

ELECTRIC WATER BOILER EKW AsZN

New design

Additional electronics:

PID

proportional-
integral-derivative
controller

BM

program
non-volatile
memory

SC

protection against
increased
frequency of boiler
activation

OSC

four-element
protection against
overheating

DM

double energy
meter (of EKW
boiler)

PAS

pump
protection
system

Watch Dog
processor
control
system



Microprocessor control system optimizes boiler operational algorithm and provides maximum energy saving, functional comfort as well as increased reliability and durability of the appliance.

Technical data:

1. Hanging boiler
2. Air temperature adjustment range – depending on the type of room thermostat
3. Electronic system fuse – 500 mA
4. Hydraulic resistance – negligible, small
5. Factory test pressure – 12 at., design pressure – 6 at. (safety valve 3 bar, other valve on request)
6. Weight: ~22kg (depending on power rating)
7. Water volume inside the boiler
8. Efficiency 99.5%
9. IPX2, class 1
10. Stepless temperature adjustment 5÷90°C (floor 5÷40°C)

Complies with the following directives:

LVD – low-voltage directive – electric safety,
RoHS – restrictions of hazardous substances

Electronic system functions:

1. Control: room, floor
2. Multi-functional LCD display
3. Automatic power selection – by 1/6 (by 1/3)
4. Manual power reduction 33-67-100%
5. Heater operation time measurement – wear optimization
6. Smooth on/off section switching
7. Pump operation time-lag
8. Water temperature measurement and stepless adjustment
9. Diode boiler operation displays
10. Compatible with all types of room thermostats (dry contact)

EMC – electromagnetic compatibility,

WEEE – waste electrical and electronic equipment

Inspection for Environmental Protection register no.: E0001767W

Power	Manual power distribution on the boiler	Boiler power electronic modulation	Power supply 230/400V	Fuse safety devices (A)	Power cord in mm ²	Heated area (m ²) height 2.7 m U = 0.3	Alternative heating boiler m ²
4 kW	100 % - 67% - 33%	by 1/3	1 phase	1 x 20	3 x 2.5	~ 50	~ 70
4 kW	100 % - 67% - 33%	by 1/3	3 phases	3 x 6	5 x 1.5	~ 50	~ 70
6 kW	100 % - 67% - 33%	by 1/3	1 phase	1 x 32	3 x 4	~ 70	~ 100
6 kW	100 % - 67% - 33%	by 1/3	3 phases	3 x 10	5 x 2.5	~ 70	~ 100
9 kW	100 % - 67% - 33%	by 1/6	3 phases	3 x 16	5 x 2.5	~ 110	~ 150
12 kW	100 % - 67% - 33%	by 1/6	3 phases	3 x 20	5 x 4	~ 150	~ 210
15 kW	100 % - 67% - 33%	by 1/6	3 phases	3 x 25	5 x 4	~ 180	~ 250
18 kW	100 % - 67% - 33%	by 1/6	3 phases	3 x 32	5 x 6	~ 220	~ 310
21 kW	100 % - 67% - 33%	by 1/6	3 phases	3 x 40	5 x 6	~ 260	~ 360
24 kW	100 % - 67% - 33%	by 1/6	3 phases	3 x 40	5 x 10	~ 300	~ 400

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www.calorserv.ro - www.calor.ro



ELECTRIC WATER BOILER EKW AsZN

All Elterm boiler subassemblies come from reputable manufacturers:



boiler insulation – mineral wool
ROCKWOOL λ 0.042W/mK

SELFA stainless steel heaters

ø 114 x 3.6 steel body long life
(Polish laser cut steel)



vent, manometer, safety valve and
Flamco 8 l membrane vessel



Grundfos pump

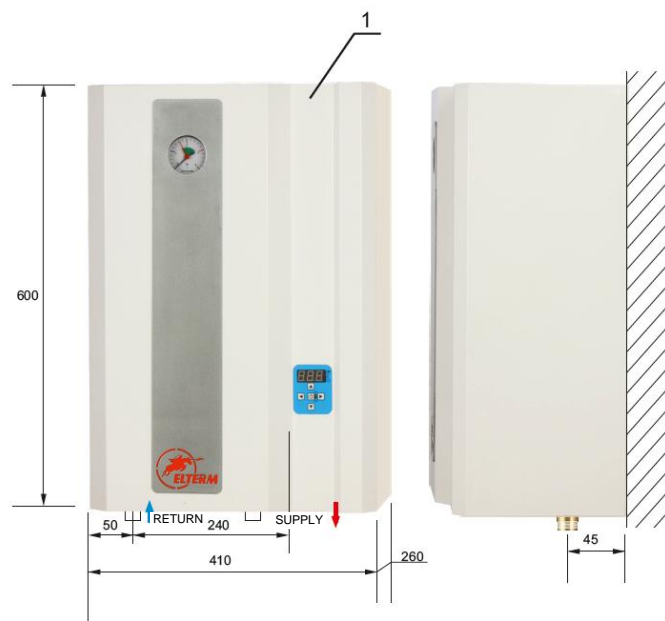
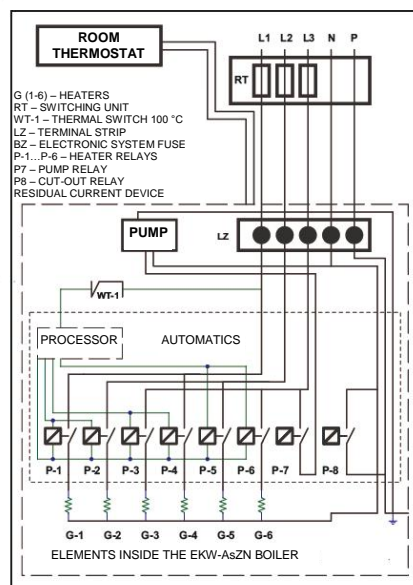


galvanised sheet case
(CNC pressed)



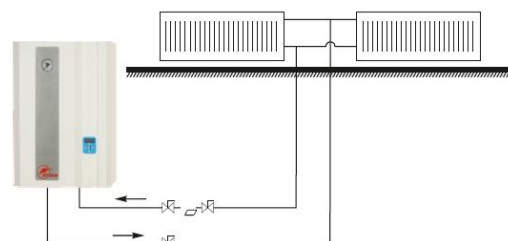
TIMEL software
OMRON subassemblies

EKW-AsZN BOILER CIRCUIT DIAGRAM

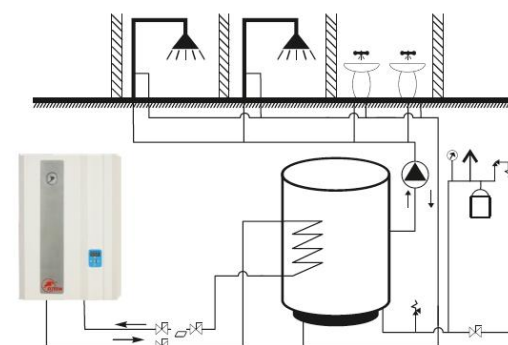


REFERENCE DIAGRAMS

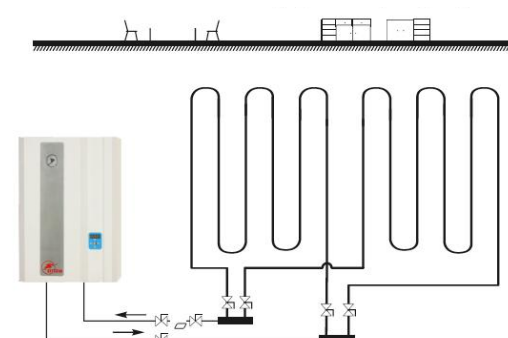
EKW-AsZN boiler as an independent heat source



EKW-AsZN boiler with a hot utility water storage tank – heating large quantities of hot utility water in a short period of time



EKW-AsZN boiler in a floor heating system



EKW AsZN boiler equipment

1. External case
2. Mounting plate
3. Automatics mounting bracket
4. LED display
5. Control panel
6. Room thermostat terminal strip
7. Boiler body (tank)
8. Boiler insulation
9. Heating unit
10. Automatic vent 3/8" male thread
11. TLZ 16² (10²) terminal strip
12. Relays
13. 4 bar manometers
14. 3 bar safety valve
15. Central heating pump
16. 8 l membrane vessel
17. Supply connector pipe GZ 3/4" male thread
18. Return connector pipe GZ 3/4" male thread