

# Product catalogue 2017

## Kospel - leader in innovation modern technologies and quality

Kospel company was founded in 1990 by it's current President of the Board, Eng. Mr Krzysztof Łukasik who started installation of the first constructed by himself instantaneous water heaters.

Currently Kospel is the one of Europe's largest manufacturers of electric water heaters, domestic hot water cylinders, heat pumps, solar collectors and electric boilers. Company have 4 modern production facilities, systematically increases sales and it's products are known in 57 countries of the World. Such an impressive success has been achieved by the innovation, technology development, quality and the highest level of customer satisfaction.



#### Headquarters Olchowa 1, Koszalin

Domestic sales and foreign trade departments, technical consulting, graphic department, service center.



#### Production facility BOWID 24, Koszalin

Production halls with the area of 8,700 square meters, production of water heaters, electric boilers and heat pumps, reserach and development purchasing, accounting, human resources.



#### Production facility Damnica

Automated welding facility and first in Poland dry enamelling line dedicated for water tanks.



#### Production facility Karlino

Production halls and and warehouses with a total area of 8.600 square meters, assembly, packaging and storage of domestic hot water cylinders and solar collectors.

Turnover 20 mln 10 mln EUR 1990 2000 2010 2016 Export to 57 World countries.







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KOSPEL S.A. reserves the right to make technical changes designed to improve products which are not present in this catalogue.









Electric instantaneous water heaters are easy to install, they do not require an additional gas connection or chimney. They are safe in operation, there is no risk of explosion, no risk of pollution or carbon monoxide poisoning.

Electric instantaneous water heaters offer an energy efficient way to heat water - they heat water only when you turn on the hot water tap, ensuring that no heat is lost, and electricity wasted, while storing the water. Energy efficiency class A. Small, compact size allows you to easily install them near the water outlet point and this makes them much more water efficient. Users are not limited to the hot water stored in the tank - they can produce an endless amount of hot water on demand.

Kospel offers wide range of instantaneous water heaters to provide its customers the optimal choice and ensuring them the best comfort and efficient use of energy.



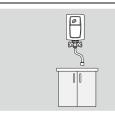
## EPS2 Twister

Small in size, inexpensive to install, ideal for summer houses, offices or bars.



Application

from 3,5kW



K

Power switch The power switch in 5,5 kW heater allows users to limit the power consumption to 4,4 kW.

5,5kW



Most important advantages

Fine-stream spray head Guarantees comfortable use and savings on water and energy up to 50%.

Mixer tap included in the set

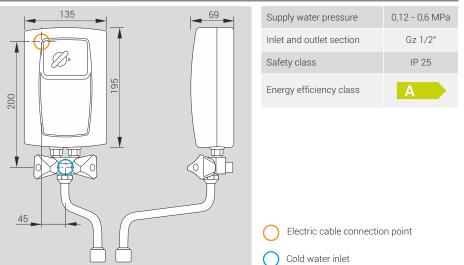
in the set.

The water heater is a non-

pressure appliance, it can only be connected to

a three-way tap, included

#### Dimensions



| Туре             | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (∆t=30°)<br>(I/min.) |
|------------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| EPS2-3,5 TWISTER | 3,5 kW / 230V~              | 15,2              | 3 x 1,5                             | 1,7                             |
| EPS2-4,4 TWISTER | 4,4 kW / 230V~              | 19,1              | 3 x 2,5                             | 2,1                             |
| EPS2-5,5 TWISTER | 5,5 kW / 230V~              | 23,9              | 3 x 2,5                             | 2,6                             |



## EPJ Optimus

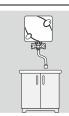
Reliable hand-wash EPJ 5,5 Optimus can be installed above the kitchen sink



Application



from 3,5kW



5,5kW

Mixer tap included in the set

the set.

The water heater is a nonpressure appliance, it can only be connected to a three-way tap, inlcuded in

Fine-stream spray head Guarantees comfortable use and savings on water and energy up to 50%.

#### Most important advantages



Copper shielded heating elements Reliable technology ensures long life, resistance to water decay and air bubbles.



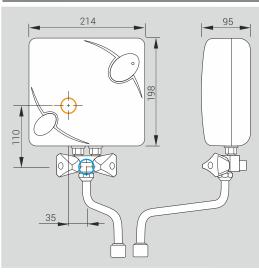
Regulating valve Allows for setting comfortable temperature at a maximum possible flow of water.



equipped with a supply cord and can be plugged into a socket. Water heaters of a greater power should be connected to an electric terminal.

3,5kW water heater is

#### Dimensions



| Supply water pressure    | 0,12 - 0,6 MPa |
|--------------------------|----------------|
| Inlet and outlet section | Gz 1/2"        |
| Safety class             | IP 24          |
| Energy efficiency class  | Α              |

Electric cable connection point

Cold water inlet

| Туре            | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (∆t=30°)<br>(I/min.) |
|-----------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| EPJ-3,5 OPTIMUS | 3,5 kW / 230V~              | 15,2              | 3 x 1,5                             | 1,7                             |
| EPJ-4,4 OPTIMUS | 4,4 kW / 230V~              | 19,1              | 3 x 2,5                             | 2,1                             |
| EPJ-5,5 OPTIMUS | 5,5 kW / 230V~              | 23,9              | 3 x 2,5                             | 2,7                             |

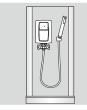


## EPS2.P Prister

Small in size, inexpensive water heater for shower cabin



Application



from 4,4kW

#### Most important advantages



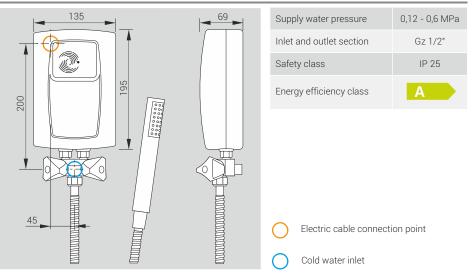
Fine-stream spray head Guarantees comfortable use and savings on water and energy up to 50%.



## Mixer tap included in the set

The water heater is a nonpressure appliance, it can only be connected to a three-way tap, inlcuded in the set.

#### Dimensions



| Туре               | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (∆t=30°)<br>(I/min.) |
|--------------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| EPS2-4,4.P.PRISTER | 4,4 kW / 230V~              | 19,1              | 3 x 2,5                             | 2,1                             |
| EPS2-5,5.P.PRISTER | 5,5 kW / 230V~              | 23,9              | 3 x 2,5                             | 2,6                             |





| Туре                | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (Δt=30°)<br>(I/min.) |
|---------------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| EPJ.P- 4,4 PRIMUS   | 4,4 kW / 230V~              | 19,1              | 3 x 2,5                             | 2,1                             |
| EPJ.P- 5,5 PRIMUS   | 5,5 kW / 230V~              | 23,9              | 3 x 2,5                             | 2,7                             |
| EPJ.P- 4,4.U PRIMUS | 4,4 kW / 230V~              | 19,1              | 3 x 2,5                             | 2,1                             |
| EPJ.P- 5,5.U PRIMUS | 5,5 kW / 230V~              | 23,9              | 3 x 2,5                             | 2,7                             |

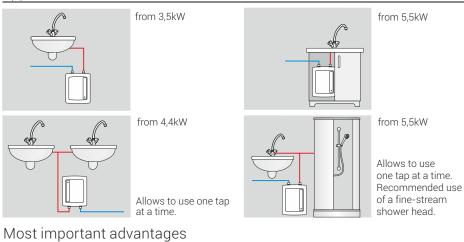


## EPO2 Amicus

The new heater ideal for sink or washing basin

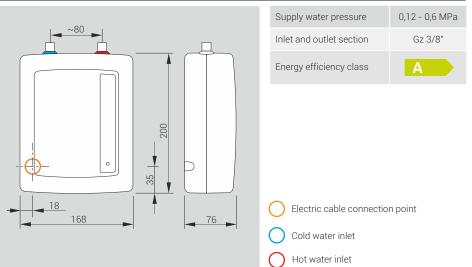


Application



Universal mounting Can be installed in any position, above or below the sink.

#### Dimensions



#### Technical data

| Туре          | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (∆t=30°)<br>(I/min.) |
|---------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| EP02-3 AMICUS | 3,5 kW / 230V~              | 15,2              | 3 x 1,5                             | 1,7                             |
| EP02-4 AMICUS | 4,4 kW / 230V~              | 19,1              | 3 x 2,5                             | 2,1                             |
| EP02-5 AMICUS | 5,5 kW / 230V~              | 23,9              | 3 x 2,5                             | 2,7                             |
| EP02-6 AMICUS | 6,0 kW / 230V~              | 26,1              | 3 x 4                               | 2,9                             |



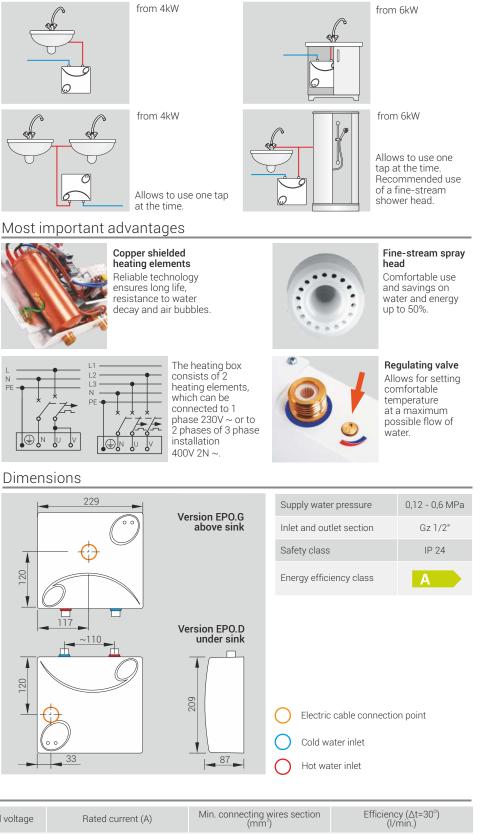
**Fine-stream spray head** Comfortable use and savings on water and energy up to 50%.

## EPO Amicus

Water heater that can be installed above or under the kitchen sink



Application



#### Technical data

| Туре           | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (∆t=30°)<br>(I/min.) |
|----------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| EPO.D-4 AMICUS | 4 kW / 230V~                | 17,4 / *8,7       | 3x2,5 / *4x1,5                      | 1,9                             |
| EPO.D-5 AMICUS | 5 kW / 230V~                | 21,7 / *10,9      | 3x2,5 / *4x1,5                      | 2,4                             |
| EPO.D-6 AMICUS | 6 kW / 230V~                | 26,1 / *13        | 3x4 / *4x2,5                        | 2,9                             |
| EPO.G-4 AMICUS | 4 kW / 230V~                | 17,4 / *8,7       | 3x2,5 / *4x1,5                      | 1,9                             |
| EPO.G-5 AMICUS | 5 kW / 230V~                | 21,7 / *10,9      | 3x2,5 /*4x1,5                       | 2,4                             |
| EPO.G-6 AMICUS | 6 kW / 230V~                | 26,1 / *13        | 3x4 / *4x2,5                        | 2,9                             |

\* values for 400 2N~ connection

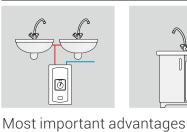


## EPMH hydraulic

High power single phase heaters



Application





# Ø

A fine-stream shower head recommended.



Power regulation Allows to set the heater on full power or economic mode.

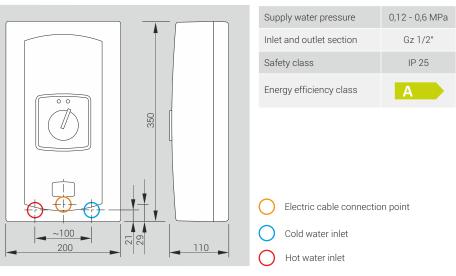


Copper shielded heating elements Reliable technology ensures long life, resistance to water decay and air bubbles.

#### Dimensions



Automatically switches on 2 steps of heating Automatic "switch on" system and power selection according to the water flow rate.



| Туре     | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (∆t=30°)<br>(I/min.) |
|----------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| EPMH-7,5 | 7,5 kW / 230V               | 34,1              | 3 x 6                               | 3,6                             |
| EPMH-8,0 | 8,0 kW / 230V               | 36,4              | 3 x 6                               | 3,8                             |
| EPMH-8,5 | 8,5 kW / 230V               | 38,6              | 3 x 6                               | 4,1                             |



## **EPME** electronic

Electronically controlled heater with LCD display



Application





#### Most important advantages





#### Dimensions

# LCD display

Display allows to set the desired water temperature, read the inlet and outlet temperature, the water flow rate and power with which the unit currently heats.



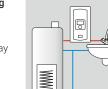
#### Copper shielded heating elements Reliable technology ensures long life, resistance to water decay

Temperature lock

save the maximum temperature value e.g. in

This allows the user to

order to protect children against burn injuries.



 $T_1$ 

 $T_2$ 

 $T_3$ 

 $\square$ 

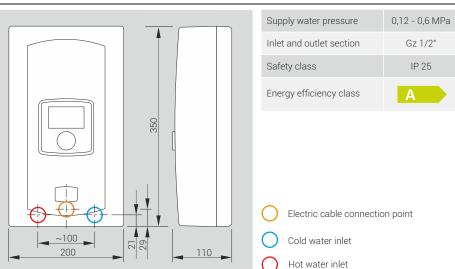
A fine-stream shower head recommended.

#### Electronic control

Electronic control system ensures stability and smooth regulation of water temperature from 30° C to 60°C (1°C step).

Can work on already preheated water. Inlet water temperature up to 70°C.

Memory of three most commonly used temperatures.



#### Technical data

| Туре          | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (∆t=30°)<br>(I/min.) |
|---------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| EPME-5,5-9,0* | 5,5-9,0 kW / 230V*          | 24,0-39,3*        | 3 x 2,5-3 x 6*                      | 2,7-4,3*                        |

\* 8 powers in one heater. At the first start up, the maximum power must be set. Parameters of the electrical installation must comply with the selected power.

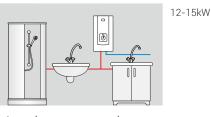


## PPH2 hydraulic

Multipoint water heater at the lowest price



#### Application



#### Most important advantages

98

/

~100 245 0

360 440

V



**Power regulation** Allows to set the heater on full power or economic mode.

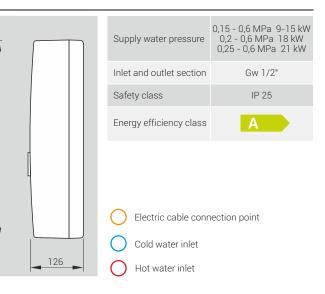


Automatically switches on 2 steps of heating Automatic "switch on" system and power selection according to the water flow rate.

Ö

from 18kW

#### Dimensions



| Туре    | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (∆t=30°)<br>(I/min.) |
|---------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| PPH2-09 | 9 kW / 400V 3~              | 3x13,0            | 4 x 1,5                             | 4,3                             |
| PPH2-12 | 12 kW / 400V 3~             | 3x17,3            | 4 x 2,5                             | 5,8                             |
| PPH2-15 | 15 kW / 400V 3~             | 3x21,7            | 4 x 2,5                             | 7,2                             |
| PPH2-18 | 18 kW / 400V 3~             | 3x26,0            | 4 x 4                               | 8,7                             |
| PPH2-21 | 21 kW / 400V 3~             | 3x30,3            | 4 x 4                               | 10,1                            |

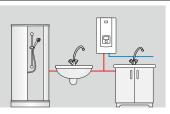


## PPE2 electronic LCD

Electronically controlled heater with LCD display at the best price



Application



#### Most important advantages



#### LCD display Display allows to read the inlet and outlet temperatures, the water flow rate and unit power.

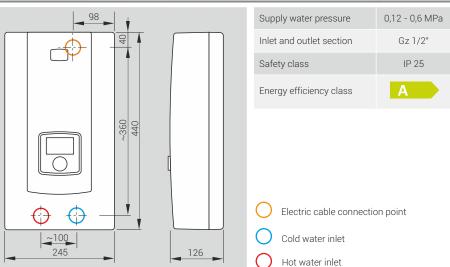
from 12kW



#### **3 powers in 1 heater** This allows the user to select the desired power level (not applicable for 27 kW version).

#### Temperature lock This allows the user to save the maximum temperature value e.g. in order to protect children against burn injures.

#### Dimensions



#### Technical data

| Туре              | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm <sup>2</sup> ) | Efficiency (∆t=30°)<br>(I/min.) |
|-------------------|-----------------------------|-------------------|--|---------------------------------|
| PPE2-09/12/15.LCD | 9/12/15 kW / 400V 3~        | 3x13,0/17,3/21,7  | 4 x 1,5/2,5/2,5                                  | 4,3/5,8/7,2                     |
| PPE2-18/21/24.LCD | 18/21/24 kW / 400V 3~       | 3x26,0/30,3/34,6  | 4 x 4/4/6  | 8,7/10,1/11,6                   |
| PPE2-27.LCD       | 27 kW / 400V 3~             | 3x39              | 4 x 6  | 13,0                            |



from 18kW

**Electronic control system** Ensures stability and smooth regulation

of water temperature from  $30^{\circ}$ C -  $60^{\circ}$ C ( $1^{\circ}$ C step).

Can work on already preheated water. Inlet water temperature up to 70°C.

**Temperature memory** This allows the user

frequently used water

to save three most

temperature.

9

WWW

T1

 $T_2$ 

 $T_3$ 

8

## PPVE Focus electronic

The first water heater with LCD touch screen display made in Europe



Application



#### Most important advantages



9/12/15 kW

18/21/24 kW

LCD touch-screen display Display allows to set the desired water temperature, read the inlet and outlet temperatures, the water flow rate and power with which the unit currently heats.

from 12kW

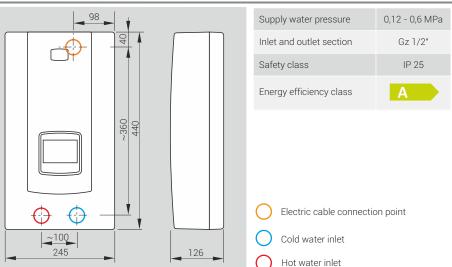
#### **3 powers in 1 heater** This allows the user to

This allows the user to select the desired power level. (Not applicable for 27 kW version).

#### **Temperature lock** This allows the user to save the maximum temperature value e.g.

to save the maximum temperature value e.g. in order to protect children against burn injures.

#### Dimensions



#### Technical data

| Туре                | Rated power / Rated voltage | Rated current (A)) | Min. connecting wires section (mm <sup>2</sup> ) | Efficiency (∆t=30°)<br>(I/min.) |
|---------------------|-----------------------------|--------------------|--|---------------------------------|
| PPVE-09/12/15.FOCUS | 9/12/15 kW / 400V 3~        | 3x13,0/17,3/21,7   | 4 x 1,5/2,5/2,5                                  | 4,3/5,8/7,2                     |
| PPVE-18/21/24.FOCUS | 18/21/24 kW / 400V 3~       | 3x26,0/30,3/34,6   | 4 x 4/4/6  | 8,7/10,1/11,6                   |
| PPVE-27.FOCUS       | 27 kW / 400V 3~             | 3x39               | 4 x 6  | 13,0                            |



from 18kW

Electronic control system

Ensures stability and

smooth regualtion of water temperature from 30°C-60°C (1°C step).

Can work on already preheated water.

up to 70°C.

8

WWW

 $T_1$ 

 $T_2$ 

T<sub>3</sub>

Inlet water temperature

Temperature memory

This allows the user

frequently used water

to save three most

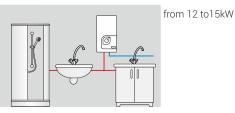
temperature.

# KDH / KDHZ Luxus hydraulic

Heater with proven and durable construction



Application



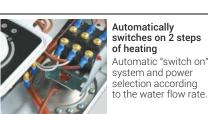
#### Most important advantages



Copper shielded heating elements Reliable technology ensures long life, resistance to water decay and air bubbles.

### Power regulation

Allows to set the heater on full power or economic mode.

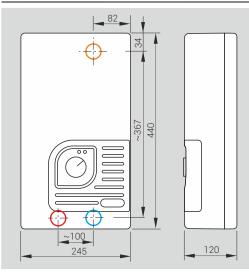


Automatically switches on 2 steps of heating Automatic "switch on" system and power selection according

from 18kW



#### Dimensions



| Supply water pressure    | 0,15 - 0,6 MPa 9-15 kW<br>0,2 - 0,6 MPa 18 kW<br>0,25 - 0,6 MPa 21-24 W |
|--------------------------|---|
| Inlet and outlet section | Gw 1/2"   |
| Safety class             | IP 25   |
| Energy efficiency class  | Α   |

\* Inlet and outlet pipes connected to the heater must be made of copper or steel.

| Ο      | Electric cable connection point |
|--------|---------------------------------|
| 0      | Cold water inlet                |
| $\sim$ |                                 |





### KDHZ

Metal case with extra resistance to prevent any damage. Perfect for public buildings.

| Туре         | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (Δt=30°)<br>(I/min.) |
|--------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| KDH-09 LUXUS | 9 kW / 400V 3~              | 3x13,0            | 4 x 1,5                             | 4,3                             |
| KDH-12 LUXUS | 12 kW / 400V 3~             | 3x17,3            | 4 x 2,5                             | 5,8                             |
| KDH-15 LUXUS | 15 kW / 400V 3~             | 3x21,7            | 4 x 2,5                             | 7,2                             |
| KDH-18 LUXUS | 18 kW / 400V 3~             | 3x26,0            | 4 x 4                               | 8,7                             |
| KDH-21 LUXUS | 21 kW / 400V 3~             | 3x30,3            | 4 x 4                               | 10,1                            |
| KDH-24 LUXUS | 24 kW / 400V 3~             | 3x34,6            | 4 x 6                               | 11,6                            |



# KDE / KDEZ Bonus electronic

Reliable water heater with electronic control system



Application



#### Most important advantages



Copper shielded heating elements Reliable technology ensures long life, resistance to water decay and air bubbles.

from 12kW

(E)

0

Dimensions

# Sensor operates at very low pressure 0,1MPa and water flow as little as 2,5 l/min.

Water flow sensor

## Priority switch Cooperation with another electric high power consumption appliance.



Electronic control system Ensures stability and smooth regualtion of water temperature from 30°C to 60°C.

from 18kW

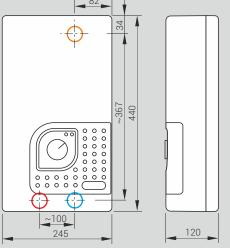


Can work on already preheated water. Inlet water temperature up to 70°C.

| н |   |  |
|---|---|--|
| н |   |  |
| н |   |  |
|   |   |  |
|   |   |  |
|   | a |  |

#### KDEZ

Metal case with extra resistance to prevent any damage. Perfect for public



| Supply water pressure   | 0,12 - 0,6 MPa |  |  |  |
|---|----------------|--|--|--|
| Inlet and outlet section  | Gz 1/2"*       |  |  |  |
| Safety class  | IP 25          |  |  |  |
| Energy efficiency class   | Α              |  |  |  |
| * Inlet and outlet pipes connected to the<br>heater must be made of copper or steel |                |  |  |  |



buildings.



| Cold water inlet |  |
|------------------|--|

Hot water inlet

| Туре         | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (∆t=30°)<br>(I/min.) |
|--------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| KDE-09 BONUS | 9 kW / 400V 3~              | 3x13,0            | 4 x 1,5                             | 4,3                             |
| KDE-12 BONUS | 12 kW / 400V 3~             | 3x17,3            | 4 x 2,5                             | 5,8                             |
| KDE-15 BONUS | 15 kW / 400V 3~             | 3x21,7            | 4 x 2,5                             | 7,2                             |
| KDE-18 BONUS | 18 kW / 400V 3~             | 3x26,0            | 4 x 4                               | 8,7                             |
| KDE-21 BONUS | 21 kW / 400V 3~             | 3x30,3            | 4 x 4                               | 10,1                            |
| KDE-24 BONUS | 24 kW / 400V 3~             | 3x34,6            | 4 x 6                               | 11,6                            |
| KDE-27 BONUS | 27 kW / 400V 3~             | 3x39,0            | 4 x 6                               | 13,0                            |



## EPP Maximus electronic

Water heater with the highest efficiency of hot water production



Application



#### Most important advantages



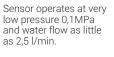
Copper shielded heating elements Reliable technology ensures long life, resistance to water decay and air bubbles



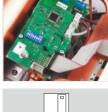
C

## Water flow sensor

Priority switch



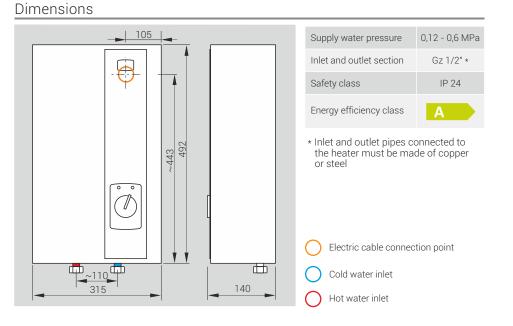
Cooperation with another electric high power consumption appliance.



36kW

**Electronic control system** Ensures stability and smooth regualtion of water temperature from 30° to 60°C

Can work on already preheated water. Inlet water temperature up to  $70^{\circ}$ C.



| Туре           | Rated power / Rated voltage | Rated current (A) | Min. connecting wires section (mm²) | Efficiency (∆t=30°)<br>(I/min.) |
|----------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|
| EPP-36 MAXIMUS | 36 kW / 400V 3~             | 3x52,0            | 4 x 10                              | 17,3                            |





# Storage water heaters





Electric storage water heaters are the cheapest and easiest solution to install. They don't require an additional gas connection or chimney, can be connected to the electrical installation available in every home.

Electric storage water heaters provide a simple and inexpensive to install hot water solution. There is no

risk of explosion, no risk of pollution or carbon monoxide poisoning.

In production of electric storage water heaters, Kospel is using fully automated enamelling powder technology or stainless steel which guarantees the highest product quality.

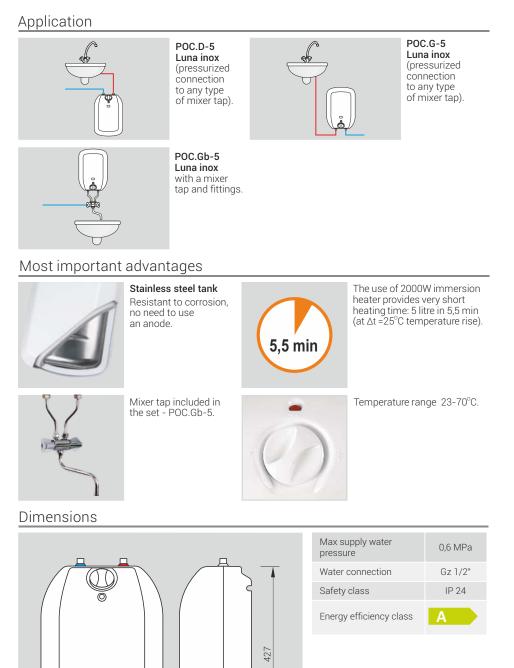


Electric storage water heater

## POC Luna inox

Water heater for wash basin with the tank made of stainless steel





#### Technical data

| Туре                | Rated power / Rated voltage | Capacity (I) | Heating time $\Delta t = 30^{\circ}C$ (min.) |
|---------------------|-----------------------------|--------------|--|
| POC.D-5 LUNA INOX   | 2 kW / 230V                 | 5            | 5,5  |
| POC.G-5 LUNA INOX   | 2 kW / 230V                 | 5            | 5,5  |
| POC.Gb-5 LUNA INOX  | 2 kW / 230V                 | 5            | 5,5  |
| POC.D-5 600 W INOX  | 0,6 kW / 230V               | 5            | 18   |
| POC.G-5 600 W INOX  | 0,6 kW / 230V               | 5            | 18   |
| POC.Gb-5 600 W INOX | 0,6 kW / 230V               | 5            | 18   |

163

285



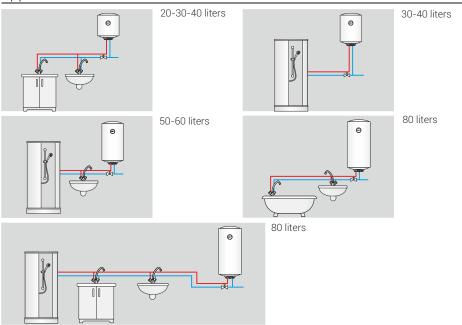
Electric storage water heaters

## OSV Slim

Water heater perfect for small bathrooms, with a diameter of 36 cm only



Application

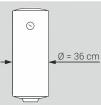


#### Most important advantages



#### Enamelling technology

Kospel company launched Poland's first fully automated enamelling powder system. Tanks are made of high quality of steel and are secured over the entire surface by evenly applied layer of enamel with optimal thickness.



## Slim - diameter only 36 cm Slim storage water heater was designed especially for places with limited space.

Thanks to reducing the width to 36 cm only, it occupies much less space than traditional storage water heaters.



Temperature control range from 7° to 77°C.

#### Dimensions

| Model  | Dimensions<br>(mm) | Supply water pressure                                      |
|--------|--------------------|--|
| OSV-20 | 427 x 363          | Inlet and outlet section/distance between inlet and outlet |
| OSV-30 | 519 x 363          | Safety class   |
| OSV-40 | 689 x 363          |  |
| OSV-50 | 809 x 363          | Energy efficiency class                                    |
| OSV-60 | 927 x 363          |  |
| OSV-80 | 1167 x 363         |  |

| Supply water pressure                                      | 0,6 MPa          |
|--|------------------|
| Inlet and outlet section/distance between inlet and outlet | Gz 1/2" / 110 mm |
| Safety class   | IP 24            |
| Energy efficiency class                                    | D                |

| Туре        | Rated power / Rated voltage | Capacity (I) | Heating time $\Delta t = 40^{\circ}C$ (h) |
|-------------|-----------------------------|--------------|---|
| OSV-20 SLIM | 2 kW / 230V                 | 20           | 0,45                                      |
| OSV-30 SLIM | 2 kW / 230V                 | 30           | 0,67                                      |
| OSV-40 SLIM | 2 kW / 230V                 | 40           | 0,89                                      |
| OSV-50 SLIM | 2 kW / 230V                 | 50           | 1,14                                      |
| OSV-60 SLIM | 2 kW / 230V                 | 60           | 1,43                                      |
| OSV-80 SLIM | 2 kW / 230V                 | 80           | 1,86                                      |



|          | Product code-description  |
|----------|---|
|          | BATERIA.EPS/EPJ/EPJ.Pu - Chrome mixer tap (without faucet) for EPS Twister, EPJ Optimus, EPJ.Pu |
|          | BATERIA.EPJ.P - Chrome mixer tap (without shower set) for EPJ.P Primus, POC.GB                  |
|          | PERL.GW.WEW.CHROM - Fine-stream sprayhead (chrome, internal thread)                             |
|          | PERL.GW.ZEW.CHROM - Fine-stream sprayhead (chrome, external thread)                             |
|          | PRZEŁĄCZNIK.EPJ.PU - EPJ.PU Primus shower/washbasin switch                                      |
| \$ 8     | PRZYŁĄCZA.PP.GÓRA - Top connections for PPH2, PPE2, PPVE heaters (copper)                       |
|          | PRZYŁĄCZA.PP.DÓŁ - Bottom connections for PPH2, PPE2, PPVE (copper)                             |
| h        | RURKI.EPJ.P.500 - EPJ.P 500 mm fittings for EPJ.P Primus (1 set-2pcs.)                          |
| (1)      | WĄŻ.PRYSZNICOWY - Shower hose   |
|          | WYLEWKA.150.CHROM - 150 mm KOSPEL chrome faucet   |
|          | WYLEWKA.195.CHROM - 195 mm KOSPEL chrome faucet   |
| c=/      | WYLEWKA.250.CHROM - 250 mm KOSPEL chrome faucet   |
|          | WYLEWKA.300.CHROM - 300 mm KOSPEL chrome faucet   |
|          | WYLEWKA.PRYSZNICOWA - Shower fine-stream sprayhead  |
| <b>F</b> | ZEST.PRYSZNICOWY - Shower set: hose, fine-stream spray head and fittings                        |

## Storage water heaters accessories

|   | Product code-description  |
|---|---|
|   | ANODA.AMO.18/160/125 - Magnesium anode rod for OSV Slim 20-40 liters (installation in the immersion heater)       |
|   | ANODA.AMO.18/287/250 - Magnesium anode rod for OSV Slim 50-80 liters (installation in the immersion heater)       |
|   | ANODA.AMO.22/208 - Magnesium anode rod 22x208 with cork 3/4 for OSV Slim 20-40 liters (installation from the top) |
|   | ANODA.AMW.400 - Magnesium anode rod 22x400 with cork 3/4 for OSV Slim 50-80 liters (installation from the top)    |
| • | ANODA.AML.21x130x2 - Magnesium - chain anode for OSV Slim 20-40 liters  |
|   | ANODA.AML.21x130x3 - Magnesium - chain anode for OSV Slim 50-80 liters  |
|   | RURKI.POC.GB - Fittings for POC GB and POW.G (1 set-2pcs.)  |



| <br> |  |
|------|--|
|      |  |
|      |  |
|      |  |
|      |  |





# Domestic hot water cylinders





Domestic hot water cylinders are used to heat and store water. Such cylinders have to be resistant to corrosion. That's why Kospel uses an exceptional, first in Poland, fully automatised dry enamelling line.

Getting hot water from a cylinder connected to a boiler or a solar system is quite popular. Tanks that are made of a high quality steel are placed in the enamelling chamber, where are evenly covered with the optimal thickness layer of enamel. This method as compared to traditional wet enamelling technology improves the quality of enamel coat and ensures long-lasting cylinder performance.

Kospel also offers cylinders made of acid-resistant steel.



## WZ Termo Hit

For water storage supplied by external heat source (exchanger), for example cooker heat coil.

#### Most important advantages



#### Enamelling technology

Kospel company launched Poland's first fully automated enamelling powder system. Tanks are made of high quality of steel and are secured over the entire surface by evenly applied layer of enamel with optimal thickness.



#### Manufacturing automation Welding and enamelling are the key factors in cylinder

production process. It's automation provides full repeatibility of the process, top quality of performance and anti-corrosion protection level.



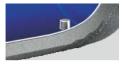
#### Unbeatable quality

Quality control system covers all production stages. Each device is being fully checked before shipment. Fault factor is as low as 0,06%.



#### New casing

Upgraded case provides modern look. Thicker insulation guarantees even better protection against heat losses.



#### Water diffuser

Diffuser significantly reduces cold/hot water mixing effect, and provides steady water temperature distribution.



#### Temperature indicator

Temperature sensor allows stored water temperature control.

#### Additional equipment

Immersion heaters can be installed on the cylinder: GRW-1,4kW/230V; GRW-2,0kW/230V; GRW-3,0/230V lub GRW-4,5kW/400V

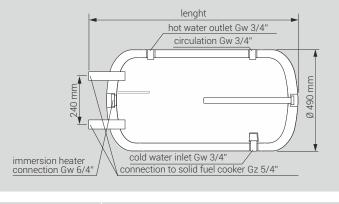
#### Technical data

| Туре             | Capacity (I) | Stand-by losses* (W) | Anode type |
|------------------|--------------|----------------------|------------|
| WZ-80 TERMO HIT  | 86           | 57                   | AMW.400    |
| WZ-100 TERMO HIT | 109          | 63                   | AMW.400    |
| WZ-120 TERMO HIT | 130          | 65                   | AMW.660    |
| WZ-140 TERMO HIT | 140          | 71                   | AMW.660    |

\* In line with EU Commission resolution no. 812/2013,814/2013



#### Dimensions



|                         | Lei | nght (mm) |     |
|-------------------------|-----|-----------|-----|
| WZ-80                   |     | 920       |     |
| WZ-100                  |     | 1125      |     |
| WZ-120                  |     | 1295      |     |
| WZ-140                  |     | 1365      |     |
|                         |     |           |     |
| Rated pressure (cylinde | er) | 0,6 M     | IPa |
| Energy efficiency class |     | С         |     |



## WW/WB Termo Hit

Cylinder with heating coil for co-operation with solid fuel cookers

#### Most important advantages



#### Enamelling technology

Kospel company launched Poland's first fully automated enamelling powder system. Tanks are made of high quality of steel and are secured over the entire surface by evenly applied layer of enamel with optimal thickness.



#### Manufacturing automation

Welding and enamelling are the key factors in cylinder production process. It's automation provides full repeatibility of the process, top quality of performance and anti-corrosion protection level.



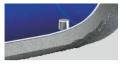
#### Unbeatable quality

Quality control system covers all production stages. Each device is being fully checked before shipment. Fault factor is as low as 0,06%.



#### New casing

Upgraded case provides modern look. Thicker insulation guarantees even better protection against heat losses.



#### Water diffuser

Diffuser significantly reduces cold/hot water mixing effect, and provides steady water temperature distribution.



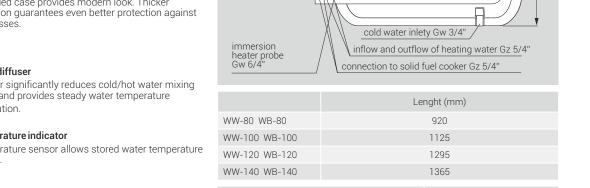
#### Temperature indicator

Temperature sensor allows stored water temperature control.

#### Additional equipment

Immersion heaters can be installed on the cylinder: GRW-1,4kW/230V; GRW-2,0kW/230V; GRW-3,0/230V or GRW-4,5kW/400V

#### Technical data



Rated pressure (cylinder / coil) Energy efficiency class

| Туре             | Storage capacity (I) | Surface of heat transfer (m²) | Power * (kW) | Stand-by losses ** (W) | Anode type |
|------------------|----------------------|-------------------------------|--------------|------------------------|------------|
| WW-80 TERMO HIT  | 84                   | 0,3                           | 10           | 56                     | AMW.400    |
| WW-100 TERMO HIT | 107                  | 0,3                           | 10           | 64                     | AMW.400    |
| WW-120 TERMO HIT | 127                  | 0,4                           | 12           | 66                     | AMW.660    |
| WW-140 TERMO HIT | 138                  | 0,4                           | 12           | 73                     | AMW.660    |
| WB-80 TERMO HIT  | 84                   | 0,3                           | 10           | 56                     | AMW.400    |
| WB-100 TERMO HIT | 107                  | 0,3                           | 10           | 64                     | AMW.400    |
| WB-120 TERMO HIT | 127                  | 0,4                           | 12           | 66                     | AMW.660    |
| WB-140 TERMO HIT | 138                  | 0,4                           | 12           | 73                     | AMW.660    |

\* Following parameters: 80/15/45°C heating water temp. / feed water temp. / domestic water temp. Flow rate of heating water though the cylinder - 3,0 m³/h. \*\* In line with EU Commission resolution no. 812/2013, 814/2013





lenght

cold water inlet Gw 3/4'

lenght

inflow and outflow of heating water Gz 5/4"

hot water outlet Gw 3/4"

circulation Gw 3/4'

hot water outlet Gw 3/4" circulation Gw 3/4'

Ø 490

Ø 490

0,6 / 0,6 MPa

#### Dimensions

type WW

immersion

type WB

with additional connections

heater probe Gw 6/4"

## WP / WPZ Termo Hit

Jacket cylinders ensures highest heating capacity and shortest time of water heating

#### Most important advantages



#### **Enamelling technology**

Kospel company launched Poland's first fully automated enamelling powder system. Tanks are made of high quality of steel and are secured over the entire surface by evenly applied layer of enamel with optimal thickness.



## Manufacturing automation

Welding and enamelling are the key factors in cylinder production process. It's automation provides full repeatibility of the process, top quality of performance and anti-corrosion protection level.



## Unbeatable quality

Quality control system covers all production stages. Each device is being fully checked before shipment. Fault factor is as low as 0,06%.



#### Corrugated walls technology

Corrugated walls additionally enlarge the heating surface and allows installing of heat exchangers in closed systems (with jacket rated pressure 0,3 MPa).



#### New casing

Upgraded case provides modern look. Thicker insulation guarantees even better protection against heat losses



#### Water diffuser

Diffuser significantly reduces cold/hot water mixing effect, and provides steady water temperature distribution.



#### **Temperature indicator**

Temperature sensor allows stored water temperature control

#### Additional equipment

Immersion heaters can be installed on the cylinder: GRW-1,4kW/230V; GRW-2,0kW/230V; GRW-3,0/230V or GRW-4,5kW/400V

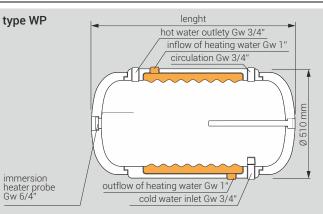
#### Technical data

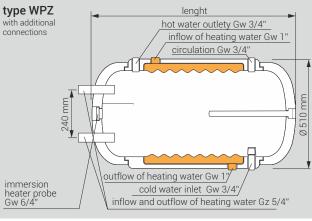
| Туре              | Storage capacity (I) | Surface of heat transfer (m²) | Power * (kW) | Stand-by losses ** (W) | Anode type |
|-------------------|----------------------|-------------------------------|--------------|------------------------|------------|
| WP-100 TERMO HIT  | 109                  | 0,75                          | 20           | 56                     | AMW.400    |
| WP-120 TERMO HIT  | 130                  | 0,95                          | 27           | 65                     | AMW.660    |
| WP-140 TERMO HIT  | 140                  | 1,05                          | 29           | 69                     | AMW.660    |
| WPZ-100 TERMO HIT | 109                  | 0,75                          | 20           | 56                     | AMW.400    |
| WPZ-120 TERMO HIT | 130                  | 0,95                          | 27           | 65                     | AMW.660    |
| WPZ-140 TERMO HIT | 140                  | 1,05                          | 29           | 69                     | AMW.660    |

\* Following parameters: 80/15/45°C heating water temp. / feed water temp. / domestic water temp. Flow rate of heating water through the cylinder - 3,0 m<sup>3</sup>/h. \*\* In line with EU Commission resolution no. 812/2013, 814/2013



#### Dimensions





|                         | Lenght (mm) |       |  |  |  |
|-------------------------|-------------|-------|--|--|--|
| WPW-100 WPZ-100         |             | 1080  |  |  |  |
| WPW-120 WPZ-120         |             | 1250  |  |  |  |
| WPW-140 WPZ-140         |             | 1320  |  |  |  |
| Rated pressure (cylinde | 0,6/0,3     | 3 MPa |  |  |  |
| Energy efficiency class |             | С     |  |  |  |



#### Horizontal hot water cylinders

## WPW Termo Hit

Jacket cylinders equipped with coil providing highest heating capacity and co-operation with two heating sources.

#### Most important advantages



#### Enamelling technology

Kospel company launched Poland's first fully automated enamelling powder system. Tanks are made of high quality of steel and are secured over the entire surface by evenly applied layer of enamel with optimal thickness.



#### Manufacturing automation

Welding and enamelling are the key factors in cylinder production process. It's automation provides full repeatibility of the process, top quality of performance and anti-corrosion protection level.



#### Unbeatable quality

Quality control system covers all production stages. Each device is being fully checked before shipment. Fault factor is as low as 0,06%.



#### Corrugated walls technology

Corrugated walls additionally enlarge the heating surface and allows installing of heat exchangers in closed systems (with jacket rated pressure 0,3 MPa).

#### New casing

Upgraded case provides modern look. Thicker insulation guarantees even better protection against heat losses.



#### Water diffuser

Diffuser significantly reduces cold/hot water mixing effect, and provides steady water temperature distribution.



#### Temperature indicator

Temperature sensor allows stored water temperature control.

#### Additional equipment

Immersion heaters can be installed on the cylinder: GRW-1,4kW/230V; GRW-2,0kW/230V; GRW-3,0/230V or GRW-4,5kW/400V

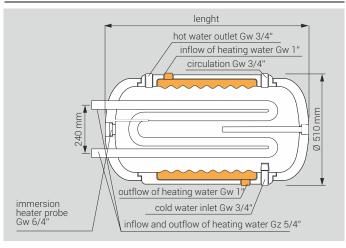
#### Technical data

| Туре              | Storage capacity (I) | Surface of heat transfer (m <sup>2</sup> ) | Power * (kW) | Stand-by losses ** (W) | Anode type |
|-------------------|----------------------|--|--------------|------------------------|------------|
| WPW-100 TERMO HIT | 107                  | 0,3 / 0,75                                 | 10 / 20      | 58                     | AMW.400    |
| WPW-120 TERMO HIT | 128                  | 0,4 / 0,95                                 | 12 / 27      | 67                     | AMW.660    |
| WPW-140 TERMO HIT | 138                  | 0,4 / 1,05                                 | 12/29        | 72                     | AMW.660    |

\* Following parameters:: 80/15/45°C heating water temp. / feed water temp. / domestic water temp. Flow rate of heating water through the cylinder - 3,0 m<sup>3</sup>/h. \*\* In line with EU Commission resolution no. 812/2013, 814/2013



#### Dimensions



|         | Lenght (mm) |
|---------|-------------|
| WPW-100 | 1080        |
| WPW-120 | 1250        |
| WPW-140 | 1320        |
|         |             |

Rated pressure (cylinder / coil / jacket)

Energy efficiency class

0,6/0,6/0,3/ MPa

C

,0,0,0,0,0,0,1,1



Vertical hot water cylinders

## SE Termo Max

Perfect to store domestic hot water



#### Additional equipment

Immersion heaters can be installed on the cylinder: GRW-1,4kW/230V; GRW-2,0kW/230V; GRW-3,0kW/230V; GRW-4,5kW/400V for capacity 140 litres up, and GRW-6,0kW/400V in capacity 250 liters up.

#### Technical data

| Туре             | Storage capacity (I) | Stand-by lossese* (W) | Anode type** |
|------------------|----------------------|-----------------------|--------------|
| SE-140 TERMO MAX | 140                  | 65                    | AMW.400      |
| SE-200 TERMO MAX | 210                  | 84                    | AMW.M8.450   |
| SE-250 TERMO MAX | 255                  | 85                    | AMW.M8.450   |
| SE-300 TERMO MAX | 305                  | 92                    | AMW.M8.450   |
| SE-400 TERMO MAX | 380                  | 98                    | AMW.M8.450   |
| SE-500 TERMO MAX | 485                  | 83                    | AMW.M8.400   |

\* In line with EU Commission resolution no. 812/2013,814/2013 (UE) 812/2013,814/2013.

\*\* Applicable for cylinders manufactured after 15.11.2012. Anode type should be adjusted in relation with instruction manual, provided with the device.

#### Inspection hole (from 250 liters) immersion heater connector Gw 6/4 Cold water inlet Gw 3/4" (Gw 1" or capaci from 400 liters) Diameter А G В С D F F

|                           | (mm) |
|---------------------------|------|------|------|------|------|------|------|------|------|------|
| SE-140                    | 500  | 1435 | 111  | -    | -    | -    | 993  | -    | 1301 | -    |
| SE-200                    | 595  | 1610 | 127  | -    | -    | -    | 1109 | -    | 1464 | -    |
| SE-250                    | 695  | 1380 | 127  | -    | -    | -    | 943  | -    | 1230 | -    |
| SE-300                    | 695  | 1615 | 127  | -    | -    | -    | 1093 | -    | 1464 | -    |
| SE-400                    | 755  | 1660 | 124  | -    | -    | -    | 1125 | -    | 1507 | -    |
| SE-500                    | 854  | 1780 | 136  | -    | -    | -    | 1220 | -    | 1584 | -    |
|                           |      |      |      |      |      |      |      |      |      |      |
| Rated pressure (cylinder) |      |      |      |      |      | 0,6  |      |      |      |      |

Energy efficiency class





Most important advantages

## Enamelling technology

Kospel company launched Poland's first fully automated enamelling powder system. Tanks are made of high quality of steel and are secured over the entire surface by evenly applied layer of enamel with optimal thickness.

#### Unbeatable quality

type SE

magnesium anode temperature indicator

Quality control system covers all production stages. Each device is being fully checked before shipment. Fault factor is as low as 0,06%.

hot water outlet Gw 3/4" (Gw 1" for capacities from 400 liters)

circulation connection Gw 3/4"

temperature sensor pipe

# Dimensions



#### Jacket cylinder vertical-horizontal

## SP 180 Termo-S

Water Jacket Cylinders with a very large heating surface, that can be mounted in vertical or horizontal position



#### Additional equipment

Immersion heaters can be installed on the cylinder: GRW-1,4kW/230V; GRW-2,0kW/230V; GRW-3,0kW/230V or GRW-4,5kW/400V.

#### Most important advantages





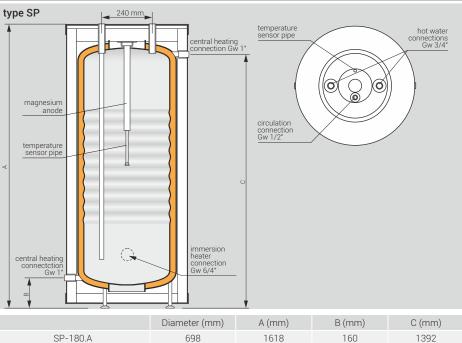








#### Dimensions



|                                    |          | ( )  | ( /       |
|------------------------------------|----------|------|-----------|
| SP-180.A                           | 698      | 1618 | 160       |
| SP-180                             | 595      | 1500 | 132       |
| Rated pressure (cylinder / jacket) |          |      | 0,6 / 0,3 |
| Energy efficiency class            | SP-180.A |      | Α         |
| Energy enholency class             |          |      |           |

SP-180

#### Technical data

| Туре             | Storage capacity total / DHW / CH (I) | Surface of heat transfer (m²) | Cylinder power * (kW) | Stand-by losses ** (W) | Anode type |
|------------------|---------------------------------------|-------------------------------|-----------------------|------------------------|------------|
| SP-180.A.TERMO-S | 183 / 140 / 43                        | 1,6                           | 54                    | 33                     | AMW.M8.450 |
| SP-180.TERMO-S   | 183 / 140 / 43                        | 1,6                           | 54                    | 76                     | AMW.M8.450 |

Following parametres 80/10/45°C – heating water temp./feed water temp./domestic water temp., flow rate of heating water through the coil 3,0 m<sup>3</sup>/h.
 In line with EU Commission resolution no. 812/2013, 814/2013



1364

### High power and efficiency

Tank in tank construction is characterised with the largest surface of heat transfer. SP-180 cylinder provides 30% more power and efficiency compare to 200 liters traditional cylinder with a heating coil. It ensures high comfort of use and fast hot water production.

#### Energy efficiency class A

SP-180.A cylinder ensures highest thermal insulation class. Heat losses are reduced up to 50%! Comparing to efficiency class C it saves up to 380kWh annually.

#### Can be mounted in any position

Special construction of cylinder and mounting bracket senable to mount the cylinder in vertical (standing or hanging) or horizontal position.

#### Enamelling technology

Kospel company launched Poland's first fully automated enamelling powder system. Tanks are made of high quality of steel and are secured over the entire surface by evenly applied layer of enamel with optimal thickness.

#### Corrugated walls technology

Corrugated walls additionally enlarge the heating surface and allows installing of heat exchangers in closed systems (with jacket rated pressure 0,3 MPa).

#### Unbeatable quality

Quality control system covers all production stages. Each device is being fully checked before shipment. Fault factor is as low as 0,06%.

Vertical hot water cylinders

## SW / SWZ Termo Max

Cylinders with heating coil, perfect to co-operate with central heating boiler



#### Additional equipment

Immersion heaters can be installed on the cylinder: GRW-1,4kW/230V; GRW-2,0kW/230V; GRW-3,0kW/230V; GRW-4,5kW/400V for capacity 100 liters up, and GRW-6,0kW/400V for capacity 250 litres up.

#### Most important advantages



#### Enamelling technology

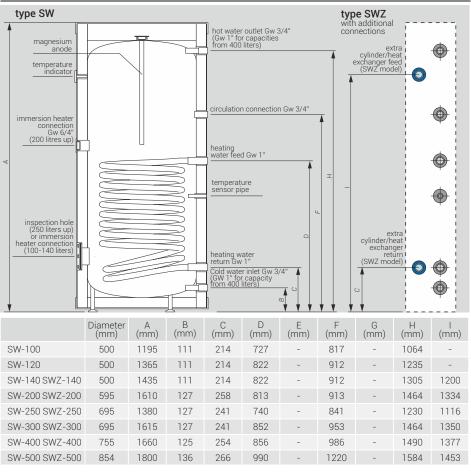
Kospel company launched Poland's first fully automated enamelling powder system. Tanks are made of high quality of steel and are secured over the entire surface by evenly applied layer of enamel with optimal thickness.



#### Unbeatable quality

Quality control system covers all production stages. Each device is being fully checked before shipment. Fault factor is as low as 0,06%.

#### Dimensions



Rated pressure (cylinder / coil)

0,6 / 1,0 MPa

#### Energy efficiency class

#### Technical data

| Туре              | Storage capacity (I) | Surface area of coil (m²) | Power of coil* (kW) | Stand-by losses** (W) | Anode type*** |
|-------------------|----------------------|---------------------------|---------------------|-----------------------|---------------|
| SW-100 TERMO MAX  | 105                  | 0,8                       | 34                  | 65                    | AMW.660       |
| SW-120 TERMO MAX  | 124                  | 1,0                       | 41                  | 72                    | AMW.800       |
| SW-140 TERMO MAX  | 134                  | 1,0                       | 41                  | 67                    | AMW.800       |
| SW-200 TERMO MAX  | 204                  | 1,1                       | 40                  | 86                    | AMW.M8.450    |
| SW-250 TERMO MAX  | 250                  | 1,2                       | 44                  | 88                    | AMW.M8.450    |
| SW-300 TERMO MAX  | 300                  | 1,5                       | 53                  | 94                    | AMW.M8.400    |
| SW-400 TERMO MAX  | 375                  | 1,7                       | 58                  | 101                   | AMW.M8.500    |
| SW-500 TERMO MAX  | 465                  | 2,25                      | 85                  | 82                    | AMW.M8.500    |
| SWZ-140 TERMO MAX | 134                  | 1,0                       | 41                  | 67                    | AMW.800       |
| SWZ-200 TERMO MAX | 204                  | 1,1                       | 40                  | 86                    | AMW.M8.450    |
| SWZ-250 TERMO MAX | 250                  | 1,2                       | 44                  | 88                    | AMW.M8.450    |
| SWZ-300 TERMO MAX | 300                  | 1,5                       | 53                  | 94                    | AMW.M8.400    |
| SWZ-400 TERMO MAX | 374                  | 1,7                       | 58                  | 101                   | AMW.M8.500    |
| SWZ-500 TERMO MAX | 465                  | 2,25                      | 85                  | 82                    | AMW.M8.500    |

\* Following parametres 80/10/45°C – heating water temp./feed water temp./domestic water temp., flow rate of heating water through the coil 3,0 m³/h.

\*\* In line with EU Commission resolution no. 812/2013, 814/2013.

\*\*\* Applicable for cylinders manufactured after 15.11.2012. Anode type should be adjusted in relation with instruction manual, provided with the device.



Vertical hot water cylinders

## SB/SBZ Termo Solar

Cylinders with double heating coil, perfect to co-operate with central heating boiler and solar collectors.



#### Additional equipment

Immersion heaters can be installed on the cylinder: GRW-1,4kW/230V; GRW-2,0kW/230V; GRW-3,0kW/230V; GRW-4,5kW/400V for capacity 100 liters up, and GRW-6,0kW/400V for capacity 250 liters up.

#### Technical data

#### Surface area of coil lower / upper (m²) Power of coil lower / upper(kW) Stand-by losses\*: (W) Туре Storage capacity (I) Anode type\*\*\* 200 SB-200 TERMO SOLAR 1.1 / 0.75 40 / 29 83 AMW.M8.400 SB-250 TERMO SOLAR 246 1,0/0,8 37/31 90 AMW.M8.400 SB-300 TERMO SOLAR 296 1,5/0,8 53/31 96 AMW.M8.500 SB-400 TERMO SOLAR 366 1,7/0,9 58/34 98 AMW.M8.500 SB-500 TERMO SOLAR 455 2,25 / 1,04 85/39 84 AMW.M8.590 SBZ-200 TERMO SOLAR 200 1,1/0,75 40 / 29 83 AMW.M8.400 SBZ-250 TERMO SOLAR 246 1,0/0,8 37/31 90 AMW.M8.400 SBZ-300 TERMO SOLAR 296 1,5/0,8 53/31 96 AMW M8 500 SBZ-400 TERMO SOLAR 366 1,7/0,9 58 / 34 98 AMW.M8.500 SBZ-500 TERMO SOLAR 455 2,25 / 1,04 85/39 84 AMW.M8.590

\* Following parametres 80/10/45°C - heating water temp./feed water temp./domestic water temp., flow rate of heating water through the coil 3,0 m³/h.

\*\* In line with EU Commission resolution no. 812/2013, 814/2013

\*\*\* Applicable for cylinders manufactured after 15.11.2012. Anode type should be adjusted in relation with instruction manual, provided with the device.

| (250 litres up)                  |                  |           |           | eating water<br>turn Gw 1"<br>Id water ink<br>W 1" for cap<br>Im 400 liters | et Gw 3/4"<br>acity |           |            | (SWZ mod  | ūrn (     |           |
|----------------------------------|------------------|-----------|-----------|---|---------------------|-----------|------------|-----------|-----------|-----------|
|                                  | Diameter<br>(mm) | A<br>(mm) | B<br>(mm) | C<br>(mm)   | D<br>(mm)           | E<br>(mm) | F<br>(mm)  | G<br>(mm) | H<br>(mm) | l<br>(mm) |
| SB-200 SBZ-200                   | 595              | 1610      | 127       | 258   | 813                 | 903       | 993        | 1291      | 1464      | 1334      |
| SB-250 SBZ-250                   | 695              | 1380      | 127       | 241   | 628                 | 747       | 837        | 1079      | 1230      | 1116      |
| SB-300 SBZ-300                   | 695              | 1615      | 127       | 241   | 852                 | 981       | 1071       | 1313      | 1464      | 1350      |
| SB-400 SBZ-400                   | 755              | 1660      | 125       | 254   | 856                 | 986       | 1076       | 1319      | 1490      | 1377      |
| SB-500 SBZ-500                   | 854              | 1800      | 136       | 266   | 990                 | 1115      | 1220       | 1448      | 1584      | 1453      |
| Rated pressure (cylinder / coil) |                  |           |           |   |                     | 0,        | 6 / 1,0 MF | Pa        |           |           |
|                                  |                  |           |           |   |                     |           | _          |           |           |           |

Energy efficiency class



## Most important advantages



Dimensions type SB

magnesiun anod

temperature indicato

immersion heater connection

inst

#### **Enamelling technology**

Kospel company launched Poland's first fully automated enamelling powder system. Tanks are made of high quality of steel and are secured over the entire surface by evenly applied layer of enamel with optimal thickness.

#### Unbeatable quality

П

Quality control system covers all production stages. Each device is being fully checked before shipment. Fault factor is as low as 0,06%.

hot water outlet Gw 3/4" (Gw 1" for capacities from 400 liters)

ating water feed Gw 1"

circulation connection Gw 3/4 heating water return Gw 1

temperature sensor pipe

eating /ater feed Gw 1'

temperature sensor pipe

type SBZ with additional connections

extra cylinder/heat exchanger feed (SWZ model)

extra cylinder/heat

 $\bigcirc$ 

 $\bigcirc$ 

#### Vertical hot water cylinders

# SW.INOX

Vertical hot water cylinders made of stainless steel, with heating coil



#### Most important advantages

Highly effective thermal insulation

#### Acid-resistant steel AISI 316

Both cylinder and coil are made of austenitic stainless steel, type AISI 316.

#### Passivation

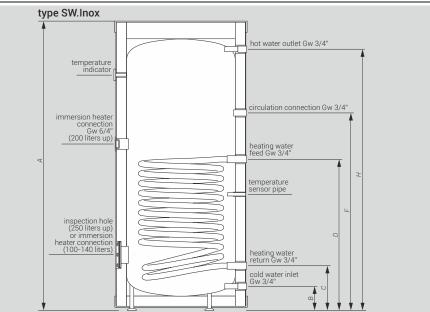
Cylinder is additionally protected by immersion passivation process, that protects welding points.

## Effective thickness of thermal insulation minimises heat losses from the cylinder. Its rigid claret colour casing ensures aesthetic look and provides protection against mechanical damages.

#### High efficiency

Coil with large heat transfer surface, reaching very bottom of the cylinder ensures short time of water heating and steady water temperature distribution.

#### Dimensions



|                                  | Diameter<br>(mm) | A<br>(mm) | B<br>(mm) | C<br>(mm) | D<br>(mm) | E<br>(mm) | F<br>(mm)   | G<br>(mm) | H<br>(mm) |
|----------------------------------|------------------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|
| SW.INOX-100                      | 500              | 1195      | 111       | 214       | 727       | -         | 817         | -         | 1064      |
| SW.INOX-120                      | 500              | 1365      | 111       | 214       | 822       | -         | 912         | -         | 1235      |
| SW.INOX-140                      | 500              | 1435      | 111       | 214       | 822       | -         | 912         | -         | 1305      |
| SW.INOX-200                      | 595              | 1610      | 127       | 258       | 813       | -         | 913         | -         | 1464      |
| SW.INOX-300                      | 695              | 1615      | 127       | 241       | 852       | -         | 953         | -         | 1464      |
| Rated pressure (cylinder / coil) |                  |           |           |           |           |           | 0,6 / 1,0 M | ИРа       |           |
| Energy efficiency class          |                  |           |           |           |           |           | С           |           |           |

#### Additional equipment

Immersion heaters can be installed on the cylinder: GRBT.INOX-1,4kW/230V for every capacity GRBT.INOX-2,0kW/230V for capacity 200 liters up.

#### Technical data

| Туре        | Storage capacity (I) | Surface area of coil (m²) | Power of coil* (kW) | Stand-by losses** (W) |
|-------------|----------------------|---------------------------|---------------------|-----------------------|
| SW.INOX-100 | 105                  | 0,8                       | 34                  | 64                    |
| SW.INOX-120 | 125                  | 1,0                       | 41                  | 70                    |
| SW.INOX-140 | 135                  | 1,0                       | 41                  | 66                    |
| SW.INOX-200 | 204                  | 1,1                       | 40                  | 86                    |
| SW.INOX-300 | 300                  | 1,5                       | 53                  | 94                    |

\* Following parametres 80/10/45°C - heating water temp./feed water temp./domestic water temp., flow rate of heating water through the coil 3,0 m³/h.

\*\* In line with EU Commission resolution no. 812/2013, 814/2013.



#### Vertical hot water cylinders

## **SB.INOX**

Vertical hot water cylinders made of stainless steel, with double heating coil



#### Most important advantages

Highly effective thermal insulation

#### Acid-resistant steel AISI 316

Both cylinder and coil are made of austenitic stainless steel, type AISI 316.

#### Passivation

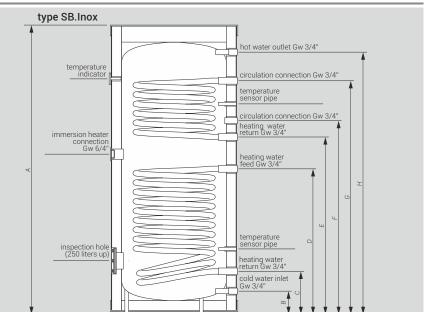
Cylinder is additionally protected by immersion passivation process, that protects welding points.

Effective thickness of thermal insulation minimises heat losses from the cylinder. Its rigid claret colour casing ensures aesthetic look and provides protection against mechanical damages.

#### **High efficiency**

Coil with large heat transfer surface, reaching very bottom of the cylinder ensures short time of water heating and steady water temperature distribution.

#### Dimensions



|                                  | Diameter<br>(mm) | A<br>(mm)  | B<br>(mm) | C<br>(mm) | D<br>(mm) | E<br>(mm) | F<br>(mm) | G<br>(mm) | H<br>(mm) |
|----------------------------------|------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| SB.INOX-200                      | 595              | 1610   | 127       | 258       | 813       | 903       | 993       | 1291      | 1464      |
| SB.INOX-300                      | 695              | 695         1615         127         241         852 |           |           |           | 981       | 1071      | 1313      | 1464      |
| Rated pressure (cylinder / coil) |                  |  |           |           |           |           | 0,6 / 1,0 | ) MPa     |           |
| Energy efficiency class          |                  |  |           |           |           | С         |           |           |           |

#### Additional equipment

Immersion heaters can be installed on the cylinder: GRBT.INOX-1,4kW/230V or GRBT.INOX-2,0kW/230V

#### Technical data

| Туре        | Storage capacity (I) | Surface area of coil<br>lower/upper (m²) | Power of coil lower / upper* (kW) | Stand-by losses** (W) |
|-------------|----------------------|--|-----------------------------------|-----------------------|
| SB.INOX-200 | 200                  | 1,1/0,75                                 | 40/29                             | 83                    |
| SB.INOX-300 | 296                  | 1,5/0,8                                  | 53/31                             | 96                    |

\* Following parametres 80/10/45°C - heating water temp./feed water temp./domestic water temp., flow rate of heating water through the coil 3,0 m³/h. \*\* In line with EU Commission resolution no. 812/2013, 814/2013



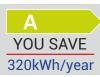
Vertical hot water cylinders

## SWK Termo Top

Cylinders with single heating coil, all connections at the top side only. Dedicated for installation under wall-hanged central heating boiler.



#### Most important advantages



insulation

PUR

65mm

#### High thermal insulation A class

annually.

65mm insulation, made of polyurethane foam, provides high energy efficiency class.

SWK.A cylinder ensures highest thermal insulation class. Heat losses are

reduced up to 50%! Comparing to efficiency class C it saves up to 320kWh

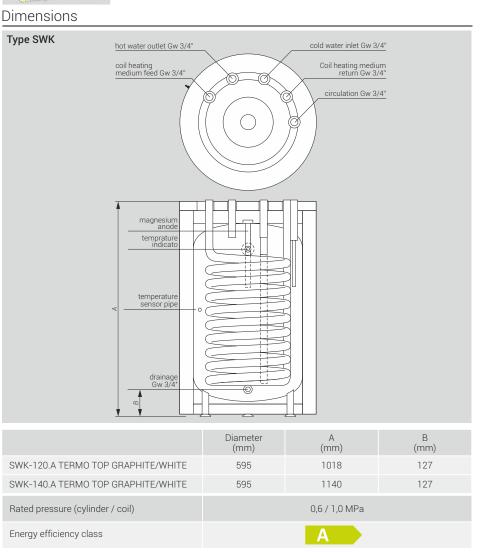
#### **Enamelling technology**

Energy efficiency class A

Kospel company launched Poland's first fully automated enamelling powder system.Tanks are made of high quality of steel and are secured over the entire surface by evenly applied layer of enamel with optimal thickness.

#### Unbeatable quality

Quality system control covers all production stages. Each device is being fully checked before shipment. Fault factor is as low as 0,06%.



#### Technical data

| Туре                         | Capacity (I) | Coil surface (m <sup>2</sup> ) | Coil power* (kW) | Stand-by losses** (W) | Anode type |
|------------------------------|--------------|--------------------------------|------------------|-----------------------|------------|
| SWK-120.A TERMO TOP GRAPHITE | 111          | 1,0                            | 40               | 36                    | AMW.M8.450 |
| SWK-140.A TERMO TOP GRAPHITE | 134          | 1,1                            | 42               | 38                    | AMW.M8.450 |
| SWK-120.A TERMO TOP WHITE    | 111          | 1,0                            | 40               | 36                    | AMW.M8.450 |
| SWK-140.A TERMO TOP WHITE    | 134          | 1,1                            | 42               | 38                    | AMW.M8.450 |

\* Following parametres 80/10/45°C - heating water temp./feed water temp./domestic water temp., flow rate of heating water through the coil - 3,0m³/h. \*\* In line with EU Commission resolution no. 812/2013, 814/2013.



## SV / SVW

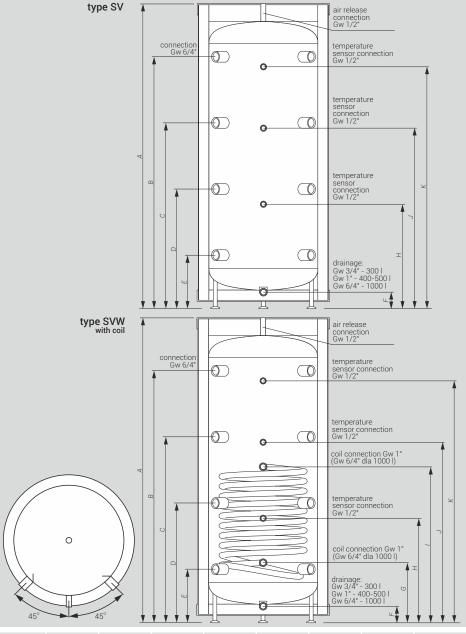
Ideal to store domestic hot water from different sources of heat, for example 2 central heating boilers and solar collectors



Rated pressure (cylinder / coil) 0,6 / 1,0 MPa

С

Energy efficiency class (up to 500 liters) Most important advantages



|          | Diameter<br>(mm) | A<br>(mm) | B<br>(mm) | C<br>(mm) | D<br>(mm) | E<br>(mm) | F<br>(mm) | G<br>(mm) | H<br>(mm) | ا<br>(mm) | J<br>(mm) | K<br>(mm) |
|----------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| SV-300   | 754              | 1626      | 1337      | 973       | 611       | 249       | 126       | -         | 544       | -         | 940       | 1249      |
| SV-400   | 804              | 1668      | 1368      | 996       | 626       | 256       | 124       | -         | 550       | -         | 947       | 1278      |
| SV-500   | 854              | 1761      | 1446      | 1051      | 656       | 261       | 130       | -         | 629       | -         | 1064      | 1379      |
| SV-1000  | 1054             | 2042      | 1681      | 1216      | 751       | 287       | 147       | -         | 749       | -         | 1185      | 1599      |
| SVW-300  | 754              | 1626      | 1337      | 973       | 611       | 249       | 126       | 239       | 544       | 850       | 940       | 1249      |
| SVW-400  | 804              | 1668      | 1368      | 996       | 626       | 256       | 124       | 246       | 550       | 856       | 947       | 1278      |
| SVW-500  | 854              | 1761      | 1446      | 1051      | 656       | 261       | 130       | 251       | 629       | 974       | 1064      | 1379      |
| SVW-1000 | 1054             | 2042      | 1681      | 1216      | 751       | 287       | 147       | 281       | 749       | 988       | 1185      | 1599      |

#### Technical data

| Туре     | Storage capacity (I) | Surface area of coily (m <sup>2</sup> ) | Power of coil * (kW) | Stand-by losses ** (W) |
|----------|----------------------|---|----------------------|------------------------|
| SV-300   | 307                  | -                                       | -                    | 92                     |
| SV-400   | 380                  | -                                       | -                    | 94                     |
| SV-500   | 485                  | -                                       | -                    | 83                     |
| SV-1000  | 1000                 | -                                       | -                    | -                      |
| SVW-300  | 300                  | 1,5                                     | 50                   | 96                     |
| SVW-400  | 375                  | 1,7                                     | 56                   | 98                     |
| SVW-500  | 465                  | 2,25                                    | 85                   | 82                     |
| SVW-1000 | 1000                 | 2,8                                     | 73                   | -                      |

Following parametres 80/10/45°C – heating water temp./feed water temp./domestic water temp., flow rate of heating water through the coil 3,0 m<sup>3</sup>/h.
 In line with EU Commission resolution no. 812/2013, 814/2013.



#### Cylinder accessories

| Cymruci accesso | 105  |
|-----------------|--|
|                 | Item / description   |
|                 | ANODA.AMW.400 - Magnesium anode 22x400mm with a cork 3/4"  |
|                 | ANODA.AMW.660 - Magnesium anode 21x660mm with a cork 3/4"  |
|                 | ANODA.AMW.800 - Magnesium anode 21x840mm with a cork 3/4"  |
| 0               | ANODA.AMW.M8.450 - Magnesium anode 33x450mm M8   |
| •               | ANODA.AMW.M8.400 - Magnesium anode 40x400mm M8   |
| 0               | ANODA.AMW.M8.500 - Magnesium anodea AMW 40x500 M8  |
| STR BAR         | ANODA.AMW.M8.590 - Magnesium anode AMW 40x590 M8   |
|                 | ANODA.ELEKTRONICZNA.L380.PL - Electronic anode (titanium), complete with inspection hole plug, for 200-500litres cylinders |
| 21.0            | GRZAŁKA.GRW-1.4 - Immersion heater with a thermostat GRW-1,4kW/230V, 6/4"  |
|                 | GRZAŁKA.GRW-2.0 - Immersion heater with a thermostat GRW-2,0kW/230V, 6/4"  |
|                 | GRZAŁKA.GRW-3.0/230V - Immersion heater with a thermostat GRW-3,0kW/230V, 6/4*   |
|                 | GRZAŁKA.GRW-4.5/400V - Immersion heater with a thermostat GRW-4,5kW/400V, 6/4*   |
|                 | GRZAŁKA.GRW-6.0/400V - Immersion heater with a thermostat GRW-6,0kW/400V, 6/4*   |
|                 | GRZAŁKA.GRBT.INOX-1.4 - Immersion heater for stainless steel cylinder GRBT.INOX-1,4kW / 230V, 6/4"                         |
|                 | GRZAŁKA.GRBT.INOX-2.0 - Immersion heater for stainless steel cylinder GRBT.INOX-2.0kW/ 230V, 6/4"                          |
|                 | KLUCZ.KORKA - Cork spanner 6/4"  |
|                 | WIESZAK.WMD-019 - Horizontal cylinder hangers (1 set - 2 pcs)  |
|                 | FLANSZA.GRW - Flange plug for over 250 litres vertical cylinders with Gw 6/4" immersion heater connector.                  |



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# Heat pumps





Energy efficient devices using renewable sources are becoming a standard in heating technology. Heat pumps are one of such devices - by using air, water and ground temperature potential difference may be used for effective heating. Volume of thermal energy gained exceeds several times volume of electrical energy used for the process. Kospel company, by using it's 25-years experience in manufacturing of heating devices, started to produce heat pumps. As a first step, pump dedicated for domestic water heating is being introduced. Other types, dedicated for buildings heating, are under development process.



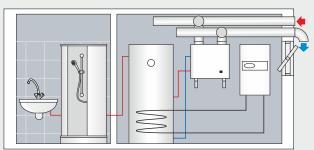
Domestic water heat pump

#### Application



Purpose of HPI-4 heat pump is domestic water heating by using air thermal energy.

It may be connected to any hot water cylinder, both in modernized and new installation.



The most appropriate point of pump installation is a storage or boiler room.

Simultaneously with water heating, pump is able to cool and dry air in the room where air intake and exhaust are located.

#### Most important advantages



2001

~ 2,5h 400L ~ 5h Highly effective compressor Pump is equipped with rotation compressor, which allows the device to reach heating power of 4kW.



Multi-row evaporator Large heat transfer surface evaporator is another element deciding about extraordinary heating parameters.



#### Short time of water heating

High power and COP factor guarantee cost-effective water heating, in time 30-50% shorter than other devices available on the market. Approximate time of heating 15-45°C water in 20°C air temperature: ~2,5h for 200 liters, ~5h for 400 litres.



#### Coaxial condenser

Pump is equipped with coaxial condenser, that guarantees maximum efficiency of water heating.

#### Air filter

Important part of the pump is air filter, protecting evaporator from dirt and pollutants. This solution ensure long-lasting and efficient use of the pump.

#### Dimensions

| air intake<br>Ø 200 mm |        | air exhaust<br>Ø 200 mm | 230 - 1 |   |  | for A20/W35             | 3,7 kW  |
|------------------------|--------|-------------------------|---------|---|--|-------------------------|---------|
| +                      |        |                         |         |   | Heating power                                    | dla A7/W35              | 3,0 kW  |
|                        |        |                         |         | on/off switch   | (wg EN 14511)                                    | dla A20/W45             | 3,4 kW  |
|                        | 330    |                         |         | water tank temperature sensor                             |  | dla A7/W45              | 2,7 kW  |
|                        |        |                         | 0000    | SG relay output<br>(max 0,1A 250V)<br>for slave device    |  | dla A20/W35             | 3,8     |
|                        |        |                         |         | connection (i.e. heater)                                  | COP  | dla A7/W35              | 3,1     |
| 673 mm                 |        |                         |         | NA non-current input<br>for master device<br>(i.e. timer) | (wg EN 14511)                                    | dla A20/W45             | 3,2     |
| 67                     |        |                         |         | Powering cable  |  | dla A7/W45              | 2,5     |
|                        |        |                         |         | Water inlet G 3/4"  | Water temperature regul                          | lation                  | 20-55°C |
| E .                    |        |                         |         | Water outlet G 3/4"                                       | Minimal air temperature                          |                         | 5°C     |
|                        |        |                         |         |   | Air flow   |                         | 800m³/h |
|                        |        |                         |         | Condensate G 3/4"   | Rated water pressure                             |                         | 0,6MPa  |
|                        | 690 mm |                         | 520 mm  | -   | Maximum lenght of air p<br>with diameter DN 200) | ipes (Intake + exhaust, | 10m     |

| Туре             | Description   |
|------------------|---|
| HPI-4            | HPI heat pump                                       |
| HPI.FILTR.PL     | Pocket filter for HPI heat pump - G3 287x287x200/3k |
| HPI.REGULATOR.PL | Temperature/time regulator for HPI heat pump        |
| HPI.WIESZAK.PL   | HPI heat pump hanger                                |



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# Solar collectors





Rising cost of conventional energy as well as rapidly growing "ecological awareness", boosted with various forms of alternative funding, made use of solar energy very popular. Solar collectors became a constant element of housing architecture.

The average annual radiation in Poland is at the level of 1000 kWh/year/m<sup>2</sup>, where as an average annual insolation duration is 1600 h/year.

Flat solar collectors with harp construction

## KSH

Solar collectors are the heart of solar systems that heat domestic hot water.

Suitable both for small family houses and large systems at public places.

Collectors can be also used to heat water in swimming pools and to support heating, especially underfloor heating.





#### Most important advantages

High efficiency of solar radiation processing - absorption coefficient: 95%, emission: 5%. Thanks to high selective BlueTec ETA PLUS coating at the absorber plate and high-permeability hardened glass, the highest level of solar radiation convertion is ensured.

Ultrasonic technology of absorber plate and copper pipes connections provides excellent transmission of energy to heating system.

Powder coated, sealed enclosure made of aluminium sheets ensures 100% tightness and long time operation.

Heat losses are significantly reduced by high-quality thermal insulation made of concentrated rock mineral wool.

Dedicated mounting kits made of stainless steel and aluminium make the installation process easy at the various locations and at various angles.

All the collector elements are made of durable materials (copper, aluminium), fulfilling all demanding quality standards, and are covered with 10 year warranty.

#### Technical data



| Туре  |  | KSH-2,0                    | KSH.A-2,0  | KSH-2,3   | KSH.A-2,3                       |  |
|---|--|----------------------------|--|---|---------------------------------|--|
| Dimensions  | mm                                     | 2119 x                     | 1072 x 90  | 2424 x 1072 x 90  |                                 |  |
| Weight  | kg                                     | 3                          | 6,5  | 41,8  |                                 |  |
| Surface   | m²                                     | 2                          | ,27  | 2   | ,6                              |  |
| Absorber type   |  | copper plate<br>absorber p | aluminium plate<br>plate covered with high<br>9 copper pipes w | copper plate<br>selective BlueTec ETA<br>elded ultrasonicly | aluminium plate<br>A PLUS coat, |  |
| Absorber's surface  | m²                                     | 2                          | ,00  | 2,  | 30                              |  |
| Active surface of absorber                                  | m²                                     | 1                          | ,98  | 2,27  |                                 |  |
| Efficiency at zero<br>losses                                | %                                      | 0                          | ,75  | 0,72  |                                 |  |
| Heat losses<br>coefficient                                  | W/<br>(m²K)                            | 4                          | ,22  | 2,57  |                                 |  |
| Air temperature<br>heat losses<br>dependancy<br>coefficient | W/<br>(m <sup>2</sup> K <sup>2</sup> ) | 0                          | ,02  | 0,05  |                                 |  |
| Radiation angle<br>coefficient                              |  |                            | 0,   | 93  |                                 |  |
| Fluid content   | dm³                                    | 1,13                       |  | 1   | ,4                              |  |
| Max working<br>pressure                                     | MPa                                    | 0,6                        |  |   |                                 |  |
| Flow min-max  | dm³/<br>min                            | 1-4                        |  |   |                                 |  |
| Connections<br>diameter                                     | mm                                     |                            | R  | 118   |                                 |  |



#### Solar kits with KSH-2.0 collectors Type/description



ZSH-2/250 - Flat collector KSH-2,0 (2 pcs.), cylinder SB-250, solar system controller, solar pump station (double pipeline), expansion vessel (18 liters) with a connection kit, collectors connection kit, flexible connectors, masking frame, solar fluid (20 liters).

ZSH-3/300 - Flat collector KSH-2,0 (3 pcs.), cylinder SB-300, solar system controller, solar pump station (double pipeline), expansion vessel (25 liters) with a connection kit, collectors connection kit, flexible connectors, masking frame (2 pcs.), solar fluid (20 liters).

ZSH-2 - as above, without cylinder.

Solar kits with KSH.A-2,0 collectors

Type/description

ZSH-3 - as above, without cylinder.



ZSH.A-2/250 - Flat collector KSH.A-2,0 (2 pcs.), cylinder SB-250, solar system controller, solar pump station (double pipeline), expansion vessel (18 liters) with a connection kit, collectors connection kit, flexible connectors, masking frame, solar fluid (20 liters).



ZSH.A-2 - as above, without cylinder

ZSH.A-3/300 - Flat collector KSH.A-2,0 (3 pcs.), cylinder SB-300, solar system controller, solar pump station (double pipeline), expansion vessel (25 liters) with a connection kit, collectors connection kit, flexible connectors, masking frame (2 pcs.), solar fluid (20 liters).



ZSH.A-3 - as above, without cylinder.

#### Solar kits with KSH-2,3 collectors



ZSH-2x2,3//300 - Flat collector KSH-2,3 (2 pcs.), cylinder SB-300, solar system controller, solar pump station (double pipeline), expansion vessel (25 liters) with a connection kit, collectors connection kit, flexible connectors, masking frame, solar fluid (20 liters)

ZSH-2x2,3 - as above, without cylinder.



ZSH-3x2,3/400 - Flat collector KSH-2,3 (3 pcs.), cylinder SB-400, solar system controller, solar pump station (double pipeline), expansion vessel (25 liters) with a connection kit, collectors connection kit, flexible connectors, masking frame, solar fluid (20 liters).

ZSH-3x2,3 - as above, without cylinder.

Type/description

#### Solar kits with KSH.A-2,3 collectors

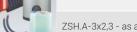


ZSH.A-2x2,3//300 - Flat collector KSH.A-2,3 (2 pcs.), cylinder SB-300, solar system controller, solar pump station (double pipeline), expansion vessel (25 liters) with a connection kit, collectors connection kit, flexible connectors, masking frame, solar fluid (20 liters).

ZSH.A-2x2,3 - as above, without cylinder.



ZSH.A-3x2,3/400 - Flat collector KSH.A-2,3 (3 pcs.), cylinder SB-400, solar system controller, solar pump station (double pipeline), expansion vessel (25 liters) with a connection kit, collectors connection kit, flexible connectors, masking frame, solar fluid (20 liters).



ZSH.A-3x2,3 - as above, without cylinder.

Attention! Mounting kits must be matched separately

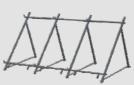


#### Mounting kits, connection systems

#### Vertical collectors roof mounting kits

#### Type/description

s<u>, s</u>, s<u>,</u>





ZMB-1 (solar collector (s), inclined roof, roofing materials: metal sheet tiles, tar paper) ZMB-2 (solar collectors (s), inclined roof, roofing materials: metal sheet tiles, tar paper) ZMB-3 (solar collectors (s), inclined roof, roofing materials: metal sheet tiles, tar paper) ZMB-4 (solar collectors (s), inclined roof, roofing materials: metal sheet tiles, tar paper) ZMB-5 (solar collectors (s), inclined roof, roofing materials: metal sheet tiles, tar paper) ZMD-1 (solar collector (s), inclined roof, roofing materials: ceramic tile) ZMD-2 (2 solar collectors (s), inclined roof, roofing materials: ceramic tile) ZMD-3 (3 solar collectors (s), inclined roof, roofing materials: ceramic tile) ZMD-4 (4 solar collectors (s), inclined roof, roofing materials: ceramic tile) ZMD-5 (5 solar collectors (s), inclined roof, roofing materials: ceramic tile) ZMP-1 (1 solar collector (s), flat roof) ZMP-2 (2 solar collectors (s), flat roof) ZMP-3 (3 solar collectors (s), flat roof) ZMP-4 (4 solar collectors (s), flat roof) ZMP-5 (5 solar collectors (s), flat roof) ZMS-1 (1 solar collector (s) 2.0, vertical wall) ZMS-2 (2 solar collectors (s) 2.0, vertical wall) ZMS-3 (3 solar collectors (s) 2.0, vertical wall) ZMS-4 (4 solar collectors (s) 2.0, vertical wall ZMS-5 (5 solar collectors (s) 2.0, vertical wall) ZMSi-1 (1 solar collector (s) 2.3, vertical wall) ZMSi-2 (2 solar collectors (s) 2.3, vertical wall) ZMSi-3 (3 solar collectors (s) 2.3, vertical wall) ZMSi-4 (4 solar collectors (s) 2.3, vertical wall) ZMSi-5 (5 solar collectors (s) 2.3, vertical wall)

#### Roof mounting kits - horizontal collectors

| the shart      |
|----------------|
| dening and     |
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| and the factor |
|                |
| AAAA           |

| riz | izontal collectors   |  |  |  |  |  |
|-----|--|--|--|--|--|--|
|     | Type/description   |  |  |  |  |  |
|     | ZMB-1.H (1 solar collector, inclined roof, roofing materials: metal sheet tiles, tar paper)  |  |  |  |  |  |
|     | ZMB-2.H (2 solar collectors, inclined roof, roofing materials: metal sheet tiles, tar paper) |  |  |  |  |  |
|     | ZMB-3.H (3 solar collectors, inclined roof, roofing materials: metal sheet tiles, tar paper) |  |  |  |  |  |
|     | ZMD-1.H (1 solar collector, inclined roof, roofing materials: ceramic tiles)                 |  |  |  |  |  |
|     | ZMD-2.H (2 solar collectors, inclined roof, roofing materials: ceramic tiles)                |  |  |  |  |  |
|     | ZMD-3.H (3 solar collectors, inclined roof, roofing materials: ceramic tiles)                |  |  |  |  |  |
|     | ZMP-1.H (1 solar collector, flat roof)   |  |  |  |  |  |
|     | ZMP-2.H (2 solar collectors, flat roof)  |  |  |  |  |  |
|     | ZMP-3.H (3 solar collectors, flat roof)  |  |  |  |  |  |
|     | ZMS-1.H (1 solar collector 2.0, vertical wall)   |  |  |  |  |  |
|     | ZMS-2.H (2 solar collectors 2.0, vertical wall)  |  |  |  |  |  |
|     | ZMS-3.H (3 solar collectors 2.0, vertical wall)  |  |  |  |  |  |
| ets | - vertical collectors  |  |  |  |  |  |
|     |  |  |  |  |  |  |

#### Collectors connection sets – vertical colle Type/description



 Type/description

 ZPH-1 (for 1 KSH solar collector)

 ZPH-2 (for 2 KSH solar collectors)

 ZPH-3 (for 3 KSH solar collectors)

 ZPH-4 (for 4 KSH solar collectors)

 ZPH-5 (for 5 KSH solar collectors)

#### Collectors connection sets - vertical collectors



 S - vertical collectors

 Type/description

 ZPH-1.H (for 1 KSH solar collector)

 ZPH-2.H (for 2 KSH solar collectors)

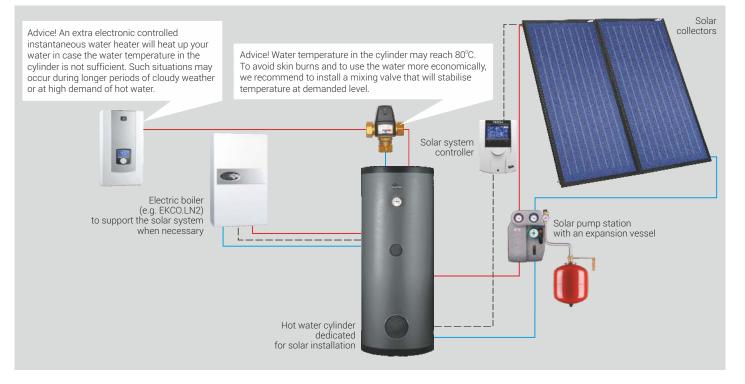
ZPH-3.H (for 3 KSH solar collectors)



#### Solar system accessories

|                       | Type / Description   |
|-----------------------|--|
| 74534                 | CZUJNIK.SOLARNY.KOL.PL - Temperature sensor for solar collector (SolarCompT1301, Tech)   |
| 而首                    | CZUJNIK.SOLARNY.WYM.PL - Temperature sensor for water cylinder (SolarCompT1001, Tech)  |
|                       | GPD.2-12.UPM3.25-75 - Pump station two-way 2-12l/min with pump UPM3.25-75  |
|                       | GPD.8-38.UPM3.25-75 - Pump station two-way 8-38I/min with pump UPM3.25-75  |
|                       | MSK.H.PL - Masking panel, MSK.H for 2,0H collectors - horizontal   |
|                       | MSK-2,0.PL - Masking panel MSK for 2,0m <sup>2</sup> collectors  |
|                       | MSK-2.3.PL - Masking panel MSK for 2,3m <sup>2</sup> collectors  |
|                       | NWS.18.PL - Solar expansion vessel 18 liters   |
|                       | NWS.25.PL - Solar expansion vessel 25 liters   |
|                       | NWS.40.PL - Solar expansion vessel 40 liters   |
|                       | NWS.ZESTAW.PL - Solar expansion vessel (18, 25 & 40 liters) mounting kit (rack, stopping valve, connection hose)                       |
| <u>.</u>              | PŁYN.SOLARNY.PL - Solar installation fluid (20 liters)   |
|                       | REGULATOR.SOLARCOMP-971.PL - Solar regulator SolarComp 971   |
|                       | REGULATOR.TECH.ST-402N.PWM.PL - Solar regulator Tech ST-402N.PWM   |
|                       | WĄŻ.FALOWANY.OTULINA-1,5M.PL - Flexible hose with insulation DN16/1,5m/GW3/4"  |
| a 220                 | ZAWÓR.SOL.VC4013.PL - Solar three-way valve, Honeywell VCZMH6000 with a servomotor VC4013ZZ00  |
|                       | ZAWÓR.TM50.PL - Mixing valve, Honeywell TM50 1/2   |
| 1 S &                 | ZMB.UCHWYT.PL - Complete collector grasper to metal sheet tiles (double thread screw, clamping plate, locking screw for profile handle |
| <b>W</b> . <b>W</b> . | ZMD.UCHWYT.PL - Complete collector grasper to metal sheet tiles (double thread screw, clamping plate, locking screw for profile handle |

#### Diagram of solar water heating system







# Electric central heating flow boilers





Electric boilers are modern, comfortable, safe and eco-friendly source of heating. It's a perfect solution for the locations without a gas supply as well as for the energy-saving constructions.

Cheap in installation, does not require gas connection, chimney, boiler room and solid fuel storage - all is needed is electrical connection access.

Weather control ensures high comfort of use and maintanence-free operation, what combined with thermal coefficient at the level of 99,4% (real value) is a guarantee of cost-efficient exploitation.

Electric boilers are widely use to support heating systems based on fireplace or solid fuel heat source. With low operation running costs, electric boilers providing higher comfort of heating and guarantee anti-freezing temperature during absence of occupants.

Boilers are small devices with esthetic design, and may be easily mounted in the most convenient place.



#### Electric boilers

## EKCO.L2 KCO.LN EKCO.L2p EKCO.LN2p



#### Additional equipment



#### Three way valve with servo-motor

Co-operation with a hot water

cylinder requires three-way valve (ZAWÓR.KOT.VC6013).

The water temperature in cylinder can be set on the front panel if the WE-019/01 temperature sensor is applied.

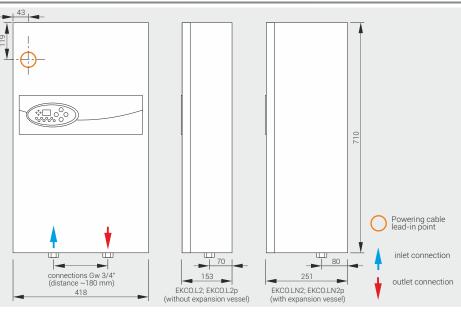
#### Temperature regulator

EKCO.L2/LN2 boilers should be additionally equipped with room thermostat regulators, which ensures cost-efficient and user friendly operation.

#### Most important advantages

- **EKCO.LN2 model** boiler intended for central heating system and hot water cylinders, equipped with an expansion vessel (6 liters) and differential pressure relief valve (bypass).
- EKCO.L2 model similar to LN2 version, without an expansion vessel and bypass valve.
- EKCO.LN2p model boiler intended for underfloor heating system (reduced heating temperature value, adjusted safety temperature limiter), equipped with an expansion vessel (6 liters) and differential pressure relief valve (bypass)
- **EKCO.L2p model** boiler intended for underfloor heating system (reduced heating temperature value, adjusted safety temperature limiter). It is equipped with a differential pressure relief valve (bypass).
- Electronic control system and reliable semiconductor elements.
- Automatic power modulation.
- Heating water temperature range: From 20°C to 85°C - EKCO.L2, EKCO.LN2
   From 20°C to 60°C - EKCO.L2p, EKCO.LN2p
- Rated power available from 4kW to 24kW.

#### Dimensions



| Rated power                       | kW  | 4                | 6              | 8              | 12   | 15   | 18       | 21   | 24   |
|-----------------------------------|-----|------------------|----------------|----------------|------|------|----------|------|------|
| Rated voltage                     |     | 230              | √~ or 400\     | / 3N~          |      |      | 400V 3N~ |      |      |
| Rated electrical<br>energy demand | А   | 17,4/*5,7        | 26/*8,7        | 34,8/*11,7     | 17,3 | 21,7 | 26       | 30,3 | 34,6 |
| Minimal wires<br>cross-section    | mm² | 3x2,5/<br>*5x1,5 | 3x4/<br>*5x1,5 | 3x6/<br>*5x1,5 | 5x   | 2,5  | 5)       | x4   | 5x6  |
| Energy efficiency<br>class        |     | D                |                |                |      |      |          |      |      |

\* Values for the following parameters: 400V 3N - while calculating demand for thermal energy, a number of factors need to be taken into consideration:

- cubature of building

- heat transfer coefficient (through the walls, windows and ceilings)

- efficiency of room ventilation

- ability of a building to accumulate heat



| EKCO.LN2 - boilers with expansion vessel and bypass valve |  |  |  |  |
|---|--|--|--|--|
| Туре  | Rated power / Rated voltage  |  |  |  |
| EKCO.LN2-04   | 4kW /400V 3N~ or 230V~   |  |  |  |
| EKCO.LN2-06   | 6kW /400V 3N~ or 230V~   |  |  |  |
| EKCO.LN2-08   | 8kW /400V 3N~ or 230V~   |  |  |  |
| EKCO.LN2-12   | 12kW /400V 3N~   |  |  |  |
| EKCO.LN2-15   | 15kW /400V 3N~   |  |  |  |
| EKCO.LN2-18   | 18kW /400V 3N~   |  |  |  |
| EKCO.LN2-21   | 21kW /400V 3N~   |  |  |  |
| EKCO.LN2-24   | 24kW /400V 3N~   |  |  |  |
| Attention! EKCO.LN2 boile                                 | ers must be additionally equipped with temperature regulator, and in case of co-operation with water cylinder in 3-way valve and temperature |  |  |  |

sensor WE-019/01

#### EKCO.L2 - boilers without expansion vessel and bypass valve

| Туре       | Rated power / Rated voltage |
|------------|-----------------------------|
| EKCO.L2-04 | 4kW /400V 3N~ or 230V~      |
| EKCO.L2-06 | 6kW /400V 3N~ or 230V~      |
| EKCO.L2-08 | 8kW /400V 3N~ or 230V~      |
| EKCO.L2-12 | 12kW /400V 3N~              |
| EKCO.L2-15 | 15kW /400V 3N~              |
| EKCO.L2-18 | 18kW /400V 3N~              |
| EKCO.L2-21 | 21kW /400V 3N~              |
| EKCO.L2-24 | 24kW /400V 3N~              |
|            |                             |

Attention! EKCO.L2 boilers must be additionally equipped with temperature regulator, and in case of co-operation with water cylinder in 3-way valve and temperature sensor WE-019/01

#### EKCO.LN2p - boilers dedicated for underfloor heating installations, with expansion vessel and bypass valve

| Туре         | Rated power / Rated voltage |  |
|--------------|-----------------------------|--|
| EKCO.LN2-04P | 4kW /400V 3N~ or 230V~      |  |
| EKCO.LN2-06P | 6kW /400V 3N~ or 230V~      |  |
| EKCO.LN2-08P | 8kW /400V 3N~ or 230V~      |  |
| EKCO.LN2-12P | 12kW /400V 3N~              |  |
| EKCO.LN2-15P | 15kW /400V 3N~              |  |
| EKCO.LN2-18P | 18kW /400V 3N~              |  |
| EKCO.LN2-21P | 21kW /400V 3N~              |  |
| EKCO.LN2-24P | 24kW /400V 3N~              |  |
|              |                             |  |

Attention! EKCO.LN2p boilers must be additionally equipped with temperature regulator

EKCO.L2p - boilers dedicated for underfloor heating installations, without expansion vessel and bypass valve

| Туре                      | Rated power / Rated voltage                                 |
|---------------------------|---|
| EKCO.L2-04P               | 4kW /400V 3N~ or 230V~                                      |
| EKCO.L2-06P               | 6kW /400V 3N~ or 230V~                                      |
| EKCO.L2-08P               | 8kW /400V 3N~ or 230V~                                      |
| EKCO.L2-12P               | 12kW /400V 3N~  |
| EKCO.L2-15P               | 15kW /400V 3N~  |
| EKCO.L2-18P               | 18kW /400V 3N~  |
| EKCO.L2-21P               | 21kW /400V 3N~  |
| EKCO.L2-24P               | 24kW /400V 3N~  |
| Attention! EKCO.L2p boile | rs must be additionally equipped with temperature regulator |



#### Electric boilers

## EKCO.M2 EKCO.MN2

Boilers with weather compensation



#### Additional equipment



**C.MG module** - allows for additional heating system control (i.g. floor heating). Using additional C.MG modules ensures control over mixing valves, that reduces heating water temperature for each circulation system. Up to 24 C.MG modules may be connected to the C.PS unit.

**C.MW module** - ON/OFF functionality, allows to schedule working cycle (up to 24 modules may be connected to C.PS unit).

WE-019/01 sensor - additional heating circulation sensor or water cylinder temperature sensor.



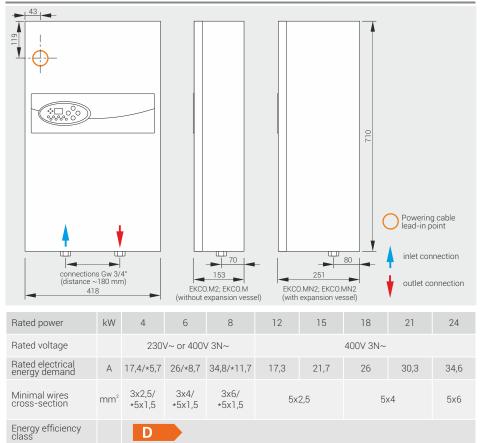
#### Three way valve with servo mechanism

Co-operation with a hot water cylinder requires three-way valve (i.g. ZAWÓR.KOT. VC6013) and WE- 019/01 temperature sensor.

#### Most important advantages

- EKCO.MN2 model weather compensation boiler equipped with C.PS control unit, can work on one or two central heating systems and also with domestic hot water tank. Whole kit includes: boiler with 6 liters expansion vessel and bypass valve, C.PS. control unit, WE-027 sensor.
- EKCO.M2 model as above, without expansion vessel and bypass valve.
- Weather compensation ensures automatic boiler respond to the changes of outside temperature. This allows maintenance-free and energy efficient boiler operation.
- Electronic control system and reliable semiconductor elements.
- Automatic power modulation.

#### Dimensions



\* \* Values for the following parameters: 400V 3N - while calculating demand for thermal energy, a number of factors need to be taken into consideration:

- cubature of building

- heat transfer coefficient (through the walls, windows and ceilings)

- efficiency of room ventilation

- ability of a building to accumulate heat



| EKCO.MN2 - boilers with weather compensation and expansion vessel   |                             |  |  |  |
|---|-----------------------------|--|--|--|
| Туре  | Rated power / rated voltage |  |  |  |
| EKCO.MN2-04   | 4kW /400V 3N~ or 230V~      |  |  |  |
| EKCO.MN2-06   | 6kW /400V 3N~ or 230V~      |  |  |  |
| EKCO.MN2-08   | 8kW /400V 3N~ or 230V~      |  |  |  |
| EKCO.MN2-12   | 12kW /400V 3N~              |  |  |  |
| EKCO.MN2-15   | 15kW /400V 3N~              |  |  |  |
| EKCO.MN2-18   | 18kW /400V 3N~              |  |  |  |
| EKCO.MN2-21   | 21kW /400V 3N~              |  |  |  |
| EKCO.MN2-24   | 24kW /400V 3N~              |  |  |  |
| Attention! In case of co-operation with water cylinder EKCO.MN2 boilers must be additionally equipped with 3-way valve and temperature sensor WE-019/01 |                             |  |  |  |

#### $\ensuremath{\mathsf{EKC0.M2}}\xspace$ - boilers with weather compensation

| Туре       | Rated power / rated voltage |
|------------|-----------------------------|
| EKCO.M2-04 | 4kW /400V 3N~ or 230V~      |
| EKCO.M2-06 | 6kW /400V 3N~ or 230V~      |
| EKCO.M2-08 | 8kW /400V 3N~ or 230V~      |
| EKCO.M2-12 | 12kW /400V 3N~              |
| EKCO.M2-15 | 15kW /400V 3N~              |
| EKCO.M2-18 | 18kW /400V 3N~              |
| EKCO.M2-21 | 21kW /400V 3N~              |
| EKCO.M2-24 | 24kW /400V 3N~              |
|            | 24kW /400V 3N~              |

Attention! In case of co-operation with water cylinder EKCO.M2 boilers must be additionally equipped with 3-way valve and temperature sensor WE-019/01

#### C.PS system components

| Туре      | Description   |
|-----------|---|
| C.MG      | Heating circulation module, providing control over additional circulation operation - for co-operation with C.PS unit, WE-019/01 sensor included. |
| C.MW      | Functionality, allows to schedule working cycle. For co-operation with C.PS unit.   |
| WE-027    | External temperature sensor   |
| WE-019/01 | Temperature sensor for water cylinder or heating circulation sensor   |



#### **Electrical boilers**

## EKD.L FKD.M.WiFi

Boilers with built in domestic hot water storage tank





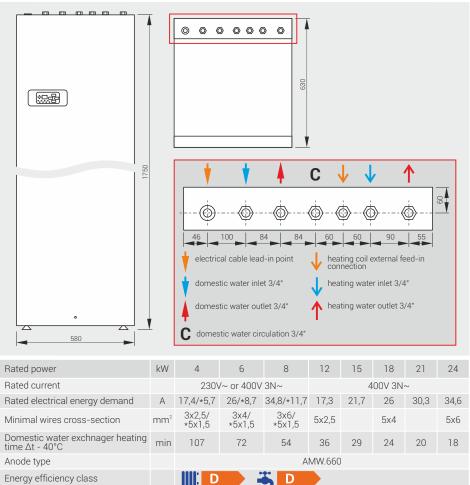
#### C.PS.

**C.PS** control unit with 5,7" touchscreen is a weather compensation driver, and allows to manage entire heating system as well as other home devices. 32 various components may be connected to the unit, including 24 cascade-connected boilers. System may be configured in any way, using different boilers and modules, as well as various room temperatures, various modes: comfortable, comfortable-raised, comfortable-reduced, economical, anit-

#### Most important advantages

- **EKD.L model** bi-functional boiler dedicated for cooperation with central heating installations. Built-in domestic hot water storage tank (130 liters), expansion vessels (12 liters) and bypass valve. Boiler should be additionally equipped with room thermostat.
- Weather compensation (EKD.M) ensures automatic boiler respond to the changes of outside temperature. This allows for maintenance-free and energy efficient boiler operation.
- Electronic control system and reliable semiconductor elements.
- Heating water temperature range control from 20°C do 85°C.
- Automatic power modulation.
- May cooperate with another heating source.

#### Dimensions



Energy efficiency class

\* 400V 3~ phase connection value

Values for the following parameters: 400V 3N -While calculating demand for thermal energy, a number of factors need to be taken into consideration: - cubature of building

heat transfer coefficient (through the walls, windows and ceilings)

- efficiency of room ventilation

- ability of a building to accumulate heat

#### Additional equipment

C.MG module - allows control over additional heating circulation (i.e. floor heating). Additional modules allows to control mixing valves lowering water temperature for each heating circulation (up to 24 modules may be connected to C.PS unit). WE-019/01 sensor in set.

C.MW module - ON/OFF control, allows to program operating time schedule for other domestic electrical devices (up to 24 modules may be connected to C.PS unit).



| EKD.L - bi-functional boilers in basic configuration |                             |  |  |  |
|--|-----------------------------|--|--|--|
| Туре   | Rated power - Rated voltage |  |  |  |
| EKD.L-04   | 4kW /400V 3N~ or 230V~      |  |  |  |
| EKD.L-06   | 6kW /400V 3N~ or 230V~      |  |  |  |
| EKD.L-08   | 8kW /400V 3N~ or 230V~      |  |  |  |
| EKD.L-12   | 12kW /400V 3N~              |  |  |  |
| EKD.L-15   | 15kW /400V 3N~              |  |  |  |
| EKD.L-18   | 18kW /400V 3N~              |  |  |  |
| EKD.L-21   | 21kW /400V 3N~              |  |  |  |
| EKD.L-24   | 24kW /400V 3N~              |  |  |  |

Attention! EKCO.LN2 boilers must be additionally equipped with temperature regulator.

 $\ensuremath{\mathsf{EKD.M}}\xspace$  - bi-functional boilers with weather compensation control

| Туре     | Rated power - Rated voltage |  |
|----------|-----------------------------|--|
| EKD.M-04 | 4kW /400V 3N~ or 230V~      |  |
| EKD.M-06 | 6kW /400V 3N~ or 230V~      |  |
| EKD.M-08 | 8kW /400V 3N~ or 230V~      |  |
| EKD.M-12 | 12kW /400V 3N~              |  |
| EKD.M-15 | 15kW /400V 3N~              |  |
| EKD.M-18 | 18kW /400V 3N~              |  |
| EKD.M-21 | 21kW /400V 3N~              |  |
| EKD.M-24 | 24kW /400V 3N~              |  |



#### Electric boilers



#### High power boilers



#### Additional equipment



#### Three way valve with servo-motor Co-operation with a hot water

cylinder requires three-way valve (ZAWÓR.KOT.VC6013). The water temperature in cylinder can be set on the front panel if the WE-008 temperature sensor is applied.

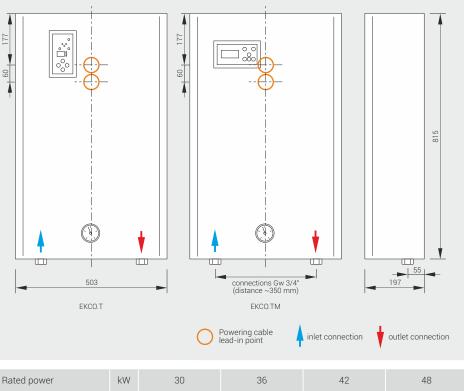
#### Temperature regulator

EKCO.T boilers should be additionally equipped with room thermostat regulators, which ensures cost-efficient and user friendly operation.

#### Most important advantages

- **EKCO.T model** high power boiler, intended for central heating system and hot water cylinders.
- EKCO.TM model high power boiler with weather compensation, can work on one or two central heating systems and also with hot water cylinder.
- Can co-operate with other boilers in cascade connection (EKCO.TM as a master boiler, EKCO.T as a slave boiler).
- Temperature range available: from 40°C to 85°C.
- High power boilers are equipped with two heating elements to extend the lifetime of the unit.
- Power range: from 30kW to 48kW.

#### Dimensions



| Rated power                    | kW  | 30     | 36   | 42     | 48     |
|--------------------------------|-----|--------|------|--------|--------|
| Rated voltage                  |     |        | 400V | / 3N~  |        |
| Rated electrical energy demand | А   | 3x43,3 | 3x52 | 3x60,6 | 3x69,3 |
| Minimal wires<br>cross-section | mm² |        | 5x10 |        | 5x16   |
| Energy efficiency class        |     | D      |      |        |        |

\* 400V 3~ phase connection value

Values for the following parameters: 400V 3N - while calculating demand for thermal energy, a number of factors need to be taken into consideration:

- cubature of building

- heat transfer coefficient (through the walls, windows and ceilings)

- efficiency of room ventilation

- ability of a building to accumulate heat



| EKCO.T - high power boilers in basic configuration  |                             |  |  |  |  |
|---|-----------------------------|--|--|--|--|
| Туре  | Rated power - Rated voltage |  |  |  |  |
| EKCO.T-30   | 30kW /400V 3N~              |  |  |  |  |
| EKCO.T-36   | 36kW /400V 3N~              |  |  |  |  |
| EKCO.T-42   | 42kW /400V 3N~              |  |  |  |  |
| EKCO.T-48   | 48/kW /400V 3N~             |  |  |  |  |
| Attention! EKCO.T boilers must be additionally equipped with temperature sensor, and in case of co-operation with water cylinder with 3-way valve and temperature sensor WE-008 |                             |  |  |  |  |

| Modele EKCO.TM - high power boilers with weather compensation |
|---|
|---|

| Туре  | Rated power - Rated voltage |  |  |  |
|---|-----------------------------|--|--|--|
| EKCO.TM-30  | 30kW /400V 3N~              |  |  |  |
| EKCO.TM-36  | 36kW /400V 3N~              |  |  |  |
| EKCO.TM-42  | 42kW /400V 3N~              |  |  |  |
| EKCO.TM-48  | 48/kW /400V 3N~             |  |  |  |
| Attention! In case of co-operation with water cylinder EKCO.TM boilers must be additionally equipped with 3-way valve and temperature sensor WE-008 |                             |  |  |  |

#### Boiler accessories

|  | Type - description   |
|--|--|
|  | CZUJNIK.WE-019/01 - Temperature sensor for EKCO.L2; EKCO.LN2; EKCO.M2; EKCO.MN2 (to measure temperature in cylinder) |
|  | CZUJNIK.WE-008 - Temperature sensor for EKCO.T and EKCO.TM (to measure temperature in cylinder)                      |
|  | FILTR.F-MAG 3/4" - Magnetic filter for 3/4" heating installations  |
|  | MODUŁ.MZK-1/02 - Control unit for 2-boilers cascade (EKCO.T)   |
|  | MODUŁ.MZK-1/03 - Control unit for 3-boilers cascade (EKCO.T)   |
|  | ZAWÓR.KOT.VC6013 - 3-way valve (3/4" HONEYWELL, VCZMH6000E valve with a VC6013ZZ00 servo-motor with a cable)         |



#### Steam generators



Perfect for modern, public SPA centers as well as home application



#### Most important advantages

- Covers from 2kW to 21 kW range of power (3 models each with adjustable 3 power levels). Linking into cascade could cover even more than 100kW.
- Generators are equipped with immersion heaters made of stainless steel.
- Anti-limescale and flushing systems installed as a standard equipment.
- Built-in control panel enables easy setting and reading all the Vapor parameters, on/off light switching, ventilation, aroma pump. Also external control panel is available as an option.

#### Technical data

| Name of the generator                    |        | VAPOR 6      |      |             |       | VAPOR 12          |               | ١      | VAPOR 21        |               |        |
|--|--------|--------------|------|-------------|-------|-------------------|---------------|--------|-----------------|---------------|--------|
| Туре                                     |        | GW1A         |      |             |       |                   | GW2A          |        | GW3A            |               |        |
| Steam output                             | kg/h   | 2 5 8        |      |             | 8     | 10                | 15            | 18     | 20              | 24            | 29     |
| Rated power                              | kW     | 2            | 4    | 6           | 6     | 8                 | 10            | 12     | 14              | 17,5          | 21     |
| Rated voltage                            | $\vee$ | 230V~        |      |             |       | 400 3N~           |               |        |                 |               |        |
| Rated current                            | А      | 8,7          | 17,4 | 26          | 3x8,7 | 3x11,6            | 3x14,5        | 3x17,3 | 3x20,3          | 3x25,3        | 3x30,3 |
| Minimum cross-section of the power cable | mm²    |              | 3x4  |             | 5x1,5 |                   | 5x2,5         |        | 5x4             |               |        |
| Dimensions (W x H x D)                   | mm     |              | 568  | x 450 x 221 | 1     | 600 x 501 x 258,5 |               |        | 683 x 501 x 290 |               |        |
| Weight empty / Weight operating          | kg     |              | ~1   | 9,4 / ~24,0 |       | ~                 | ~24,0 / ~31,0 |        |                 | ~30,0 / ~39,0 |        |
| Water pressure max accepted              | MPa    |              |      |             |       | 0,05 - 0,6        | 0,05 - 0,6    |        |                 |               |        |
| Steam pressure max                       | MPa    |              |      |             |       | 0,05              | 0,05          |        |                 |               |        |
| Water/steam connection diamater          |        | G3/4" / Ø 22 |      |             | 22    |                   | G3/4" / Ø 35  |        |                 |               |        |
| Safety class                             |        |              |      |             | IP 22 |                   |               |        |                 |               |        |

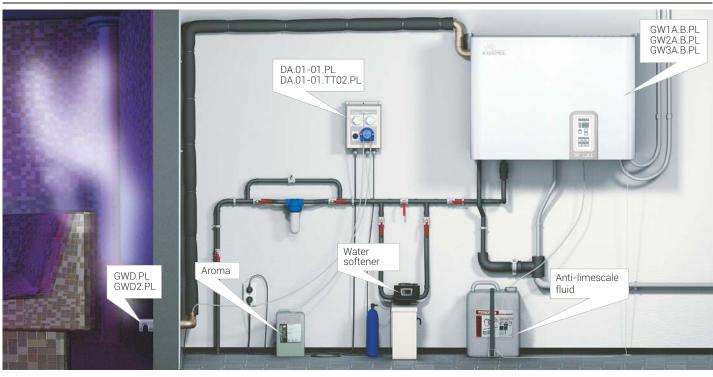
#### The choice of VAPOR for steam room capacity

| The choice of VAPOR for steam room capacity Power |        | Power | Steam output | Capacity of the glass or acrylic steam<br>room structure |                             | Capacity of the gypsum board made steam room structure-tiled |                             | Capacity of the concrete, stone made steam room structure-tiled |                             |
|---|--------|-------|--------------|--|-----------------------------|--|-----------------------------|---|-----------------------------|
| Model   | Туре   | [kW]  | [kg/h]       | no mechanical ventilation                                | with mechanical ventilation | no mechanical ventilation                                    | with mechanical ventilation | no mechanical ventilation                                       | with mechanical ventilation |
|   |        | 2     | 2            | 2-4 m <sup>3</sup>                                       | 2-3 m <sup>3</sup>          | 2-3 m <sup>3</sup>   | 2-3 m <sup>3</sup>          | 2-2,5 m <sup>3</sup>  | 1-2 m <sup>3</sup>          |
| VAPOR 6   | GW1A.B | 4     | 5            | 5-8 m <sup>3</sup>                                       | 5-6 m <sup>3</sup>          | 3-6 m <sup>3</sup>   | 2-5 m <sup>3</sup>          | 2-5 m <sup>3</sup>  | 2-4 m <sup>3</sup>          |
|   |        | 6     | 8            | 8-12 m <sup>3</sup>                                      | 8-11 m <sup>3</sup>         | 3-9 m <sup>3</sup>   | 3-8 m <sup>3</sup>          | 3-8 m <sup>3</sup>  | 3-6 m <sup>3</sup>          |
|   |        | 8     | 10           | 10-16 m <sup>3</sup>                                     | 10-14 m <sup>3</sup>        | 4-11 m <sup>3</sup>  | 4-10 m <sup>3</sup>         | 4-10 m <sup>3</sup>   | 4-8 m <sup>3</sup>          |
| VAPOR 12  | GW2A.B | 10    | 15           | 13-20 m <sup>3</sup>                                     | 12-16 m <sup>3</sup>        | 5-13 m <sup>3</sup>  | 5-12 m <sup>3</sup>         | 5-12 m <sup>3</sup>   | 5-10 m <sup>3</sup>         |
|   |        | 12    | 18           | 16-24 m <sup>3</sup>                                     | 14-20 m <sup>3</sup>        | 6-16 m <sup>3</sup>  | 6-14 m <sup>3</sup>         | 6-14 m <sup>3</sup>   | 6-12 m <sup>3</sup>         |
|   |        | 14    | 20           | 18-28 m <sup>3</sup>                                     | 16-22 m <sup>3</sup>        | 7-18 m <sup>3</sup>  | 7-16 m <sup>3</sup>         | 7-16 m <sup>3</sup>   | 7-14 m <sup>3</sup>         |
| VAPOR 21 GV                                       | GW3A.B | 17    | 24           | 22-34 m <sup>3</sup>                                     | 18-24 m <sup>3</sup>        | 8-22 m <sup>3</sup>  | 8-20 m <sup>3</sup>         | 8-20 m <sup>3</sup>   | 8-18 m <sup>3</sup>         |
|   |        | 21    | 29           | 28-42 m <sup>3</sup>                                     | 22-30 m <sup>3</sup>        | 8-26 m <sup>3</sup>  | 8-24 m <sup>3</sup>         | 8-24 m <sup>3</sup>   | 10-22 m <sup>3</sup>        |

Cascade connection of the VAPOR units allows cooperation with the larger capacity steam room in proportion to the combined units power



#### Example of technical room for the generator working in public locations



#### Accessories



#### System components

| Туре                      | Description  |
|---------------------------|--|
| GW1A.B.PL                 | Uniform front VAPOR 6 steam generator  |
| GW2A.B.PL                 | Uniform front VAPOR 12 steam generator   |
| GW3A.B.PL                 | Uniform front VAPOR 21 steam generator   |
| DA.01-01.PL               | VAPAROMA applicator with return valve GZ 3/8" in grey casing   |
| DA.01-01.TT02.PL          | VAPAROMA applicator with tee joint 35m, steam temperature sensor and return valve 3/8" in grey casing  |
| GWD.PL                    | Nozzle GZ 3/4" for VAPOR6 generator and other model available at the market  |
| GWD2.PL                   | Nozzle GW 1' 1/4" for all VAPOR generators and other available at the market   |
| GWN.PL                    | Generator supporting stands (complete set)   |
| OWZ-05.PL                 | Basket/shelve for anti-limescale fluids and aromas   |
| PHEW3.VAPOR.PL            | External control unit for VAPOR generator based on PHE3, high IP protection, mounted in the wall inside or outside steam room, for private use                                     |
| PHEW3.RB.VAPOR.PL         | External control unit for VAPOR generator based on PHE3, high IP protection, mounted in the wall inside or outside steam room, for private use, with white color mounting frame;   |
| PŁYN.ODKAMIENIAJĄCY.01L.P | Anti-limescale liquid, 1 litre bottle  |
| PŁYN.ODKAMIENIAJĄCY.05L.P | Anti-limescale liquid canister, 5 liters   |
| PŁYN.ODKAMIENIAJĄCY.10L.P | Anti-limescale liquid canister, 10 liters  |
| PŁYN.ODKAMIENIAJĄCY.20L.P | Anti-limescale liquid canister, 20 liters  |
| W.PS-01.PL                | External control unit for VAPOR generator, low IP, mounted in the wall outside steam room  |
| W.PS01.P.PL               | External control unit for VAPOR generator, public access version, mounted in the wall outside of steam room, ON/OFF functionality only, overview on the temperature and bath time. |



#### Magnetic descalers

## Dima 1/2" Megamax 3/4" XCal 6000 1"

To prevent pipe system from lime scale build up. Free of maintenance, no operating costs.

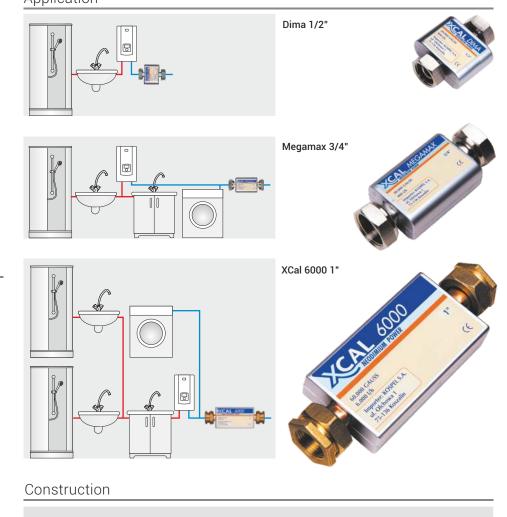
#### Most important advantages

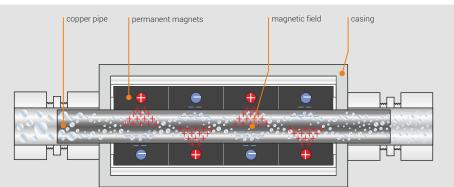
Magnetic descaler works by applying electromagnetic field to the water. The electromagnetic field changes condition of water as it passes through the pipes. This prevents build-up of new lime scale and remove the existing lime scale.

Advantages of using magnetic descalers:

- extends the life of water appliances and water piping systems.
- eliminates lime scale from water appliances and dishes.
- preserves mineral content of drinking water.

Application





#### Technical data

| Туре                           | Efficiency ( I/h ) | Dimensions (mm) |
|--------------------------------|--------------------|-----------------|
| DIMA 1/2" Magnetic descaler    | 800                | 60 x 50         |
| MEGAMAX 3/4" Magnetic descaler | 800                | 90 x 50         |
| XCAL 6000 1" Magnetic descaler | 6000               | 186 x 83        |



## IH GoldSun

Infrared heaters provide a pleasant feeling as warmth similar to the sun rays. Ideal for mounting on the terraces, open spaces, halls, workshops etc.

#### Key advantages

#### Economical source of heat

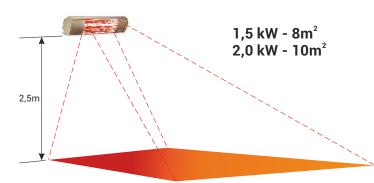
Infrared heaters do not heat the air - all energy emitted by the device directly heats people and objects. Pleasant feeling of warmth occurs immediately (after 1 second) after switching the device on.

#### Highest quality

Use of quartz halogen lamp Dr Fischer with the life of 5000 hours. Durable materials - aluminum and stainless steel provide resistance to external weather conditions.

#### Safety class IP 55

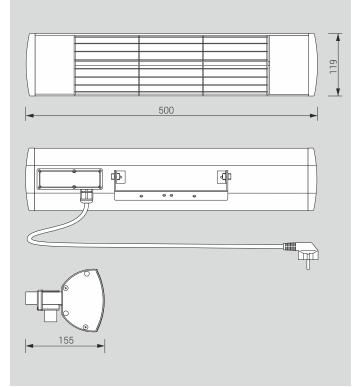
Can be mounted on the outside of the building e.g under umbrella or pergola.



Indicative heating surface.



#### Dimensions







#### Technical data

| Туре   | Rated power (kW) | Dimensions (mm) | Rated current (A) |
|--------|------------------|-----------------|-------------------|
| IH-1,5 | 1,5              | 500 x 119 x 112 | 6,25              |
| IH-2,0 | 2,0              | 500 x 119 x 112 | 8,25              |



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## Kospel - how it's made?





#### From idea to implementation

The life of each device begins in the minds of the marketers, designers and constructors. Basing on the prototype created, engineering department prepares an implementation process and in the meanwhile tool workshop is taking care of the machines and tools necessary for mass production.



Most of the components are manufactured using CNC machines. Most of the production stages are automatically supervised. This ensures high efficiency and perfect precision.





#### Assembly

Ready-to-go devices assembly process is the most important stage of the whole manufacturing cycle. This step requires absolutely strict technology and compliance of process schedule. Standarization and procedures are the guarantee of the highest quality level.



#### Quality control

Kospel company has developed its own system of quality control. In subsequent stages of production an individual components are tested. Each finished product, before is packed and delivered to the customer, is ultimately controlled at the measurment station - therefore is marked with Kospel warranty sign.

KOSPE







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