

 Nikola Parapunov 3a/33

 contact@ales.com.mk

 +389 2 3079 286


 www.ales.com.mk


CATALOGUE






 Nikola Parapunov 3a/33

 contact@ales.com.mk

 +389 2 3079 286

 www.ales.com.mk

Electric boilers

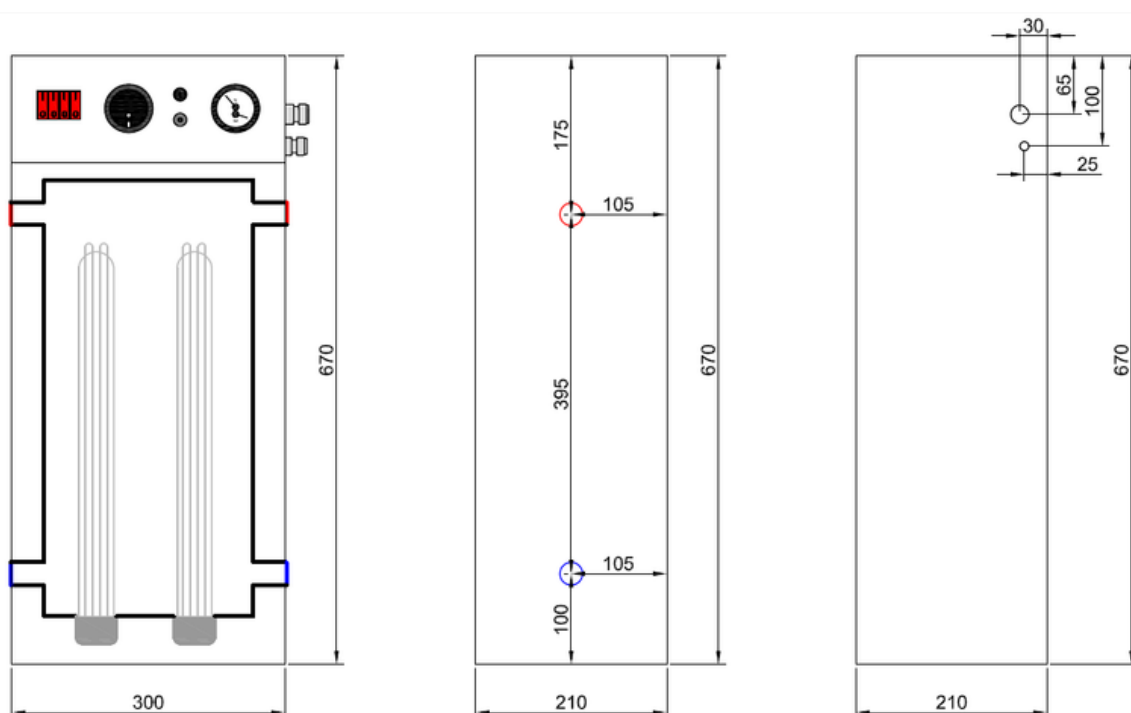
Standard




The STANDARD series of electric boilers are manufactured with power ratings from 6 kW to 36 kW and contain a three-pole control thermostat that gradually switches the heaters according to temperature setpoint. They are on-wall mounted type of electric boilers with the freedom of water inlet/outlet connections on the right side or left side.

The STANDARD series represent a universal solution for heating installation installers. The electric boiler can be used as a main or auxiliary heat source for residential, business and industrial facilities.


Dimensions






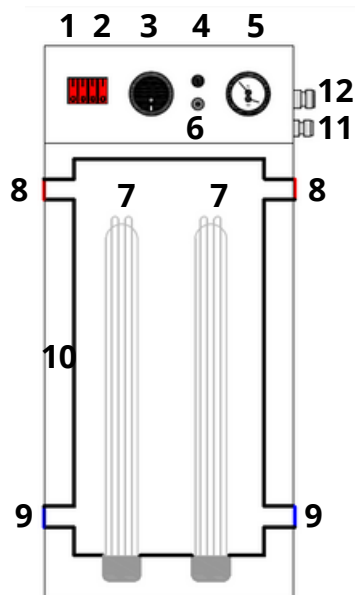
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Components



- 1. Pump switch (main switch)
- 2. El. heaters switches
- 3. Control thermostat
- 4. Safety thermostat
- 5. Thermomanometer
- 6. Fuse 5 A

- 7. El. heaters
- 8. Water outlet
- 9. Water inlet
- 10. Tank
- 11. Thermostat cable inlet
- 12. Power cable inlet







Power	6 kW	8 kW	9 kW	12 kW	18 kW	24 kW	30 kW	36 kW
Voltage	380 V AC, 50 Hz							
Current	9 A	12 A	14 A	18 A	27 A	37 A	46 A	55 A
Circuit breaker sizing	16 A	16 A	16 A	25 A	32 A	40 A	50 A	63 A
Cable sizing	5x2.5mm²	5x2.5mm²	5x2.5mm²	5x4mm²	5x4mm²	5x6mm²	5x6mm²	5x10mm²
Number of switching degrees	1	1	1	3	3	3	3	3
Maximum operating pressure	3 bar							
Minimum operating pressure	1.2 bar							
Maximum operating temperature	80 °C							
Water inlet/outlet size	1"	1"	1"	1"	1"	1"	5/4"	5/4"
Tank size	17.5 l							
IP protection	IP 40							
Efficiency	99 %							
Weight (without water)	21.2 kg	21.2 kg	21.2 kg	21.6 kg	23.3 kg	23.3 kg	24.7 kg	24.7 kg
Dimensions (WxLxH)	300 x 210 x 670 mm							



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Electric boilers

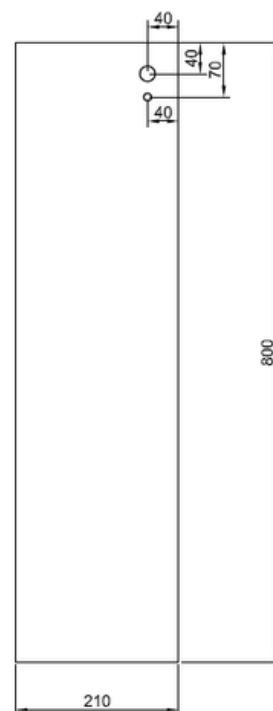
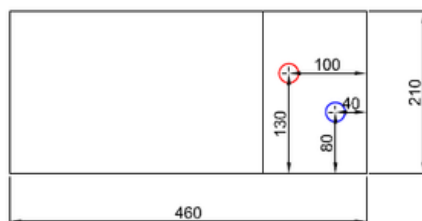
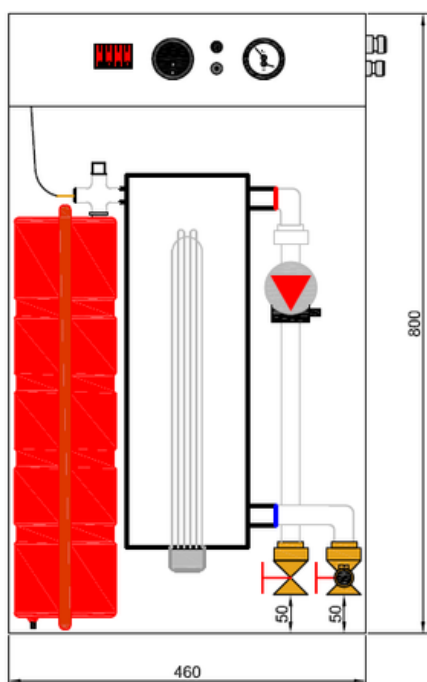
On-wall mounted Monoblock




The MONOBLOCK series of electric boilers are manufactured with power ratings from 6 kW to 27 kW. This type of electric boilers comprise of a pump, air vent valve, safety valve, water inlet/outlet valve and three-pole control thermostat that gradually switches the heaters according to temperature setpoint.

The electric boiler can be used as a main or auxiliary heat source for residential, business and industrial facilities. This type of electric boilers are meant to be installed on a wall and they provide water inlet/outlet connections at the bottom. However, by customer's choice the connections may be manufactured as bottom-right or bottom-left.


Dimensions






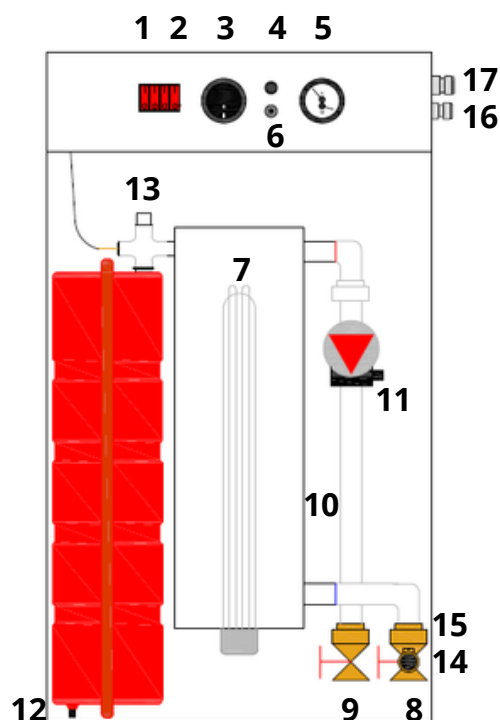
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Components



1. Pump switch (main switch)
2. El. heaters switches
3. Control thermostat
4. Safety thermostat
5. Thermomanometer
6. Fuse 5 A
7. El. heaters
8. Inlet valve


9. Outlet valve
10. Tank
11. Pump
12. Expansion tank
13. Air vent valve
14. Water filling valve
15. Safety valve
16. Thermostat cable inlet
17. Power cable inlet






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Electric boilers

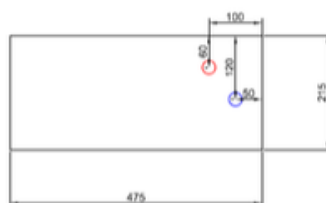
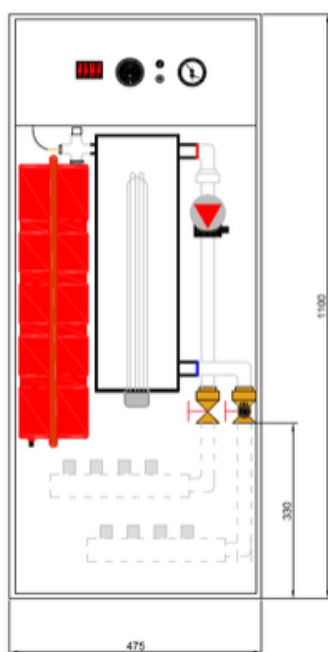
On-wall mounted Monoblock (with additional space for manifolds)




The MONOBLOCK series of electric boilers are manufactured with power ratings from 6 kW to 27 kW. This type of electric boilers comprise of a pump, air vent valve, safety valve, water inlet/outlet valve and three-pole control thermostat that gradually switches the heaters according to temperature setpoint.

The electric boiler can be used as a main or auxiliary heat source for residential, business and industrial facilities. This type of electric boilers are meant to be installed on a wall and provide an additional space for manifolds in order to achieve a compact design at the place of installation. They provide water inlet/outlet connections at the bottom however by customer's choice the connections may be manufactured as bottom-right or bottom-left. The cable inlets are placed according to the water inlets'/outlets' position.


Dimensions






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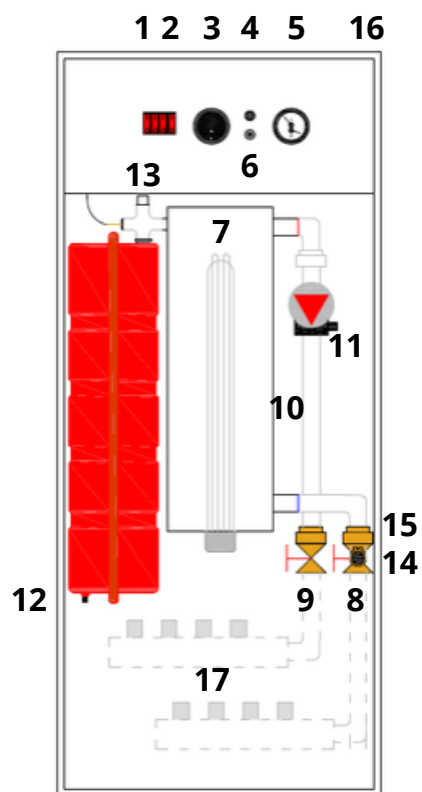
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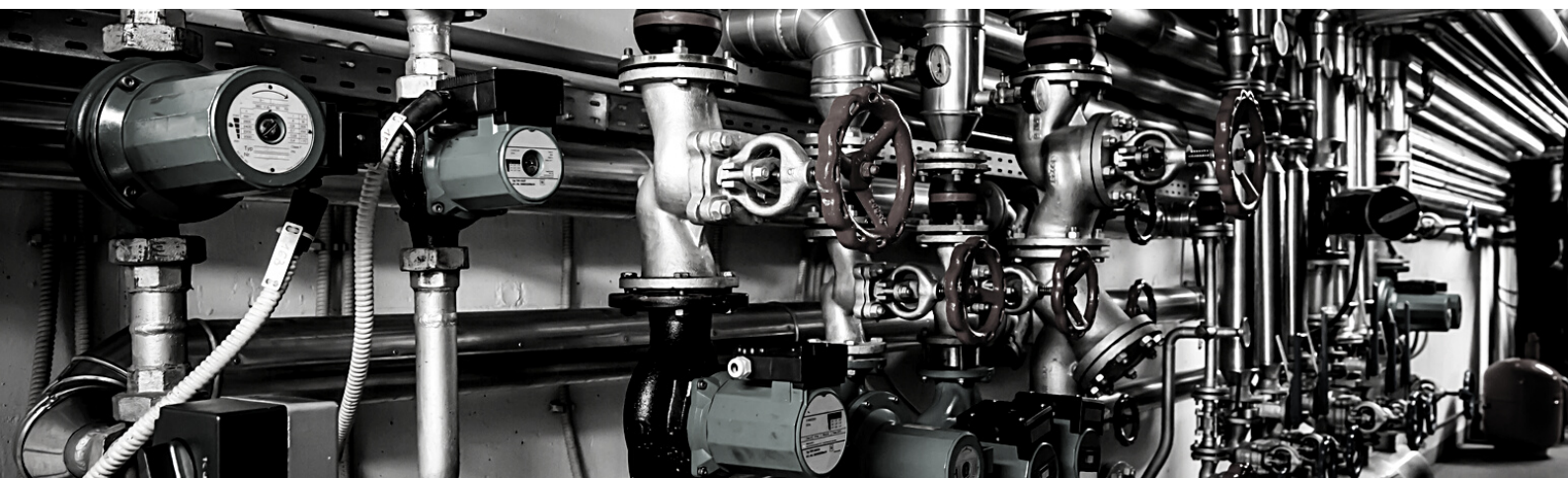


Components



1. Pump switch (main switch)
2. El. heaters switches
3. Control thermostat
4. Safety thermostat
5. Thermomanometer
6. Fuse 5 A
7. El. heaters
8. Inlet valve

9. Outlet valve
10. Tank
11. Pump
12. Expansion tank
13. Air vent valve
14. Water filling valve
15. Safety valve
16. Thermostat cable & power cable inlet
17. Manifolds space





Electric boilers

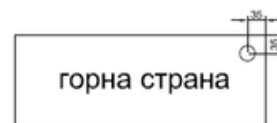
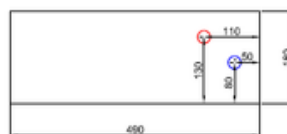
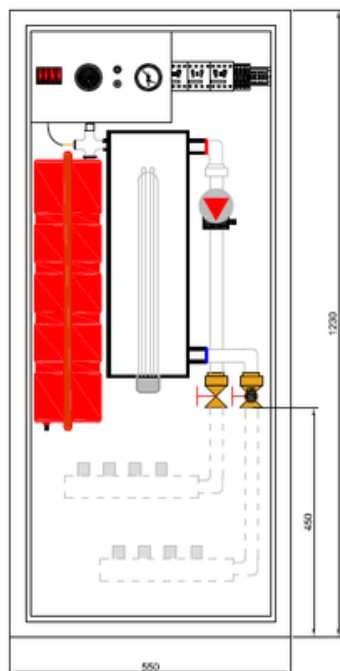
In-wall mounted Monoblock (with additional space for manifolds)



The MONOBLOCK series of electric boilers are manufactured with power ratings from 6 kW to 27 kW. This type of electric boilers comprise of a pump, air vent valve, safety valve, water inlet/outlet valve and three-pole control thermostat that gradually switches the heaters according to temperature setpoint.

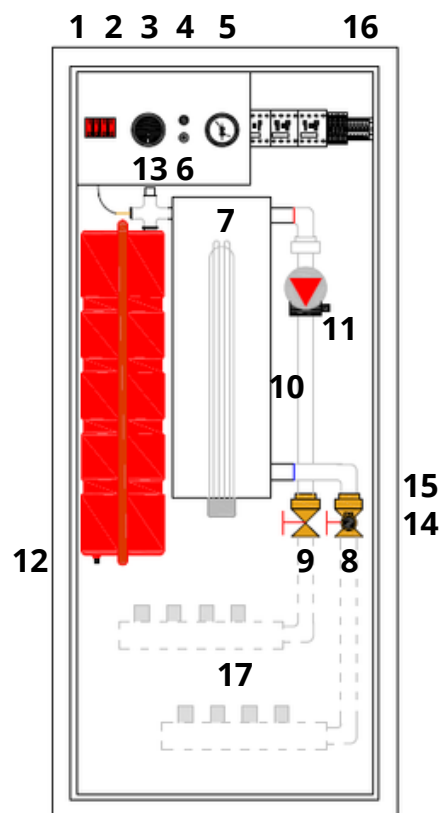
The electric boiler can be used as a main or auxiliary heat source for residential, business and industrial facilities. This type of electric boilers are meant to be installed inside a wall and provide an additional space for manifolds in order to achieve a compact design at the place of installation. They provide water inlet/outlet connections at the bottom however by customer's choice the connections may be manufactured as bottom-right or bottom-left. Тие се произведуваат со простор за колектори се со цел целата инсталација да биде сместена во еден ормар (касета). The cable inlets are placed according to the water inlets'/outlets' position.

Dimensions





Components




1. Pump switch (main switch)
2. El. heaters switches
3. Control thermostat
4. Safety thermostat
5. Thermomanometer
6. Fuse 5 A
7. El. heaters
8. Inlet valve

9. Outlet valve
10. Tank
11. Pump
12. Expansion tank
13. Air vent valve
14. Water filling valve
15. Safety valve
16. Thermostat cable & power cable inlet
17. Manifolds space





 Nikola Parapunov 3a/33



 contact@ales.com.mk



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Technical specification

Power	6 kW	8 kW	9 kW	12 kW	18 kW	24 kW	27 kW
Voltage	380 V AC, 50 Hz						
Current	9 A	12 A	14 A	18 A	27 A	37 A	41 A
Circuit breakers sizing	16 A	16 A	16 A	25 A	32 A	40 A	50 A
Cable sizing	5x2.5mm²	5x2.5mm²	5x2.5mm²	5x4mm²	5x4mm²	5x6mm²	5x6mm²
Number of switching degrees	1	1	1	3	3	3	3
Maximum operating pressure	2.2 bar						
Minimum operating pressure	1.2 bar						
Maximum operating temperature	80 °C						
Safety valve	3 bar						
Water inlet/outlet size	1"	1"	1"	1"	1"	5/4"	5/4"
Tank size	13 l						
Expansion tank size	8 l	8 l	8 l	10 l	12 l	12 l	12 l
IP protection	IP 40						
Efficiency	99 %						
Weight (without water)	35 kg	35 kg	35 kg	36.5 kg	38.4 kg	38.9 kg	39.9 kg
Dimensions (WxLxH)	490 x 180 x 1170 mm						



Electric boilers

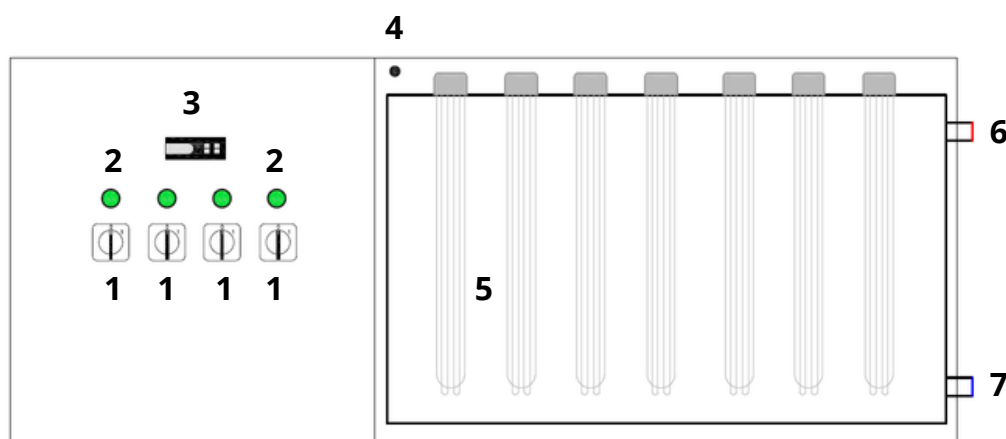
36 - 250 kW



This series of electric boilers is manufactured with power ratings from 36 kW to 250 kW consisting of four-pole control thermostat that gradually switches the heaters according to temperature setpoint. They are of leg mounted type and the water inlets/outlets can be placed according to customer's choice.

The electric boiler can be used as a main or auxiliary heat source for business and industrial facilities as well as recreation centers. This type of electric boilers are manufactured by order.

Components



- 1.El. heater cam switches
- 2.Indicating lights for el. heaters
- 3.Control thermostat
- 4.Safety thermostat
- 5.El. heaters
- 6.Water outlet
- 7.Water inlet



Technical specification

Power	36-250 kW
Voltage	380 V AC, 50 Hz
Number of switching degrees	4
Maximum operating pressure	3 bar
Minimum operating pressure	1.2 bar
Maximum operating temperature	80 °C
Water inlet/outlet size	5/4 "
IP protection	IP 40
Efficiency	99 %





Electric duct heaters

Electric duct heaters are used in air handling systems as primary or secondary heating source for business or industrial facilities. ALES manufactures electric duct heaters with a varying power ratings from 3 kW to 100 kW. They can also be manufactured by order of the customer's need with greater power ratings, custom dimensions or installation types. Our electric duct heaters are manufactured according to all applicable european standards and all of the incorporated components are manufactured by reputable domestic and european manufacturers.. Our types of manufactured electric duct heaters are the following:

- 1. Standard tubular duct heaters**
- 2. Finned tubular duct heaters**

ADVANTAGES AND DISADVANTAGES

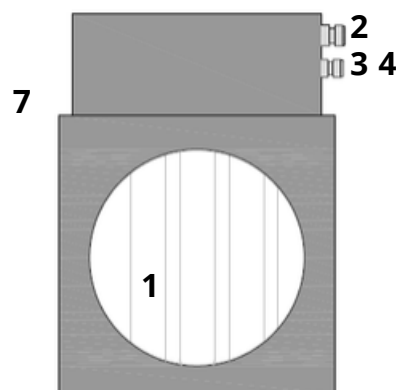
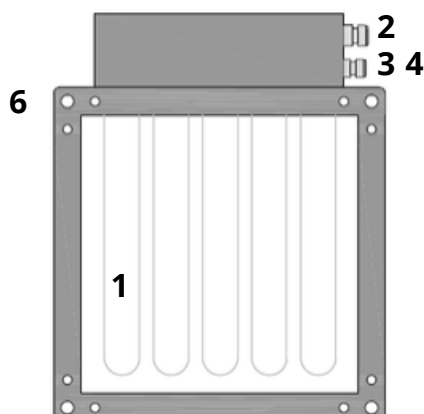
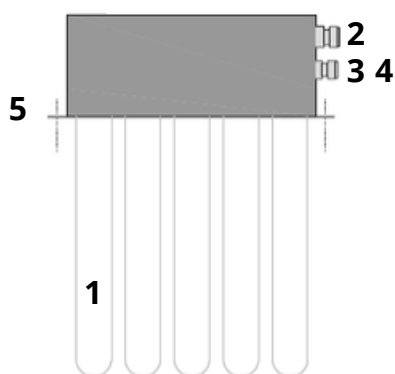
TYPE OF DUCT HEATER	ADVANTAGES	DISADVANTAGES
Standard tubular duct heater	<ul style="list-style-type: none">- Less sensitive to humidity and dust- Suited for demanding environments- Excellent mechanical resistance- Heating element is not in direct contact with air	<ul style="list-style-type: none">- Increase in pressure drop- Less heat dissipation
Finned tubular duct heater	<ul style="list-style-type: none">- Good heat dissipation- Less sensitive to humidity and dust- Suited for demanding environments- Excellent mechanical resistance- Heating element is not in direct contact with air	<ul style="list-style-type: none">- Increase in pressure drop



Standard tubular duct heater

Standard tubular duct heaters are manufactured with power ratings from 3 kW to 100 kW, however we offer even higher power ratings according to customer's order. According to installation they can be manufactured as **insert type**, **flanged** or **round type**

Components



- 1. El. heaters
- 2. Power cable inlet
- 3. Thermostat cable inlet
- 4. Inlet for series fan command cable

- 5. Insert type duct heater
- 6. Flanged type duct heater
- 7. Round type duct heater

Note: Dimensions of duct heaters are according to customer's order

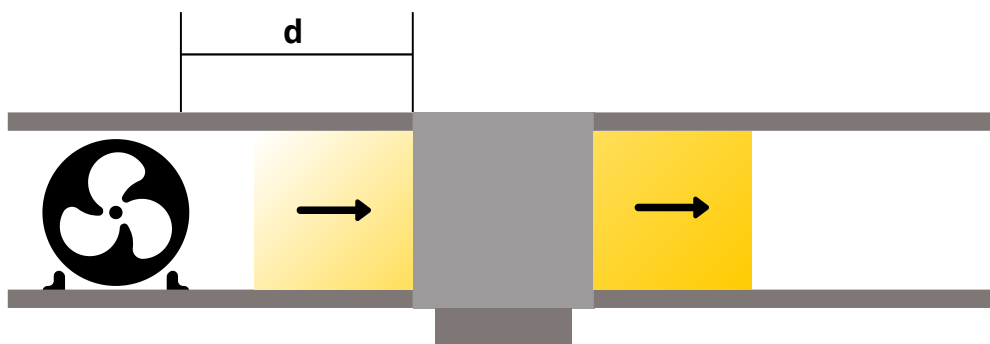




Installation

1.

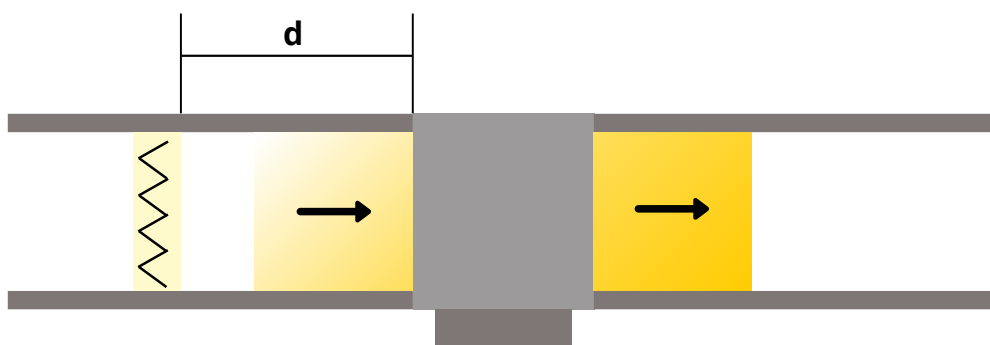
Fan



$d = 3 \times \text{duct diameter}$

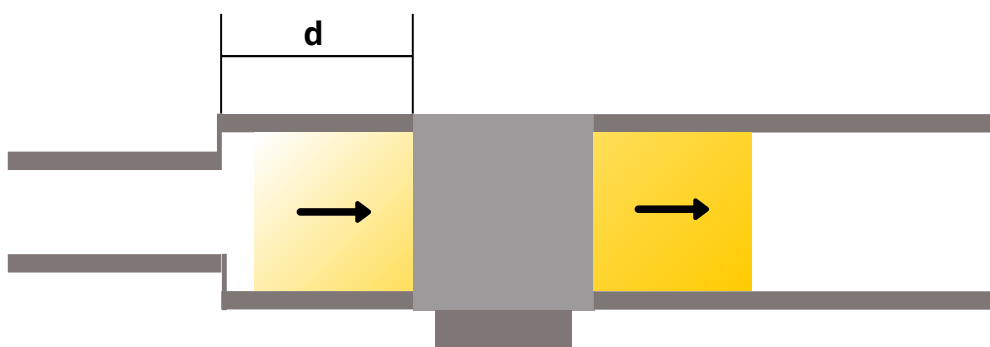
2.

Filter



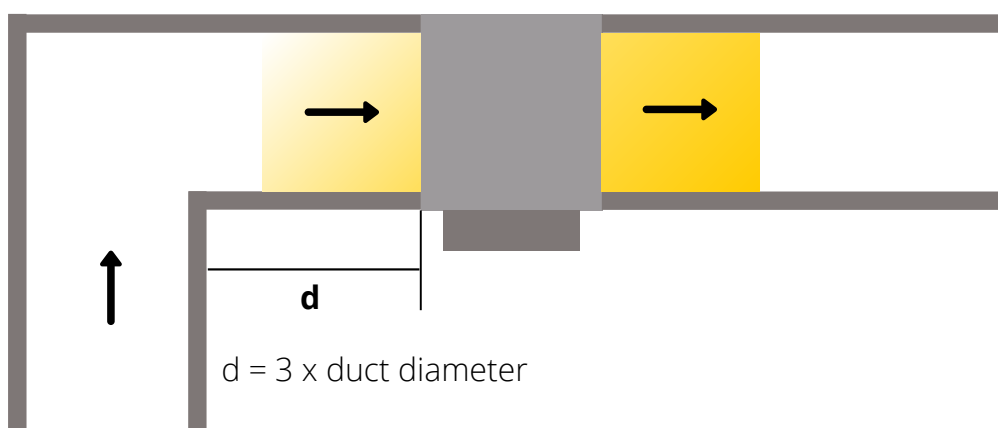
$d = 3 \times \text{duct diameter}$

3.




$d = 3 \times \text{duct diameter}$


4.





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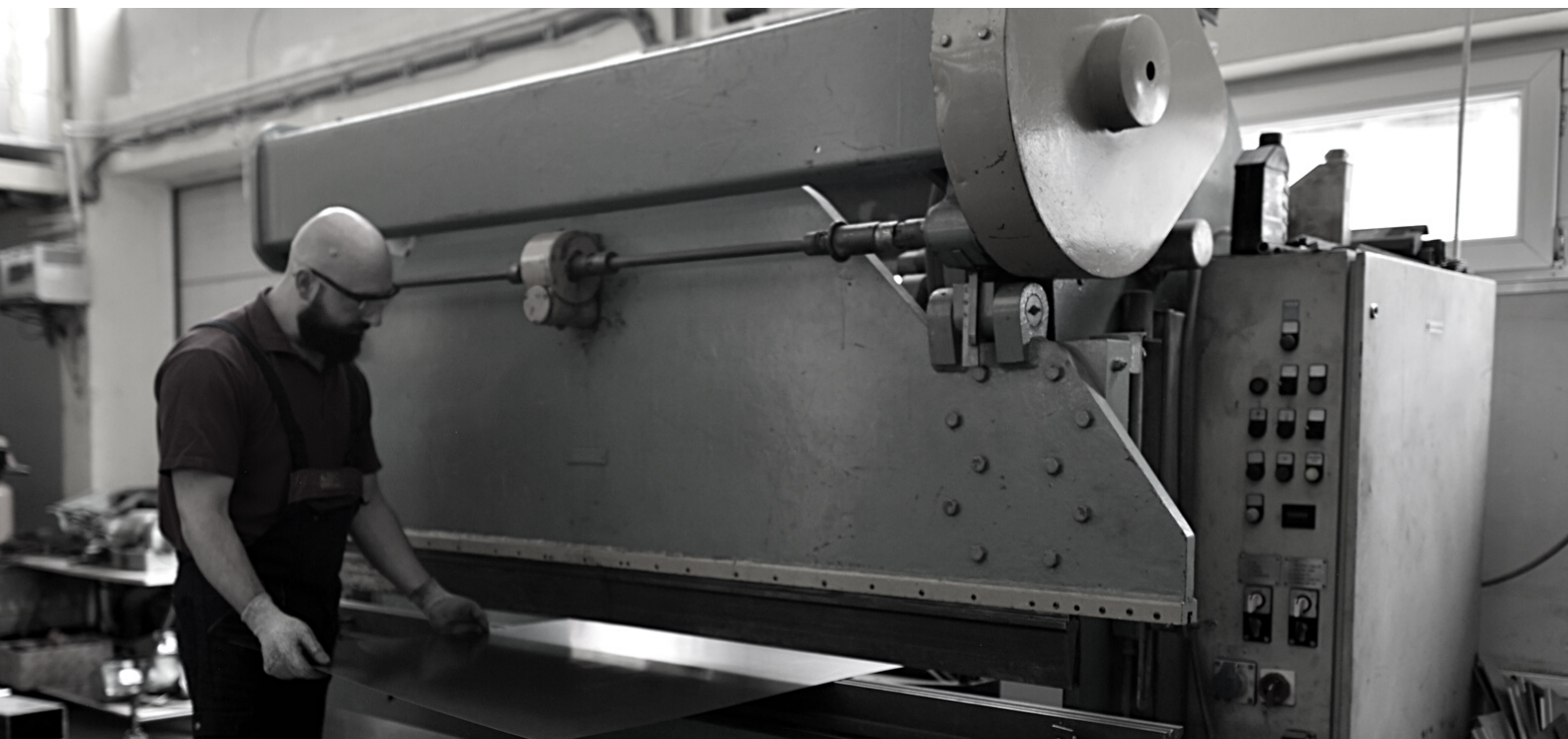
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Technical specification

Power	3-100 kW
Voltage	230 V AC/380 V AC, 50 Hz
Safety thermostat at 70 °C (automatic reset)	
Safety thermostat at 110 °C (manual reset)	
Safety thermostat at 140 °C in case of a sticky contactor (manual reset)	
Room thermostat contact	
Series fan command contact	
Differential pressure detector(optional)	
Minimum distance from duct obstacle: 3 x duct diameter before & after duct heater	

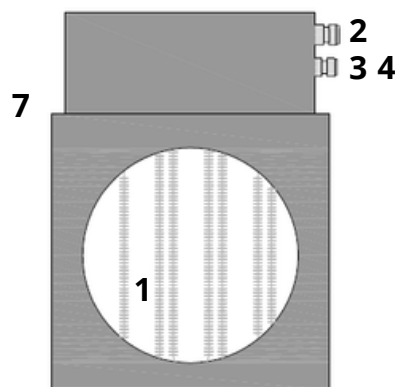
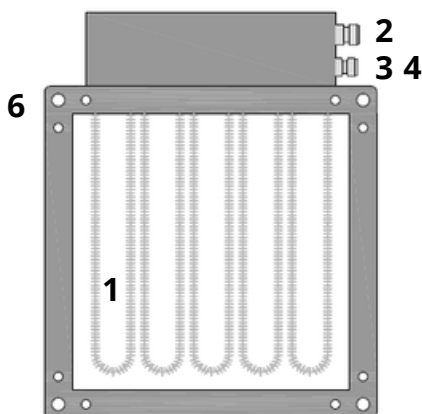
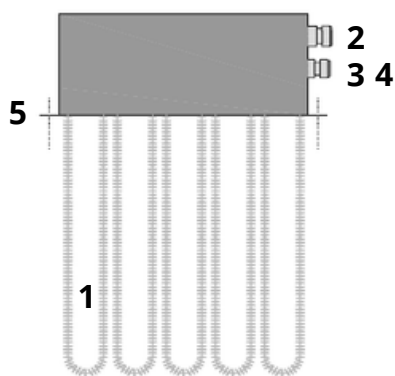




Finned tubular duct heater

Finned tubular duct heaters are manufactured with power ratings from 3 kW to 100 kW, however we offer even higher power ratings according to customer's order. According to installation they can be manufactured as insert type, flanged or round type

Components



- 1. El. heaters
- 2. Power cable inlet
- 3. Thermostat cable inlet
- 4. Inlet for series fan command cable

- 5. Insert type duct heater
- 6. Flanged type duct heater
- 7. Round type duct heater

Note: Dimensions of duct heaters are according to customer's order

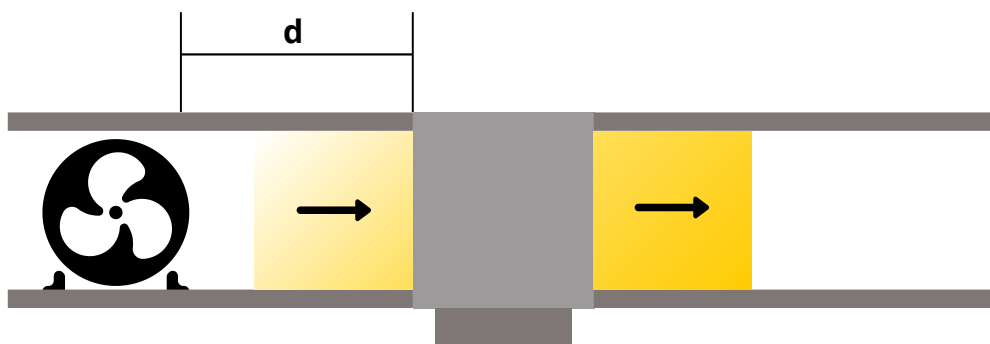




Installation

1.

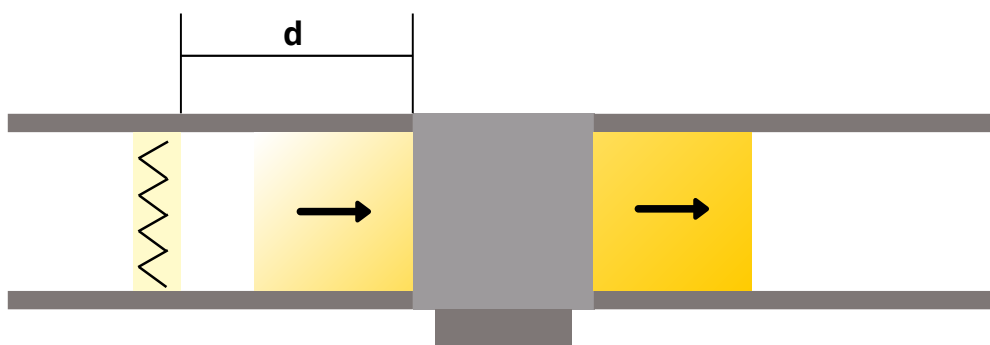
Fan



$d = 3 \times \text{duct diameter}$

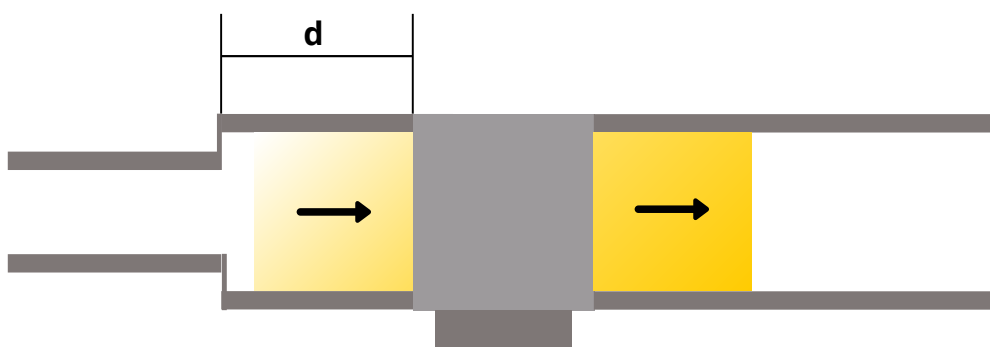
2.

Filter



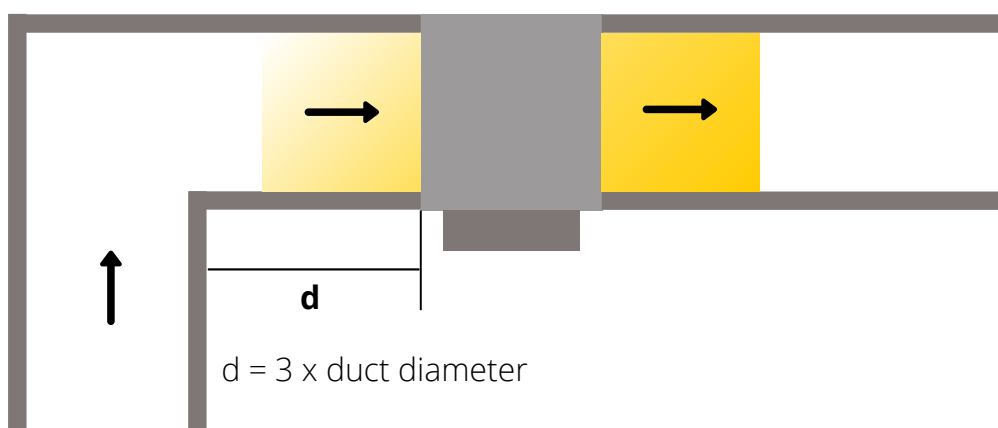
$d = 3 \times \text{duct diameter}$

3.




$d = 3 \times \text{duct diameter}$

4.




$d = 3 \times \text{duct diameter}$



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 contact@ales.com.mk

 +389 2 3079 286

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Technical specification

Power	3-100 kW
Voltage	230 V AC/380 V AC, 50 Hz
Safety thermostat at 70 °C (automatic reset)	
Safety thermostat at 110 °C (manual reset)	
Safety thermostat at 140 °C in case of a sticky contactor (manual reset)	
Thermostat command contact	
Series fan command contact	
Differential pressure detector(optional)	
Minimum distance from duct obstacle: 3 x duct diameter before & after duct heater	



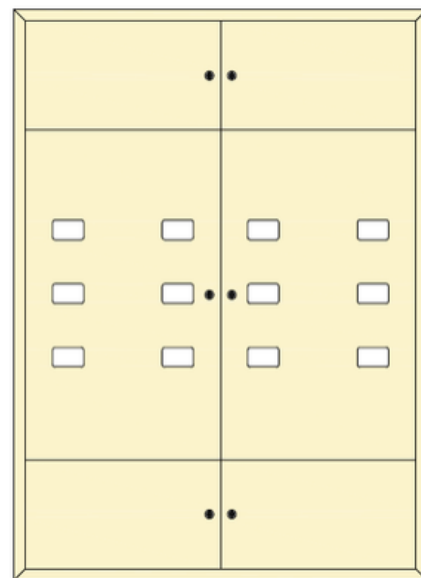
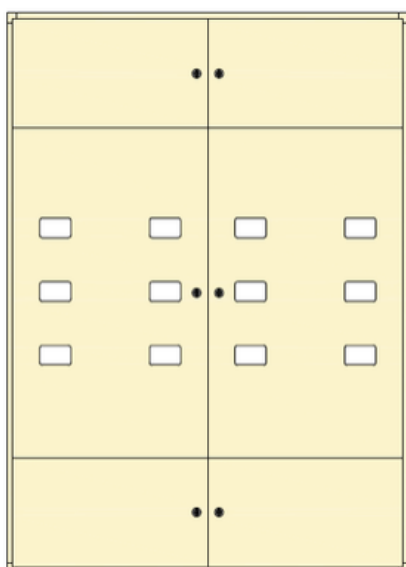
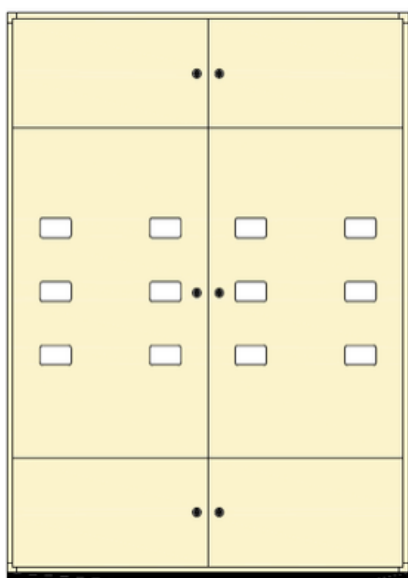


Electrical enclosures

ALES manufactures electrical enclosures with different dimensions according to customer's needs. The enclosures are intended for low voltage networks and they are made from steel sheets protected with electrostatic powder coating with colors according to customer's choice. They are intended as base mounted or on/in wall mounted. We manufacture two types of electrical enclosures:

1. Measuring cabinets
2. Industrial cabinets

Measuring cabinets






Technical specification


Installation type	Base mounted or on/in wall mounted
Locking type	Lock & key
Material	Electrostatic powder coated steel sheet
IP protection	IP 43
Intended for indoor use	
Manufacturing with dimensions according to customer's order	
<p>The cabinet is separated in three sections:</p> <ol style="list-style-type: none">1. Bottom section intended for for cable glands and main switch2. Middle section intended for electricity meters3. Upper section inteded for circuit breakers	






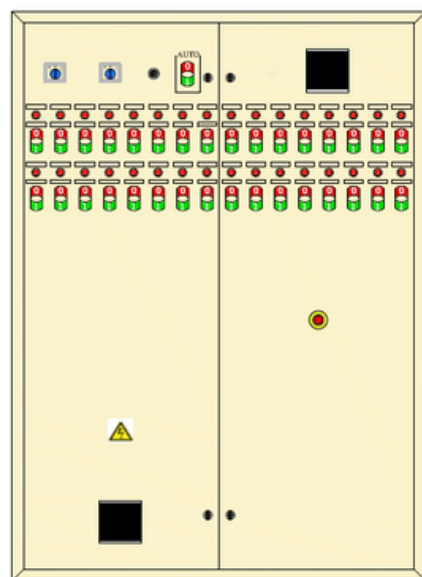
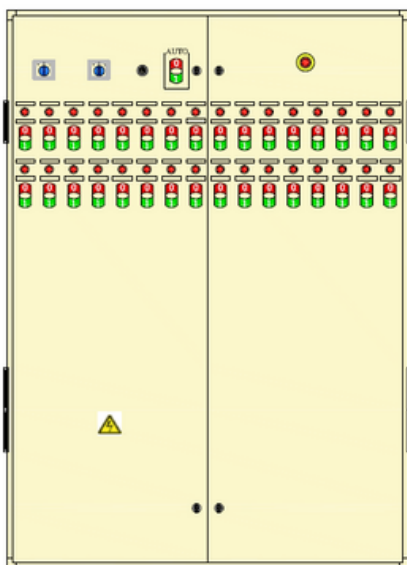
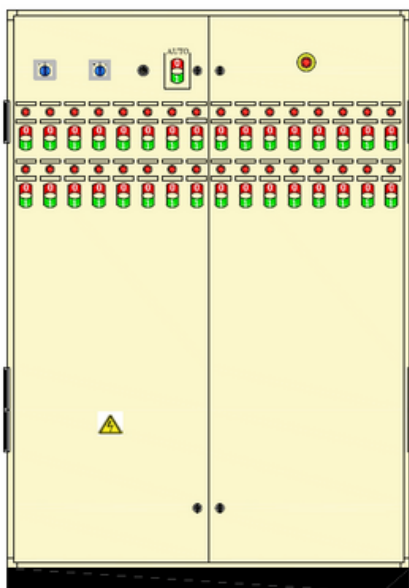
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Industrial cabinets





Technical specification

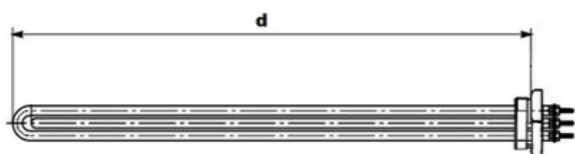
Installation type	Base mounted or on/in wall mounted
Locking type	Lock & key
Material	Electrostatic powder coated steel sheet
IP protection	IP 43
Intended for indoor use	
Manufacturing with dimensions according to customer's order	
<p>The cabinet can be separated in several sections according to its application:</p> <ol style="list-style-type: none">1. Section for circuit breakers, contactors, motor protection circuit breakers etc2. Section for variable frequency drives with cooling outlet and fan3. Section for programmable logic controllers with cooling outlet and fan	





Boiler heaters

Boiler heaters are used as auxillary heat source in combi boilers with one or two heat exchangers. The heaters are manufactured with a power rating of 9kW however they may be used as 3kW or 6kW as well, depending on boiler size. They contain a control thermostat for switching the heaters, safety thermostat and red indicating light.



Technical specification

- Power: 9 kW (3 x 3 kW)
- Voltage: 230 V AC/380 V AC, 50 Hz
- Indicator: red light
- One-pole control thermostat
- Safety thermostat at 110 °C (manual reset)
- Pipe material: stainless steel or copper (optional)
- Pipe diameter Ø: 8.1 mm
- Flange: 6/4", brass
- Connection terminals: M4
- Dimension: d = 415 mm
(other dimensions according to customer's order)



FROM IDEA TO SOLUTION



+389 2 3079 286



Nikola Parapunov 3a/33



contact@ales.com.mk



www.ales.com.mk

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