



# Pricelist 2019



Discover the world of heat pumps

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Please refer to the relevant data sheet for information on technical details such  
as power consumption, COPs, etc.

The information regarding dimensions, sizing and installation provided in the  
installation instructions.

Subject to technical and design modifications.

All prices exclude VAT.

Valid on 01.06.2019

Version 201905



Rijksdienst voor Ondernemend  
Nederland



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## Heat and energy for the future

PicoEnergy is your expert for heat pumps headquartered in Pinsdorf, Upper Austria.

Trust on highest reliability and quality. With the knowledge and experience we make natural resources usable for your home.

A successful concept for a modern, carefree and energy-efficient lifestyle.



## Quality for partners and products

*„Our exclusive partners throughout Europe appreciate the excellent quality from Austria and the high efficiency of our products, as well as our support and online service.*

*With this, we ensure a perfect installation, commissioning and great operation.*

*Instructions and on-site trainings complete our offer. Services which ensure a trouble-free operation.*

*Benefit from the uniqueness of our heat pumps and work with us to create a successful and clean energy future.“*



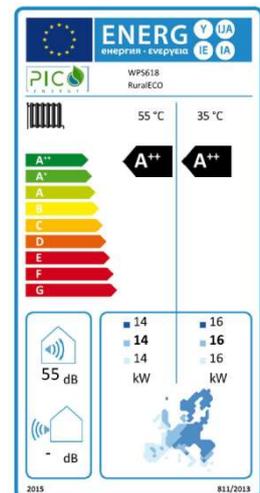
Dr. Hannes F. Jakob, MBA  
Executive Director

# Energy Label Directive

The statutory EU Directive on Energy related Products evaluates different products and orders them into different efficiency classes. The regulations concerning energy efficiency labelling of heating appliances and DHW cylinders came into force on 26 September 2013. It is their aim to define harmonized guidelines on labelling and on standardized product information regarding the energy efficiency of central heating and combi heating appliances, as well as water heaters and DHW cylinders respectively. Following a two-year transition period the Energy Label requirements have become obligatory on September 26, 2015.

## What information does the Energy Label provide?

As previously mentioned, the energy efficiency labels indicate the energy consumption of heat pumps and help to rank their efficiency at a glance. The efficiency classes are established on the basis of a seasonal coefficient of performance (SCOP) and range from class A++ (highest efficiency) to class G (poorer performance). In addition, three climate zones were defined within the EU, as different climatic conditions greatly affect the efficiency of appliances. The indication of the sound power level is also intended to serve as a decision-making aid.



## Energy efficiency symbols:



This symbol means ENERGY EFFICIENCY CLASS A++

This symbol means ENERGY EFFICIENCY CLASS A+++

From 26.09.2019, the energy efficiency class A+++ is introduced, which means that our products automatically move into the class as they already meet the higher requirements.

# Model code for heat pumps WP

The heat pumps WP \*\* are designated as follows: (eg: WPD412)

- WP** Heat Pump
  
- D** D Direct evaporation  
S Brine  
W Groundwater  
L Air
  
- 412** 4 - 12kW Output  
6 - 18kW Output





## The heat pump for heating and cooling

A consistently pleasant indoor climate throughout the year. Your heat pump efficiently uses the energy from the ground or from the air.



## Integration of photovoltaic

Generate electricity for free with a photovoltaic system on your own roof. This power can be used for your heat pump and other consumers.



## Smart Grid Ready- future proof

Using the Smart Grid-Ready interface, the heat pump accepts the excess supply of renewable electricity at reasonable prices and stores it as heating energy in the buffer or process water storage tank.



## Control via Smartphone or voice-control

Take advantage of the many opportunities to manage your energy center. Simple and intuitive operation for the most modern heat pump development is already integrated.

## Further advantages of PicoEnergy:

- Highest efficiency of heat pump systems
- Intelligent power control
- Cascadable up to 4 heat pumps
- Integrated fresh water module control
- Integrated solar controller function
- Extended warranty up to 10 years possible



CONTROL HEATING  
FROM ANYWHERE

# Product Overview WP

		RuralECO			UrbanECO	
		WPS	WPD	WPS-W	WPS 26	WPS-W 26
Power range	fixed	-	-	-	-	-
	variable	3 - 16 kW	3 - 20 kW	3 - 19 kW	3 - 6 kW	4 - 8 kW
	PLUS	5 - 67 kW	5 - 76 kW	5 - 88 kW	-	-
Heating		✓	✓	✓	✓	✓
Domestic Hot water		✓	✓	✓	✓	✓
Cooling	Active	-	-	-	-	-
	Passive	optional	-	optional	optional	optional
Installation site		Inside	Inside	Inside	Inside	Inside
Type of Installation		Monoblock	Split	Monoblock	Monoblock	Monoblock
Circulating pump		external	external	external	external	external
Touch control unit		✓	✓	✓	✓	✓
Web visualization		✓	✓	✓	✓	✓
PV optimisation of self-consumption		✓	✓	✓	✓	✓
Outdoor temperature sensor		✓	✓	✓	✓	✓
Heat metering		optional	optional	optional	optional	optional
Soft start		-	-	-	-	-
Electric meter		optional	optional	optional	optional	optional
Electric booster heater		optional	optional	optional	optional	optional
Refrigerant		R410A	R410A (not filled)	R410A	R410A	R410A
Source	Air					
	Ground					
	Water					

ECOAir	ECOAir Premium	ECOAir Compact
WPLT	WPL	WPLC
-	-	-
8 - 34 kW	2 - 17 kW	2 - 17 kW
-	4 - 69 kW	-
✓	✓	✓
✓	✓	✓
✓	✓	✓
-	-	-
outside	Inside / outside	outside
Monoblock	Split	Monoblock
✓	external	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
optional	✓	✓
-	-	-
optional	optional	optional
optional	optional	optional
R410A	R410A (not filled)	R452b
		
		



PicoEnergy  
Heat pumps

SIMPLY RELIABLE



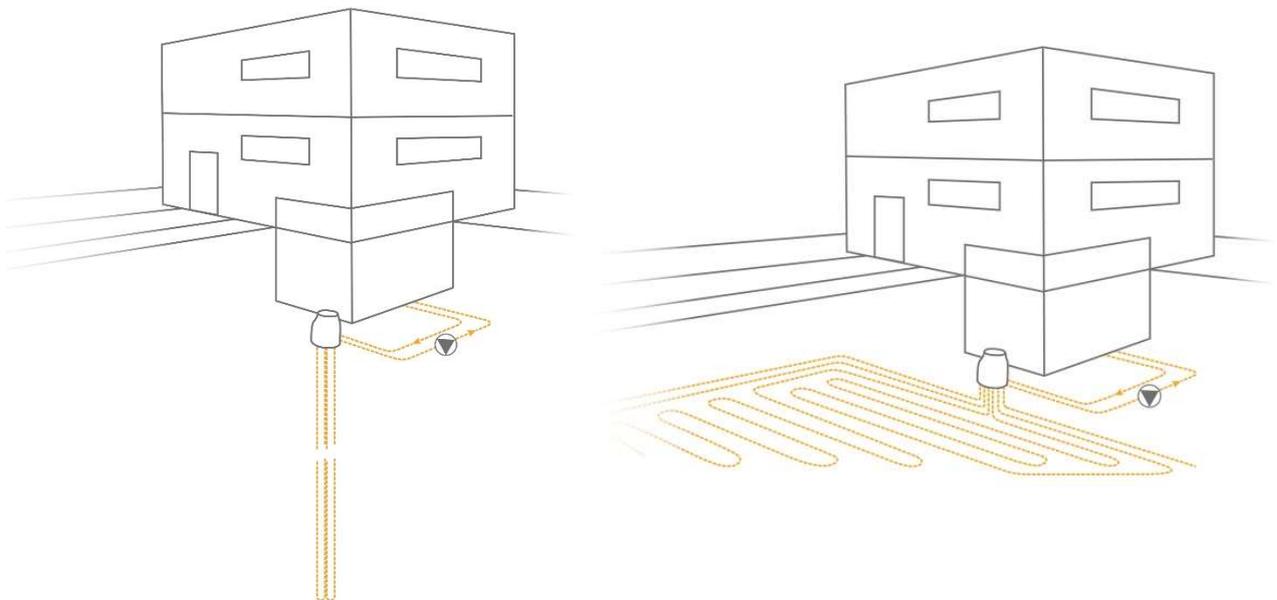
Brine heat pump WPS



## Brine heat pump WPS

This heat pump uses solar energy stored in the ground. This solar energy is available at any time. Whether it is day or night, summer or winter, yes, even infinitely, because it is always renewed. The earth is a particularly good heat storage due to its relatively constant ground temperature. Even from a depth of 1.3 m, little more temperature fluctuations occur, no matter how cold it is outside.

For our system, we use either a flat collector (a large pipe system about 1.3 meters below the earth's surface is laid) or a geothermal probe, which is introduced via a depth hole (50 to 150m).

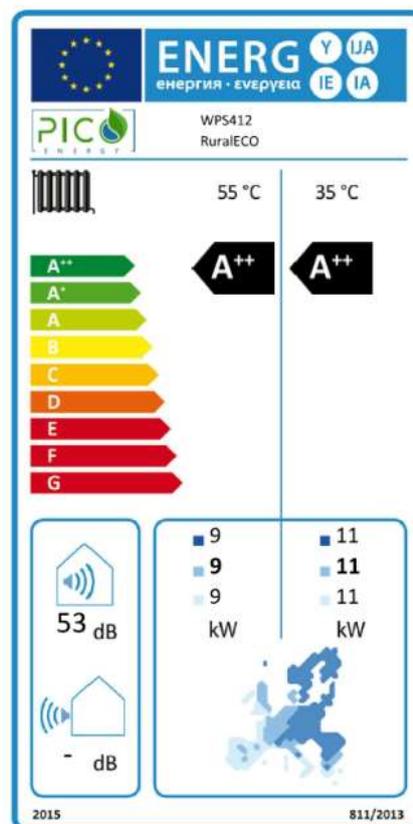


Due to the sophisticated PicoEnergy control, self-generated electricity from the photovoltaic system can be used for the heating and cooling of the house. The speed control of the heat pump adapts itself to the photovoltaic power independently. The free photovoltaic electricity can thus be used as best as possible for heating the house, hot water and swimming pool.

# Brine heat pump WPS

## Advantages:

- Highest efficiency of heat pump systems
- High innovative power also in the field of control technology
- High innovation in control technology
- Internet Inside: Control of the heat pump from the mobile phone, tablet or PC
- Photovoltaic Integration:
- Use of your own free electricity for the heat pump
- Smart grid for the power systems of the future
- Integration possibility of external systems (eg house management system)
- Latest overheating control
- Easy operation with touch screen technology
- Application range down to -22 ° C



Model	WPS 412	WPS 618
flow 35°C	A+++	A+++
flow 55°C	A++	A++

# Brine heat pump WPS

Technical Data	Models	WPS 412		WPS 618		WPS 532	WPS 549	WPS 566	
		400V	230V	400V	230V	400V	400V	400V	
Power range [kW]*		3-11 kW		4-16 kW		5-32 kW	5-49 kW	5-66 kW	
Energy class flow 35 °C		A++ (A+++)							
Energy class flow 55 °C		A++ (A+++)							
Dimensions Heat pump HxWxD [mm]		1300 x 600 x 650			2x (1300 x 600 x 650)		3x (1300 x 600 x 650)	4x (1300 x 600 x 650)	
Weight [kg]		162		174		334	494	654	
Sound power level [dB(A)]		53		54		58	59	60	
Fuse main current [A]		3 x C16			2x (3 x C16)		3x (3 x C16)	4x (3 x C16)	
Fuse controller [A]		1 x C13			2x (1 x C13)		3x (1 x C13)	4x (1 x C13)	
Hydraulic connection [inch]		5/4" external thread							
Max. Flow temperature [°C]		Up to 62°C							

Performance data acc. EN 14825

Climate: average	SCOP 35°C	5,29	5,51	5,05	5,05	5,04
	$\eta_s$ 35°C	206	217	194	194	193
	SCOP 55°C	3,96	4,28	3,75	3,72	3,70
	$\eta_s$ 55°C	155	168	142	141	140

Performance data acc. EN 14511

B0/W35 - 5K at 100% Heating output	Heating output [kW]	10,64	15,76	32,51	49,26	66,61
	Power consumption [kW]	2,41	3,61	7,50	11,39	15,28
	Coeff. of perf. [COP]	4,42	4,36	4,33	4,32	4,32
B0/W55 - 8K at 100% Heating output	Heating output [kW]	8,99	14,26	29,31	44,36	59,41
	Power consumption [kW]	3,05	4,96	10,71	16,47	22,23
	Coeff. of perf. [COP]	2,95	2,88	2,74	2,69	2,67

# Brine heat pump WPS

## Heat Pump + Accessories

	Article No	Price
WPS 412	9430450	8.070 €
WPS 412 230V	9430451	8.070 €
WPS 618	9430750	9.080 €
WPS 618 230V	9430751	9.080 €
WPS 18 (Extension)	9430770	7.230 €
<b>Controller Accessories</b>		
Remote control OI 420	670013	159 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electricity meter 400V / PV Counter	790510	273 €
Electricity meter 230V	620102	99 €
Cable set electricity meter 400V	738137	15 €
Cable set electricity meter 230V	738139	14 €
WIFI Stick for AP 420	670076	40 €
Blind cover AP420	670191	64 €
<b>Heating Accessories for WPS 412</b>		
Circulation Pump Yonos Para G25-180/8-75 PWM*	670503	122 €
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Vortex sensor with 3m cable	670061	186 €
Heating Pressure Switch	738120	75 €
<b>Heating Accessories for WPS 618</b>		
Circulation Pump Stratos Para 30/1-8 PWM*	670502	376 €
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Vortex sensor with 3m cable	670061	186 €
Heating Pressure Switch	738120	75 €

\* Prices are non-discountable net prices.  
Refrigerant costs according valid offer

## Brine heat pump WPS

Source Accessoires for WPS 412*	Article No	Price
Circulation Pump Yonos Para GT 25/GT7.5 PWM	670134	151 €
Module Passive cooling (Standard)*	738156	1 249 €
Module Passive cooling (Stainless steel)*	738160	1 589 €
Source Accessoires for WPS 618*		
Circulation Pump Stratos Para 30/1-8 PWM	670502	376 €
Ground collectors**		
Brine - Ground collector set 6-8kW	670154	1.810 €
Brine - Ground collector set 9-10kW	670155	2.352 €
Brine - Ground collector set 11-12kW	670156	2.810 €
Brine - Ground collector set 13-14kW	670157	3.552 €
Brine - Ground collector set 15-17kW	670158	3.774 €
Brine - Ground collector set 18-19kW	670159	4.330 €
Accessoires for geothermal probe		
Brine distributor DN32 2x	670160	693 €
Brine distributor DN32 3x	670161	868 €
Brine distributor DN32 4x	670162	1.052 €
Brine distributor DN32 5x	670163	1.227 €
Brine distributor DN32 6x	670164	1.424 €

\* Prices are non-discountable net prices.

\*\*plastic pipe 120rdm 3/4" incl. brine distributor, screws, wall mounting bracket, antifreeze

Equipment suggestion WPS 412 with DHW production + Heating Circuit	pc.	Article No	Price
WPS 412	1	9430450	8 070 €
Temperature sensor PT1000	2	812300	12 €
Electric booster heater 6kW	1	738003	398 €
Circulation Pump Yonos Para G25-180/8-75 PWM*	2	670503	122 €
Noise decoupler set	2	670060	169 €
HRS300 (300l with 3,5m <sup>2</sup> WP-register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 Inch	1	887010	339 €

### Accessories supplied with the heat pump:

- AP420
- Outside temperature sensor
- Temperature sensor PT1000



PicoEnergy  
Heat pumps

LARGE PERFORMANCE  
VERY COMPACT

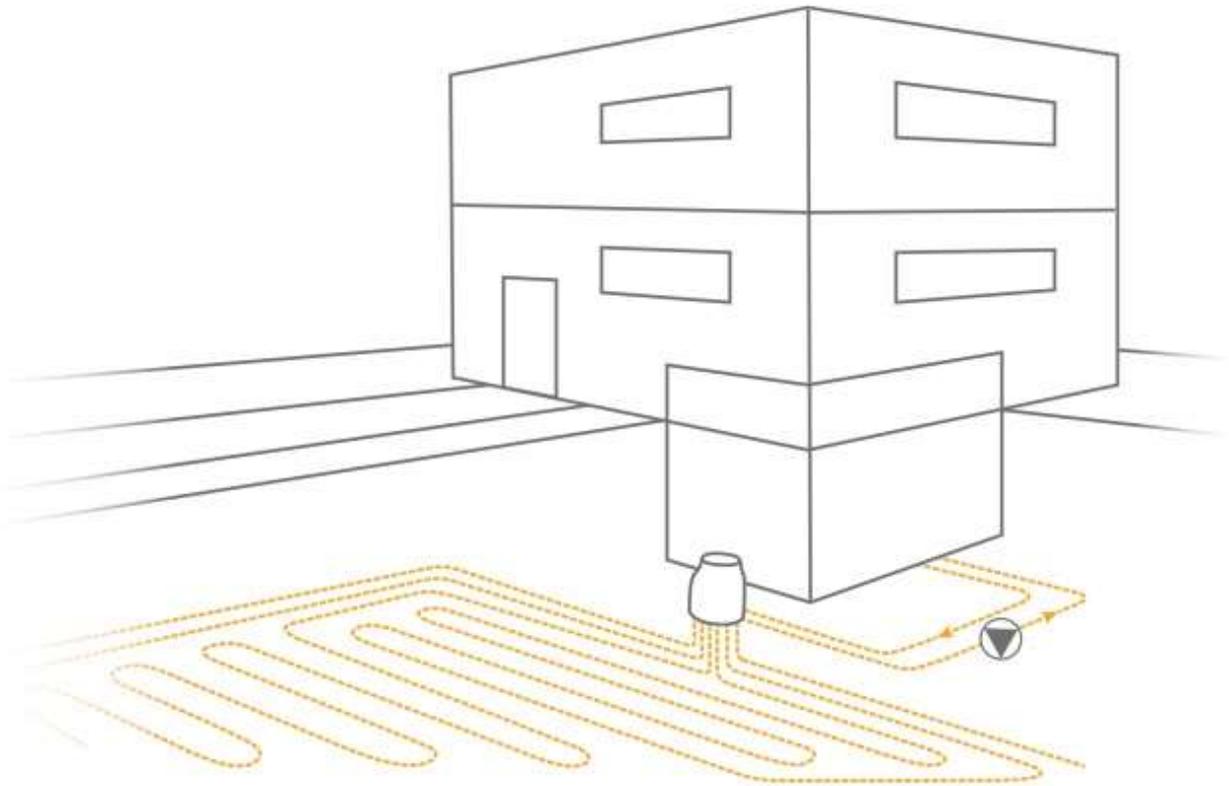


## Direct evaporation heat pump WPD



## Direct evaporation heat pump WPD

This heat pump uses solar energy stored in the ground. This solar energy is available at any time. Whether it is day or night, summer or winter, yes, even infinitely, because it is always renewed. The earth is a particularly good heat storage due to its relatively constant ground temperature. Even from a depth of 1.3 m, little more temperature fluctuations occur, no matter how cold it is outside. For our system, we use either a flat collector (a large pipe system about 1.3 meters below the earth's surface) is laid or a geothermal probe, which is introduced via a depth hole (50 to 150 m). The direct evaporation technology is 20% more efficient than conventional surface collectors.

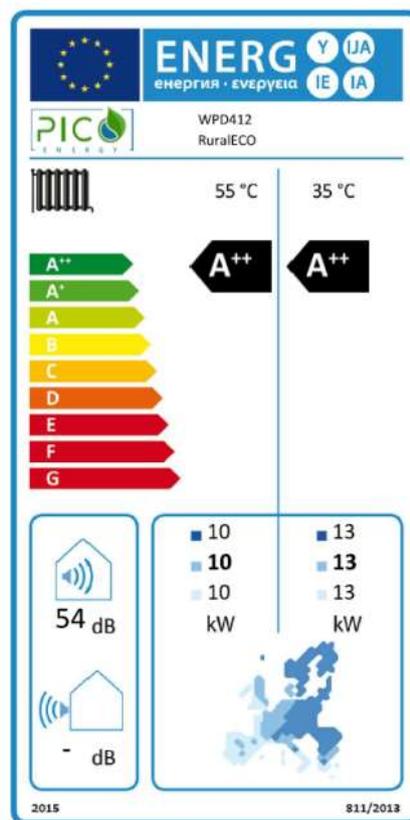


Due to the sophisticated PicoEnergy control, self-generated electricity from the photovoltaic system can be used for the heating and cooling of the house. The speed control of the heat pump adapts itself to the photovoltaic power independently. The free photovoltaic electricity can thus be used as best as possible for heating the house, hot water and swimming pool.

# Direct evaporation heat pump WPD

## Advantages:

- Highest efficiency of heat pump systems
- High innovative power also in the field of control technology
- High innovation in control technology
- Internet Inside: Control of the heat pump from the mobile phone, tablet or PC
- Photovoltaic Integration:
- Use of your own free electricity for the heat pump
- Smart grid for the power systems of the future
- Integration possibility of external systems (eg house management system)
- Latest overheating control
- Easy operation with touch screen technology
- Application range down to -22 ° C



Model	WPD 412	WPD 618
flow 35°C	<b>A+++</b>	<b>A+++</b>
flow 55°C	<b>A++</b>	<b>A++</b>

# Direct evaporation heat pump WPD

Technical Data	Models	WPD 412		WPD 618		WPD 532	WPD 549	WPD 566	
		400V	230V	400V	230V	400V	400V	400V	
Power range [kW]*		3-13 kW		5-20 kW		5-32 kW	5-49 kW	5-66 kW	
Energy class flow 35 °C		A++ (A+++)							
Energy class flow 55 °C		A++ (A+++)							
Dimensions Heat pump HxWxD [mm]		1300 x 600 x 650			2x (1300 x 600 x 650)		3x (1300 x 600 x 650)	4x (1300 x 600 x 650)	
Weight [kg]		155		165		334	494	654	
Sound power level [dB(A)]		54		56		58	59	60	
Fuse main current [A]		3 x C16			2x (3 x C16)		3x (3 x C16)	4x (3 x C16)	
Fuse controller [A]		1 x C13			2x (1 x C13)		3x (1 x C13)	4x (1 x C13)	
Hydraulic connection [Inch]		5/4 *external thread							
Max. Flow temperature [°C]		up to 62°C							

Performance data acc. EN 14825

Climate: average	SCOP 35°C	5,81	6,03	5,63	5,61	5,58
	$\eta_s$ 35°C	231	240	224	223	222
	SCOP 55°C	4,23	4,11	4,03	4,01	3,98
	$\eta_s$ 55°C	168	163	160	159	158

Performance data acc. EN 15879

B0/W35 - 5K at 100% Heating output	Heating output [kW]	12,76	19,95	38,82	57,69	4,94
	Power consumption [kW]	2,76	4,26	8,01	11,76	65,74
	Coef. of perf. [COP]	4,62	4,66	4,85	4,91	21,88
B0/W55 - 8K at 100% Heating output	Heating output [kW]	10,05	14,98	31,90	48,82	65,74
	Power consumption [kW]	3,22	4,72	10,44	16,16	21,88
	Coef. of perf. [COP]	3,12	3,26	3,06	3,02	3,00

# Direct evaporation heat pump WPD

Heat Pump + Accessories	Article No	Price
WPD 412	9410450	7.990 €
WPD 412 -230V	9410451	7.990 €
WPD 618	9410750	8.990 €
WPD 618 -230V	9410751	8.990 €
WPD 18 (Extension)	9410770	6.480 €
<b>Controller Accessories</b>		
Remote control OI 420	670289	159 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electricity meter 400V / PV Counter	790510	273 €
Electricity meter 230V	620102	99 €
Cable set electricity meter 400V	738137	15 €
Cable set electricity meter 230V	738139	14 €
WIFI Stick for AP 420	670076	40 €
Blind cover AP420	670191	64 €
<b>Heating Accessoires for WPD 412</b>		
Circulation Pump Yonos Para G25-180/8-75 PWM*	670503	122 €
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Vortex sensor with 3m cable	670061	186 €
Heating Pressure Switch	738120	75 €
<b>Heating Accessoires for WPD 618</b>		
Circulation Pump Stratos Para 30/1-8 PWM*	670502	376 €
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Vortex sensor with 3m cable	670061	186 €
Heating Pressure Switch	738120	75 €

\* Prices are non-discountable net prices.  
Refrigerant costs according valid offer

## Direct evaporation heat pump WPD

Source Accessoires **	Article No	Price
Refrigerant Set DV 6x	738100	142 €
Refrigerant Set DV 7x	738101	153 €
Refrigerant Set DV 8x	738102	165 €
Refrigerant Set DV 9x	738103	176 €
Refrigerant Set DV 11x	738104	204 €
Refrigerant Set DV 14x	738105	262 €
Ground collector***		
Ground collector copper 10/70	670120	330 €
Source Accessoires for WPD 412**		
Spirecverdampfer 412*	670059	2 240 €
Source Accessoires for WPD 618**		
Spirec evaporator 618*	670058	3 335 €

\* Prices are non-discountable net prices.

\*\*Injecting spider and collecting pipe

\*\*\*Details at the planing manual

Equipment suggestion WPD 412 with 30 W/m <sup>2</sup> extraction rate, DHW + heating circuit	pc.	Article No	Price
WPD 412	1	9410450	7 990 €
Temperature sensor PT1000	2	812300	12 €
Electric booster heater 6kW	1	738003	398 €
Circulation Pump Yonos Para G25-180/8-75 PWM*	1	670503	122 €
Noise decoupler set	1	883300	169 €
HRS300 (300l with 3,5m <sup>2</sup> WP-register)	1	214984	1 630 €
Network cable 15m	1	887010	67 €
3-way diverter valve, 1 Inch	1	887000	339 €
Refrigerant Set DV 6x	1	738100	142 €
Ground collector copper 10/70	6	670120	330 €

### Accessories supplied with the heat pump:

- AP420
- Outside temperature sensor
- Temperature sensor PT1000

COMFORT & EFFICIENT



A close-up, soft-focus photograph of a person lying on a bed. The person's arm is visible on the left side, resting on a white sheet. A blue pillow is partially visible on the right. The overall scene is bright and clean, suggesting a comfortable and modern living environment.

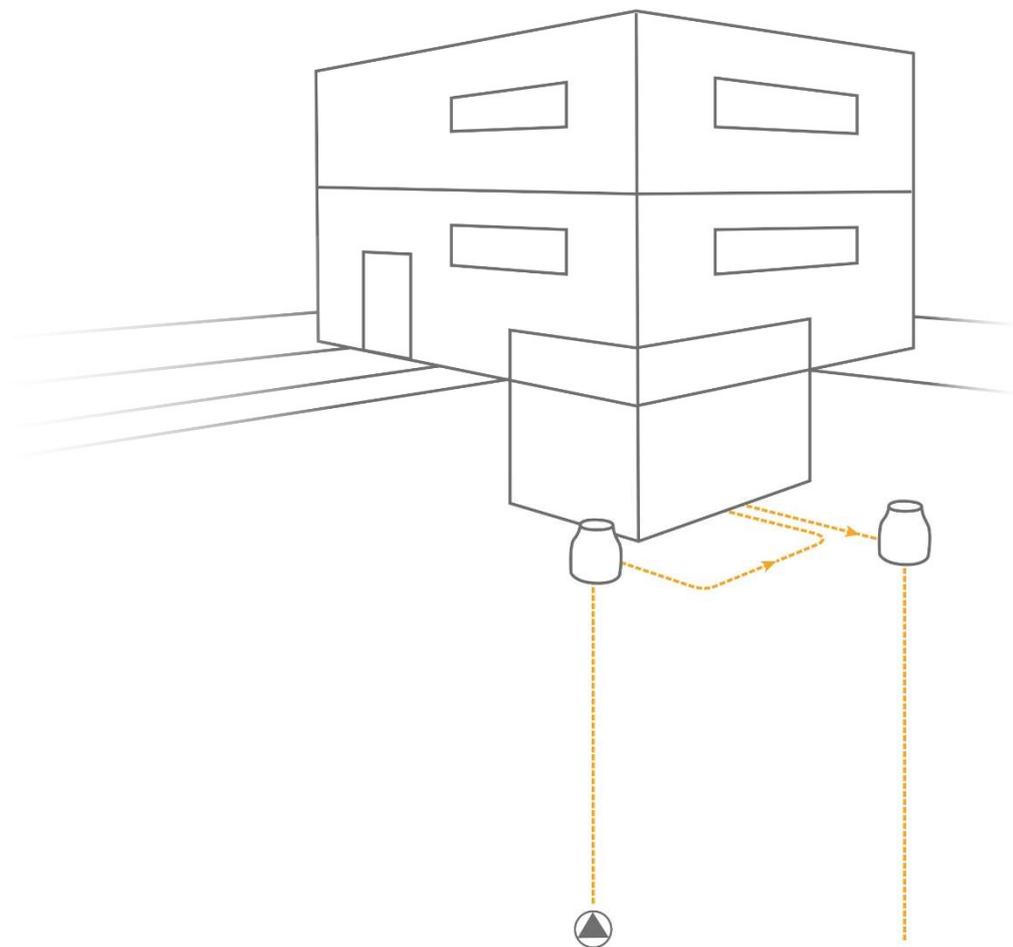
PicoEnergy  
Heat pumps

## Groundwater heat pump WPS-W



## Groundwater heat pump WPS-W

If groundwater is available in a suitable depth and in a sufficient quantity, you have an excellent heat source. The temperature is constant between 7 and 12 ° C. Due to the constant temperature of the ground water, you can achieve the highest levels of efficiency even at the lowest outdoor temperatures. The two wells require little space and are therefore ideal for small grounds. With this system you can not only heat up. You can also use the heat pump to cool and therefore create a comfortable room climate in summer. Cooling takes place via the „heating system“. The heat extracted from the room is transferred to the ground water via the heat pump.

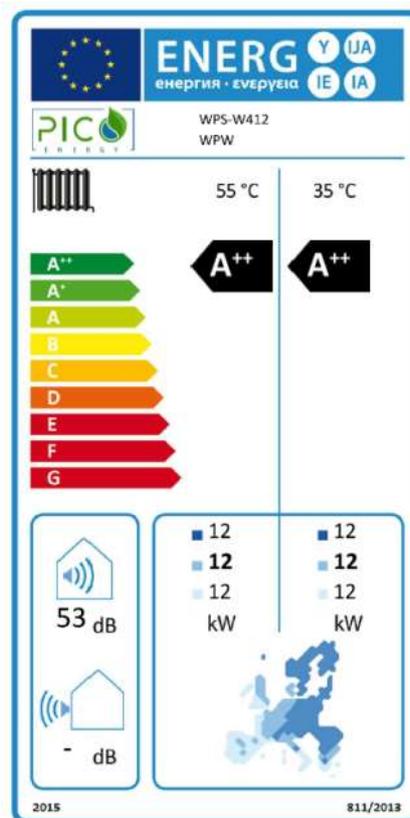


Due to the sophisticated PicoEnergy control, self-generated electricity from the photovoltaic system can be used for the heating and cooling of the house. The speed control of the heat pump adapts itself to the photovoltaic power independently. The free photovoltaic electricity can thus be used as best as possible for heating the house, hot water and swimming pool.

# Groundwater heat pump WPS-W

## Advantages:

- Highest efficiency of heat pump systems
- High innovative power also in the field of control technology
- High innovation in control technology
- Internet Inside: Control of the heat pump from the mobile phone, tablet or PC
- Photovoltaic Integration:
- Use of your own free electricity for the heat pump
- Smart grid for the power systems of the future
- Integration possibility of external systems (eg house management system)
- Latest overheating control
- Easy operation with touch screen technology
- Application range down to -22 ° C



Models	WPS-W 412	WPS-W 618
flow 35°C	A+++	A+++
flow 55°C	A++	A++

# Groundwater heat pump WPS-W

Technical Data	Models	WPS-W 412		WPS-W 618		WPS-W 532	WPS-W 549	WPS-W 566	
		400V	230V	400V	230V	400V	400V	400V	
Power range [kW]*		4-12 kW		6-19 kW		5-32 kW	5-49 kW	5-66 kW	
Energy class flow 35 °C		A++ (A+++)							
Energy class flow 55 °C		A++ (A+++)							
Dimensions Heat pump HxWxD [mm]		1300 x 600 x 650			2x (1300 x 600 x 650)		3x (1300 x 600 x 650)	4x (1300 x 600 x 650)	
Weight [kg]		155	165	334		494	654		
Sound power level [dB(A)]		53	55	58		59	60		
Fuse main current [A]		3 x C16			2x (3 x C16)		3x (3 x C16)	4x (3 x C16)	
Fuse controller [A]		1 x C13			2x (1 x C13)		3x (1 x C13)	4x (1 x C13)	
Hydraulic connection [Inch]		5/4" external thread							
Max. Flow temperature [°C]		up to 62°C							

Performance data acc. EN 14825

Climate: average	SCOP 35°C	6,71	6,63	6,33	6,31	6,28
	$\eta_s$ 35°C	265	262	252	251	250
	SCOP 55°C	5,01	4,96	4,71	4,68	4,66
	$\eta_s$ 55°C	197	195	187	186	185

Performance data acc. EN 14511

W10/W35 - 5K at 100% Heating output	Heating output [kW]	12,21	19,05	42,00	64,95	87,90
	Power consumption [kW]	2,13	3,40	7,29	11,18	15,07
	Coeff. of perf. [COP]	5,74	5,61	5,76	5,81	5,83
W10/W55 - 8K at 100% Heating output	Heating output [kW]	11,52	18,15	38,43	58,71	78,99
	Power consumption [kW]	3,22	5,16	11,20	17,24	23,28
	Coeff. of perf. [COP]	3,58	3,52	3,43	3,41	3,39

# Groundwater heat pump WPS-W

Heat Pump + Accessories	Article No	Price
WPS-W 412	9441450	8 070 €
WPS-W 412 -230V	9441451	8 070 €
WPS-W 618	9441750	9 080 €
WPS-W 618 -230V	9441751	9 080 €
WPS-W 18 (Extension)	9441770	7 230 €
Groundwater module	670074	115 €
Flow switch W08 (WPS-W 412)	325002	109 €
Flow switch W14 (WPS-W 618)	325004	129 €
<b>Controller Accessories</b>		
Remote control OI 420	670289	159 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electricity meter 400V / PV Counter	790510	273 €
Electricity meter 230V	620102	99 €
Cable set electricity meter 400V	738137	15 €
Cable set electricity meter 230V	738139	14 €
WIFI Stick for AP 420	670076	40 €
Blind cover AP420	670191	64 €
<b>Heating Accessoires for WPS-W 412</b>		
Circulation Pump Yonos Para G25-180/8-75 PWM*	670503	122 €
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Vortex sensor with 3m cable	670061	186 €
Heating Pressure Switch	738120	75 €
<b>Heating Accessoires for WPS-W 618</b>		
Circulation Pump Stratos Para 30/1-8 PWM*	670502	376 €
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Vortex sensor with 3m cable	670061	186 €
Heating Pressure Switch	738120	75 €

\* Prices are non-discountable net prices.  
Refrigerant costs according valid offer

# Groundwater heat pump WP S-W

Source Accessoires*	Article No	Price
Stainless steel heat exchanger for WPS-W412	670189	1 339 €
Stainless steel heat exchanger for WPS-W618	670190	1 805 €
Module Passive cooling (Standard)*	738156	1 249 €
Module Passive cooling (Stainless steel)*	738160	1 589 €

\* Prices are non-discountable net prices.

Equipment suggestion WPS-W 412 with DHW production + Heating Circuit	pc	Article No	Price
WPS-W 412	1	9430450	8 070 €
Groundwater module	1	670074	115 €
Temperature sensor PT1000	2	812300	109 €
Electric booster heater 6kW	1	738003	12 €
Circulation Pump Yonos Para G25-180/8-75 PWM*	1	670503	122 €
Noise decoupler set	2	670060	169 €
HRS300 (300l with 3,5m <sup>2</sup> WP-register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 inch	1	887010	339 €

## Accessories supplied with the heat pump:

- AP420
- Outside temperature sensor
- Temperature sensor PT1000

ALL BENEFITS  
AT A SMALL SPACE



PicoEnergy  
Heat pumps

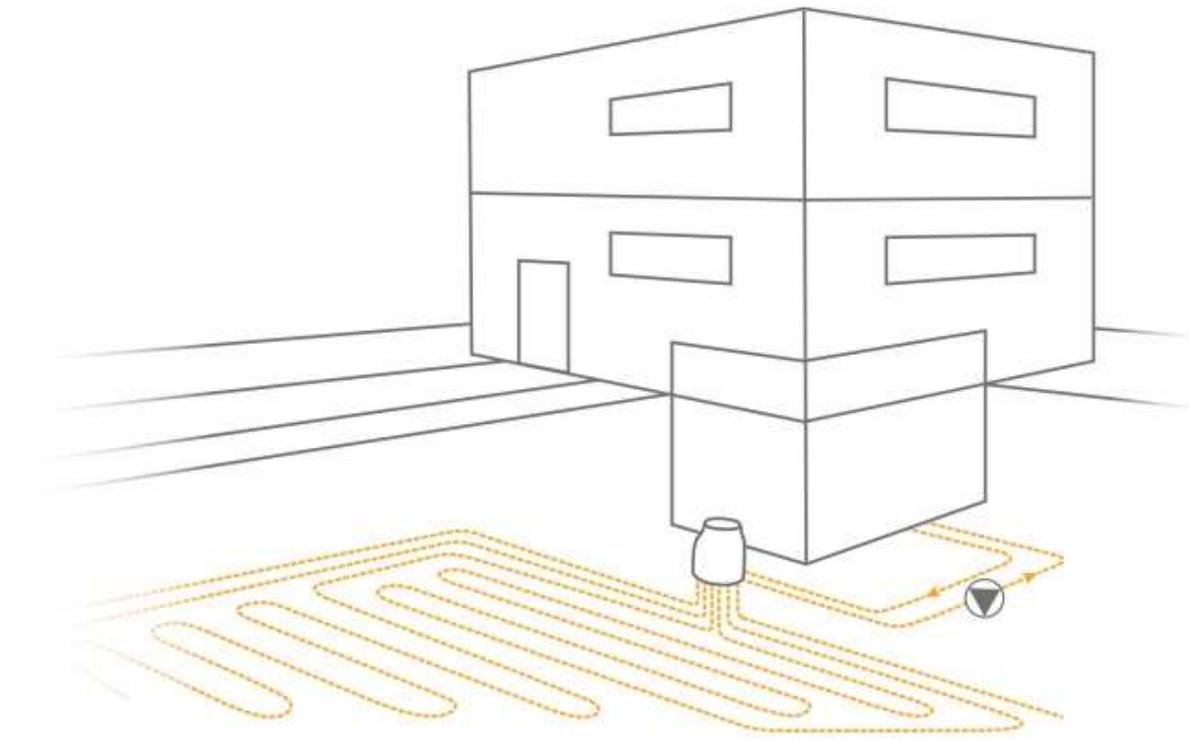


## Brine heat pump WPS 26



## Brine heat pump WPS 26

This heat pump uses solar energy stored in the ground. This solar energy is available at any time. Whether it is day or night, summer or winter, yes, even infinitely, because it is always renewed. The earth is a particularly good heat storage due to its relatively constant ground temperature. Even from a depth of 1.3 m, little more temperature fluctuations occur, no matter how cold it is outside. For our system, we use either a flat collector (a large pipe system about 1.3 meters below the earth's surface is laid) or a geothermal probe, which is introduced via a depth hole (50 to 150m).

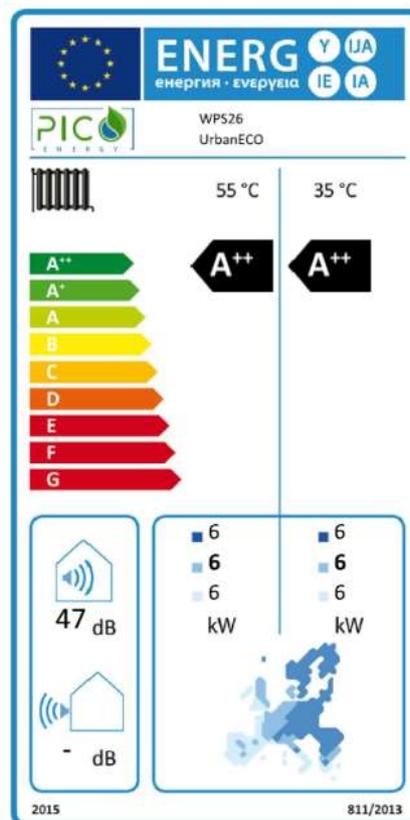


Due to the sophisticated PicoEnergy control, self-generated electricity from the photovoltaic system can be used for the heating and cooling of the house. The speed control of the heat pump adapts itself to the photovoltaic power independently. The free photovoltaic electricity can thus be used as best as possible for heating the house, hot water and swimming pool.

# Brine heat pump WPS 26

## Advantages:

- Highest efficiency of heat pump systems
- High innovative power also in the field of control technology
- High innovation in control technology
- Internet Inside: Control of the heat pump from the mobile phone, tablet or PC
- Photovoltaic Integration:
- Use of your own free electricity for the heat pump
- Smart grid for the power systems of the future
- Integration possibility of external systems (eg house management system)
- Latest overheating control
- Easy operation with touch screen technology
- Application range down to -22 ° C



Model	WPS 26
flow 35°C	A <sup>+++</sup>
flow 55°C	A <sup>++</sup>

# Brine heat pump WPS 26

Technical Data	Model	WPS 26
		230V
Power range [kW]*		2-6 kW
Energy class flow 35 ° C		A++ (A+++)
Energy class flow 55 ° C		A++ (A+++)
Dimensions Heat pump HxWxD [mm]		612 x 610 x 430
Weight [kg]		59
Refrigerant [kg]		R410A
Sound power level [dB(A)]		47
Fuse main current [A]		1 x C16
Fuse controller [A]		1 x C13
Hydraulic connection [Inch]		3/4 "external thread
Max. Flow temperature [°C]		up to 60°C
Performance data acc. EN 14825		
Climate: average	SCOP 35°C	5,13
	$\eta_s$ 35°C	200
	SCOP 55°C	3,73
	$\eta_s$ 55°C	134
Performance data acc. EN 14511		
B0/W35 at 72 % Heating output	Heating output [kW]	4,37
	Power consumption [kW]	0,96
	Coeff. of perf. [COP]	4,57
B0/W35 - 5K at 100% Heating output	Heating output [kW]	6,45
	Power consumption [kW]	1,49
	Coeff. of perf. [COP]	4,34
B0/W55 - 8K at 100% Heating output	Heating output [kW]	5,78
	Power consumption [kW]	2,11
	Coeff. of perf. [COP]	2,74

# Brine heat pump WPS 26

Heat Pump + Accessories	Article No	Price
WPS 26	9430150	5 450 €
WPS 26 ZH (Inkl. Zusatzheizung)	9430151	5 740 €
<b>Controller Accessories</b>		
Remote control OI 420	670013	159 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electricity meter 400V / PV Counter	790510	273 €
Electricity meter 230V	620102	99 €
Cable set electricity meter UrbanECO	738139	14 €
WIFI Stick for AP 420	670076	64 €
<b>Heating Accessoires</b>		
Circulation Pump Yonos Para G25-180/8-75 PWM*	670503	122 €
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	671040	124 €
Vortex sensor with 3m cable	670061	186 €
Heating Pressure Switch	738120	75 €
<b>Source Accessoires</b>		
Circulation Pump Yonos Para G25-180/8-75 PWM*	670503	122 €
Module Passive cooling (Standard)	738156	1 249 €
Module Passive cooling (Stainless steel)	738160	1 589 €
<b>Ground collectors **</b>		
Brine-Ground collector 4-6kW	670153	1 352 €
Brine-Ground collector 6-8kW	670154	1 810 €
<b>Geothermal probe Accessoires</b>		
Brine distributor DN32 2x	670160	693 €
Brine distributor DN32 3x	670161	868 €
<b>Heatpump Accessoires</b>		
Wall bracket WPS26	738122	133 €

\* Prices are non-discountable net prices.

\*\*plastic pipe 120mm 3/4" incl. brine distributor, screws, wall mounting bracket, antifreeze

Details at the planning manual

Refrigerant costs according valid offer

## Brine heat pump WPS 26

Equipment suggestion WPS 26 with DHW production + Heating Circuit

	pc.	Article No	Price
WPS 26	1	9430150	5 450 €
Temperature sensor PT1000	2	812300	12 €
Electric booster heater 6kW	1	738003	398 €
Circulation Pump Yonos Para G25-180/8-75 PWM*	2	670503	122 €
Noise decoupler set	2	671040	124 €
HRS300 (300l with 3,5m <sup>2</sup> WP-register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 inch	1	887010	339 €
Set for heating circuit with mixer	1	887000	799 €
Brine-Ground collector 6-8kW	1	670154	1 810 €

### Accessories supplied with the heat pump:

- AP420
- Outside temperature sensor
- Temperature sensor PT1000



PicoEnergy  
Heat pumps

# HEAT FOR THE FUTURE

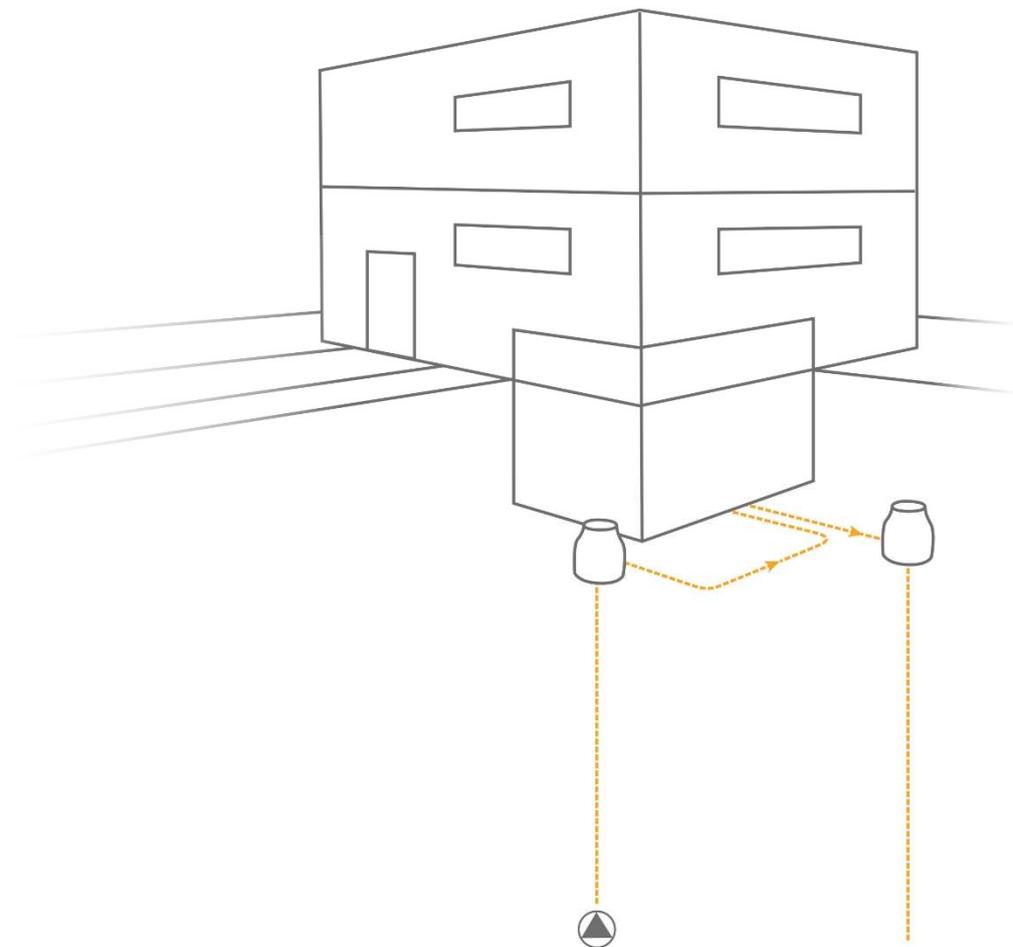


## Groundwater heat pump WPS-W 26



## Groundwater heat pump WPS-W 26

If groundwater is available in a suitable depth and in a sufficient quantity, you have an excellent heat source. The temperature is constant between 7 and 12 ° C. Due to the constant temperature of the ground water, you can achieve the highest levels of efficiency even at the lowest outdoor temperatures. The two wells require little space and are therefore ideal for small grounds. With this system you can not only heat up. You can also use the heat pump to cool and therefore create a comfortable room climate in summer. Cooling takes place via the „heating system“. The heat extracted from the room is transferred to the ground water via the heat pump.

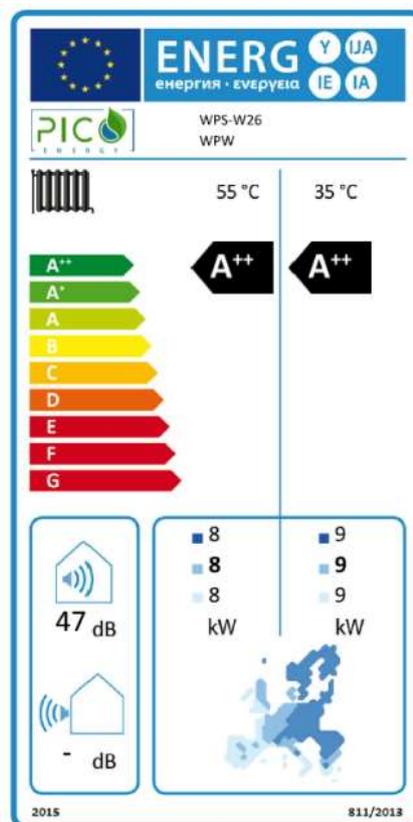


Due to the sophisticated PicoEnergy control, self-generated electricity from the photovoltaic system can be used for the heating and cooling of the house. The speed control of the heat pump adapts itself to the photovoltaic power independently. The free photovoltaic electricity can thus be used as best as possible for heating the house, hot water and swimming pool.

# Groundwater heat pump WPS-W 26

## Advantages:

- Highest efficiency of heat pump systems
- High innovative power also in the field of control technology
- High innovation in control technology
- Internet Inside: Control of the heat pump from the mobile phone, tablet or PC
- Photovoltaic Integration:
- Use of your own free electricity for the heat pump
- Smart grid for the power systems of the future
- Integration possibility of external systems (eg house management system)
- Latest overheating control
- Easy operation with touch screen technology
- Application range down to -22 ° C



Model	WPS 26
flow 35°C	A <sup>+++</sup>
flow 55°C	A <sup>++</sup>

# Groundwater heat pump WPS-W 26

Technical Data	Model	WPS-W 26	
		230V	
Power range [kW]*		3-8 kW	
Energy class flow 35 ° C		A++ (A+++)	
Energy class flow 55 ° C		A++ (A+++)	
Dimensions Heat pump HxWxD [mm]		612 x 610 x 430	
Weight [kg]		59	
Refrigerant [kg]		R410A	
Sound power level [dB(A)]		47	
Fuse main current [A]		1 x C16	
Fuse controller [A]		1 x C13	
Hydraulic connection [Inch]		3/4 "external thread	
Max. Flow temperature [°C]		up to 60°C	
Performance data acc. EN 14825			
Climate: average		SCOP 35°C	7,4
	$\eta_s$ 35°C	290	
	SCOP 55°C	5,13	
	$\eta_s$ 55°C	198	
Performance data acc. EN 14511			
W10/W35 at 72 % Heating output	Heating output [kW]	5,91	
	Power consumption [kW]	0,98	
	Coeff. of perf. [COP]	6,01	
W10/W35 - 5K at 100% Heating output	Heating output [kW]	8,6	
	Power consumption [kW]	1,61	
	Coeff. of perf. [COP]	5,36	
W10/W30 at 54 % Heating output	Heating output [kW]	4,7	
	Power consumption [kW]	0,64	
	Coeff. of perf. [COP]	7,4	
W10/W55 - 8K at 100% Heating output	Heating output [kW]	7,72	
	Power consumption [kW]	2,38	
	Coeff. of perf. [COP]	3,24	

# Groundwater heat pump WPS-W 26

Heat Pump + Accessories	Article No	Price
WPS-W 26	9430150	5 450 €
WPS-W 26 incl. Booster heater	9430151	5 740 €
Groundwater module	671049	47 €
Flow switch W06 (WPS-W 26)	325001	111 €
<b>Controller Accessories</b>		
Remote control OI 420	670289	159 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
PV Counter	790510	273 €
Electric meter 230V	620102	99 €
Cable set electricity meter UrbanECO	738139	14 €
WIFI Stick for AP 420	670076	40 €
<b>Heating Accessoires</b>		
Circulation Pump Yonos Para G25-180/8-75 PWM*	670503	122 €
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	671040	124 €
Vortex sensor with 3m cable	670061	186 €
Heating Pressure Switch	738120	75 €
<b>Source Accessoires</b>		
Stainless steel heat exchanger for WPS-W 26	670486	1 345 €
Module Passive cooling (Standard)*	738156	1 249 €
Module Passive cooling (Stainless steel)*	738160	1 589 €
<b>Heat Pump Accessoires</b>		
Wall bracket WPS26	738122	133 €

\*Circulation Pump prices are non-discountable net prices.  
Refrigerant costs according valid offer

# Groundwater heat pump WPS-W 26

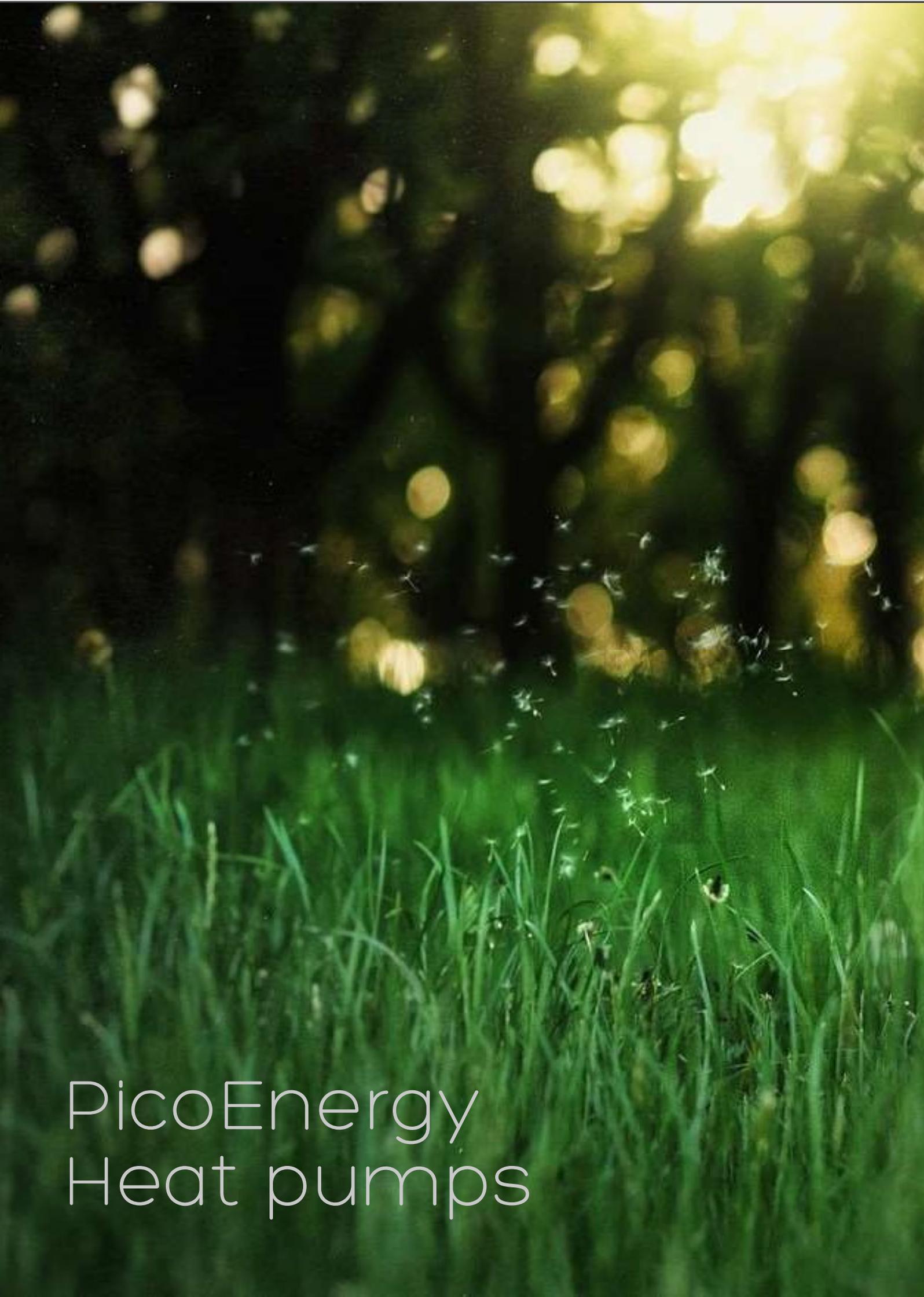
Equipment suggestion WPS-W 26 with DHW production + Heating Circuit

	pc.	Article No	Price
WPS-W 26	1	9430150	5 450 €
Groundwater module	1	670074	115 €
Flow switch W06 (WPS-W 26)	1	325001	111 €
Temperature sensor PT1000	1	812300	110 €
Electric booster heater 6kW	2	812300	12 €
Circulation Pump Yonos Para G25-180/8-75 PWM*	1	670503	122 €
Noise decoupler set	2	671040	124 €
HRS300 (300l with 3,5m <sup>2</sup> WP-register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 Inch	1	887010	339 €



## Accessories supplied with the heat pump:

- AP420
- Outside temperature sensor
- Temperature sensor PT1000



PicoEnergy  
Heat pumps

VERY SILENT IN OPERATION

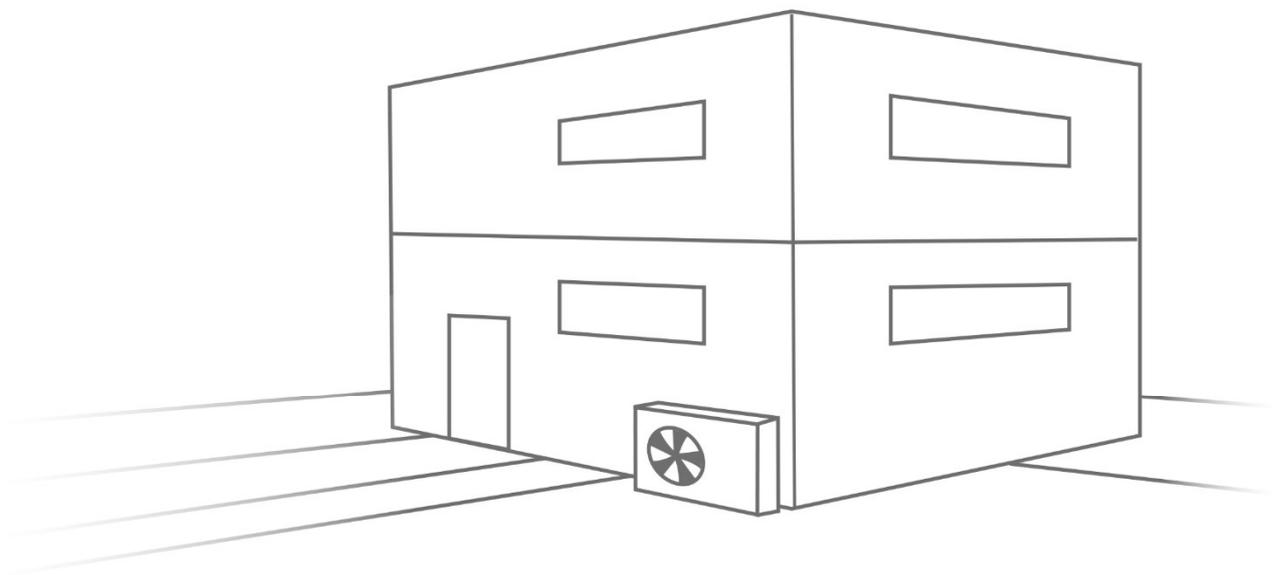


# Air Source heat pump WPL



## Air Source heat pump WPL

Air heat pumps draw the energy for heating your house from the ambient air. These are mainly used when geothermal heat pumps are not possible or economically viable. The efficiency of an air heat pump depends on the ambient temperature (the higher the better). With an air heat pump from PicoEnergy you can heat as well as cool. During cooling, the heat extracted from the room is discharged to the ambient temperature in the outside area.

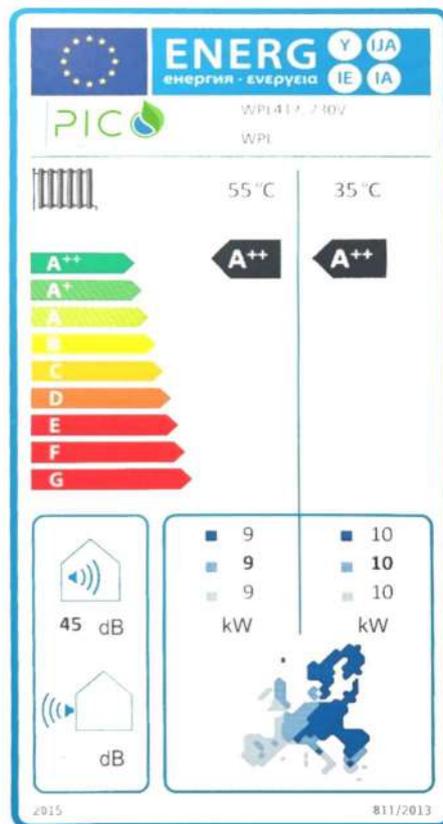


Due to the sophisticated PicoEnergy control, self-generated electricity from the photovoltaic system can be used for the heating and cooling of the house. The speed control of the heat pump adapts itself to the photovoltaic power independently. The free photovoltaic electricity can thus be used as best as possible for heating the house, hot water and swimming pool.

# Air Source heat pump WPL

## Advantages:

- Highest efficiency of heat pump systems
- High innovative power also in the field of control technology
- High innovation in control technology
- Internet Inside: Control of the heat pump from the mobile phone, tablet or PC
- Photovoltaic Integration:
- Use of your own free electricity for the heat pump
- Smart grid for the power systems of the future
- Integration possibility of external systems (eg house management system)
- Latest overheating control
- Easy operation with touch screen technology
- Application range down to -22 ° C



Models	WPL 412	WPL 618
flow 35°C	A <sup>+++</sup>	A <sup>+++</sup>
flow 55°C	A <sup>++</sup>	A <sup>++</sup>

# Air Source heat pump WPL

Technical Data	Models	WPL412		WPL618		WPL 532	WPL 552	WPL 569
		400 V	230 V	400V	230 V	400V	400V	400V
Power range [kW]*		2-12 kW		4-17 kW		4-34 kW	4,52 kW	4,69 kW
Energy class flow 35 °C		A++ (A+++)						
Energy class flow 55 °C		A++ (A+++)						
Dimensions Heat pump HxWxD [mm]		1300 x 600 x 650			2x (1300 x 600 x 650)	3x (1300 x 600 x 650)	4x (1300 x 600 x 650)	
Weight [kg]		160	166	2x 166		3x 166	4x 166	
Dimensions evaporator HxWxD [mm]		1055 x 1088 x 790	1330 x 1275 x 810	2x (1330 x 1275 x 810)		3x (1330 x 1275 x 810)	4x (1330 x 1275 x 810)	
Weight evaporator [kg]		145	180	2x 180		3x 180	4x 180	
Sound power level heat pump [dB(A)]		Siehe Datenblatt						
Sound power level evaporator [dB(A)]		Siehe Datenblatt						
Fuse main current [A]		3 x C16			2x (3 x C16)	3x (3 x C16)	4x (3 x C16)	
Fuse controller [A]		1 x C13			2x (1 x C13)	3x (1 x C13)	4x (1 x C13)	
Hydraulic connection [inch]		5/4" external thread						
Max. Flow temperature [°C]		up to 62°C						



Performance data acc. EN 14825

Climate: average	SCOP 35°C	4,59	4,55	4,55	4,55	4,55
	$\eta_s$ 35°C [%]	180	179	179	179	179
	SCOP 55°C	3,66	3,59	3,59	3,59	3,59
	$\eta_s$ 55°C [%]	143	141	141	141	141

Performance data acc. EN 14511

A2/W35-5K at 100% Heating output	Heating output [kW]	11,82	17,23	34,46	51,69	68,92
	Power consumption [kW]	3,14	4,68	9,36	14,04	18,72
	Coeff. of perf. [COP]	3,76	3,68	3,68	3,68	3,68
A-7/W52 at 100% Heating output	Heating output [kW]	8,77	13,25	26,50	39,75	53,00
	Power consumption [kW]	3,77	5,75	11,50	17,25	23,00
	Coeff. of perf. [COP]	2,33	2,30	2,30	2,30	2,30

# Air Source heat pump WPL

Heat Pump + Accessories	Article No	Price
WPL412	9421450	8 155 €
WPL412 230V	9421451	8 155 €
Evaporator AV412	738129	3 500 €
WPL618	9421750	9 155 €
WPL618 230V	9421751	9 155 €
WPL 18 (Extension)	9421770	4 500 €
Evaporator AV618	738130	186 €
<b>Controller Accessories</b>		
Remote control OI 420	670289	159 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electricity meter 400V / PV Counter	790510	273 €
Electricity meter 230V	620102	99 €
Cable set electricity meter 400V	738137	15 €
Cable set electricity meter 230V	738140	11 €
WIFI Stick for AP 420	670076	40 €
Blind cover AP420	670191	64 €
<b>Heating Accessories for WPL412</b>		
Circulation Pump Yonos Para G25-180/8-75 PWM*	670503	122 €
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Heating Pressure Switch	738120	75 €
<b>Heating Accessories for WPL 618</b>		
Circulation Pump Stratos Para 30/1-8 PWM*	670502	376 €
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Heating Pressure Switch	738120	75 €
<b>Source Accessories</b>		
Refrigerant line, insulated, 10x1 (25m collar)	321707	225 €
Refrigerant line, insulated, 18x1 (25m collar)	321708	451 €
Refrigerant line, insulated, 12x1 (25m collar)	321709	275 €
Refrigerant line, insulated, 22x1 (25m collar)	321710	575 €
Condensate tray for AV412	738131	178 €
Condensate tray for AV618	738132	178 €
Fan nozzle heater	738133	98 €

\*Prices are non-discountable net prices.  
Refrigerant costs according valid offer

## Air Source heat pump WPL

Equipment suggestion WPL 412 with DHW production + Heating Circuit

	pc.	Article No	Price
WPL412	1	9421450	8 155 €
Evaporator AV412	1	738129	3 500 €
Condensate tray for AV412	1	738131	178 €
Temperature sensor PT1000	2	812300	12 €
Electric booster heater 6kW	1	738003	398 €
Circulation Pump Yonos Para G25-180/8-75 PWM*	1	670503	122 €
Noise decoupler set	1	670060	169 €
HRS300 (300l with 3,5m <sup>2</sup> WP-register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 Inch	1	887010	339 €

### Accessories supplied with the heat pump:

- AP420
- Outside temperature sensor
- Temperature sensor PT1000
- Heat meter

Made in Austria





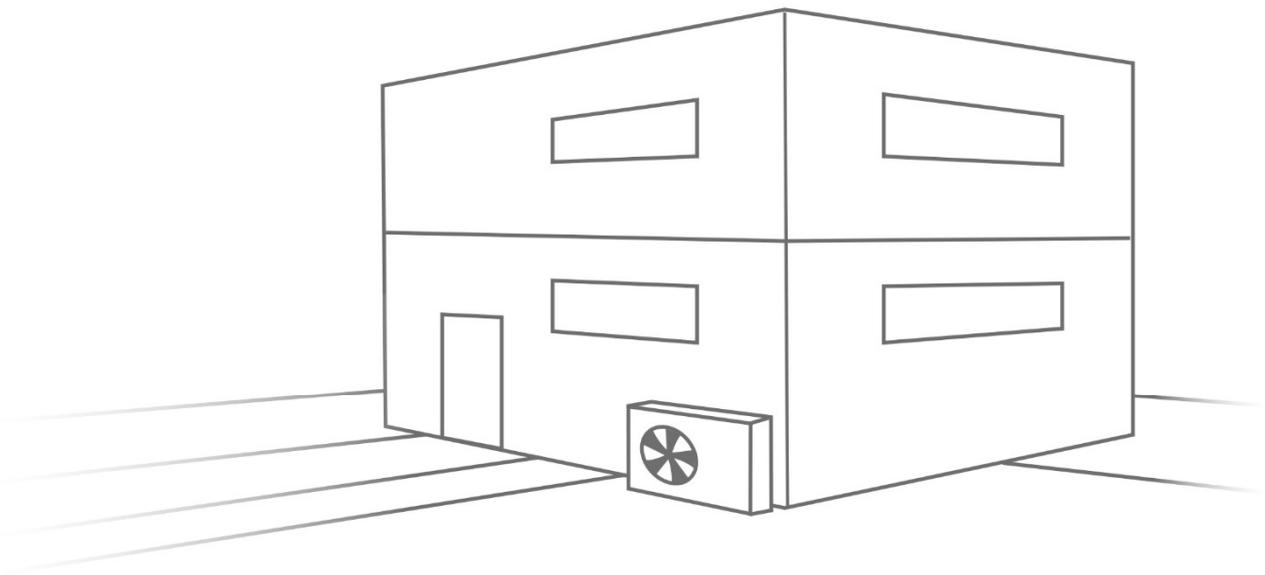
PicoEnergy  
Heat pumps

# Air Source heat pump WPLC



## Air Source heat pump WPLC

Air heat pumps draw the energy for heating your house from the ambient air. These are mainly used when geothermal heat pumps are not possible or economically viable. The efficiency of an air heat pump depends on the ambient temperature (the higher the better). With an air heat pump from PicoEnergy you can heat as well as cool. During cooling, the heat extracted from the room is discharged to the ambient temperature in the outside area.

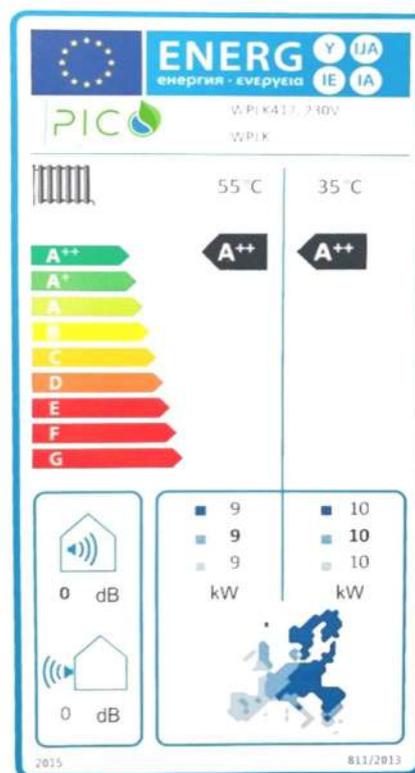


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# Air Source heat pump WPLC

## Advantages:

- Highest efficiency of heat pump systems
- High innovative power also in the field of control technology
- High innovation in control technology
- Internet Inside: Control of the heat pump from the mobile phone, tablet or PC
- Photovoltaic Integration:
- Use of your own free electricity for the heat pump
- Smart grid for the power systems of the future
- Integration possibility of external systems (eg house management system)
- Latest overheating control
- Easy operation with touch screen technology
- Application range down to -22 ° C
- Refrigerant R452b (lower GWP)



Models	WPLC 412	WPLC 618
flow 35°C	A <sup>+++</sup>	A <sup>+++</sup>
flow 55°C	A <sup>++</sup>	A <sup>++</sup>

# Air Source heat pump WPLC

Technical Data	Models	WPLC412		WPLC618		
		400V	230V	400V	230V	
Power range [kW]*		2-12 kW		4-17 kW		
Energy class flow 35 °C		A++ (A+++)				
Energy class flow 55 °C		A++ (A+++)				
Dimensions Heat pump HxWxD [mm]		1040 x 1560 x 560		1184 x 1745 x 620		
Weight [kg]		235		270		
Sound power level [dB(A)]		53		60		
Fuse main current [A]		3 x C16				
Fuse controller [A]		1 x C13				
Hydraulic connection [inch]		1"external thread				
Max. Flow temperature [°C]		up to 62°C				
Performance data acc. EN 14825						
Climate: average		SCOP 35°C	4,95		4,92	
		$\eta_s$ 35°C [%]	195		194	
		SCOP 55°C	3,82		3,78	
	$\eta_s$ 55°C [%]	150		148		
Performance data acc. EN 14511						
A7/W35 at 33% Heating output	Heating output [kW]	4,78		7,16		
	Power consumption [kW]	0,82		1,43		
	Coeff. of perf. [COP]	5,18		4,99		
A2/W35 at 52% Heating output	Heating output [kW]	6,56		8,95		
	Power consumption [kW]	1,44		2,08		
	Coeff. of perf. [COP]	4,56		4,31		
A2/W35-5K at 100% Heating output	Heating output [kW]	11,79		17,18		
	Power consumption [kW]	3,07		4,58		
	Coeff. of perf. [COP]	3,84		3,75		
A-7/W35 at 88% Heating output	Heating output [kW]	8,02		14,01		
	Power consumption [kW]	2,48		3,84		
	Coeff. of perf. [COP]	3,24		3,13		
A7/W55 at 40% Heating output	Heating output [kW]	5,41		8,09		
	Power consumption [kW]	1,69		2,64		
	Coeff. of perf. [COP]	3,20		3,07		
A-7/W52 at 100% Heating output	Heating output [kW]	8,96		13,42		
	Power consumption [kW]	3,66		5,69		
	Coeff. of perf. [COP]	2,45		2,30		

# Air Source heat pump WPLC

Heat Pump + Accessories	Article No	Price
WPLC412	9426650	10 780 €
WPLC412 230V	9426651	10 780 €
WPLC618	9426750	12 450 €
WPLC618 230V	9426751	12 450 €
<b>Controller Accessories</b>		
Remote control OI 420	670289	159 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electricity meter 400V / PV Counter	790510	273 €
Electricity meter 230V	620102	99 €
Cable set electricity meter 400V	738137	15 €
Cable set electricity meter 230V	738139	14 €
WIFI Stick for AP 420	670076	40 €
<b>Heating Accessoires for WPLC412</b>		
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Heating Pressure Switch	738120	75 €
<b>Heating Accessoires for WPL 618</b>		
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Heating Pressure Switch	738120	75 €
<b>Heatpump Accessoires</b>		
Evaporator cover WPLC412	670382	205 €
Evaporator cover WPLC618	670414	275 €
Fan nozzle heater	738133	98 €

# Air Source heat pump WPLC

Equipment suggestion WPLC412 with DHW production + Heating Circuit

	pc.	Article No	Price
WPLC412	1	9426650	10 780 €
Vortexsensor Incl. 3m Cable	1	670061	186 €
Temperature sensor PT1000	2	812300	12 €
Electric booster heater 6kW	1	738003	398 €
Noise decoupler set	1	670060	169 €
HRS300 (300l with 3,5m <sup>2</sup> WP-register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 Inch	1	887010	339 €

## Accessories supplied with the heat pump:

- AP420
- Outside temperature sensor
- Temperature sensor PT1000
- Heat meter
- Speed controlled circulation pump



PicoEnergy  
Heat pumps

# INTERNET INSIDE

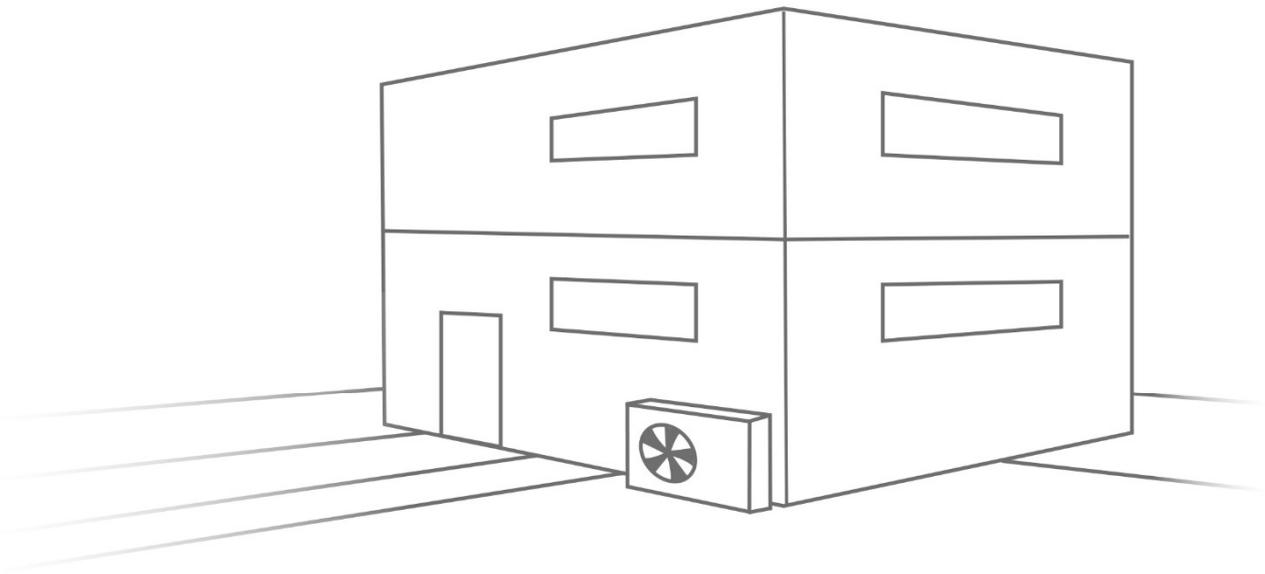


## Air Source heat pump WPLT



## Air Source heat pump WPLT

Air heat pumps draw the energy for heating your house from the ambient air. These are mainly used when geothermal heat pumps are not possible or economically viable. The efficiency of an air heat pump depends on the ambient temperature (the higher the better). With an air heat pump from PicoEnergy you can heat as well as cool. During cooling, the heat extracted from the room is discharged to the ambient temperature in the outside area.

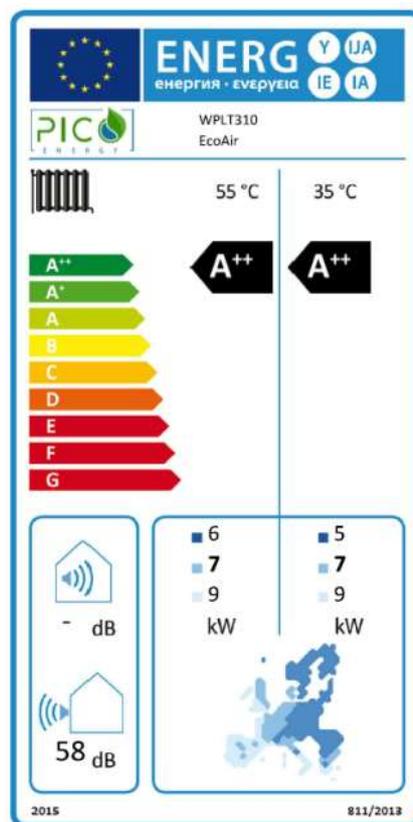


Due to the sophisticated PicoEnergy control, self-generated electricity from the photovoltaic system can be used for the heating and cooling of the house. The speed control of the heat pump adapts itself to the photovoltaic power independently. The free photovoltaic electricity can thus be used as best as possible for heating the house, hot water and swimming pool.

# Air Source heat pump WPLT

## Advantages:

- High innovative power also in the field of control technology
- High innovation in control technology
- Internet Inside: Control of the heat pump from the mobile phone, tablet or PC
- Photovoltaic Integration:  
Use of your own free electricity for the heat pump
- Smart grid for the power systems of the future
- Integration possibility of external systems (eg house management system)
- Latest overheating control
- Easy operation with touch screen technology
- Application range down to -22 ° C



Models	WPLT 724	WPLT 829	WPLT 1234
flow 35°C	A+++	A+++	A+++
flow 55°C	A++	A++	A++

# Air Source heat pump WPLT

Technical Data	Model	WPLT 724	WPLT 829	WPLT 1234
		400V	400V	400V
Power range [kW]		7-18,7 kW	8-23,4 kW	12-25,7 kW
Energy class flow 35 °C		A++		
Energy class flow 55 °C		A++		
Dimensions Heat pump HxWxD [mm]		1516,2 x 1791 x 641		
Weight [kg]		280		
Controller		Keba		
Sound power level [dB(A)]		66	68	69
Hydraulic connection [Inch]		1"external thread		
Max. Flow temperature [°C]		up to 62°C		

Performance data acc. EN 14825

Climate: average	SCOP 35°C	4,93	4,61	4,53
	$\eta_s$ 35°C	190,7	180,1	1,77
	SCOP 55°C	3,84	3,6	3,53
	$\eta_s$ 55°C	149,7	141	137,9

Performance data acc. EN 14511

A2/W35 - 5K at 100% Heating output	Heating output [kW]	18,71	23,39	25,66
	Power consumption [kW]	5,04	6,57	7,29
	Coeff. of perf. [COP]	3,71	3,56	3,52
A-7/W35 - at 100% Heating output	Heating output [kW]	14,63	18,29	21,8
	Power consumption [kW]	4,75	6,17	7,44
	Coeff. of perf. [COP]	3,08	2,96	2,93
A-7/W52 - at 100% Heating output	Heating output [kW]	13,34	16,68	19,88
	Power consumption [kW]	5,90	7,69	9,25
	Coeff. of perf. [COP]	2,26	2,17	2,15

# Air Source heat pump WPLT

Heat Pump + Accessories	Article No	Price
WPLT724	9426350	15 125 €
WPLT829	9426450	15 565 €
WPLT1234	9426550	16 145 €
<b>Controller Accessories</b>		
Remote control OI 420	670289	159 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electricity meter 400V / PV Counter	790510	273 €
Cable set electricity meter 400V ECOAir	738138	15 €
WIFI Stick for AP 420	670076	40 €
<b>Heating Accessoires</b>		
Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	670060	169 €
Heating Pressure Switch	738120	75 €
<b>Heat Pump Accessoires</b>		
Evaporator cover WPLT724 / WPLT 829 / WPLT1234	670179	245 €
Nozzle fan heater	738133	98 €
Heating tape Set for WPLT	670169	90 €

Refrigerant costs according valid offer

## Air Source heat pump WPLT

Equipment suggestion WPLT724 with DHW production + Heating Circuit

	pc.	Article No	Price
WPLT724	1	9426350	15 125 €
Temperature sensor PT1000	2	812300	12 €
Electric booster heater 6kW	1	738003	398 €
Noise decoupler set	1	670060	169 €
HRS300 (300l with 3,5m <sup>2</sup> WP-register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 Inch	1	887010	339 €

### Accessories supplied with the heat pump:

- AP420
- Outside temperature sensor
- Temperature sensor PT1000
- Heat meter
- Speed controlled circulation pump

MAXIMUM FLEXIBILITY  
HUGHE POWER





PicoEnergy  
Heat pumps

## Heat pump-Concept PLUS

With the heat pump concept PLUS, we offer full power with maximum flexibility and that for a variable heat output of 5 -66 kW. The PLUS solution combines up to four PicoEnergy heat pumps in an intelligent way and makes so many benefits available.



One of the heat pumps assumes the controlling function, the others supply energy.

Thus, in addition to a large adjustment range of the heating power from 5 to 66 kW, a maximum of failure safety can also be ensured by redundant design. Heavy towing has an end - with this concept, the introduction into the technical room will be much easier. This also simplifies the storage of spare parts.

This solution can be applied to all types of heat pumps, whether **WPS, WPD, WPS-W or WPL**.



## Standard Heat pump

WP\* 618 = 5 - 17 kW



## PLUS

WP\* 618 + 1x Extension = 5 - 32 kW



WP\* 618 + 2x Extension = 5 - 49 kW



WP\* 618 + 3x Extension = 5 - 66 kW



## WP - Series



## ND - Series

## Model code for heat pumps ND

The heat pumps ND \* are designated as follows:  
(eg.: NDA L06EuC)

**NDA**      NDA - Productfamily Air  
              NDB - Productfamily Brine  
              NDW- Productfamily Groundwater  
              NDX - Productfamily Direct evaporating

**L**            L      Air  
              S      Brine  
              W      Groundwater  
              X      Direct evaporating

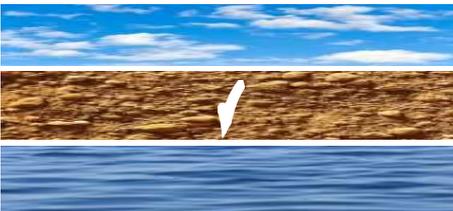
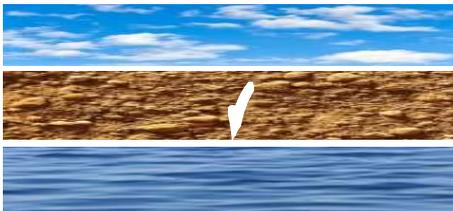
**06EuC**    06kW Output  
              08kW Output  
              10kW Output  
              14kW Output  
              18kW Output  
              20kW Output





# Product Overview ND

		NDA
		Premium
Power range	fixed	6 - 20 kW
	variable	-
Heating		✓
Domestic Hot water		✓
Cooling	Active	-
	Passive	-
Installation site		inside / outside
Type of Installation		Monoblock / Split
Circulating pump		integrated
Touch control unit		✓
Web visualization		✓
PV optimisation of self-consumption		✓
Outdoor temperature sensor		✓
Heat metering		integrated
Soft start		integrated
Electric meter		integrated
Electric booster heater		external
Refrigerant		R410A
Source	Air	
	Ground	
	Water	

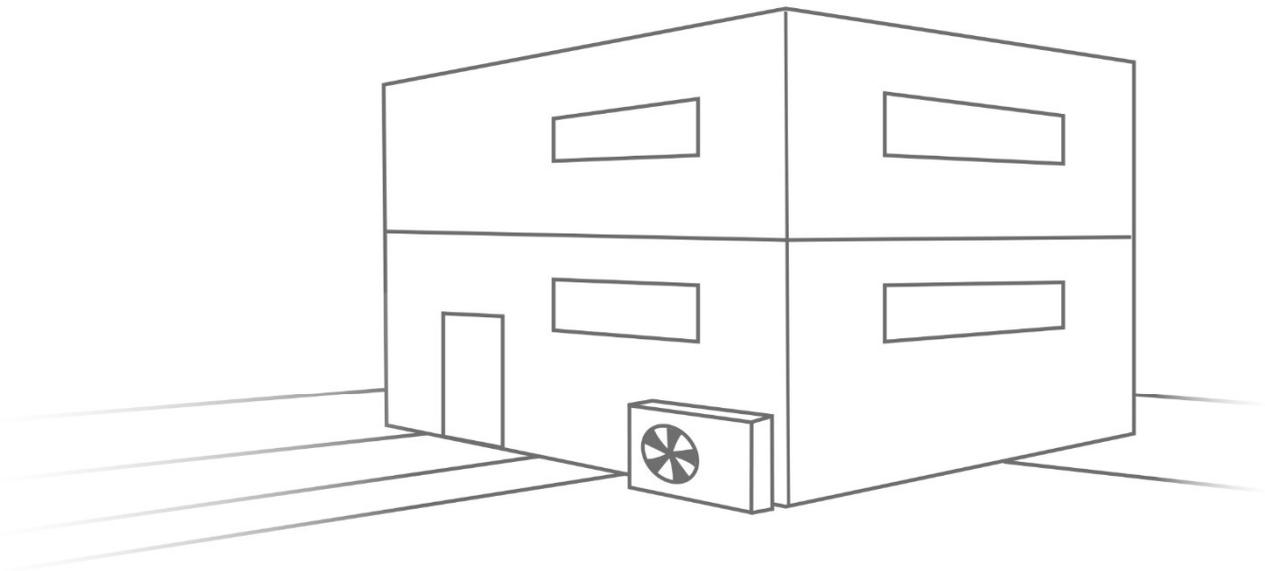
NDX	NDB	NDW
6-21 kW	6-19 kW	7 - 26 kW
-	-	-
✓	✓	✓
✓	✓	✓
-	-	-
-	✓	✓
Inside / outside	Inside / outside	Inside / outside
Monoblock / Split	Monoblock / Split	Monoblock / Split
integrated	integrated	integrated
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
optional	optional	optional
integriert / optional	integriert / optional	integriert / optional
optional	optional	optional
external	external	external
R410A	R410A	R410A
		

## Air Source Heat Pump NDA Premium



## Air Source Heat Pump NDA Premium

Air heat pumps draw the energy for heating your house from the ambient air. These are mainly used when geothermal heat pumps are not possible or economically viable. The efficiency of an air heat pump depends on the ambient temperature (the higher the better). With an air heat pump from PicoEnergy you can heat as well as cool. During cooling, the heat extracted from the room is discharged to the ambient temperature in the outside area.

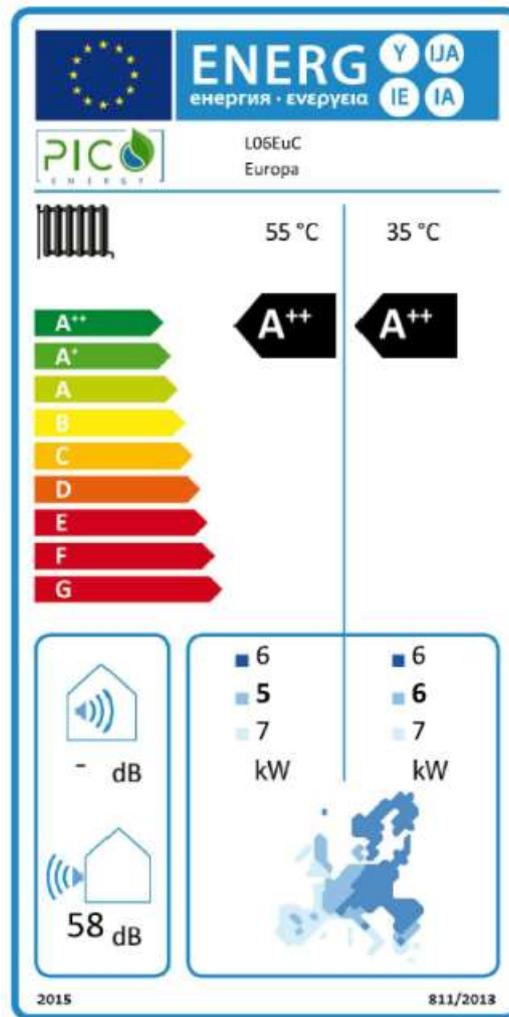


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# Air Source Heat Pump NDA Premium

## Advantages:

- Highly efficient compact unit for outdoor installation
- Functions: heating, water heating and cooling
- Whisper-quiet operation through silent mode
- Remote monitoring with internet-capable control
- PV self-consumption optimization possible
- Flow temperatures up to 62 °C
- Application up to -22 °C



Models	L06 EuC	L08 EuC	L10 EuC	L14 EuC	L18 EuC	L20 EuC
flow 35°C	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>
flow 55°C	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>

# Air Source Heat Pump NDA Premium

Technical Data	Models	L06EuC		L08EuC		L10EuC		L14EuC		L18EuC	L20EuC	
		400V	230V	400V	230V	400V	230V	400V	230V	400V	400V	
Power range [kW]		6 kW		8 kW		10 kW		14 kW		18 kW	20 kW	
Evaporator type		Premium 1									Premium 2	
Energy class flow 35/55°C		A++ / A+										
Dimensions Heat pump HxWxD [mm]		815 x 970 x 535										
Weight Heat pump [kg]		100	105	110	115					120		
Dimensions Evaporator HxWxD [mm]		1087 x 1449 x 1030									1087 x 2598 x 1030	
Weight Evaporator [kg]		155									300	
Controller		Keba										
Sound power level Evaporator [dB(A)]		58	58	64	67					62	67	
Hydraulic connection [inch]		5/4" external thread										
Max. Flow temperature [°C]		up to 62°C										

Performance data acc. EN 14825

Climate: average	SCOP 35°C	4.37	4.37	4.39	4.44	4.37	4.37	4.33	4.35	4.41	4.35
	$\eta_s$ 35°C	172	172	172	175	172	172	170	171	174	171
	SCOP 55°C	3.44	3.44	3.44	3.46	3.41	3.41	3.37	3.38	3.40	3.34
	$\eta_s$ 55°C	134	134	134	135	133	133	132	132	133	131

Performance data acc. EN 14511

A7/W35	Heating output [kW]	6.9	6.9	9.3	8.7	12.0	12.0	15.9	15.9	19.7	24.4
	Power consumption [kW]	1.35	1.35	1.84	1.71	2.38	2.38	3.22	3.21	4.03	4.87
	Coeff. of perf. [COP]	5.1	5.1	5.1	5.1	5.0	5.0	4.9	5.0	4.9	5.0
A7/W55	Heating output [kW]	6.0	6.0	8.2	7.7	10.4	10.4	14.4	14.4	15.5	21.2
	Power consumption [kW]	1.90	1.90	2.75	2.67	3.70	3.70	5.28	5.24	5.88	8.43
	Coeff. of perf. [COP]	3.2	3.2	3.0	2.9	2.8	2.8	2.7	2.8	2.6	2.5
A2/W35	Heating output [kW]	5.8	5.9	8.2	7.7	10.1	8.9	14.4	13.6	17.1	20
	Power consumption [kW]	1.36	1.36	1.92	1.77	2.39	2.10	3.43	3.17	3.96	4.68
	Coeff. of perf. [COP]	4.3	4.3	4.3	4.4	4.2	4.2	4.2	4.3	4.3	4.3
A2/W55	Heating output [kW]	5.3	5.3	7.4	7.4	8.9	8.9	12.8	12.8	14.8	18.1
	Power consumption [kW]	2.08	2.08	2.88	2.90	3.55	3.52	5.20	5.14	6.28	7.73
	Coeff. of perf. [COP]	2.5	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.4	2.3
A-7/W35	Heating output [kW]	4.5	4.5	6.1	5.8	8.0	8.0	10.5	10.5	13.6	14.9
	Power consumption [kW]	1.33	1.33	1.81	1.67	2.39	2.39	3.20	3.20	4.10	4.49
	Coeff. of perf. [COP]	3.4	3.4	3.4	3.5	3.3	3.3	3.3	3.3	3.3	3.3
A-15/W35	Heating output [kW]	3.5	3.5	4.6	4.3	6.5	6.5	8.2	8.2	10.0	11.1
	Power consumption [kW]	1.24	1.24	1.64	1.71	2.32	2.32	2.95	2.95	3.61	4.01
	Coeff. of perf. [COP]	2.8	2.8	2.8	2.5	2.8	2.8	2.8	2.8	2.8	2.8

# Air Source Heat Pump NDA Premium

Heat Pump + Accessories	Article No	Price
L06EuC	9921050	12 490 €
L06EuC 230V	9921051	12 490 €
L08EuC	9921150	12 790 €
L08EuC 230V	9921151	12 790 €
L10EuC	9921250	12 980 €
L10EuC 230V	9921251	12 980 €
L14EuC	9921350	13 180 €
L14EuC 230V	9921351	13 180 €
L18EuC	9921450	16 500 €
L20EuC	9921550	18 100 €

Wärmepumpe inkl. Luftverdampfer

## Controller Accessories

Room controller OI 420	670289	153 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electric meter 400V / PV meter	790510	273 €
WLAN Stick für AP 420	670076	40 €

## Heating Accessories

Electric booster heater 6kW	738003	398 €
Electric booster heater 9kW	738012	473 €
Noise decoupler set	644241	183 €

## Source Accessories for Split version\*

Refrigerant line, insulated, 10x1	321707	225 €
Refrigerant line, insulated, 18x1	321709	275 €
Refrigerant line, insulated, 12x1	321708	451 €
Refrigerant line, insulated, 22x1	321710	575 €

\*price per meter  
Refrigerant costs according valid offer

# Air Source Heat Pump NDA Premium

Equipment suggestion L06EuC with DHW production + Heating Circuit

	pc.	Article No	Price
L06EuC	1	9921050	12 490 €
Temperature sensor PT1000	2	812300	12 €
Electric booster heater 6kW	1	738003	398 €
Noise decoupler set	1	644241	183 €
HRS300 (300l mit 3,5m <sup>2</sup> WP-Register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 inch	1	887010	339 €

## Accessories supplied with the heat pump:

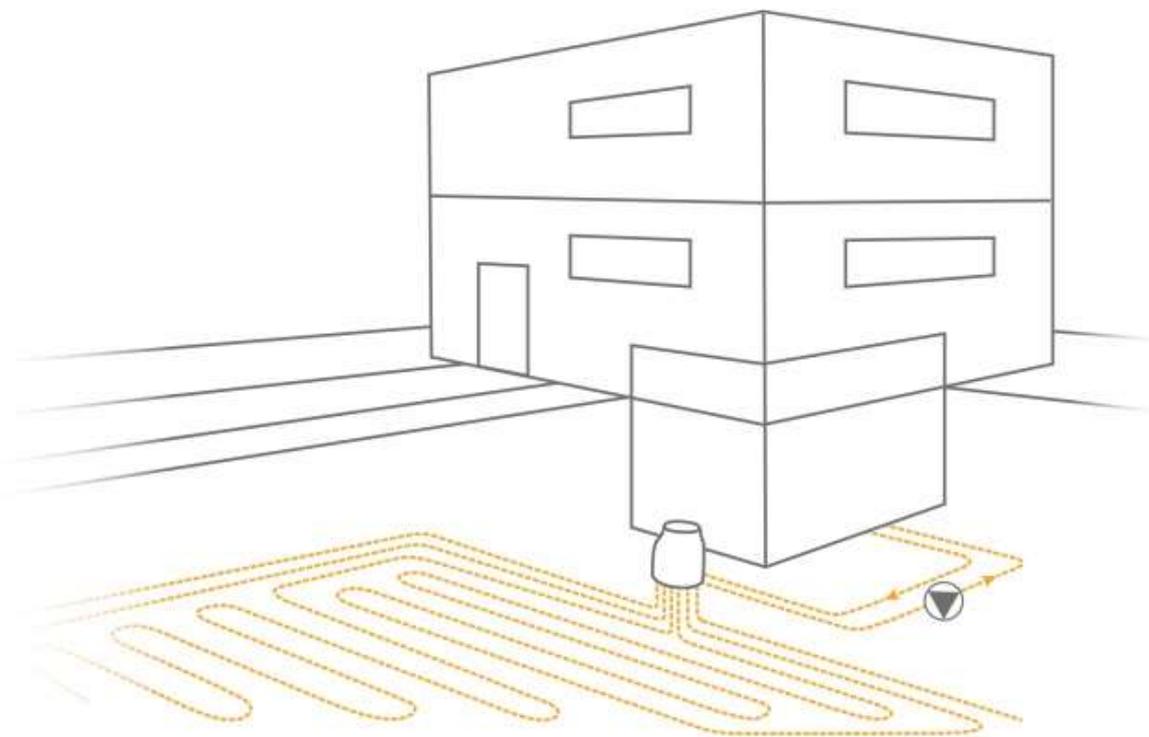
- AP420
- Outside temperature sensor
- Vortex Hetar Meter
- Speed controlled circulation pump

# Direct Evaporation Heat Pump NDX



## Direct Evaporation Heat Pump NDX

This heat pump uses solar energy stored in the ground. This solar energy is available at any time. Whether it is day or night, summer or winter, yes, even infinitely, because it is always renewed. The earth is a particularly good heat storage due to its relatively constant ground temperature. Even from a depth of 1.3 m, little more temperature fluctuations occur, no matter how cold it is outside. For our system, we use either a flat collector (a large pipe system about 1.3 meters below the earth's surface) is laid or a geothermal probe, which is introduced via a depth hole (50 to 150 m). The direct evaporation technology is 20% more efficient than conventional surface collectors.

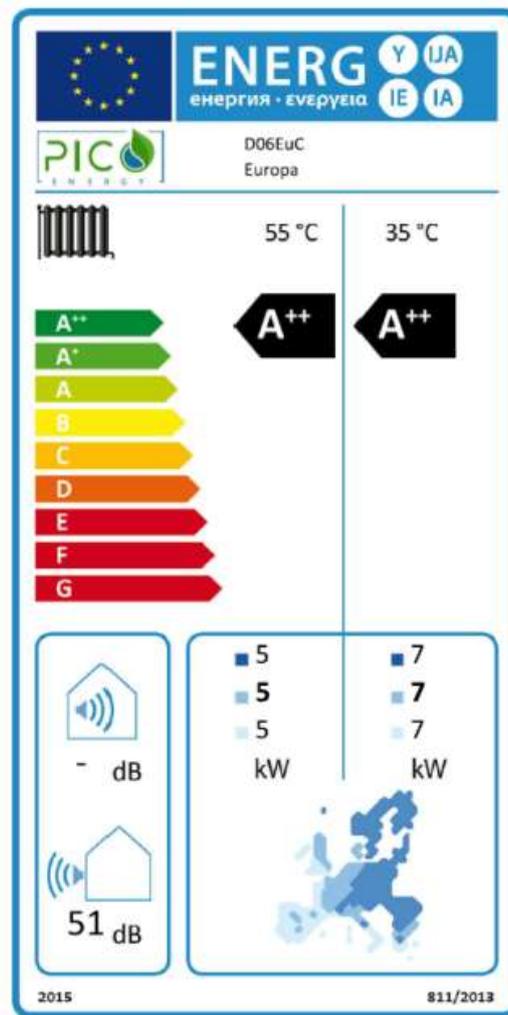


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# Direct Evaporation Heat Pump NDX

## Advantages:

- Highly efficient compact unit for outdoor installation
- Functions: heating, water heating and cooling
- Whisper-quiet operation through silent mode
- Remote monitoring with internet-capable control
- PV self-consumption optimization possible
- Flow temperatures up to 62 °C
- Application up to -22 °C



Models	D06 EuC	D08 EuC	D10 EuC	D14 EuC	D18 EuC	D20 EuC
flow 35°C	A++	A++	A++	A++	A++	A++
flow 55°C	A++	A++	A++	A++	A++	A++

# Direct Evaporation Heat Pump NDX

Technical Data	Models	D06EuC		D08EuC		D10EuC		D14EuC		D18EuC	D20EuC
		400V	230V	400V	230V	400V	230V	400V	230V	400V	400V
Power range [kW]		6 kW		8 kW		10 kW		14 kW		18 kW	20 kW
Energy class flow 35/55°C		A++									
Dimensions Heat pump HxWxD [mm]		815 x 970 x 535									
Weight Heat Pump [kg]		100		105		110		115		120	
Controller		Keba									
Sound power level Evaporator [dB(A)]		51		53		51		52		47	48
Hydraulic connection [inch]		5/4" external thread									
Max. Flow temperature [°C]		up to 62°C									

Performance data acc. EN 14825

Climate: average	SCOP 35°C	5.18	5.25	5.22	5.30	5.30	5.29
	$\eta_s$ 35°C	204	207	206	209	209	208
	SCOP 55°C	3.92	3.97	3.97	4.02	4.04	4.02
	$\eta_s$ 55°C	154	156	156	158	159	158

Performance data acc. EN 14511

B0/W35	Heating output [kW]	6.6	8.4	10.8	15.9	18.9	21.3
	Power consumption [kW]	1.31	1.67	2.17	3.14	3.75	4.25
	Coeff. of perf. [COP]	5.0	5.1	5.0	5.0	5.0	5.0
B0/W55	Heating output [kW]	5.5	7.4	9.4	13.7	16.9	18.8
	Power consumption [kW]	1.87	2.54	3.20	4.65	5.72	6.38
	Coeff. of perf. [COP]	2.9	2.9	2.9	3.0	3.0	2.9

# Direct Evaporation Heat Pump NDX

## Heat Pump + Accessories

	Article No	Price
D06EuC	9911050	7 590 €
D06EuC 230V	9911051	7 590 €
D08EuC	9911150	7 690 €
D08EuC 230V	9911151	7 690 €
D10EuC	9911250	7 840 €
D10EuC 230V	9911251	7 840 €
D14EuC	9911350	8 120 €
D14EuC 230V	9911351	8 120 €
D18EuC	9911450	9 180 €
D20EuC	9911550	9 480 €
<b>Controller Accessories</b>		
Remote control OI 420	670289	153 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electricity meter 400V / PV Counter	790510	273 €
Electric meter 230V	620102	99 €
Soft start 400V	739030	510 €
Soft start 6-10kW 230V	739005	302 €
Soft start 14kW 230V	739003	349 €
WLAN Stick for AP 420	670076	40 €
<b>Heating Accessoires</b>		
Electric booster heater - 6kW	738003	398 €
Electric booster heater - 9kW	738012	473 €
Noise decoupler set	644241	183 €
Vortex sensor with 3m cable	670061	186 €
<b>Accessories for Split ,Variante</b>		
Earth collector pipe CU 10,6x0,3	500667	6 €
Evaporator circuit connection set, split 3-fold	738085	350 €
Evaporator circuit connection set, split 4-fold	738086	404 €
Evaporator circuit connection set, split 5-fold	738087	454 €
Evaporator circuit connection set, split 6-fold	738088	513 €
Evaporator circuit connection set, split 7-fold	738089	556 €
Evaporator circuit connection set, split 8-fold	738090	615 €
Evaporator circuit connection set, split 9-fold	738091	668 €
Evaporator circuit connection set, split 10-fold	738092	721 €
Evaporator circuit connection set, split 11-fold	738093	777 €
<b>Ground collectors</b>		
3-fold evaporator circuit	730024	1 329 €
4-fold evaporator circuit	730025	1 772 €
5-fold evaporator circuit	730026	2 215 €
6-fold evaporator circuit	730027	2 657 €
10-fold evaporator circuit	730028	3 988 €
7-fold evaporator circuit	730029	4 430 €
8-fold evaporator circuit	730030	4 923 €
9-fold evaporator circuit	730031	4 924 €
12-fold evaporator circuit	730032	5 315 €

Refrigerant costs according valid offer

## Direct Evaporation Heat Pump NDX

Equipment suggestion D06EuC with DHW production + Heating Circuit

	pc.	Article No	Price
D06EuC	1	9911050	7 590 €
Temperature sensor PT1000	2	812300	12 €
Electric booster heater 6kW	1	738003	398 €
Noise decoupler set	1	644241	183 €
HRS300 (300l mit 3,5m <sup>2</sup> WP-Register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 Inch	1	887010	338 €
4-fold evaporator circuit	1	730025	1 772 €

### Accessories supplied with the heat pump:

- AP420
- Outside temperature sensor
- Speed controlled circulation pump

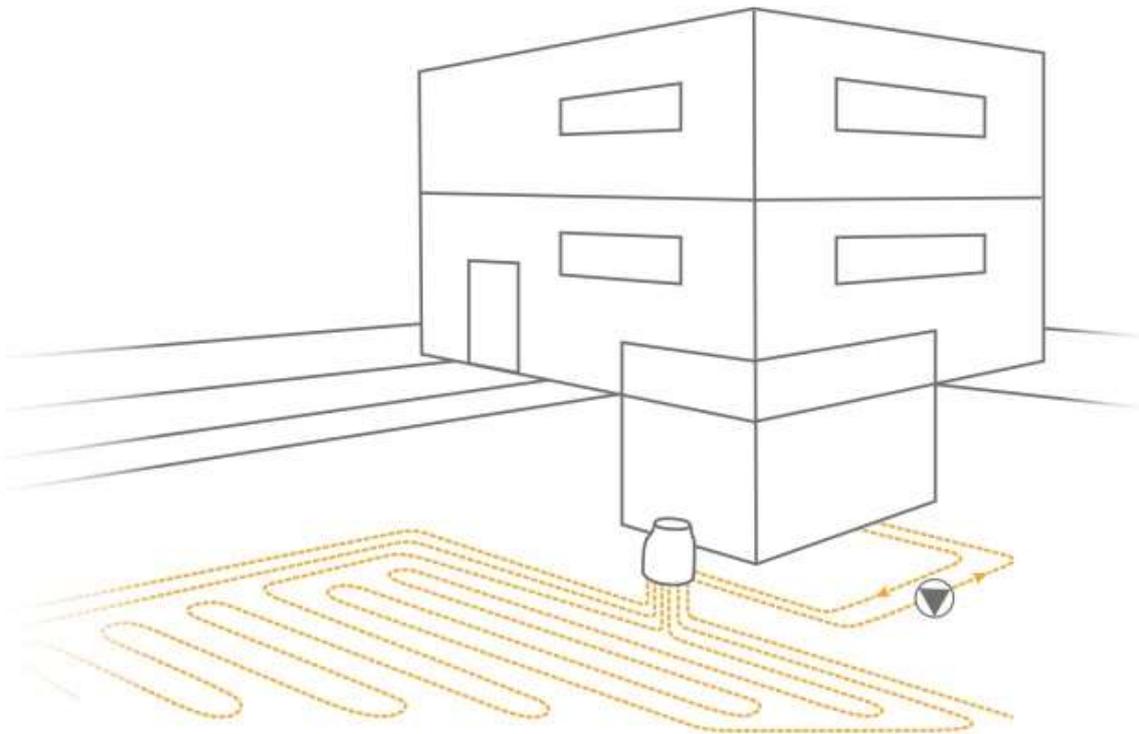
## Brine heat pump NDB



## Brine heat pump NDB

This heat pump uses solar energy stored in the ground. This solar energy is available at any time. Whether it is day or night, summer or winter, yes, even infinitely, because it is always renewed. The earth is a particularly good heat storage due to its relatively constant ground temperature. Even from a depth of 1.3 m, little more temperature fluctuations occur, no matter how cold it is outside.

For our system, we use either a flat collector (a large pipe system about 1.3 meters below the earth's surface is laid) or a geothermal probe, which is introduced via a depth hole (50 to 150m).

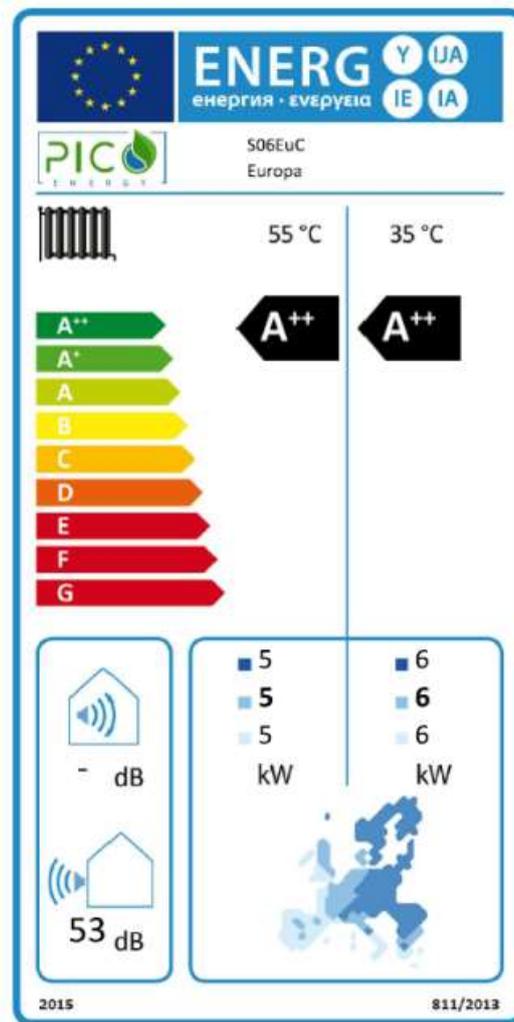


Due to the sophisticated PicoEnergy control, self-generated electricity from the photovoltaic system can be used for the heating and cooling of the house. The speed control of the heat pump adapts itself to the photovoltaic power independently. The free photovoltaic electricity can thus be used as best as possible for heating the house, hot water and swimming pool.

# Brine heat pump NDB

## Advantages:

- Highly efficient compact unit for outdoor installation
- Functions: heating, water heating and cooling
- Whisper-quiet operation through silent mode
- Remote monitoring with internet-capable control
- PV self-consumption optimization possible
- Flow temperatures up to 62 °C
- Application up to -22 °C



Models	S06 EuC	S08 EuC	S10 EuC	S14 EuC	S18 EuC	S20 EuC
flow 35°C	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>
flow 55°C	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>

# Brine heat pump NDB

Technical Data	Models	S06EuC		S08EuC		S10EuC		S14EuC		S18EuC	S20EuC	
		400V	230V	400V	230V	400V	230V	400V	230V	400V	400V	
Power range [kW]		6 kW		8 kW		10 kW		14 kW		18 kW	20 kW	
Energy class flow 35/55°C		A++										
Dimensions Heat pump HxWxD [mm]		815 x 970 x 535										
Weight Heat Pump [kg]		100		105		110		115		120		
Controller		Keba										
Sound power level [dB(A)]		53			54				55			
Hydraulic connection [Inch]		5/4" external thread										
Max. Flow temperature [°C]		up to 62°C										
Performance data acc. EN 14825												

Climate: average	SCOP 35°C	447	445	465	448	455	448	454	462	460	460
	$\eta_s$ 35°C	171	170	178	171	174	171	174	177	176	176
	SCOP 55°C	3.36	3.47	3.55	3.44	3.40	3.49	3.39	3.58	3.54	3.54
	$\eta_s$ 55°C	126	131	134	130	128	132	128	135	134	134

Performance data acc. EN 14511

B0/W35	Heating output [kW]	5.8	5.8	8.5	7.3	9.9	9.8	14.6	12.8	17.2	19.8
	Power consumption [kW]	1.34	1.34	1.90	1.70	2.29	2.29	3.40	2.89	3.93	4.53
	Coeff. of perf. [COP]	4.3	4.3	4.5	4.3	4.3	4.3	4.3	4.4	4.4	4.4
Bo/W55	Heating output [kW]	5.3	5.3	7.8	6.7	8.9	8.9	13.0	12.0	15.5	18.6
	Power consumption [kW]	2.20	1.98	2.99	2.63	3.63	3.37	5.39	4.50	5.92	7.11
	Coeff. of perf. [COP]	2.4	2.7	2.6	2.6	2.4	2.7	2.4	2.7	2.6	2.6

# Brine heat pump NDB

Heat Pump + Accessories	Article No	Price
S06EuC	9931050	8 150 €
S06EuC 230V	9931051	8 150 €
S08EuC	9931150	8 400 €
S08EuC 230V	9931151	8 400 €
S10EuC	9931250	8 760 €
S10EuC 230V	9931251	8 760 €
S14EuC	9931350	9 100 €
S14EuC 230V	9931351	9 300 €
S18EuC	9931450	9 900 €
S20EuC	9931550	10 200 €
<b>Controller Accessories</b>		
Remote control OI 420	670289	153 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electricity meter 400V / PV Counter	790510	273 €
Electric meter 230V	620102	99 €
Soft start 400V	739030	510 €
Soft start 6-10kW 230V	739005	302 €
Soft start 14kW 230V	739003	349 €
WLAN Stick for AP 420	670076	40 €
<b>Heating Accessoires</b>		
Electric booster heater - 6kW	738003	398 €
Electric booster heater - 9kW	738012	473 €
Noise decoupler set	644241	183 €
Vortex sensor with 3m cable	670061	186 €
<b>Source Accessories</b>		
Module Passive cooling (Standard)*	738156	1 249 €
Module Passive cooling (Stainless steel)*	738160	1 589 €
<b>Ground collectors</b>		
Brine - Ground collector set 6-8kW	670153	1 352 €
Brine - Ground collector set 6-8kW	670154	1 810 €
Brine - Ground collector set 9-10kW	670155	2 352 €
Brine - Ground collector set 11-12kW	670156	2 810 €
Brine - Ground collector set 13-14kW	670157	3 552 €
Brine - Ground collector set 15-17kW	670158	3 774 €
Brine - Ground collector set 18-19kW	670159	4 330 €
<b>Accessoires for geothermal probe</b>		
Brine distributor DN32 2x	670160	693 €
Brine distributor DN32 3x	670161	868 €
Brine distributor DN32 4x	670162	1 052 €
Brine distributor DN32 5x	670163	1 227 €
Brine distributor DN32 6x	670164	1 424 €

\*Prices are non-discountable net prices.  
Refrigerant costs according valid offer

## Brine heat pump NDB

Equipment suggestion S06EuC with DHW production + Heating Circuit

	pc.	Article No	Price
S06EuC	1	9931050	8 150 €
Temperature sensor PT1000	2	812300	12 €
Electric booster heater 6kW	1	738003	398 €
Noise decoupler set	1	644241	183 €
HRS300 (300l mit 3,5m <sup>2</sup> WP-Register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 Inch	1	887010	339 €
Brine - Ground collector set 6-8kW	1	670154	1 810 €

### Accessories supplied with the heat pump:

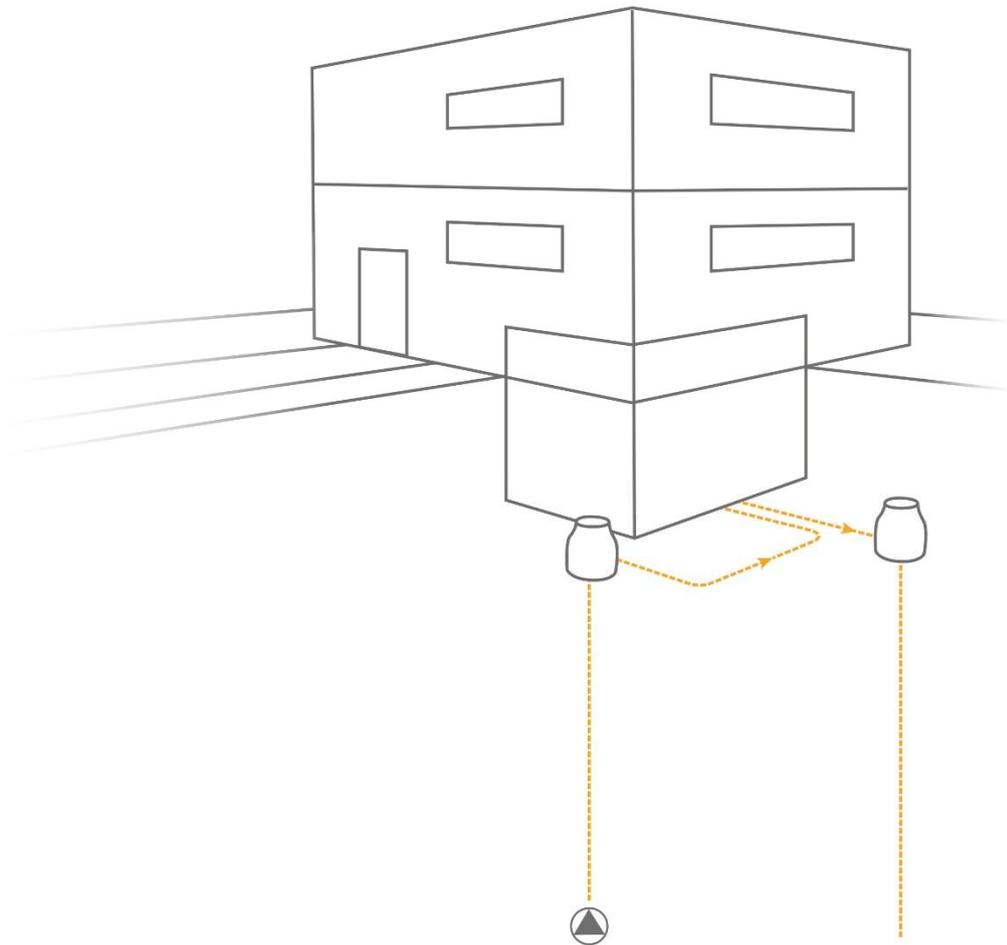
- AP420
- Outside temperature sensor
- Speed controlled circulation pump

## Groundwater heat pump NDW



## Groundwater heat pump NDW

If groundwater is available in a suitable depth and in a sufficient quantity, you have an excellent heat source. The temperature is constant between 7 and 12 ° C. Due to the constant temperature of the ground water, you can achieve the highest levels of efficiency even at the lowest outdoor temperatures. The two wells require little space and are therefore ideal for small grounds. With this system you can not only heat up. You can also use the heat pump to cool and therefore create a comfortable room climate in summer. Cooling takes place via the „heating system“. The heat extracted from the room is transferred to the ground water via the heat pump.

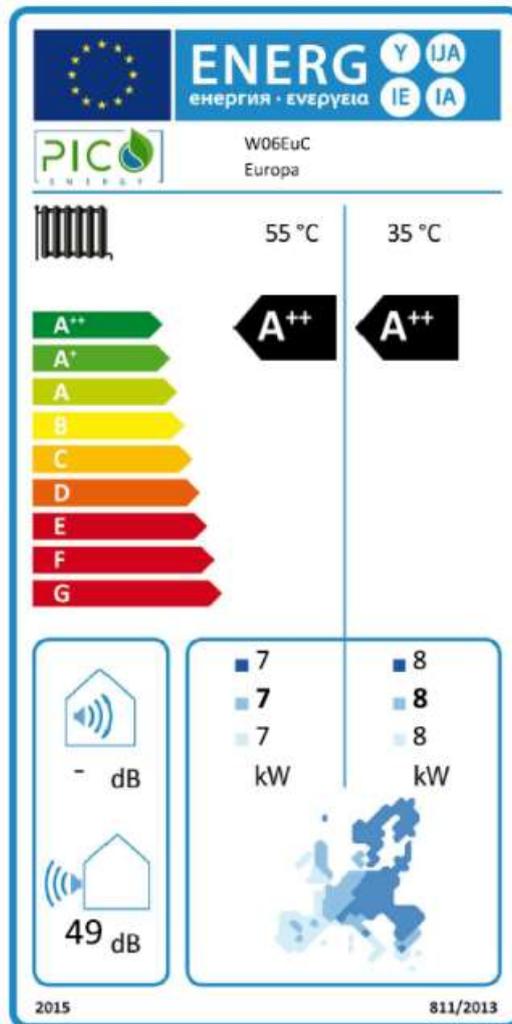


Due to the sophisticated PicoEnergy control, self-generated electricity from the photovoltaic system can be used for the heating and cooling of the house. The speed control of the heat pump adapts itself to the photovoltaic power independently. The free photovoltaic electricity can thus be used as best as possible for heating the house, hot water and swimming pool.

# Groundwater heat pump NDW

## Advantages:

- Highly efficient compact unit for outdoor installation
- Functions: heating, water heating and cooling
- Whisper-quiet operation through silent mode
- Remote monitoring with internet-capable control
- PV self-consumption optimization possible
- Flow temperatures up to 62 °C
- Application up to 8° C



Models	W06 EuC	W08 EuC	W10 EuC	W14 EuC	W18 EuC	W20 EuC
flow 35°C	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>
flow 55°C	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>

# Groundwater heat pump NDW

Technical Data	Models	W06EuC		W08EuC		W10EuC		W14EuC		W18EuC	W20EuC	
		400V	230V	400V	230V	400V	230V	400V	230V	400V	400V	
Power range [kW]		6 kW		8 kW		10 kW		14 kW		18 kW	20 kW	
Energy class flow 35/55°C		A++										
Dimensions Heat pump HxWxD [mm]		815 x 970 x 535										
Weight Heat Pump [kg]		100		105		110		120		125		
Controller		Keba										
Sound power level [dB(A)]		53			54				55			
Hydraulic connection [Inch]		5/4" external thread										
Max. Flow temperature [°C]		up to 62°C										

Performance data acc. EN 14825

Climate: average	SCOP 35°C	5.68	5.84	6.07	6.14	6.59	6.38	6.12	6.28	6.24	5.96
	$\eta_s$ 35°C	219	226	235	237	255	247	237	243	241	230
	SCOP 55°C	4.35	4.43	4.55	4.52	4.82	4.71	4.61	4.63	4.68	4.59
	$\eta_s$ 55°C	166	169	174	173	185	180	176	177	179	175

Performance data acc. EN 14511

W10/W35	Heating output [kW]	7.7	7.4	115	9.6	13.0	12.9	19.6	16.8	23.0	25.9
	Power consumption [kW]	140	132	199	163	208	2.13	3.38	2.82	3.89	4.59
	Coeff. of perf. [COP]	5.5	5.7	5.8	5.9	6.3	6.1	5.8	5.9	5.9	5.7
W10/W55	Heating output [kW]	6.8	6.7	10.1	8.6	11.6	11.5	17.2	15.0	20.3	23.7
	Power consumption [kW]	2.10	2.07	3.06	2.69	3.45	3.46	5.17	4.61	6.04	7.00
	Coeff. of perf. [COP]	3.3	3.3	3.3	3.2	3.4	3.3	3.3	3.2	3.4	3.4

# Groundwater heat pump NDW

Heat Pump + Accessories	Article No	Price
W06EuC	9941050	8 340 €
W06EuC 230V	9941051	8 340 €
W08EuC	9941150	8 600 €
W08EuC 230V	9941151	8 600 €
W10EuC	9941250	8 650 €
W10EuC 230V	9941251	8 650 €
W14EuC	9941350	9 480 €
W14EuC 230V	9941351	9 480 €
W18EuC	9941450	10 150 €
W20EuC	9941550	10 150 €
Flow switch VK325M W06	325001	111 €
Flow switch VK325M W08	325002	109 €
Flow switch VK325M W10	325003	115 €
Flow switch VK325M W14	325004	129 €
Flow switch VK325M W18	325005	125 €
Flow switch VK325M W20	325006	126 €
<b>Controller Accessories</b>		
Remote control OI 420	670289	153 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Electricity meter 400V / PV Counter	790510	273 €
Electric meter 230V	620102	99 €
Soft start 400V	739030	510 €
Soft start 6-10kW 230V	739005	302 €
Soft start 14kW 230V	739003	349 €
WLAN StIck for AP 420	670076	40 €
<b>Heating Accessolres</b>		
Electric booster heater - 6kW	738003	398 €
Electric booster heater - 9kW	738012	473 €
Noise decoupler set	644241	183 €
Vortex sensor with 3m cable	670061	186 €
<b>Source Accessories</b>		
Module Passive cooling (Standard)*	738156	1 249 €
Module Passive cooling (Stainless steel)*	738160	1 589 €

\*Prices are non-discountable net prices.  
Refrigerant costs according valid offer

## Groundwater heat pump NDW

Equipment suggestion W06EuC with DHW production + Heating Circuit

	pc.	Article No	Price
W06EuC	1	9941050	8 340 €
Flow switch VK325M W06	1	325001	111 €
Temperature sensor PT1000	2	812300	12 €
Electric booster heater 6kW	1	738003	398 €
Noise decoupler set	1	644241	183 €
HRS300 (300l mit 3,5m <sup>2</sup> WP-Register)	1	883300	1 630 €
Network cable 15m	1	214984	67 €
3-way diverter valve, 1 Inch	1	887010	339 €

### Accessories supplied with the heat pump:

- AP420
- Outside temperature sensor
- Speed controlled circulation pump

# Heat Pump Accessoires

## Controller Accessories



	Article No	Price
Remote control OI 420	670013	159 €
Heating circuit module IM110	670012	772 €
Temperature sensor PT1000	812300	12 €
Blind cover AP420	670191	64 €

## Electric meter

Electricity meter 400V / PV Counter	790510	273 €
Electricity meter 230V	620102	99 €
Cable set electricity meter 400V RuralECO / ECOAir	738137	15 €
Cable set electricity meter 400V WPLT	738138	15 €
Cable set electricity meter 230V RuralECO / UrbanECO / ECOAir	738140	11 €
Cable set electricity meter 230V UrbanECO / RuralECO	738139	14 €

## Electric booster heater



Electric booster heater - 6kW	738003	398 €
Electric booster heater - 9kW	738012	473 €
Cable for Electric booster heater 10m	189978	42 €

## Heat meter



Vortex sensor with 3m cable	670061	186 €
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## Heating Pressure Switch



Heating Pressure Switch	738120	75 €
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## Network



WIFI Stick for AP 420	670076	40 €
Network cable 10 m grey	214983	28 €
Network cable 25 m grey	214986	67 €
Network cable 30 m grey	214987	79 €

# Heat Pump Accessoires

	Article No	Price
Safety assembly		
		
Expansion vessel 25l	602335	63 €
Expansion vessel, 35l	400000	65 €
Safety assembly (without connection set)	738164	116 €
Mixing valves		
		
3-way diverter valve, 1 inch	887010	339 €
3-way diverter valve, 5/4 inch	887020	351 €
Set for heating		
		
Set for direct heating circuit	887001	509 €
Set for heating circuit with mixer	887000	799 €
Low loss header		
		
Low loss header 5/4" to 6 m <sup>3</sup> /h CP90, DN 32	887004	453 €
Low loss header 1" to 3 m <sup>3</sup> /h CP70, DN 25	887005	189 €
Passive cooling		
		
Module Passive cooling (Standard)	738156	1 249 €
Module Passive cooling (Stainless steel)	738160	1 589 €
Umwälzpumpen		
		
Umwälzpumpe Yonos Pico 25/1-6*	670500	166 €
Umwälzpumpe Stratos Para 30/1-8 PWM*	670502	232 €
Umwälzpumpe Yonos Para G25-180/8-75 PWM*	670503	183 €
Wärmedämmschale für Yonos Pico 25/1-6*	670504	259 €

## Cylinder

The cylinders have corrosion protection depending on the type. Either by enamelling and use of a magnesium protective anode or by the production of stainless steel. Buffer tanks are not susceptible to corrosion due to their use in a closed system.



The storage tanks are designed exclusively for use with drinking water. When using sparkling water tanks with enamelling, the conductivity of the water must be sufficient for a function of the magnesium protective anode. For soft water (<math>\leq 6^\circ \text{dH}</math>) we recommend the use of stainless steel storage tanks. If water treatment plants are installed, the water hardness should be set at >math>6^\circ \text{dH}</math>.

Fresh Water Module (FWM)

Article No	Price
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FWM 24 24 liters / min (at 50 ° C buffer temp.)	738113	1 380 €
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At buffer temperatures of more than 55 ° C, a thermal charging valve (Thermovar) with an opening temperature of 55 ° C shall be provided to protect the heat exchanger. This is especially needed for wood boiler connections or increasing the buffer temperature with an electric heating element.

Hot water tank with high performance register



HRS300 (300l with 3.5m <sup>2</sup> HP register)	883300	1 630 €
HRS400 (400l with 4.6m <sup>2</sup> WP register)	883400	1 985 €
HRS500 (500l with 5.9m <sup>2</sup> WP register)	883500	2 125 €
HRS600 (600l with 2m <sup>2</sup> Solar and 5.7m <sup>2</sup> WP register)	883600	3 240 €

Buffer cylinder



PU300 (300l)	881300	890 €
PU500 (500l)	881500	1 090 €
PU500K (500l cooling buffer)	881062	1 695 €
PU800 (800l)	881800	1 178 €
PU1000 (1000l)	881100	1 278 €

## Air heater

The devices are compact and easy to install everywhere. They are suitable for both wall and ceiling mounting. Operation takes place with a piping system from a central heating system. The power ratings range from 10 to 118 kW. The integrated heat exchanger is made of copper / aluminium for hot water as heating medium. The devices are protected against splash water (protection class IP54).

The multi-stage adjustable blowers can be adapted exactly to the requirements on site. They ensure draft-free, area-wide and comfortable heat and air distribution. The Kroll consultant team will be happy to help you determine your needs.



- **Large range of devices**

The large selection of models with multi-stage fan allows the most optimal solution of their requirements.

- **Useable for each room**

Versatile use through simple conversion from wall to ceiling mounting.

- **Low sound power**

The quiet operation prevents unpleasant noise pollution.

# Air heater

Air heater



	Article No	Price
LH120 10,5 - 13,7 kW	399201	1.019 €
LH130 13 - 17,8 kW	399202	1.078 €
LH220 16,6 - 18,1 kW	399203	1.122 €
LH230 20,5 - 24,5 kW	399204	1.206 €
LH320 20,3 - 28,1 kW	399205	1.325 €
LH330 23,3 - 37,4 kW	399206	1.351 €
LH420 24,1 - 32,7 kW	399207	1.429 €
LH430 30,3 - 44 kW	399208	1.466 €
LH520 29,2 - 40,1 kW	399209	1.601 €
LH530 36 - 54 kW	399210	1.642 €
LH620 42,1 - 48,6 kW	399211	1.901 €
LH630 54,4 - 64,7 kW	399212	2.011 €
LH720 62,7 - 69,4 kW	399213	2.904 €
LH730 80,7 - 90,4 kW	399214	3.177 €
LH920 80,2 - 91,2 kW	399215	3.288 €
LH930 105,1 - 118,4 kW	399216	3.616 €

## Additional parts

Brackets for wall mounting for LH120 - LH 930	399250	154 €
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# Geothermal Absorber System

GeoCollect geothermal heat absorber modules collect valuable energy from the surrounding soil. With proper dimensioning, a reliable regeneration of the soil in the absorption environment is ensured.

GeoCollect geothermal absorber modules are an effective and cost-effective alternative to geothermal probes. Compared with conventional surface collectors, this system requires significantly less surface area.

Throughflow (low-flow principle), the GeoCollect absorbers achieve their efficient extraction performance. The vertically installed GeoCollect absorbers draw energy from a large volume of soil (approximately 0.5 m horizontally and approximately 0.4 m vertically).



This arrangement, with 0.7 m between the absorbers, leads to extremely low area consumption at a surface removal rate of  $142.61 \text{ W} / \text{m}^2$ . The calculation basis  $99.83 \text{ W}$  per module applies in principle to all soil conditions! Exception: gravel (not water-bearing). The discontinuous operation of the heat pump in conjunction with a buffer storage always allows the soil enough regeneration time to provide enough energy throughout the heating season. Below you will find the geothermal sets up to 12kW heating output. Geothermal sets up to 17kW heating output on request.

# Geothermal Absorber System

Number	Unit	Article No	Price
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## Tool



Welding tool\*

		399000	290 €
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## Set for 6-7kW Heating Output



Geothermal Absorber	50	Pce	399001	5,646 €
	5	Module rows		
Width 0.7m x depth 1.5m x length 5m per module row	5	Trench		
Required Land	35	m <sup>2</sup>		
PP-Pipe 25x2,3mm	200	m		
0,65m DN 32 PP-pipe to connect absorber rows	5	Pce		
90° welded connection DN 32	10	Pce		
Pipe pieces 25x2,3x800mm	5	Pce		
Reduction sleeves 32-25 mm	10	Pce		
45° welded connection DN 25	10	Pce		
5-way brine-manifold-shaft with pre-flow regulators	1	Pce		
Thermal transfer medium with 25% ethylene glycol	1	200l		
Repair kit for mounting errors	1	Pce		
Standard connection set Plant room	1	Pce		

## Set for 7-8kW Heating Output

Geothermal Absorber	60	Pce	399002	6,266 €
	6	Module rows		
Width 0.7m x depth 1.5m x length 5m per module row	6	Trench		
Required Land	42	m <sup>2</sup>		
PP-Pipe 25x2,3mm	200	m		
0,65m DN 32 PP-pipe to connect absorber rows	6	Pce		
90° welded connection DN 32	12	Pce		
Pipe pieces 25x2,3x800mm	6	Pce		
Reduction sleeves 32-25 mm	12	Pce		
45° welded connection DN 25	12	Pce		
6-way brine-manifold-shaft with pre-flow regulators	1	Pce		
Thermal transfer medium with 25% ethylene glycol	1	200l		
Repair kit for mounting errors	1	Pce		
Standard connection set Plant room	1	Pce		

\*Net price

# Geothermal Absorber System

	Number	Unit	Article No	Price
<b>Set for 8-9kW Heating Output</b>				
Geothermal Absorber	70	Pce	399003	7,456 €
	7	Module rows		
Width 0.7m x depth 1.5m x length 5m per module row	7	Trench		
Required Land	49	m <sup>2</sup>		
PP-Pipe 25x2,3mm	300	m		
0,65m DN 32 PP-pipe to connect absorber rows	7	Pce		
90° welded connection DN 32	14	Pce		
Pipe pieces 25x2,3x800mm	7	Pce		
Reduction sleeves 32-25 mm	14	Pce		
45° welded connection DN 25	14	Pce		
7-way brine-manifold-shaft with pre-flow regulators	1	Pce		
Thermal transfer medium with 25% ethylene glycol	1	200l		
Thermal transfer medium with 25% ethylene glycol	1	60l		
Repair kit for mounting errors	1	Pce		
Standard connection set Plant room	1	Pce		

<b>Set for 9-10kW Heating Output</b>				
Geothermal Absorber	80	Pce	399004	8,042 €
	8	Module rows		
Width 0.7m x depth 1.5m x length 5m per module row	8	Trench		
Required Land	56	m <sup>2</sup>		
PP-Pipe 25x2,3mm	300	m		
0,65m DN 32 PP-pipe to connect absorber rows	8	Pce		
90° welded connection DN 32	16	Pce		
Pipe pieces 25x2,3x800mm	8	Pce		
Reduction sleeves 32-25 mm	16	Pce		
45° welded connection DN 25	16	Pce		
8-way brine-manifold-shaft with pre-flow regulators	1	Pce		
Thermal transfer medium with 25% ethylene glycol	1	200l		
Thermal transfer medium with 25% ethylene glycol	1	60l		
Repair kit for mounting errors	1	Pce		
Standard connection set Plant room	1	Pce		

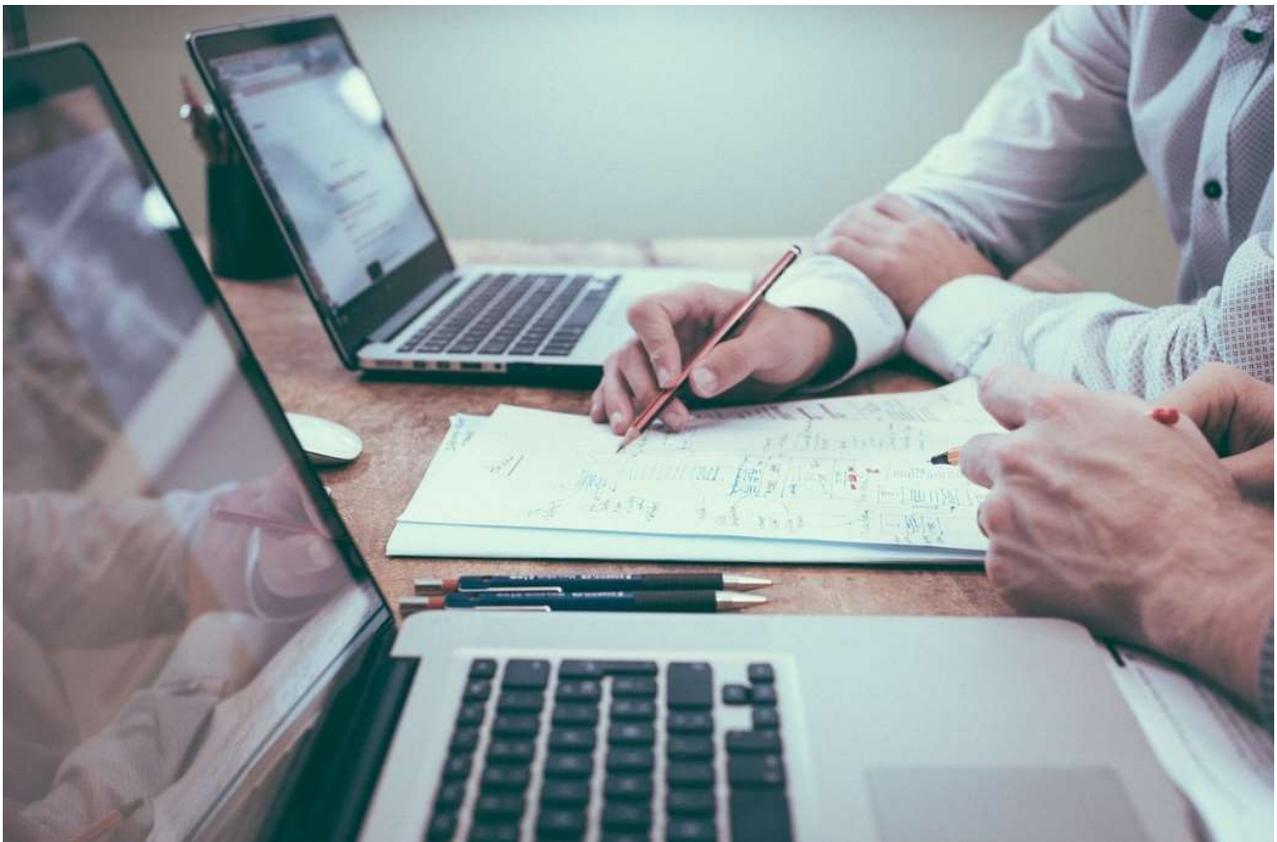
# Geothermal Absorber System

	Number	Unit	Article No	Price
<b>Set for 10-11kW Heating Output</b>				
Geothermal Absorber	90	Pce	399005	8,903 €
	9	Module rows		
Width 0.7m x depth 15m x length 5m per module row	9	Trench		
Required Land	63	m <sup>2</sup>		
PP-Pipe 25x2,3mm	300	m		
0,65m DN 32 PP-pipe to connect absorber rows	9	Pce		
90° welded connection DN 32	18	Pce		
Pipe pieces 25x2,3x800mm	9	Pce		
Reduction sleeves 32-25 mm	18	Pce		
45° welded connection DN 25	18	Pce		
9-way brine-manifold-shaft with pre-flow regulators	1	Pce		
Thermal transfer medium with 25% ethylene glycol	1	200l		
Thermal transfer medium with 25% ethylene glycol	2	60l		
Repair kit for mounting errors	1	Pce		
Standard connection set Plant room	1	Pce		
<b>Set for 11-12kW Heating Output</b>				
Geothermal Absorber	100	Pce	399006	9,489 €
	10	Module rows		
Width 0.7m x depth 15m x length 5m per module row	10	Trench		
Required Land	70	m <sup>2</sup>		
PP-Pipe 25x2,3mm	300	m		
0,65m DN 32 PP-pipe to connect absorber rows	10	Pce		
90° welded connection DN 32	20	Pce		
Pipe pieces 25x2,3x800mm	10	Pce		
Reduction sleeves 32-25 mm	20	Pce		
45° welded connection DN 25	20	Pce		
10-way brine-manifold-shaft with pre-flow regulators	1	Pce		
Thermal transfer medium with 25% ethylene glycol	1	200l		
Thermal transfer medium with 25% ethylene glycol	2	60l		
Repair kit for mounting errors	1	Pce		
Standard connection set Plant room	1	Pce		

## Warranty and Remote Maintenance

Overview	Article No	Duration	Conditions	Net Costs for Partner	Remarks
Remote maintenance access	901025	1 Jahr	Internet available	50 €	for Server Costs
Premium 3*	901026	3 Jahre	Commissioning Report + Internet available	160 €	incl. remote maintenance package
Premium 5*	901027	5 Jahre	Commissioning Report + Internet available	495 €	incl. remote maintenance package
Premium 10*	901028	10 Jahre	Commissioning Report + Internet available	165 €	Debit order as of commissioning; incl. remote maintenance package

\* All prices are not discountable net prices excl. 20% VAT.



## Remote control software

Overview	Article No	Duration	Conditions	Net Costs for Partner	Remarks
Lizenz KeStudio Scope for Partners	901021	3 Years	Program updates after 3 years are offered separately	1 890 €	-

# Terms & Conditions of PicoEnergy GmbH & Co KG

Stand Jänner 2019

## 1. General conditions

These general terms and conditions (T&C) apply to all our business relationships with companies, legal entities under public law or special public law assets (hereinafter referred to as "partners") in connection with contracts relating to the sale and/or delivery of movable assets (hereinafter referred to as "merchandise"), in particular heat pumps as well as their use and accessories. The T&C apply in their valid version as general agreement also for future contracts with the same partner without the need to make them aware of this fact in each individual case; we will notify our partners of any changes in the T&C without delay. Only our T&C shall apply. Any deviation, counteracting or supplementary T&C of the partners will only become part of our contract if and insofar as we have agreed to its application. Any unconditional execution will not replace the expressed agreement. Any individual agreements (including ancillary agreements, supplements and amendments) precede the T&C. They require a written, textual or electronic form in order to become effective. Any declarations and notifications with legal effect, which the partner is due to give to us after the agreement has been concluded, require a written, textual or electronic form in order to become effective.

## 2. Conclusion of contract

Our offers are open and non-binding. This also applies if we have provided our partner with written, electronic or by other means, catalogues, technical documents, drawings, plans, calculations, reference to DIN standards other product descriptions or documentation, title and copyright of which we have reserved. The ordering of the merchandise by the partner represents a binding offer of contract. Insofar as nothing to the contrary results from the order, we will be entitled to accept this offer of contract within 14 days of its receipt.

## 3. Prices

Prices are understood to be net ex works prices, unless otherwise agreed in individual cases, including packaging and without discount in accordance with the pricelist current at the time of conclusion of contract. All prices are quoted in euros.

## 4. Delivery, transfer of risk, acceptance, delayed acceptance

- (1) The delivery time will be negotiated individually or stated by us at the time of order acknowledgement.
- (2) Where we cannot meet the delivery times agreed as binding for reasons beyond our control (non-availability of performance), we will inform the partner of this without delay and simultaneously advise a new likely delivery time. If the performance is still not available within the new delivery time, we will be entitled, either wholly or partially, to withdraw from the contract; any part-payment made by the partner will then be reimbursed without delay. A case of non-performance in this sense would be, in particular, any delayed delivery by our suppliers if we have concluded a congruent transaction, if neither we nor our supplier are responsible or are not obligated to supply in an individual case.
- (3) Delivery is made ex works. At the request and cost of the partner, the merchandise will be shipped to a different destination (sale to destination to buyer's instructions). Insofar as nothing to the contrary has been agreed, we are entitled to determine the method of dispatch (in particular haulier, shipping route, and packaging).
- (4) The risk of incidental loss or incidental deterioration transfers to the partner no later than at handover; in the case of sale to destination at the buyer's instructions, the risk of incidental loss, incidental deterioration and risk of delay transfers at the point of handover of the merchandise to the person designated to undertake the transportation. If an acceptance has been agreed, this determines the point of transfer of risk. Any delay in acceptance by the partner will be deemed to be equal to handover or acceptance.
- (5) If the partner delays acceptance, if they fail to undertake a joint action or our delivery is delayed for other reasons that are the responsibility of the partner, we are entitled to claim compensation for any loss arising therefrom, including additional costs.

## 5. Payment terms

(1) The purchase price falls due for payment, insofar as no other payment terms are stated on our invoice, within 14 days from date of issue of our invoice and delivery or acceptance of the merchandise. We may reject cheques or bills of exchange offered as payment without giving any reason. Partners are only eligible to offset charges or retain payments insofar as such a right has been legally

established or is undisputed. The adverse rights of the partner remain unaffected in the case of faulty delivery.

(2) In the case of a sale to destination to buyer's instructions, the partner will be responsible for the shipping costs ex works as well as the costs of any shipping insurance that may be required by the partner. Any duties, fees, taxes and other public dues are met by the partner. Any shipping and other packaging becomes the property of the partner; returned packaging will not be accepted, with the exception of pallets.

(3) Settlement payments must be made to one of the accounts listed on the reverse or to a person with due authority to accept cash payments. Partners will be in default upon expiry of the aforementioned due date. During any overdue period, the purchase price will attract overdue interest at the statutory rate applicable at the time. We reserve the right to make further claims for damages due to any delay in payment (costs incurred in chasing, intervention costs, legal costs). Our claim for commercial overdue interest remains unaffected.

(4) If a client's contractual payment or part thereof is overdue by more than two weeks, the entire residual purchase price will become due for payment immediately. Should it become clear after the conclusion of the contract that our claim for the purchase price is at risk, due to inability to perform by our partner (invocation of forced auctions, initiation of an insolvency procedure), we are entitled to decline to perform in accordance with statutory regulations and, insofar as required following setting a deadline, to withdraw from the contract. In the case of contracts concerning the manufacture of unsaleable items (bespoke products), we can declare our withdrawal from contract immediately; statutory regulations concerning the dispensability of setting a deadline remain unaffected.

## 6. Cancellation

The partner has the right to cancel the contract. In the case of cancellation, we are entitled to claim compensation (loss of profit or, if greater, expenses and costs incurred). The level of compensation (cancellation charge) is 20 % of the net order value; discounts and additional payments are not taken into consideration.

## 7. Retention of title

- (1) We retain the title in all merchandise sold up to the time of full payment of all current and future debts arising from the purchase contract and any current business transaction (secured debt).
- (2) Prior to full payment of the secured debt, any merchandise sold under retention of title may neither be pledged nor transferred as a security to third parties. The partner must notify us without delay in writing if and to what extent third parties are given access to our merchandise.
- (3) Should the partner act contrary to contractual obligations, in particular in the case of non-payment of the due purchase price, we are entitled to withdraw from the contract in accordance with statutory regulations, possibly following a demand of payment having been issued, and to demand the handover of the merchandise on account of the retention of title and the withdrawal.
- (4) The partner is entitled to sell and/or process the merchandise that is subject to the retention of title within the course of their normal business activities. In this case, the following additional conditions shall apply.
  - (a) The retention of title extends to the products created by processing, mixing or joining our merchandise to the full extent of their value, whereby we shall be deemed to be the manufacturer. If following processing, mixing or joining with merchandise of third parties their title remains in place, we acquire joint ownership on this processed, mixed or joint merchandise in the ratio of the invoice value. Otherwise, the same applies to such products as for merchandise supplied under retention of title.
  - (b) Any demands against third parties arising from the onward sale of the merchandise or the products are hereby assigned to us by the partner as a security, either in total or to the extent of our possible joint ownership in accordance with the last clause. We accept this assignment. The obligations of the partner mentioned in para. 2 also apply to the recognition of assigned demands.
  - (c) The partner remains entitled jointly with us to call on any debt. We are obliged not to call on debts for as long as the partner meets his/her obligation to pay us, is not overdue, there is no application to instigate an insolvency process and there is no other default in his/her ability to perform. However, should this be the case then we will be entitled to demand that the partner informs us of any demands assigned and the associated debtor, to make all details required to call on the debt known to us, to hand over to us all associated documents and to notify the debtors (third parties) of the assignment.
  - (d) If the realizable value exceeds the security of our demands by more than 15 %, we will release securities at our discretion upon the request of the partner.

## 8. Warranty

(1) PicoEnergy agrees to take on a warranty of two years for materials. PicoEnergy agrees to improve on any defects and

deficiencies for which PicoEnergy is responsible, or to replace them after inspection of PicoEnergy. Only if the improvement or replacement has failed is there a claim for price reduction. Any other or further claim, in particular for cancellation of contract / conversion for whatever legal reason, does not exist. The burden of proof that PicoEnergy is responsible for an error or defect and that the error or defect was present at the time of delivery is solely with the Partner, irrespective of time of occurrence of the error or defect. Services provided by the partner to remedy deficiencies or defects on site are compensated by a flat-rate warranty bonus - the amount of the warranty bonus is settled in the partner contract and is usually already included in the discount granted.

(2) Statutory regulations apply to the rights of the partner in the case of material or legal faults, insofar as nothing to the contrary is stipulated in the following. The special statutory regulations applicable to the final delivery of the merchandise to a consumer remain unaffected in all cases.

(3) The delivery items are free from material faults if the agreed specifications are met. The product descriptions passed onto the partner prior to placing the order or those that were included in the contract as well as in these T&C are the agreed specifications of the merchandise. Insofar as the quality/condition was not agreed, it will be in line with the respective state of the art and statutory regulations. Claims relating to the quality of the software supplied by us will only be considered if a fault can be reproduced. We accept no liability for public statements made by third parties. We reserve the right to implement technical modifications in design that neither impair the function nor diminish the value of the product, and this will not entitle [the client] to raise a claim. This includes particularly deviations from the stated efficiency levels or heating output by +/- 10 %.

(4) Claims in relation to faults raised by the partner are excluded if the partner has failed to inspect the merchandise without delay following its receipt in accordance with statutory obligations and, insofar as a fault manifests itself, fails to notify us without delay in writing, electronically or in text form. For the purposes of immediate notification, it is the time of dispatch which applies, subject to the merchandise arriving in due course. The partner is responsible for providing evidence of dispatch and receipt of the fault notification. The fault notification must include an adequate description of the fault and, insofar as this is useful, the type and kind of occurrence. Should the partner fail to notify us accordingly, the merchandise will be deemed to have been approved, unless it is a fault that such inspection could not have identified. Where such a fault becomes apparent later, the partner must notify us without delay following discovery, otherwise the merchandise will be deemed to have been approved in spite of this fault. If the fault was maliciously withheld, the clause above will not be applied to the partner.

(5) If the merchandise delivered is faulty, we are entitled to remedy the fault or to replace the merchandise with a fault-free new alternative, as we see fit. We are entitled to make the due remedy subject to the payment of the due purchase price by the partner. However, the partner is entitled to retain an appropriate proportion of the purchase price in the ratio of the fault.

(6) The partner must allow us the required time and opportunity for due remedy in particular by handing over the rejected merchandise for test purposes. In accordance with statutory regulations, the partner must return to us the faulty merchandise where a replacement is supplied by us and include a completed return note. Should a demand for remedy of faults made by the partner prove to be unjustified, we will be entitled to reclaim the associated costs from the partner.

(7) Should a fault be identified with the end customer for which we are liable, the partner must inspect the fault on site with the end customer and notify us in line with paragraph 3. The partner is obliged, insofar as this is reasonable under the circumstances, to remove the fault at the end customer's site in accordance with our instructions. The partner may claim reimbursement of costs agreed prior to the event by submitting an invoice in line with statutory requirements. Costs which the partner would have to incur in any case should be offset. If the claim proves to be unjustified, the partner should claim any cost arising from the end customer; claims against us will then not be justified.

(8) Should the remedy fail or a deadline set by the partner for the remedy has expired or not be needed in accordance with statutory requirements, the partner may withdraw from the purchase contract or reduce the purchase price. Both parties must endeavor to find a mutually acceptable solution prior to the declaration of withdrawal. If no agreement is reached between the parties within 10 days, the partner is legally entitled to withdraw from the contract. No right to withdrawal exists in the case of an insignificant fault.

(9) The end customer or operator bears responsibility for perfect water quality. This applies particularly to adherence to VDI guideline 2035 and heating water standard H5195-1.

(10) The warranty excludes all damage resulting from failure to observe our regulations and conditions of installation, assembly and commissioning, failure to observe the operating and service instructions and failure to observe applicable standards. In the case

of a failure to observe applicable standards, we accept no liability for any losses and consequential losses arising therefrom. We shall not be liable for any damage arising from mechanical stress and/or changes brought about by weather conditions, including frost damage, particularly within the area of geothermal collectors.

(11) Warranty claims for merchandise (particularly heat pumps) are subject to a statute of limitation of two years from the date of dispatch, unless a longer period applies in accordance with the applicable law.

(12) Claims by the partner for compensation or reimbursement for expenditure can only be made in accordance with Figure 9 and are otherwise excluded.

## 9. Liability

(1) Liability for compensation and reimbursement of expenditure in connection with the infringement of a contractual or extra-contractual obligation exists, insofar as nothing to the contrary is provided by these T&C, exclusively in the case of deliberate or grossly negligent actions. In the case of ordinary negligence, we are only liable for a) losses arising from loss of life, injury or a risk to health as well as b) losses arising from an infringement of an essential contractual obligation (only the fulfillment of which would enable the correct execution of the contract and the observation of which the contractual partner can and should be able to generally rely upon). However, in this case our liability is limited to the predictable, typical loss that may arise; any liability for consequential losses is excluded.

(2) Compensation in place of the performance is excluded.

(3) The partner can only withdraw or terminate the contract on account of an infringement of obligation that is not a fault only if such infringement was grossly negligent or deliberate and our responsibility. Any general right to termination by the partner is excluded. In addition, the statutory requirements and legal consequences apply.

(4) The restrictions of liability resulting from these T&C shall not apply if we have concealed a fault maliciously. Claims in connection with liability for a faulty product

(Acts based on the 85/374/EEC Directive of the Council of the EC dated 25 July 1985) are not excluded. Insofar as we have given a guarantee, such guarantee is limited to the merchandise or the part concerned and there is no liability beyond this scope.

## 10. Guarantee conditions

(1) Guarantees concerning the quality and durability of the object of supply apply exclusively to the extent that we have expressed such a guarantee in writing. Insofar as we have issued a guarantee, this will not cover losses arising from inappropriate installation, poor siting, inadequate maintenance, failure to observe applicable standards (e.g. ÖNORM H5195, pt. 1, heating water standard) and failure to observe the installation and operating instructions.

(2) The partner is obliged to hand over and explain our guarantee declaration and its conditions to the end customer. The partner is obliged to commission the merchandise supplied in accordance with our specification and current technological standards at his own expense and to instruct the customer in its operation. All claims arising from incorrect system operation are excluded from our liability, unless we are liable due to gross negligence or deliberate action. In a guarantee case the partner is obliged to act in line with Figure 8, paragraph 6 at the customer's premises. In accordance with Figure 8, paragraph 6 the partner is entitled to reimbursement for his/her efforts and costs.

Subject to the partner not being authorized accordingly, commissioning and the removal of warranty and guarantee faults should be carried out by PicoEnergy or a service partner certified by PicoEnergy.

## 11. Place of contract and place of law

For both parties, the place of contract is the registered office of our business. The contractual parties agree the jurisdiction of the court with the relevant technical competence for Pinsdorf for all legal disputes arising from this contract in accordance with § 104 Austria JN as place of law.

## 12. Obligations of trust

It is our stated intent in every case to satisfy our customers. Should a default nevertheless occur, please contact us in the confidence that we will endeavor to find an acceptable solution.





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