	2,7 + 2,7 + 2,7 kW



## Boatswain LED PRO with low loss header function







Boatswain LED PRO 6 kW 230/480 kW

Boatswain LED PRO 8 kW 230/480 kW



code

254006

254008

## Advanced in-line CH water heater Boatswain LED

















Control output Option: Peak heat source access to switching On particular heating element – Heating priority





**PV Ready** NC contact 0V

In-line heater ability to work with:

Room temp. controler 0V Automation of other heat source or inverter



**PV Ready** Operation

counter

• In-line heater operation counter

STOP heatingAbility to set energy consumption

Indication of stop operating by in-line heater







Contact detachable

Disconnects the gas boiler when the electric inline heater is switched On. Switches the gas boiler On when the set energy consumption limit is reached.





Max. power lock

Adjustment in-line heater power to PV installation(function available on in-line heater control panel)





**PV Ready** 

on/off

Equal phase work loading (In-line heater operation with function PiD or without PiD)





**PV Ready** 

Operation Counter

Solid fuel boiler:

In-line heater Boatswain controls CH pump for 2 heat sources



**PV Ready** Operation Counter

fireplace with water mantle:

In-line heater Boatswain controls CH pump for 2 heat sources

On/Off

DHW







DHW set code 100003



solenoid valve + servo



Temp. sensor to DHW tank

Electrical efficiency class D



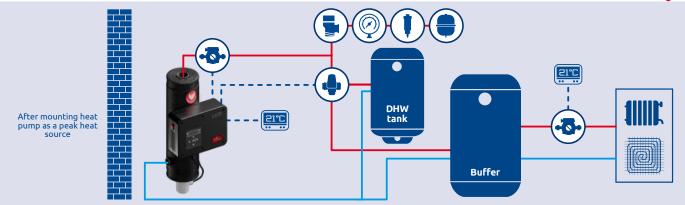






# Independent heating device in CH installation system

e.g.: while awaiting the assembly of a heat pump or other heat source. Once the heat pump is installed, the Boatswain LED works as a peak heat source.

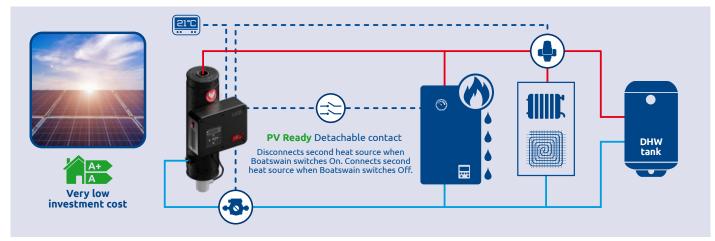


Variant 2



## Ideal to work with gas boiler

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



Variant 3





Ideal for work with solid-fuel boilers and fireplace with water mantle.

As a alternative heating device or for use energy from PV installations





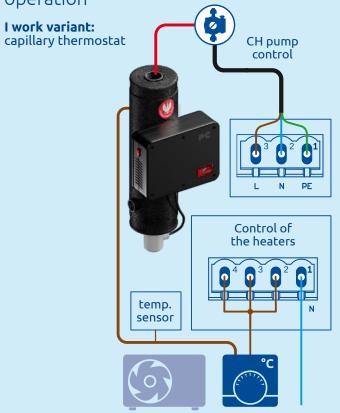
## **Boatswain HP automation**



	code
Boatswain HP 3 kW 230/480 kW	244003
Boatswain HP 6 kW 230/480 kW	244006
Boatswain HP 8 kW 230/480 kW	244008

model	Max. power	-	Heaters		1 phase supply		2 phases supply			3 phases supply		
Boatswain 3	3 kW	1	1 + 1 + 1 kW		1, 2 i 3 kW		2 kW (1+1 kW)			3 kW		
Boatswain 6	6 kW	2	2 + 2 + 2 kW		2, 4 i 6 kW		4 kW (2+2 kW)		6 kW			
Boatswain 8	8 kW	2,7	2,7 + 2,7 + 2,7 kW		2,7 i 5	,4 kW	5,4 kW (2,7+2,7 k\		-2,7 kW)	8 kW		
Security selection		1 kW	2,7 kW	3 kW	3 kW	4 kW	4 kW	5,4 kW	5,4 kW	6 kW	6 kW	8 kW
Supply 23		1 Fuse	1 Fuse	1 Fuse	2 Fuses	1 Fuse	2 Fuses	1 Fuse	2 Fuses	1 Fuse	3 Fuses	3 Fuses
Fuses	(A)	1 x 6	1 x 16	1 x 16	2 x 6	1 x 20	2 x 10	1 x 25	2 x 16	1 x 32	3 x 10	3 x 16
Power cor	rd (mm²)	3 x 1,5	3 x 2,5	3 x 4	5 x 1,5	3 x 4	5 x 2,5	3 x 4	5 x 2,5	3 x 4	5 x 2.5	5 x 2.5

Temporary absence of heat pump operation



## II work variant:

Assembly of control panel with Boatswain LED -Compatible with automation of Boatswain HP

Control panel LED - code 234000







Boatswain HP as a peak heat source





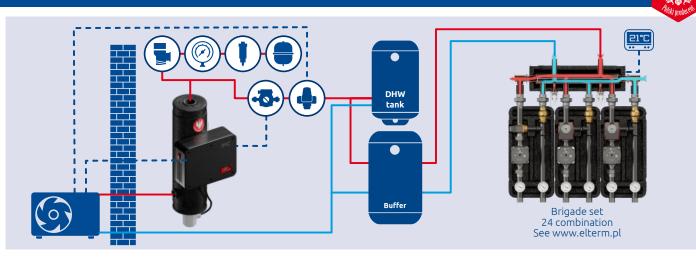














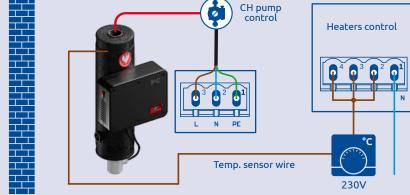
Temporary absence of heat pump

Boatswain HP as a main heat source





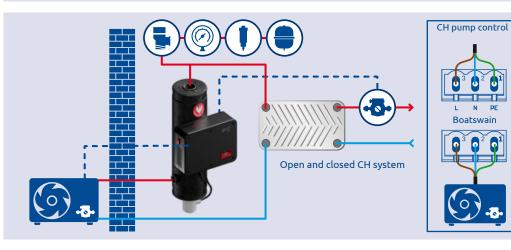






Boatswain HP as a peak heat source

Open and closed CH system Boatswain switches C.H. pump after the plate heat exchanger on the basis of the heat pump signal.







## In-line heater Rifleman



Rifileman / 400V		
4,5 kW / 400 V	Rifileman 400/4	
product code	214004	
6 kW / 400 V	Rifileman 400/6	
product code	214006	

Rifileman / 230V		
2 kW / 230 V	Rifileman 230/2	
product code	212302	
3 kW / 230 V	Rifileman 230/3	
product code	212303	



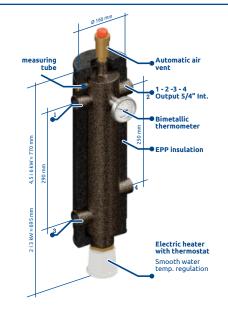


In-line heater Rifleman PRO with low loss header function.



Rifileman PRO / 400V		
4,5 kW / 400 V	Rifleman PRO 400/4	
product code	224004	
6 kW / 400 V	Riffeman PRO 400/6	
product code	224006	

Rifileman PRO / 230V		
2 kW / 230 V	Rifileman PRO 230/2	
product code	222302	
3 kW / 230 V	Rifileman PRO 230/3	
product code	222303	



# Universal connection – 5 variants

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