

HEAT PUMPS CALLA VERDE



03.2025

CATALOG

 MONOBLOK

 SPLIT



HT Heiztechnik Production Company is a modern factory that produces heating devices with capacity from 3.9 kW to 7 MW. Production takes place in modern production facilities using high-tech machine park - laser steel cutting devices, numerically controlled press brakes and robotic welding posts. Our products are characterized by very high energy efficiency, as well as simple and easy operation. The design office continuously modernizes and prepares new heating devices for production. The company's success is the creation of a series of eco-friendly boilers with capacity up to 480kW. The boilers of this series meet the highest requirements for environmental protection and energy efficiency set for **class 5** and **ECO DESIGN**.

The first **CALLA** 10kW heat pumps were manufactured in 2011 and were intended for heating residential buildings. Over the following years, a team of engineers worked on the development of heat pumps in order to obtain the best technical and operational parameters. Parameters of the devices in use were analyzed, information from users and installers was collected. The result was a series of high-tech **CALLA VERDE** inverter heat pumps with capacity of 5-20 kW. **CALLA VERDE** pumps use the latest refrigerant **R452B**, which has been manufactured for high-performance heat pumps and is the answer to increasingly stringent environmental requirements. The use of **R452B** and modern components has resulted in the heat pumps achieving very high COP (7.97) and SCOP (4.76) ratios. Moreover, the devices are very quiet. The operating parameters are confirmed by tests in an independent accredited laboratory.

HT Heiztechnik products constitute probably the widest range of heating devices in Poland and are appreciated in both domestic foreign markets.

In March 2002 **HT Heiztechnik Sp. z o.o.** acquired a majority shareholder - the Austrian company **Hargassner GmbH** - one of the leaders in the heating industry in Europe and the world. **HT Heiztechnik** has gained a very reliable partner to implement its development plan in the production of heat pumps.



CALLA VERDE

CALLA VERDE M - Monoblock

Heat pump designed for **heating and cooling of confined spaces** and production of domestic hot water in an external or integrated tank. A refrigeration system made of state-of-the-art components guarantees very high performance. The pumps are manufactured as **monoblock** and **split** units.

CALLA VERDE is a modern, inverter air heat pump, which is designed as the primary heat source for residential buildings with a cooling function during the summer. The **CALLA VERDE** heat pumps are the first certified devices on the domestic market to use the refrigerant **R452B**, which was manufactured for high-performance heat pumps and meets strict environmental requirements.

The use of an inverter compressor, with the latest **R452B** refrigerant and modern components, made it possible to achieve high **COP (up to 7.97)** and **SCOP (up to 4.76)** as well as high heating water temperatures up to 65°C (without using an electric heater).

The **CALLA VERDE** heat pump is a unit prepared as an independent, complete heat source for newly built but also for modernized buildings with underfloor and radiator heating systems. The use of a modulated capacity inverter compressor eliminated the need for a buffer tank, which significantly reduces the cost of installing the heat source and saves space.

The **CALLA VERDE** pump with its hydraulic modules is a ready-made heating solution for buildings.

The operating parameters of the **Calla Verde M** pump are confirmed by tests at a certified research institute.



R452B

ECOLOGY FIRST

The new environmentally friendly refrigerant **R452B**. Meets current European requirements - **GWP 676**.



46 dB(A)

QUIET OPERATION

Extremely quiet operation of the outdoor unit. Sound power of Calla Verde M9 - **46dB** in accordance with the standards **EN 12102-1**



MODERN DESIGN

Copeland Scroll™ inverter compressor operating in wide power modulation



do 4,76



do 7,97

ECONOMICAL HEATING

High energy efficiency - COP of up to **7.97** in accordance with the standards **EN-14511**.



CALLA VERDE M20 + Comfort II
GOLD MEDAL of the Poznań International Fair 2020.



EKOLAURY 2021 of the Polish Chamber of Ecology.

CALLA VERDE

OUTDOOR UNITS



CALLA VERDE M
CALLA VERDE S
5 - 12 kW



CALLA VERDE M
CALLA VERDE S
5 - 12 kW
NA STOJAKU - OPCJA



CALLA VERDE M
CALLA VERDE S
14 - 20 kW

INTERNAL MODULES

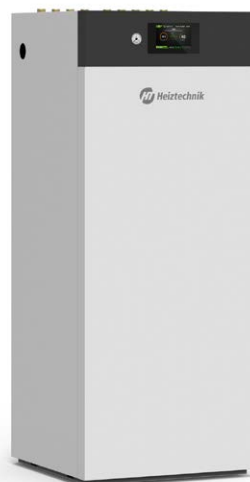
MONOBLOK



BASIC
HANGING AUTOMATION MODULE



STYLE
HANGING AUTOMATION MODULE
WITH HYDROBOX



COMFORT / COMFORT II
STANDING HYDROBOX WITH DHW
TANK AND HYDRAULIC MODULE

SPLIT



BASIC
HANGING AUTOMATION MODULE
WITH A SPLIT BOX



STYLE
HANGING AUTOMATION MODULE
WITH HYDROBOX AND WITH INTEGRATED
SPLIT BOX



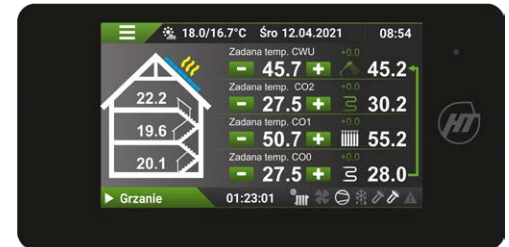
COMFORT / COMFORT II
STANDING HYDROBOX WITH DHW TANK
AND HYDRAULIC MODULE
AND SPLIT BOX



INTUITIVE CONTROL

The heat pump is equipped with a modern 5" colour touchscreen display for easy access to all controller functions.

The standard equipment also includes an internet module that allows remote operation of the unit using the BragerOne app.



SG Ready label (SG - Smart Grid) - the pump controller is adapted to work with the "Smart Energy Grid"



Characteristics of the CALLA VERDE M heat pump unit with internal modules:

- The pump is equipped with a modern Copeland Scroll™ inverter compressor with variable speed and high modulation of heating power.
- Large, color touch screen.
- Operation via the Internet.
- The entire heating system can be controlled.
- Optimal weather control.
- Cooperation with photovoltaic system.
- Wide operating temperature range.
- The electronic water circuit pump is continuously adjustable.
- Magnetic dirt separator.
- Electric heater with 3, 6, 9 kW operating grades.
- Heating water flow meter .
- Central Heating safety group.
- Very high COP values.
- Very quiet operation through the use of a large modern EC fan.
- Heat recovery from the inverter.
- Lower part of the evaporator heated with refrigerant - prevents the drip tray from freezing.
- Full diagnostics in automation of individual heat pump components.
- Possibility to work at a very low heating water temperature.
- Modern design.
- Internal unit made of galvanized steel, powder coated housing.
- External unit made of aluminum, powder coated housing.
- **The operating parameters of the heat pump are confirmed by a certified European institute.**



	Basic	Style	Comfort	Comfort II
Automation	•	•	•	•
Color touch screen	•	•	•	•
Operation via the Internet	•	•	•	•
Control of the entire heating system	•	•	•	•
Optimal weather control	•	•	•	•
Electronic CH / DHW circuit pump, continuously adjustable from automation system	•	•	•	•
Magnetic dirt separator	•	•	•	•
Electric heater with 3, 6, 9 kW operating grades	•	•	•	•
Flow meter	•	•	•	•
Central Heating safety group	•	•	•	•
Domestic hot water tank	•	•	•	•
CH / DHW switch valve	•	•	•	•
Hydraulic system assembled in a compact housing	•	•	•	•
Wall-mounted design	•	•	•	•
Floor standing design	•	•	•	•
Heating water pressure gauge	•	•	•	•
Heater contactors	•	•	•	•
Hydraulic connections at the top	•	•	•	•
Hydraulic connections at the bottom	•	•	•	•
Direct CH cycle	•	•	•	•
Direct CH circuit and CH circuit with mixing valve	•	•	•	•
DHW tank capacity for 5 - 12 kW			250 L	250 L
DHW tank capacity for 14 - 20 kW			275 L	275 L
Internal unit dimensions (W x Th x H)	315 x 132 x 450	640 x 400 x 770	250L - 695 x 858 x 1535 275L - 695 x 858 x 1770	250L - 695 x 900 x 1535 275L - 695 x 900 x 1770
Weight	8.2 kg	40 kg	250 L - 195 kg 275 L - 255 kg	250 L - 205 kg 275 L - 265 kg

Calla Verde MA	5	7	9	12	14	16	18	20
Heating power [kW]	5	7	9	12	14	16	18	20
Dimensions of external unit (W x Th x H) [mm]	1120 x 485 x 860	1120 x 485 x 860	1360 x 560 x 860	1360 x 560 x 860	1350 x 585 x 1505	1350 x 585 x 1505	1350 x 585 x 1505	1350 x 585 x 1505
Height of the ext. unit stand [mm]	400	400	400	400	-	-	-	-
Weight of external unit [kg]	129	129	148	148	210	212	212	212
Refrigerant	R452B	R452B	R452B	R452B	R452B	R452B	R452B	R452B
Operating range	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C
Refrigerant quantity [kg]	2,35	2,35	2,35	2,45	3,95	3,95	3,95	3,95
Global Warming Potential [GWP]	676	676	676	676	676	676	676	676
CO ₂ equivalent [t]	1,59	1,59	1,59	1,66	2,67	2,67	2,67	2,67
Maximum current [A]	15	15	15	3 x 12	3 x 12	3 x 12	3 x 12	3 x 12
Flow temperature [°C]	65	65	65	65	65	65	65	65
Supply voltage	230V 50Hz	230V 50Hz	230V 50Hz	3 x 400V 50 Hz	3 x 400V 50 Hz	3 x 400V 50 Hz	3 x 400V 50 Hz	3 x 400V 50 Hz

		T _j ² °C	COP _d ¹							
Temperature of use	Low 35°C	-7	3,04	2,95	2,84	2,96	3,19	3,23	3,28	3,23
		2	3,94	4,01	4,04	3,99	4,42	4,44	4,42	4,35
		7	5,10	5,21	5,53	5,43	6,39	6,46	6,54	6,59
		12	6,32	6,41	6,67	6,87	7,97	7,78	7,83	7,88
	Medium 55°C	-7	2,02	1,97	2,14	2,34	2,50	2,46	2,41	2,35
		2	3,32	3,31	3,16	3,44	3,32	3,34	3,30	3,11
		7	4,21	4,24	4,31	4,78	4,82	4,92	4,80	4,77
		12	5,25	5,32	5,80	5,93	6,35	6,10	5,59	5,50

SCOP for 35 °C (underfloor heating) moderate climate (A) ^{2/4}	4,09	4,12	4,21	4,20	4,73	4,76	4,71	4,69
Seasonal energy efficiency [%] ⁴	160,5	161,0	165,5	165,1	186,3	187,2	185,4	184,6
Class	A++	A++	A++	A++	A+++	A+++	A+++	A+++
Seasonal energy efficiency set [%] ⁴	164,5	165,0	169,5	169,1	190,3	191,2	189,4	188,6
Max. power acc. at A7/W35	5	7	9	12	14	16	18	20
TBIVALENT [°C]	-7	-7	-7	-7	-7	-7	-7	-7

SCOP for 55 °C (underfloor heating) moderate climate (A) ^{2/4}	3,25	3,23	3,29	3,54	3,68	3,61	3,53	3,40
Seasonal energy efficiency [%] ⁴	127,1	126,0	128,7	138,7	144,3	141,6	138,2	133,0
Class	A++	A++	A++	A++	A++	A++	A++	A++
Seasonal energy efficiency set [%] ⁴	131,1	130,0	132,7	142,7	148,3	145,6	142,2	137,0
Max. power acc. at A7/W35	5	7	9	12	14	16	18	20
TBIVALENT [°C]	-7	-7	-7	-7	-7	-7	-7	-7

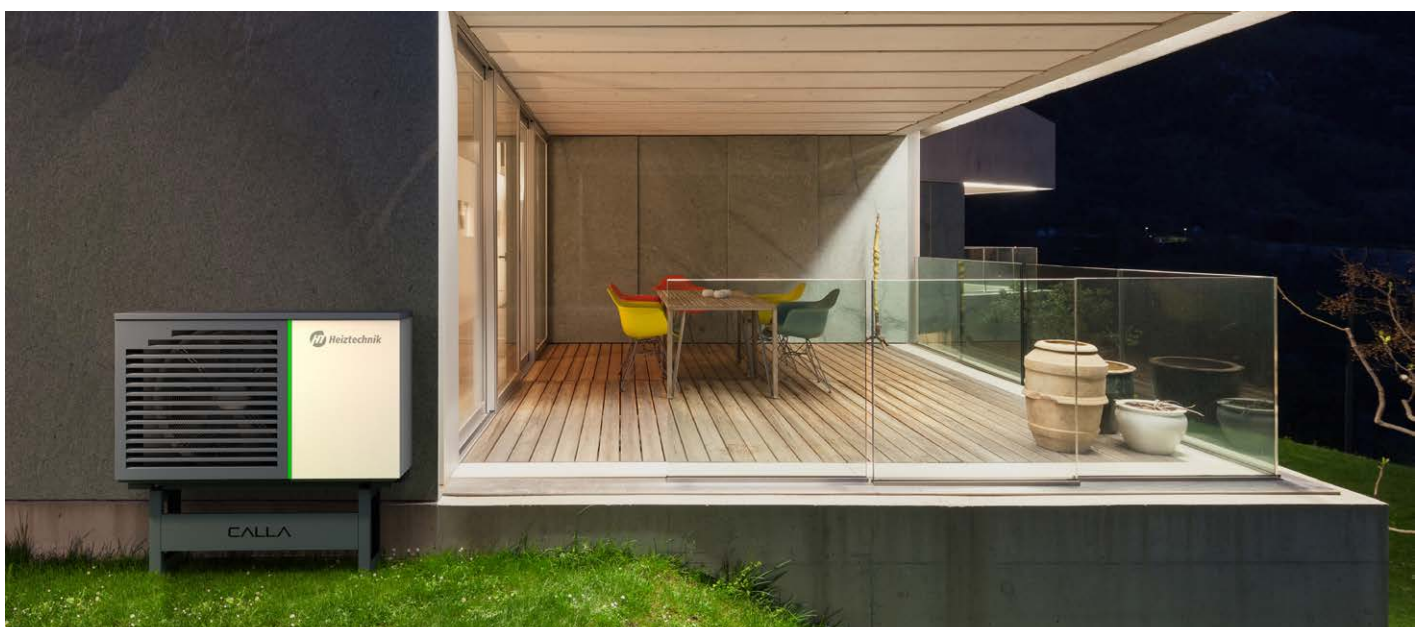
Sound power level LWA ³	54	55	46	48	50	52	53	54
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¹ For nominal loads according to PN-EN 14511

² SCOP according to 14825:2019

³ According to PN-EN 12102-1

⁴ Class IV controller



The dimensions given may vary from actual dimensions to 2%. Other detailed dimensions are available on the website.

In order to improve the product, HT Heiztechnik reserves the law to change specifications and equipment. The above prospectus does not constitute an offer within the meaning of commercial law.

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- The pump is equipped with a modern Copeland Scroll™ inverter compressor with variable speed and high modulation of heating power.
- Large, color touch screen.
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- Cooperation with photovoltaic system.
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- Magnetic dirt separator.
- Electric heater with 3, 6, 9 kW operating grades.
- Heating water flow meter .
- Central Heating safety group.
- Very high COP values.
- Very quiet operation through the use of a large modern EC fan.
- Heat recovery from the inverter.
- Lower part of the evaporator heated with refrigerant - prevents the drip tray from freezing.
- Full diagnostics in automation of individual heat pump components.
- Possibility to work at a very low heating water temperature.
- Modern design.
- Internal unit made of galvanized steel, powder coated housing.
- External unit made of aluminum, powder coated housing.



	Basic	Style	Comfort	Comfort II
Automation	•	•	•	•
Color touch screen	•	•	•	•
Operation via the Internet	•	•	•	•
Control of the entire heating system	•	•	•	•
Optimal weather control	•	•	•	•
Electronic CH / DHW circuit pump, continuously adjustable from automation system	•	•	•	•
Magnetic dirt separator		•	•	•
Electric heater with 3, 6, 9 kW operating grades		•	•	•
Flow meter	•	•	•	•
Central Heating safety group		•	•	•
Domestic hot water tank			•	•
CH / DHW switch valve			•	•
Hydraulic system assembled in a compact housing		•	•	•
Wall-mounted design	•	•		
Floor standing design			•	•
Heating water pressure gauge		•	•	•
Heater contactors		•	•	•
Hydraulic connections at the top			•	•
Hydraulic connections at the bottom		•		
Direct CH cycle			•	
Direct CH circuit and CH circuit with mixing valve				•
Split Box (W x Th x H)	375 x 165 x 600	-	375 x 165 x 600	375 x 165 x 600
DHW tank capacity for 5 - 12 kW			250 L	250 L
DHW tank capacity for 14 - 20 kW			275 L	275 L
Internal unit dimensions (W x Th x H)	315 x 132 x 450	640 x 400 x 770	250L - 695 x 858 x 1535 275L - 695 x 858 x 1770	250L - 695 x 900 x 1535 275L - 695 x 900 x 1770
Weight	8,2kg	40 kg	250 L - 195 kg 275 L - 255 kg	250 L - 205 kg 275 L - 265 kg

Calla Verde SA	5	7	9	12	14	16	18	20
Heating power [kW]	5	7	9	12	14	16	18	20
Dimensions of external unit (W x Th x H) [mm]	1120 x 485 x 860	1120 x 485 x 860	1360 x 560 x 860	1360 x 560 x 860	1350 x 585 x 1505	1350 x 585 x 1505	1350 x 585 x 1505	1350 x 585 x 1505
Height of the ext. unit stand [mm]	400	400	400	400	-	-	-	-
Weight of external unit [kg]	129	129	148	148	210	212	212	212
Refrigerant	R452B	R452B	R452B	R452B	R452B	R452B	R452B	R452B
Operating range	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C	-25°C ÷ 40°C
Refrigerant quantity [kg]	2,35	2,35	2,35	2,45	3,95	3,95	3,95	3,95
Global Warming Potential [GWP]	676	676	676	676	676	676	676	676
CO ₂ equivalent [t]	1,59	1,59	1,59	1,66	2,67	2,67	2,67	2,67
Maximum current [A]	15	15	15	3 x 12	3 x 12	3 x 12	3 x 12	3 x 12
Flow temperature [°C]	65	65	65	65	65	65	65	65
Supply voltage	230V 50Hz	230V 50Hz	230V 50Hz	3 x 400V 50 Hz	3 x 400V 50 Hz	3 x 400V 50 Hz	3 x 400V 50 Hz	3 x 400V 50 Hz

		T _j ² °C	COP _d ¹							
Temperature of use	Low 35°C	-7	3,04	2,95	2,84	2,96	3,19	3,23	3,28	3,23
		2	3,94	4,01	4,04	3,99	4,42	4,44	4,42	4,35
		7	5,10	5,21	5,53	5,43	6,39	6,46	6,54	6,59
		12	6,32	6,41	6,67	6,87	7,97	7,78	7,83	7,88
	Medium 55°C	-7	2,02	1,97	2,14	2,34	2,50	2,46	2,41	2,35
		2	3,32	3,31	3,16	3,44	3,32	3,34	3,30	3,11
		7	4,21	4,24	4,31	4,78	4,82	4,92	4,80	4,77
		12	5,25	5,32	5,80	5,93	6,35	6,10	5,59	5,50

SCOP for 35 °C (underfloor heating) moderate climate (A) ^{2/4}	4,09	4,12	4,21	4,20	4,73	4,76	4,71	4,69
Seasonal energy efficiency [%] ⁴	160,5	161,0	165,5	165,1	186,3	187,2	185,4	184,6
Class	A++	A++	A++	A++	A+++	A+++	A+++	A+++
Seasonal energy efficiency set [%] ⁴	164,5	165,0	169,5	169,1	190,3	191,2	189,4	188,6
Rated thermal power [kW]	5	7	9	12	14	16	18	20
TBIVALENT [°C]	-7	-7	-7	-7	-7	-7	-7	-7

SCOP for 55 °C (underfloor heating) moderate climate (A) ^{2/4}	3,25	3,23	3,29	3,54	3,68	3,61	3,53	3,40
Seasonal energy efficiency [%] ⁴	127,1	126,0	128,7	138,7	144,3	141,6	138,2	133,0
Class	A++	A++	A++	A++	A++	A++	A++	A++
Rated thermal power [kW]	131,1	130,0	132,7	142,7	148,3	145,6	142,2	137,0
Rated thermal power [kW]	5	7	9	12	14	16	18	20
TBIVALENT [°C]	-7	-7	-7	-7	-7	-7	-7	-7

Sound power level LWA ³	54	55	46	48	50	52	53	54
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¹ For nominal loads according to PN-EN 14511

² SCOP according to 14825:2019

³ According to PN-EN 12102-1

⁴ Class IV controller



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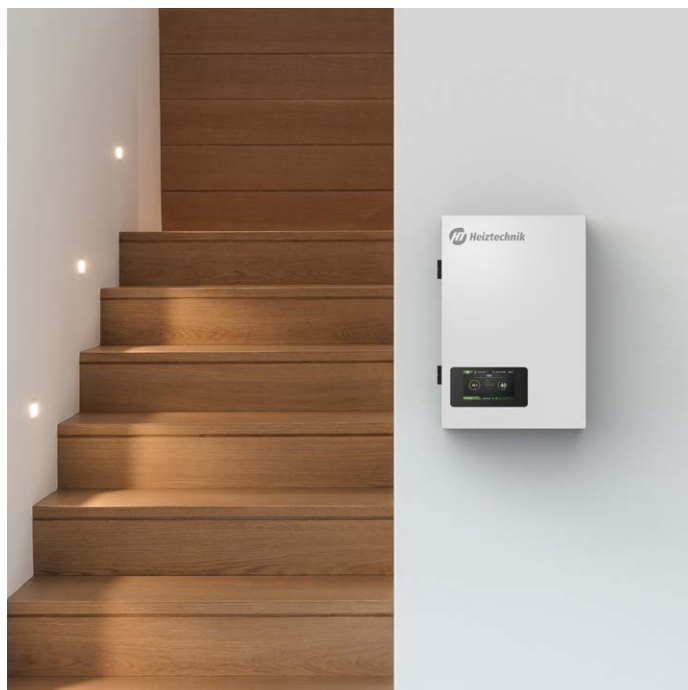
CALLA VERDE M monoblock heat pump with hanging automation module - Basic

The pump is designed for **heating and cooling** of confined spaces and production of DWH in an external tank. The compressor and refrigeration system are located in the external unit.

The internal unit contains an automation system that controls the heat pump and hydraulic system.









The **SPLIT** version is additionally equipped with a **Split Box** attachment.

The scope of delivery includes: room temperature sensor, flow meter and a 3/4" differential discharge valve (to be installed by the installer).



CALLA VERDE M BASIC **MONOBLOCK**

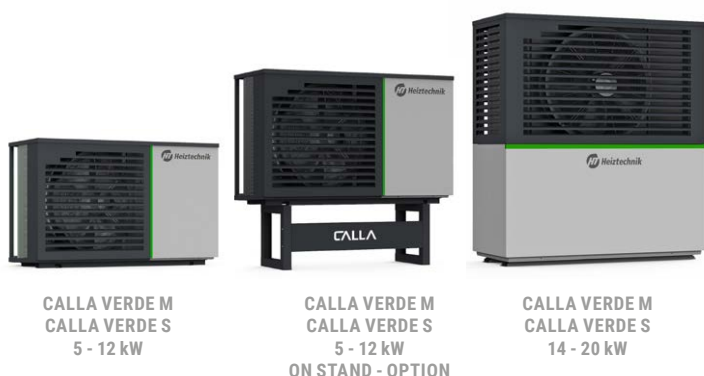
Equipment and characteristics

-  Copeland Scroll™ inverter compressor operating in wide power modulation
-  Refrigerant R452B with low GWP
-  Color touch display
-  WiFi module
-  Cooperation with photovoltaic system
-  Effective operation down to -25°C
-  Up to 65°C of heating water can be obtained
-  Ability to work at low heating water temperatures



CALLA VERDE S BASIC **SPLIT**

Outdoor units



Accessories

HT Antifreeze module - MONOBLOK
Switchboard ELBOX I HT / ELBOX II HT
NTC external temperature sensor
KTY external temperature sensor
Internal temperature sensor
DHW temperature sensor (5 lm)
KTY81 clip-on sensor
External unit stand
1' 230V CH/DHW switching valve
Zawór zabezp. przed zamarzaniem
ZZone valve (7 KVS = 7 m³)
Automatic inlet valve 0.3 - 4 bar 1/2" with pressure gauge
Silicone heating cable - 2, 3, 4, 6 lm

CALLA VERDE Style

CALLA VERDE M monoblock heat pump with hanging hydrobox - Style

The pump is designed for **heating and cooling** of confined spaces and production of DWH in an external tank. The compressor and refrigeration system are located in the external unit.

The internal unit contains an automation system that controls the pump and hydraulic system.

The hydraulic part includes: electronic circulation pump, heating water flow meter, heater contactors, 3-9 kW heater set, magnetic dirt separator, CH safety group (3bar safety valve, 12L diaphragm vessel, CH pressure gauge).





SPLIT version: The indoor unit has a built-in **Split Box**.

The scope of delivery includes: room temperature sensor and a 3/4" differential discharge valve (to be installed by the installer).



CALLA VERDE M STYLE **MONOBLOCK**

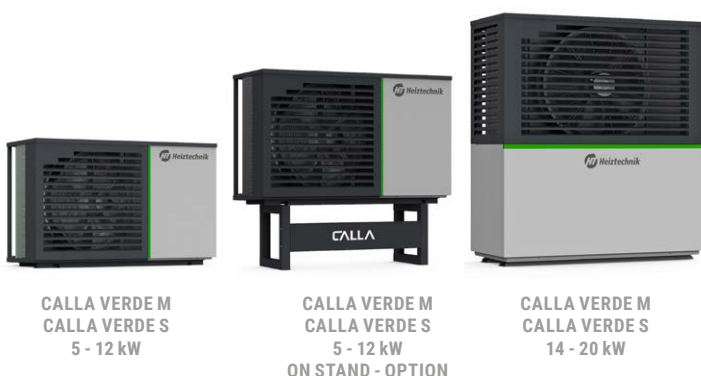
Equipment and characteristics

-  Copeland Scroll™ inverter compressor operating in wide power modulation
-  Refrigerant R452B with low GWP
-  Color touch display
-  WiFi module
-  Cooperation with photovoltaic system
-  Effective operation down to -25°C
-  Up to 65°C of heating water can be obtained
-  Ability to work at low heating water temperatures
-  Heater 3 - 6 - 9 kW with automatic power gradation
-  Magnetic dirt separator



CALLA VERDE S STYLE **SPLIT**

Outdoor units



Accessories

HT Antifreeze module - MONOBLOK
Switchboard ELBOX I HT / ELBOX II HT
NTC external temperature sensor
KTY external temperature sensor
Internal temperature sensor
DHW temperature sensor (5 l _m)
KTY81 clip-on sensor
External unit stand
1' 230V CH/DHW switching valve
Zawór zabezp. przed zamarzaniem
ZZone valve (7 KVS = 7 m ³)
Automatic inlet valve 0.3 - 4 bar 1/2" with pressure gauge
Silicone heating cable - 2, 3, 4, 6 l _m

CALLA VERDE M monoblock heat pump with hanging hydrobox - Style

The pump is designed for **heating and cooling** of confined spaces and production of DWH in an external tank. The compressor and refrigeration system are located in the external unit.

The internal unit contains an automation system that controls the pump and hydraulic system.

The hydraulic part includes: electronic circulation pump, heating water flow meter, heater contactors, 3-9 kW heater set, magnetic dirt separator, CH safety group (3bar safety valve, 12L diaphragm vessel, CH pressure gauge).












The **SPLIT** version is additionally equipped with a **Split Box** attachment.

The scope of delivery includes: room temperature sensor and a 3/4" differential discharge valve (to be installed by the installer).

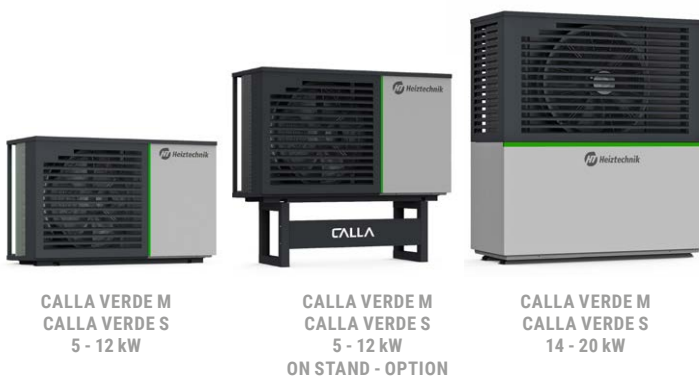


CALLA VERDE M COMFORT **MONOBLOCK**

Equipment and characteristics

-  Copeland Scroll™ inverter compressor operating in wide power modulation
-  Refrigerant R452B with low GWP
-  Color touch display
-  WiFi module
-  Cooperation with photovoltaic system
-  Effective operation down to -25°C
-  Up to 65°C of heating water can be obtained
-  Ability to work at low heating water temperatures
-  Heater 3 - 6 - 9 kW with automatic power gradation
-  Magnetic dirt separator
-  Hydraulic system connection module with DHW tank

Outdoor units



CALLA VERDE S COMFORT **SPLIT**

Accessories

HT Antifreeze module - MONOBLOK
Switchboard ELBOX I HT / ELBOX II HT
NTC external temperature sensor
KTY external temperature sensor
Internal temperature sensor
KTY81 clip-on sensor
External unit stand
Upper assembly for Comfort
Magnesium anode - comfort S (250l)
Magnesium anode - comfort M (275l)
Titanium anode
Zawór zabezpiecz. przed zamarzaniem
Zone valve (7 KVS = 7 m³)
Automatic inlet valve 0.3 - 4 bar 1/2" with pressure gauge
Silicone heating cable - 2, 3, 4, 6 lm
Angle screw-in union

CALLA VERDE Comfort II

CALLA VERDE M monoblock heat pump with standing hydrobox - Comfort II

The pump is designed for **heating and cooling** of confined spaces and production of DWH in an integrated tank. The compressor and refrigeration system are located in the external unit.

The internal unit contains an automation system that controls the pump and hydraulic system.

The hydraulic part includes: 1 direct CH circuit, 1 circuit with mixing valve, 1 DHW circuit with 250/275L tank, electronic circulation pump, CH/DHW switching valve, heating water flow meter, heater contactors, 3-9 kW heater set, magnetic dirt separator, CH safety group (3bar safety valve, 12L diaphragm vessel, CH pressure gauge).












The **SPLIT** version is additionally equipped with a **Split Box** attachment.

The scope of delivery includes: room temperature sensor and a 3/4" differential discharge valve (to be installed by the installer).

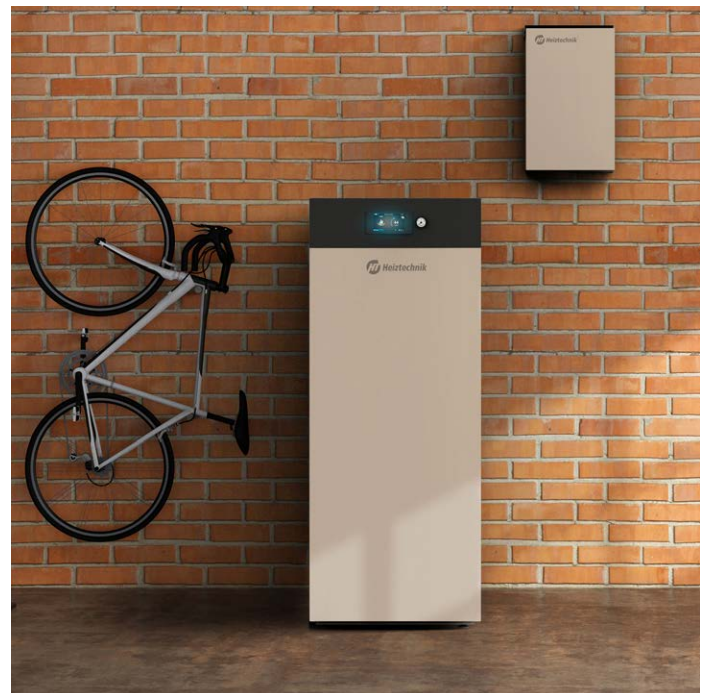
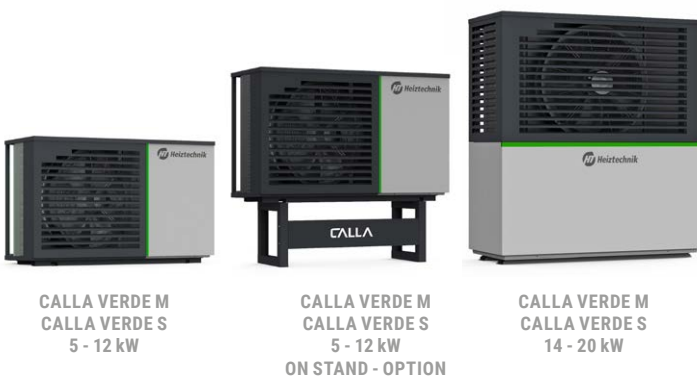


CALLA VERDE M COMFORT II **MONOBLOCK**

Equipment and characteristics

-  Copeland Scroll™ inverter compressor operating in wide power modulation
-  Refrigerant R452B with low GWP
-  Color touch display
-  WiFi module
-  Cooperation with photovoltaic system
-  Effective operation down to -25°C
-  Up to 65°C of heating water can be obtained
-  Ability to work at low heating water temperatures
-  Heater 3 - 6 - 9 kW with automatic power gradation
-  Magnetic dirt separator
-  Hydraulic system connection module with DHW tank

Outdoor units



CALLA VERDE S COMFORT II **SPLIT**

Accessories

HT Antifreeze module - MONOBLOK
Switchboard ELBOX I HT / ELBOX II HT
NTC external temperature sensor
KTY external temperature sensor
Internal temperature sensor
KTY81 clip-on sensor
External unit stand
Upper assembly for Comfort
Magnesium anode - comfort S (250l)
Magnesium anode - comfort M (275l)
Titanium anode
Zawór zabezp. przed zamarzaniem
Zone valve (7 KVS = 7 m³)
Automatic inlet valve 0.3 - 4 bar 1/2" with pressure gauge
Silicone heating cable - 2, 3, 4, 6 Im
Angle screw-in union

HT ANTIFREEZE MODULE

The HT anti-freeze module is used as an element of a monoblock heat pump installation, in which water is used as the medium in the installation connecting the external and internal units. It consists of two elements:

- an electrical module with a controller, with space for mounting a battery
- a hydraulic module with a circulation pump.

In the event of a power outage or heat pump failure, which interrupts the operation of the circulation pump while the water temperature at the measurement point drops below 5 °C, the circulation pump will be switched on, which is powered by the electrical module battery. The pump will start the flow of water from the building's central heating system to the heat pump condenser. The operating module pump protects the monoblock external unit from freezing.

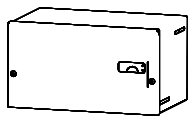
Technical parameters:

- supply voltage 195 V – 265 V
- power supply output voltage 9.0 V – 15.2 V
- power supply output power 50 W
- cooperating battery 12V (VRL/SLA), 7 - 19 Ah

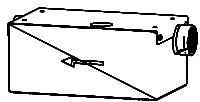
Scope of delivery – module A and B in boxes screwed together as a whole. PTC temperature sensor, seal. The scope of delivery does not include a battery.



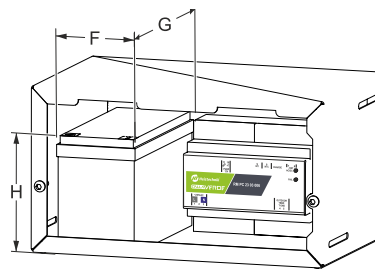
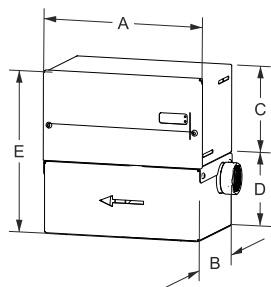
Module dimensions



Electrical module



Hydraulic module



Dimension symbol	Dimension [mm]
A	254
B	160
C	136
D	113
E	250
Maximum battery size	
F	max 100
G	max 150
H	max 115

SWITCHBOARD ELBOX HT

The switchboard allows you to connect the heat pump's electrical installation to the building's power supply network. The switchboards are made as:

- **ELBOX I HT** for connecting pumps with a power of 5 - 9 kW
- **ELBOX II HT** for connecting pumps with a power of 12 - 20 kW

The switchboard is equipped with a three-phase energy consumption meter, phase failure indicator, three-phase differential switch, overcurrent protection.

The switchboard allows:

- A. Connection of the power supply 3 X 400 V 50 Hz
- B. Distribution of the connection to:
 - internal unit automation power supply 1x 230 V
 - external unit power supply 3 x 400 V or 1 x 230 V
 - heater power supply 3 X 400V

External dimensions of the switchboard; height 360 mm x width 285 mm x depth 112 mm.

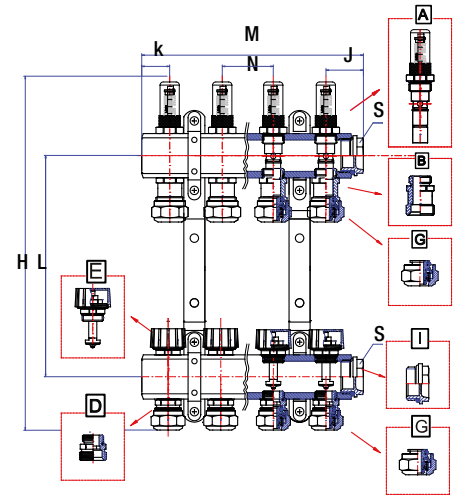


Equipment elements	ELBOX I HT	ELBOX II HT
Phase failure indicator	1	1
Three-phase energy meter	1	1
Three-phase differential switch	1	1
Overcurrent protection B10	1	1
Overcurrent protection B20	1	-
Combined protection 3x B16	1	2

Distributor on the profile 1" for underfloor heating

The 70E distributor includes:

- supply beam
 - A** - rotameters with maximum flow 2,4L/min
 - B** - eurocones 1/2" x 3/4" with O-ring
 - G** - clamps for the pipe pex/all/pex
- return beam
 - E** - thermostatic valves adopted to the mounting of thermic motors with M30X1,5 thread
 - D** - eurocones 1/2" x 3/4" with O-ring
 - G** - clamps for the pipe pex/all/pex
- 2 mounting fittings with shock-absorbers
- I** - 2 plugs 1" with O-ring for a key

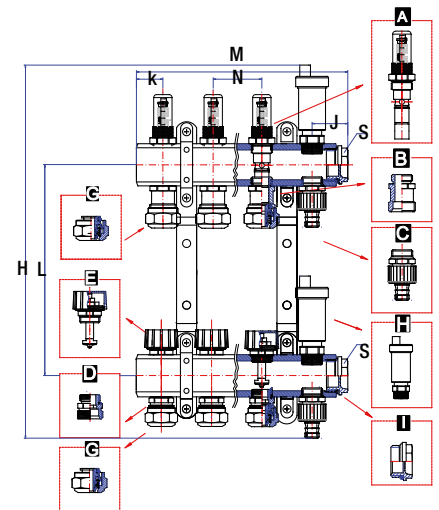


Circuits	G	L	H	M	N	K	S	J	Package	Palette	kg	Index
2	1/2"	235	338	110	50	25	30	35	1	120	2,26	CVA416
3	1/2"	235	338	160	50	25	30	35	1	120	3,08	CVA417
4	1/2"	235	338	210	50	25	30	35	1	120	3,90	CVA418
5	1/2"	235	338	260	50	25	30	35	1	72	4,72	CVA419
6	1/2"	235	338	310	50	25	30	35	1	72	5,54	CVA420
7	1/2"	235	338	360	50	25	30	35	1	72	6,37	CVA421
8	1/2"	235	338	410	50	25	30	35	1	48	7,19	CVA422
9	1/2"	235	338	460	50	25	30	35	1	48	8,01	CVA423
10	1/2"	235	338	510	50	25	30	35	1	48	8,83	CVA424
11	1/2"	235	338	560	50	25	30	35	1	36	9,65	CVA425
12	1/2"	235	338	610	50	25	30	35	1	36	10,48	CVA426
13	1/2"	235	338	660	50	25	30	35	1	36	11,30	CVA427
14	1/2"	235	338	710	50	25	30	35	1	36	12,12	CVA428
15	1/2"	235	338	760	50	25	30	35	1	36	12,94	CVA429

Distributor on the profile 1" for underfloor heating with venting and filling valves

The 71E distributor includes:

- supply beam with additional section
 - C** - drain valves for hose
 - H** - automatic air vent with stop valve
 - A** - rotameters with maximum flow 2,4L/min
 - B** - eurocones 1/2" x 3/4" with O-ring
 - G** - clamps for the pipe pex/all/pex
- return beam with additional section
 - C** - drain valves for hose
 - H** - automatic air vent with stop valve
 - E** - thermostatic valves adopted to the mounting of thermic motors with M30X1,5 thread
 - D** - eurocones 1/2" x 3/4" with O-ring
 - G** - clamps for the pipe pex/all/pex
- 2 mounting fittings with shock-absorbers
- I** - 2 plugs 1" with O-ring for a key



Circuits	G	L	H	M	N	K	S	J	Package	Palette	kg	Index
2	1/2"	235	400	160	50	25	30	35	1	120	3,13	CVA402
3	1/2"	235	400	210	50	25	30	35	1	120	3,96	CVA403
4	1/2"	235	400	260	50	25	30	35	1	120	4,78	CVA404
5	1/2"	235	400	310	50	25	30	35	1	72	5,60	CVA405
6	1/2"	235	400	360	50	25	30	35	1	72	6,42	CVA406
7	1/2"	235	400	410	50	25	30	35	1	72	7,24	CVA407
8	1/2"	235	400	460	50	25	30	35	1	48	8,07	CVA408
9	1/2"	235	400	510	50	25	30	35	1	48	8,89	CVA409
10	1/2"	235	400	560	50	25	30	35	1	48	9,71	CVA410
11	1/2"	235	400	610	50	25	30	35	1	36	10,53	CVA411
12	1/2"	235	400	660	50	25	30	35	1	36	11,35	CVA412
13	1/2"	235	400	710	50	25	30	35	1	36	12,18	CVA413
14	1/2"	235	400	760	50	25	30	35	1	36	13,00	CVA414
15	1/2"	235	400	810	50	25	30	35	1	36	13,82	CVA415

The dimensions given may vary from actual dimensions to 2%. Other detailed dimensions are available on the website.

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BUFFER TANKS HANGING HT BW

40 • 60 L

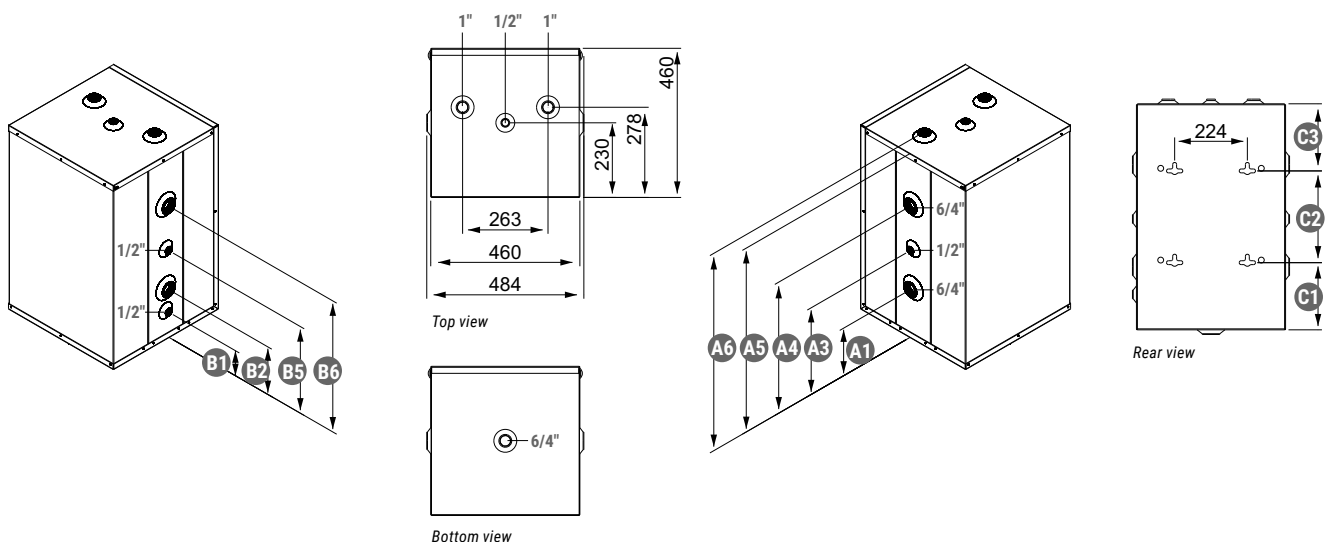


A tank designed for hot water storage
Installation of the buffer:

- vertical hanging
- horizontal hanging

Outlets to the top and left and right side of the buffer.

HT BW 40 • 60 L



B1 - Drainage 1"
B5 - Temperature sensor connection 1/2"

B2 - Heating circuit connector 6/4"
B6 - Heating circuit connector 6/4"

A1 - Heating circuit connector 6/4"
A4 - Heating circuit connector 6/4"

A3 - Temperature sensor connection 1/2"
A6 - Heating circuit connector 1"

Technical data

	DIMENSIONS														
	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	C1	C2	C3
CONNECTIONS (")	6/4	-	1/2	6/4	-	1	1	6/4	-	-	1/2	6/4	-	-	-
HT BW 40	181	-	254	334	521	536	109	181	-	-	254	334	177	137	207
HT BW 60	194	-	341	-	696	711	109	194	-	-	341	509	207	283	207

Parameter	Unit	DIMENSIONS	
		HT BW 40	HT BW 60
Energy efficiency class	-	B	B
Stand-by losses	W	42	53
Storage capacity	l	40	60
Max. rated pressure	MPa(bar)	0,3 (3)	0,3 (3)
Max. buffer operating temperature	°C	90	90
Min. buffer operating temperature	°C	10	10
Weight (without water)	kg	36	45
Thickness of heat insulation	mm	40	40
Number of connections / dimension	pcs. / inch	2 x 1" + 5 x 6/4"	

BUFFER TANKS HANGING / STANDING HT BWS

80 • 120 • 150 L

A tank designed for hot water storage
Installation of the buffer:

- standing
- vertical hanging
- horizontal hanging

Outlets to the top and left and right side of the buffer.

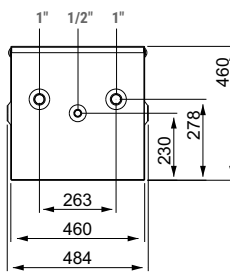
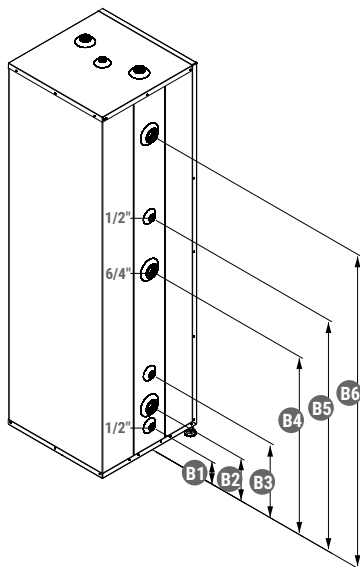


HT BWS 80

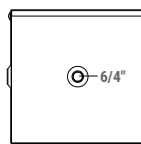
HT BWS 120

HT BWS 150

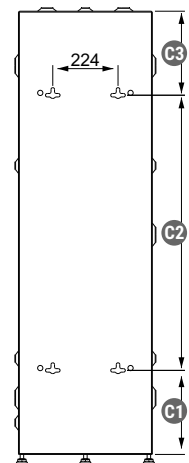
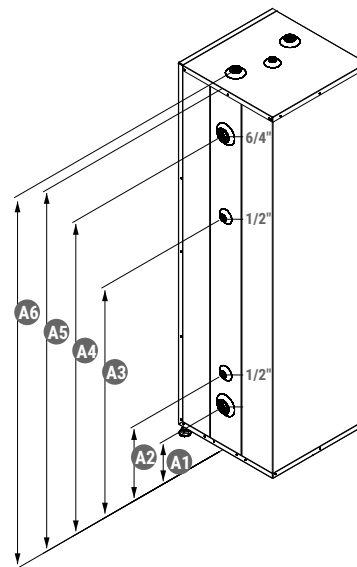
HT BWS 80 • 120 • 150 L



Top view



Bottom view



Rear view

B1 - Drainage 1"
B3 - Temperature sensor connection 1/2"
B5 - Temperature sensor connection 1/2"

B2 - Heating circuit connector 6/4"
B4 - Heating circuit connector 6/4"
B6 - Heating circuit connector 6/4"

A1 - Heating circuit connector 6/4"
A3 - Temperature sensor connection 1/2"
A6 - Heating circuit connector 1"

A2 - Temperature sensor connection 1/2"
A4 - Heating circuit connector 6/4"

Technical data

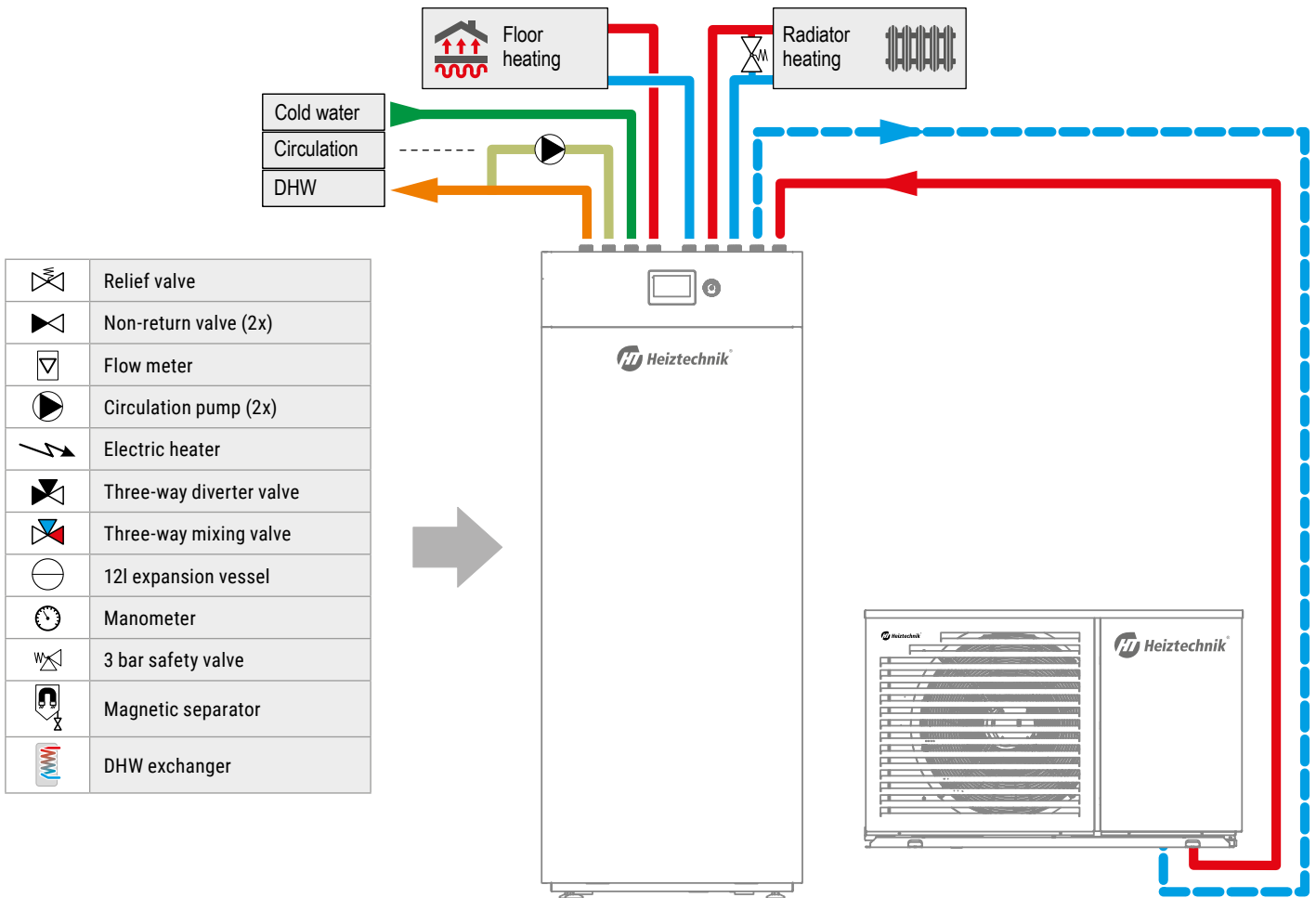
	DIMENSIONS														
	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	C1	C2	C3
CONNECTIONS (")	6/4	1/2	1/2	6/4	-	1	1	6/4	1/2	6/4	1/2	6/4	-	-	-
HT BWS 80	194	-	539	694	881	896	109	194	-	434	539	694	207	468	207
HT BWS 120	194	329	807	1059	1246	1261	109	194	329	616	807	1059	288	670	288
HT BWS 150	194	329	991	1334	1522	1536	109	194	329	754	991	1334	288	945	289

Parameter	Unit	DIMENSIONS		
		HT BWS 80	HT BWS 120	HT BWS 150
Energy efficiency class	-	B	B	B
Stand-by losses	W	58	60	65
Storage capacity	l	80	100	150
Max. rated pressure	MPa(bar)	0,3 (3)	0,3 (3)	0,3 (3)
Max. buffer operating temperature	°C	90	90	90
Min. buffer operating temperature	°C	10	10	10
Weight (without water)	kg	53	71	84
Thickness of heat insulation	mm	40	40	40
Number of connections / dimension	pcs. / inch	2 x 1" + 5 x 6/4"		
Leg height	mm	35	35	35

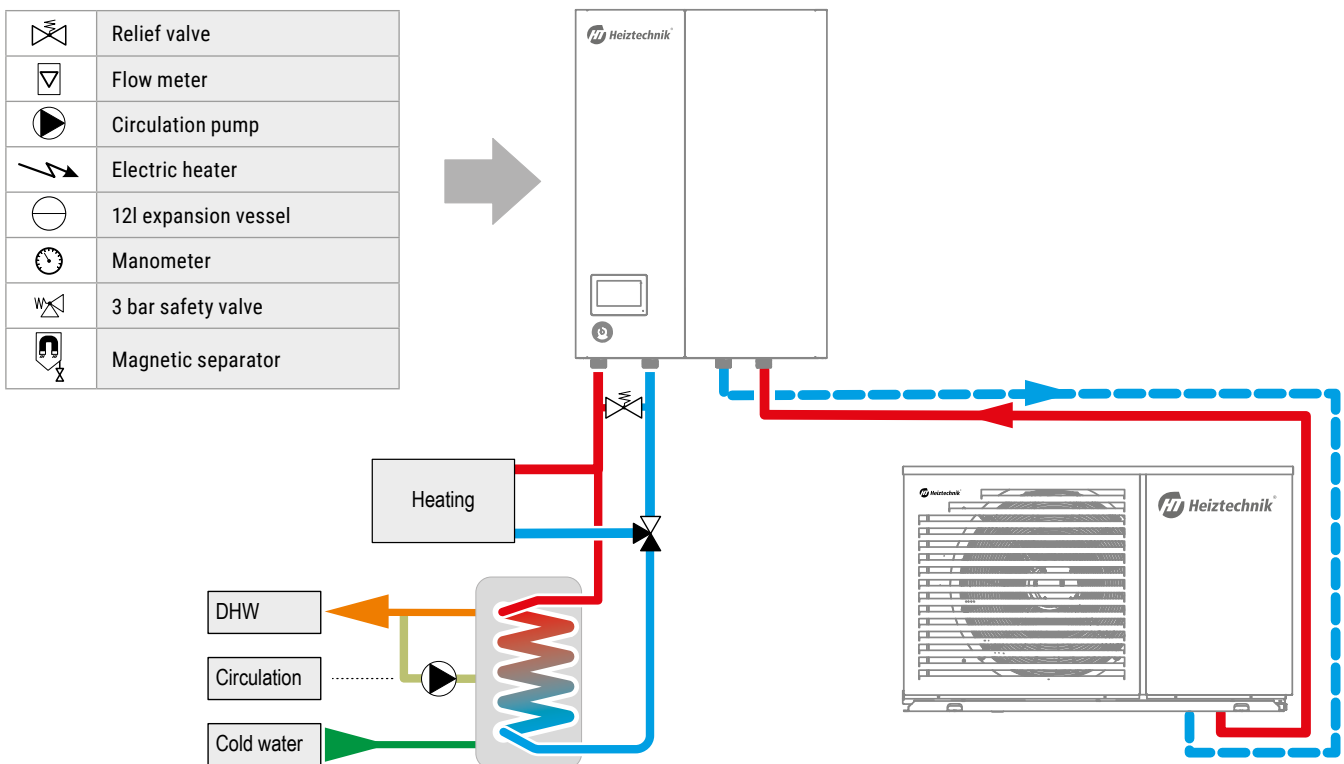
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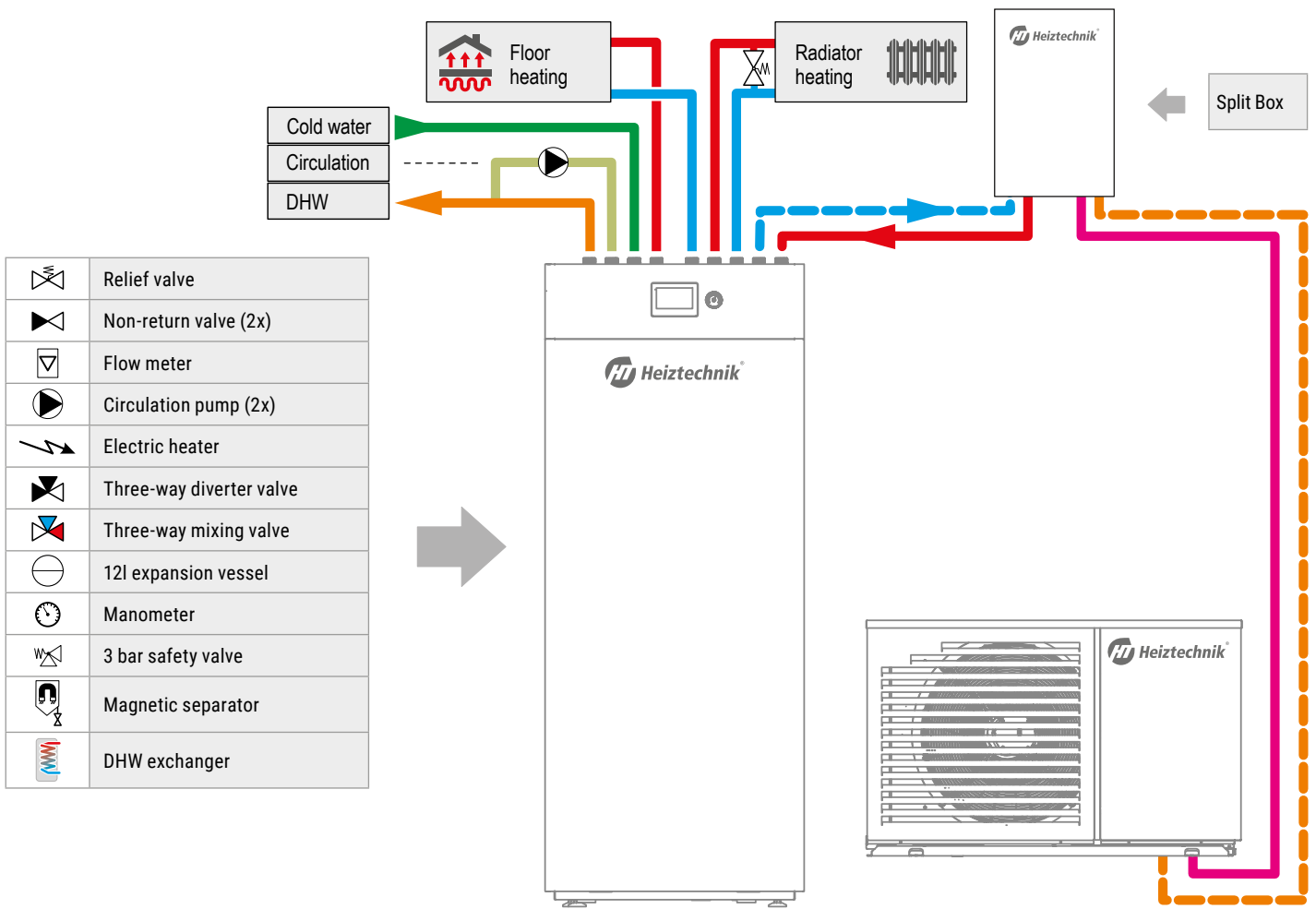
CALLA VERDE M Comfort II - hydraulic diagram



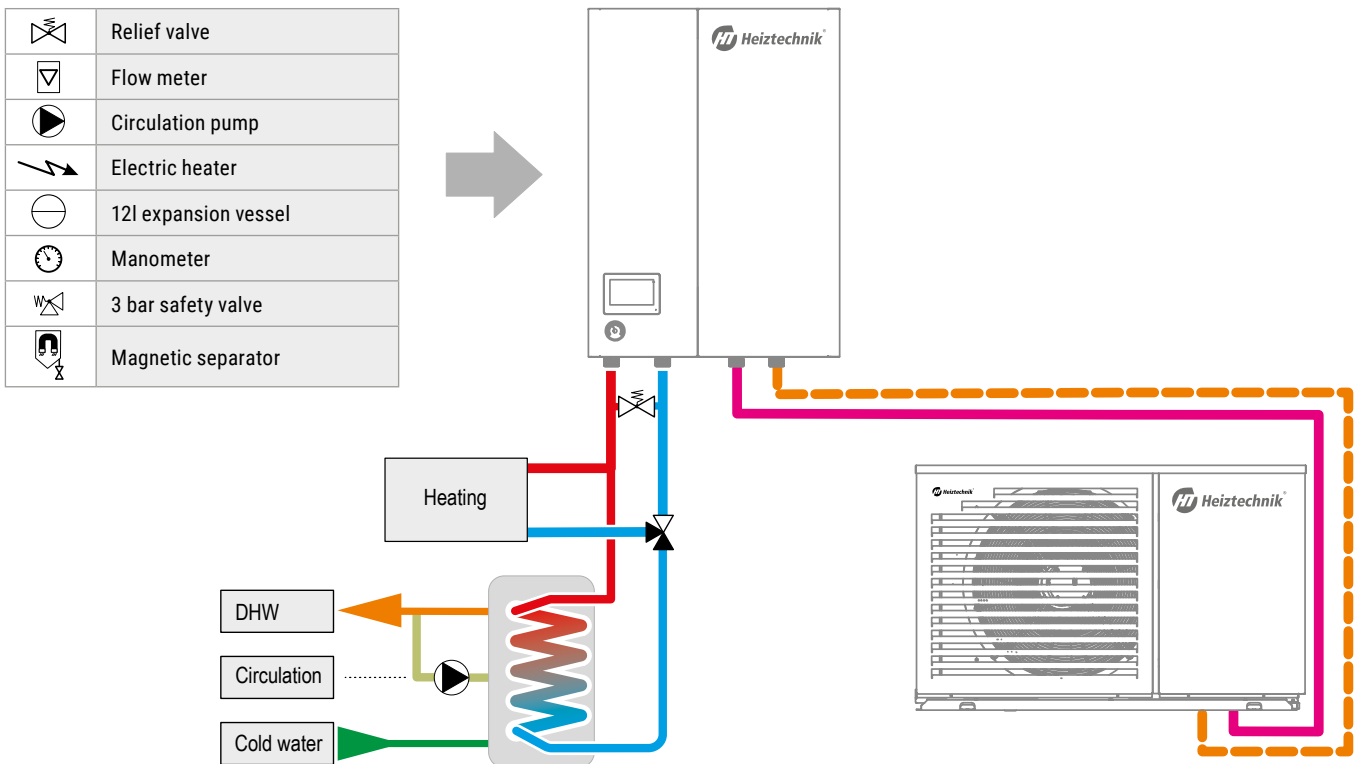
CALLA VERDE M Style - hydraulic diagram



CALLA VERDE S Comfort II - hydraulic diagram



CALLA VERDE S Style - hydraulic diagram





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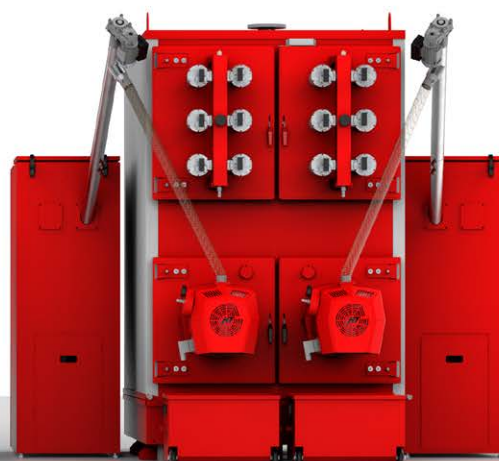
*Ecology is not a trend.
It is a lifestyle!*



heat pumps



pellet boilers



biomass boilers

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