4Heat

4Heat Products Catalogue

Inverter air water heat pump designed in **split EVI** technology
Monoblock inverter air water heat pump
Full domestic hot water supply | House heating

Inverter air water heat pump designed in split EVI technology

COOLING
20 ~ 45°C

-35 ~ 35°C
HEATING

The New Source of Energy

Inverter air water heat pump designed in **split EVI** technology

Full domestic hot water supply | House heating

Our Advantage

Our 4Heat pumps are characterized by numerous innovative solutions in the world of technologies connected with modern heating.

Inverter-type control of the 4Heat pump compressor enables heating in the winter and cooling in the summer. This makes it possible to increase the efficiency by as much as 20% compared to traditional technologies.

Effectiveness
Even at very low temp.

On very cold days

Owing to the effective control of the refrigerant, the pump is efficient at outside temperatures as low as –28°C.

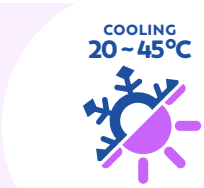
Help

Helpline. Quick service. Specialist advice.

10-year warranty
For **4Heat** pumps.

10-year warranty

4Heat pumps are covered by a 10-year warranty on the territory of Europe.



Range of operation

Extremely high ranges of operation of 4Heat. From –35°C to +45°C.

Installation

Exceptionally easy installation. Ease of operation. Mobility.

The company's philosophy is to deliver reliable equipment with state-of-the-art. Technological solutions available on the market. New solutions enable us to create a competitive advantage. An invaluable advantage of our heat pumps is the possibility to use them for active cooling in the summer. For this purpose, a special four-way valve is built in in each of our devices. By reversing the direction of pumping of the compressor, the flow of the refrigerant is altered and thus the direction of heat flow.

Advantages of Heat Pumps

Heat pumps by 4Heat are characterized by numerous advantages. They are unique on the marked due to their large number of options and modern technological solutions.

When choosing a heat pump, you should pay attention to numerous advantages such as reliability, durability, and solid branded components.

EVI Technology

Panasonic compressor + **EVI** Technology, is **E**nhanced **V**apor **I**njection.

ALFA LAVAL

ALFA LAVAL heat exchanger built from stainless steel, in the internal unit.

HONEYWELL

Three-way **HONEYWELL** valve integrated in the external unit.

Four-way valve

Four-way valve in the external unit. Possibility of heating and cooling.

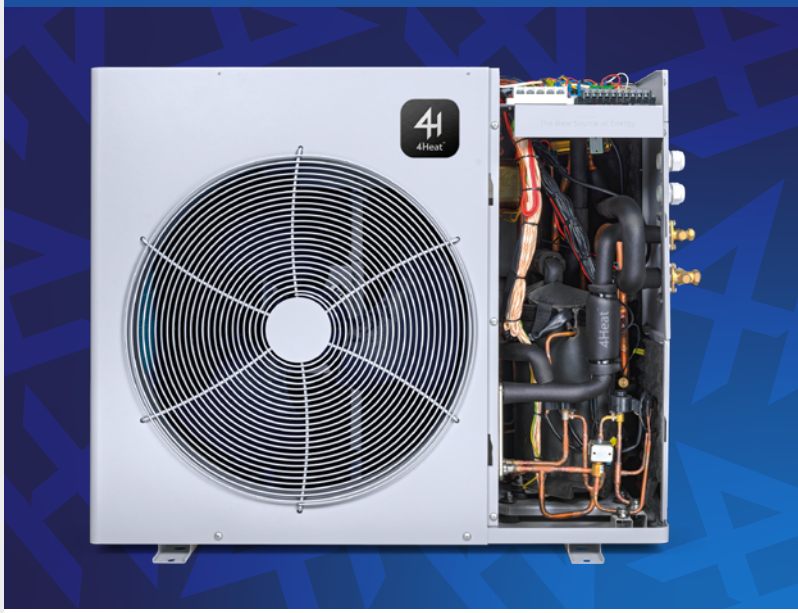
WILO

Integrated high efficiency circulating **WILO** heat pump.

PANASONIC compressor + **EVI** technology

Panasonic compressor + **EVI** technology, i.e. **E**nhanced **V**apor **I**njection, makes it possible to direct a portion of the refrigerant to an additional element of the circuit — a second heat exchanger in the external unit — by means of an additional expansion valve. The medium is evaporated in it, which then enters the compressor prepared for work in **EVI** technology for the optimization of the heat pump at a lower outside temperature.

Panasonic + EVI



OPERATION OF HEAT PUMP WITH EVI COMPRESSOR

Pressure graph—enthalpy

Low energy consumption is possible owing to, e.g., the fully inverter technology; controlled compressor efficiency, from 30% to 150% or the high-quality ALFA LAVAL heat exchanger.

4Heat are characterized by numerous innovative solutions, owing to which they have the highest energy certification of class A+++

HONEYWELL valve

The three-way Honeywell valve integrated inside the internal unit enables the use of the heating function split into central heating and domestic hot water circuits.

Honeywell

Traditional heater

Hot water

Floor heating

The casing was built from high-quality steel, which owing to special profiles withstand high loads without deformations.

The casings of 4Heat pumps are durable and solidly built from highest-class steel. The high-quality materials and the adequate design ensure high durability of our products.

4Heat excellence

Choose an environmentally friendly product. Small dimensions, high efficiency, and at the same time quiet operation.

Your family will thank you for the warmth, and your neighbors for the quiet operation. Nature-friendly and energy-saving are the qualities that make the 4Heat pump exceptional.

ALFA LAVAL heat exchanger

The heat exchanger in the internal unit is built from AISI 316 stainless steel as stacked thin profiled sheets. The channels created between them together with the openings placed in the corners of the plates enable counter-flow of media. The plates in the exchanger are joined along their edges and in all the points where the plates meet. All this ensures adequate mechanical strength of the exchanger. Temperature range: -160 °C ÷ 225 °C, pressure up to 32 bar. Manufactured pursuant to directive 97/23/EC.

ALFA LAVAL
heat exchanger

4Silent

The special design of fan blades that ensures more efficient and quieter operation.

Heating pipe

Heating pipe in the external unit prevents condensate from freezing.

WI-FI

Built-in Wi-Fi ommunication module as standard.

Temperature sensor

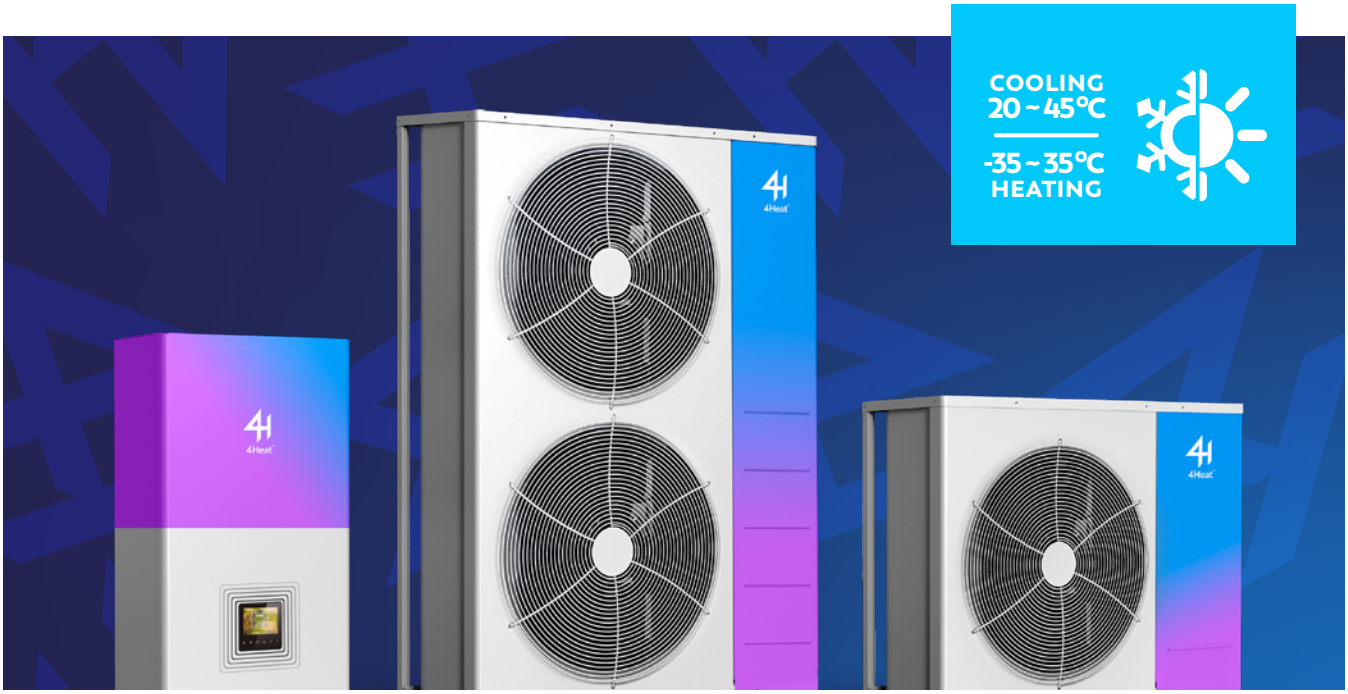
Built-in sensor of outside temperature.

Mobile application

Remote control by means of an app.

EVI technology

PANASONIC compressor + **EVI** technology,
is **E**nhanced **V**apor **I**njection.

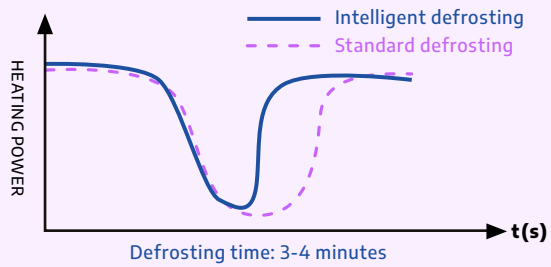


Innovative heat pump technology – 4Heat EVI

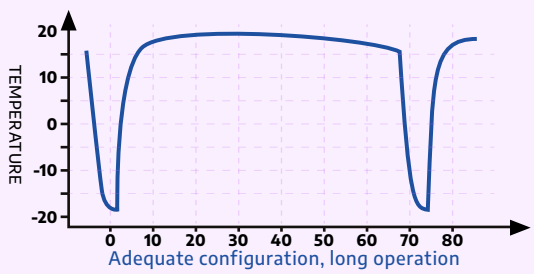
Inverter-type control of the **4Heat** pump compressor makes it possible to achieve its optimum operation by adjusting the power of the device to fast changing heat demands. This ensures efficiency that is 20% higher than other heat pumps.
This is particularly important during extremely cold nights with temperatures as low as -35 degrees and warm sunny days, when the temperature increases up to several degrees above zero. A solution to the key problem is to ensure an adequate process of evaporator defrosting. Reducing the process of freezing and optimizing the whole heating system is only possible owing to the special design of the **4Heat** evaporator and adequate drainage of condensate.

4Heat is a team of creative people with almost 20 years of experience in advanced hardware and software technologies, who provide their services to many sectors of economy in Poland and abroad.

Accurate and intelligent defrosting system



Defrosting time: 3-4 minutes



Adequate configuration, long operation

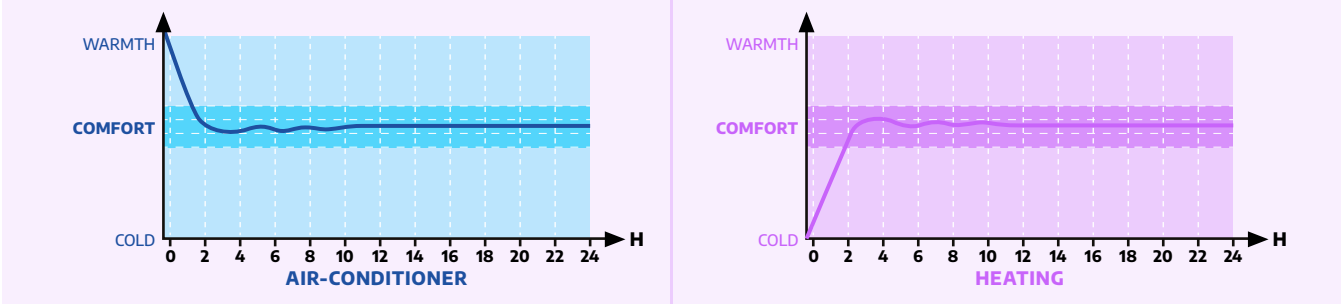
Heating in the winter + cooling in the summer

The heat pump may also be used for active cooling in the summer. For this purpose, a special four-way valve is built in in the device. In this case, it is enough to reverse the direction of pumping of the compressor and the expansion valve, owing to which the flow of the refrigerant is altered and thus the direction of heat flow. This is realized by the scheme of a reversible heat pump, i.e. in the heating medium circuit. The compressor is connected through a special valve, which makes it possible to reverse the direction of its powering. The four-way valve allows to fit one of the two expansion valves into the circuit. In the heating mode, the pump has a slightly higher power and efficiency compared to the cooling mode.

Compressor + EVI

Panasonic compressor + **EVI** technology, **E**nhanced **V**apor **I**njection, makes it possible to direct a portion of the refrigerant to an additional element of the circuit — a second heat exchanger in the external unit — by means of an additional expansion valve. The medium is evaporated in it, which then enters the compressor prepared for work in the **EVI** technology for the optimization of the **4Heat** pump at a lower outside temperature. For this purpose, stepless control of the performance of **Panasonic** inverter compressors is used in addition to controlled rotational speed of brushless fans.

Inverter-type technology — Cooling and heating

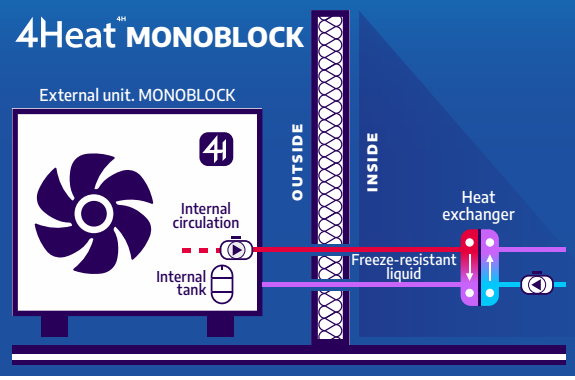


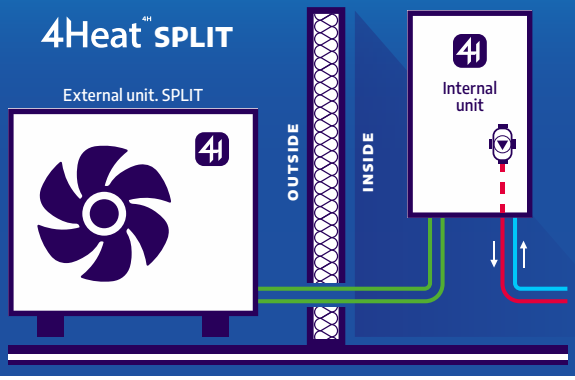
Monoblock-type inverter 4Heat™ pump

COOLING
20 ~ 45°C

-35 ~ 35°C
HEATING

The New Source of Energy





Rest assured that our trained expert technicians will be able to advise you on which heat pump version is suitable for your needs — Monoblock or Split.

Monoblock 4Heat is a single solution for both heating and cooling – efficient and easy to install.

Monoblock Version

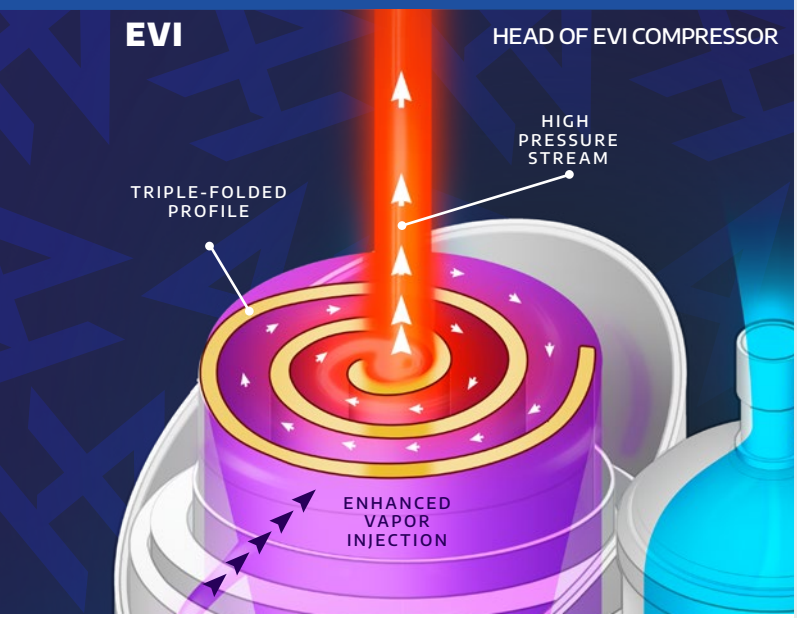
Integrated solution in the area of heating domestic hot water and 2-zone control (central heating): Radiators + floor heating.

Monoblock-type **4Heat** pumps use the same technology as split-type pumps — **Panasonic** compressor + **EVI**.

Why 4Heat **MONOBLOCK**?

In the Monoblock version, F-GAZ allowance is not needed. Theoretically, this makes it possible to install the heat pump yourself. Of course, knowledge and experience are welcome.

Monoblock is not equipped with an internal unit — warm water or, ideally, glycol is pumped inside the building to the hydraulic part. During a power outage, the best solution is using glycol, which will not freeze and burst the device.

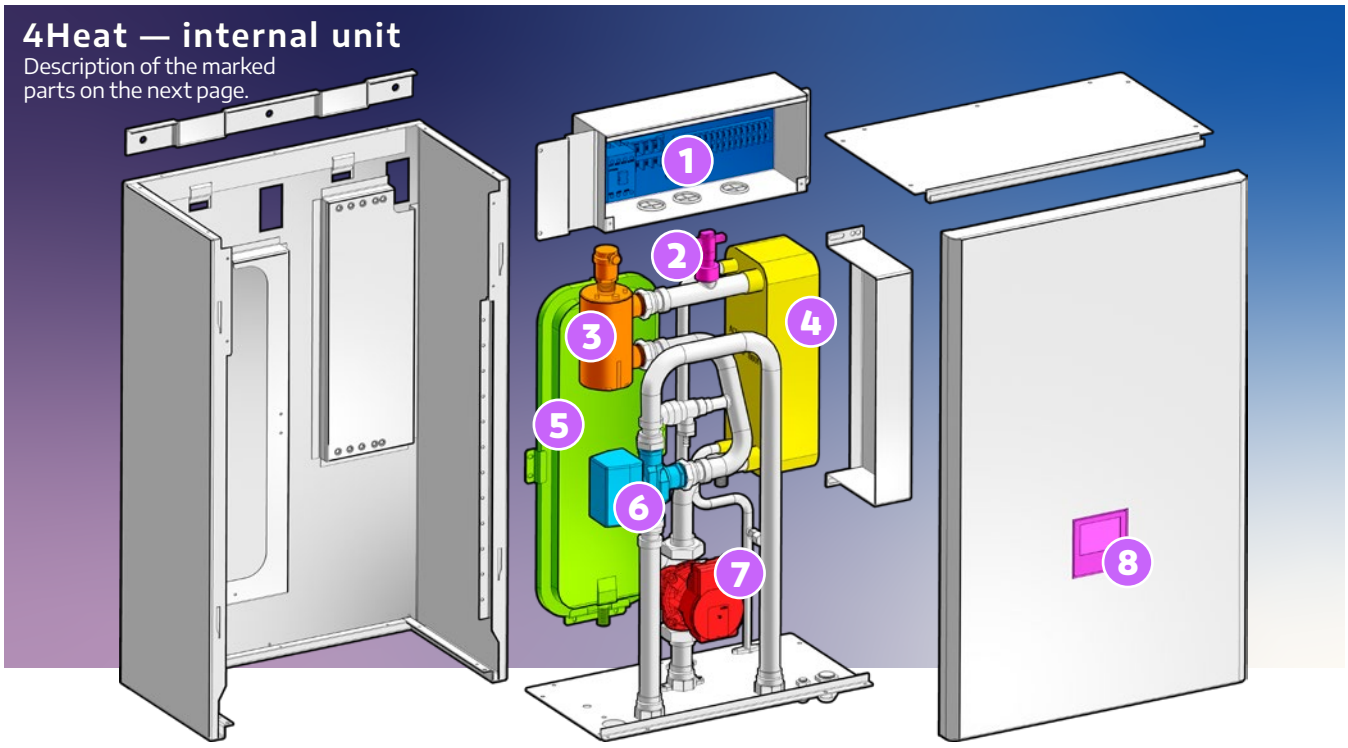


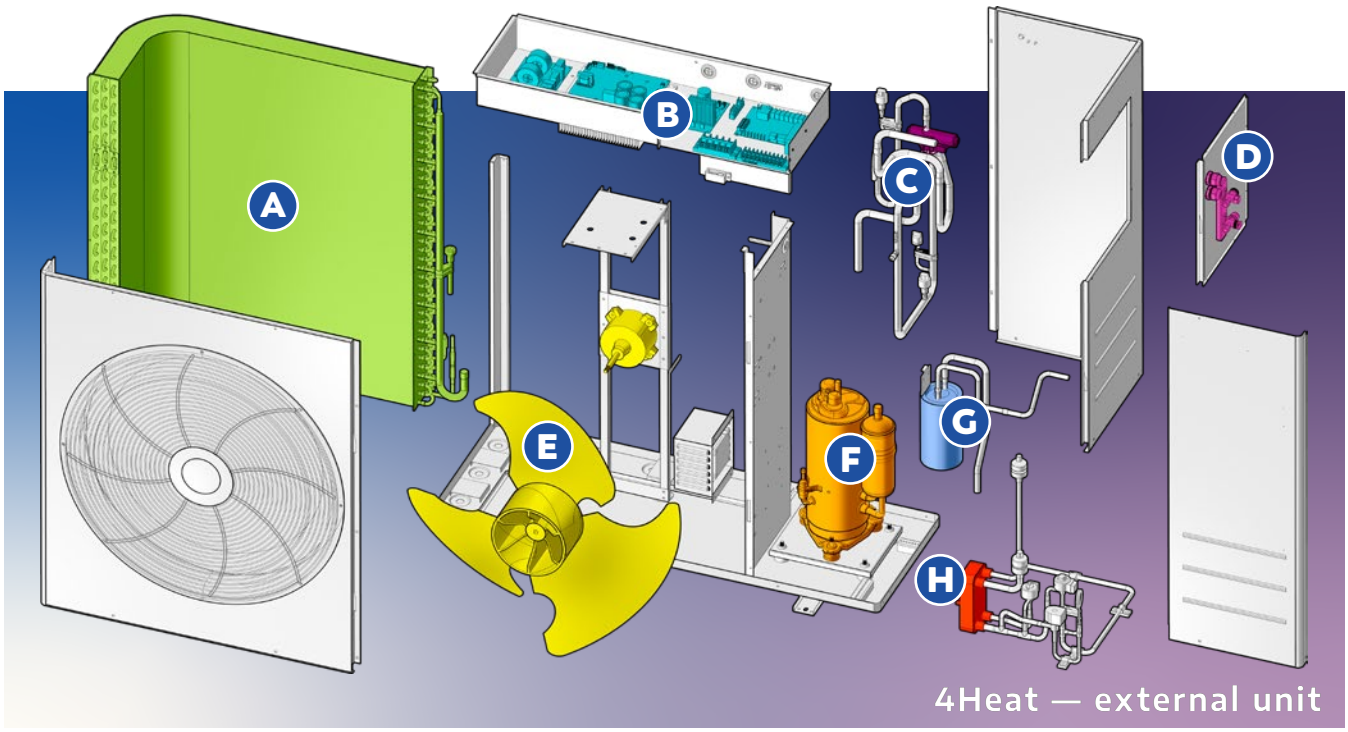
Advantages of Enhanced Vapor Injection (EVI) technology:

1. Smaller compressor to achieve the same heating efficiency – lower cost, weight, vibrations, and noise.
2. Constant performance at changing evaporation temperatures and constant compression parameters.
3. Very wide so-called “work envelope”.
4. Steam postinjection protects the compressor itself against excessive pressure and temperature.
5. Cooling efficiency higher by 25%; performance higher by 20 %, especially at higher pressure ratios.
6. Possibility of control of performance by means of steam injection.
7. Smaller diameter of circulation of liquid to the main evaporator.
8. Smaller amount of R32 medium in the circuit.

4Heat from the Inside

Internal unit | **External** unit | Compressor **EVI**
Technical drawings. See what 4Heat looks like inside.





Description of the marked parts on the next page.

4Heat — internal unit

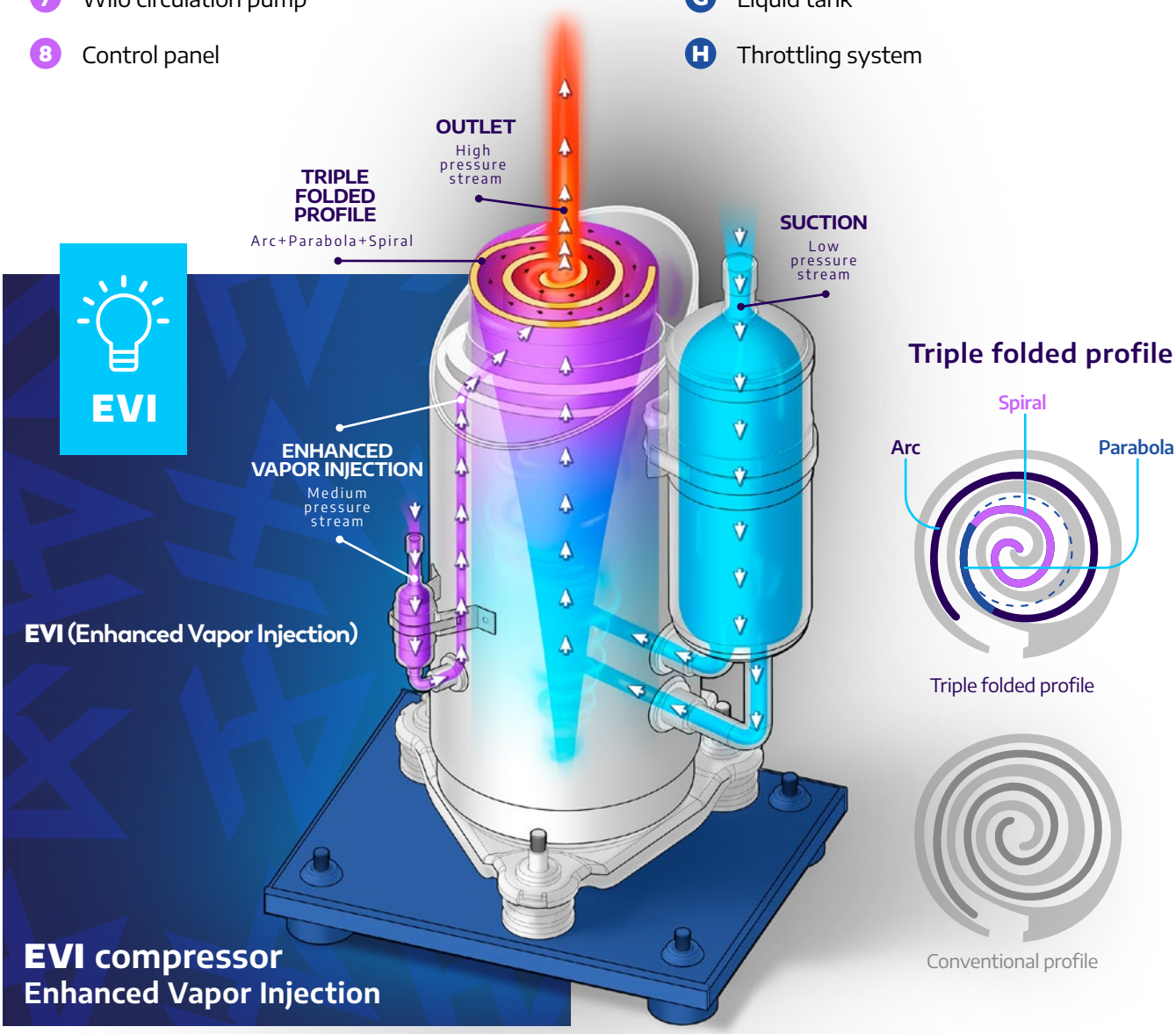
List of the main components and elements of the **internal** unit in **4Heat** pumps (parts numbered on the technical drawing on the previous page):

1. Control module
2. Water flow switch
3. Backup electric heater
4. **Alfa Laval** heat exchanger
5. Expansion tank
6. **Honeywell** three-way valve
7. Wilo circulation pump
8. Control panel

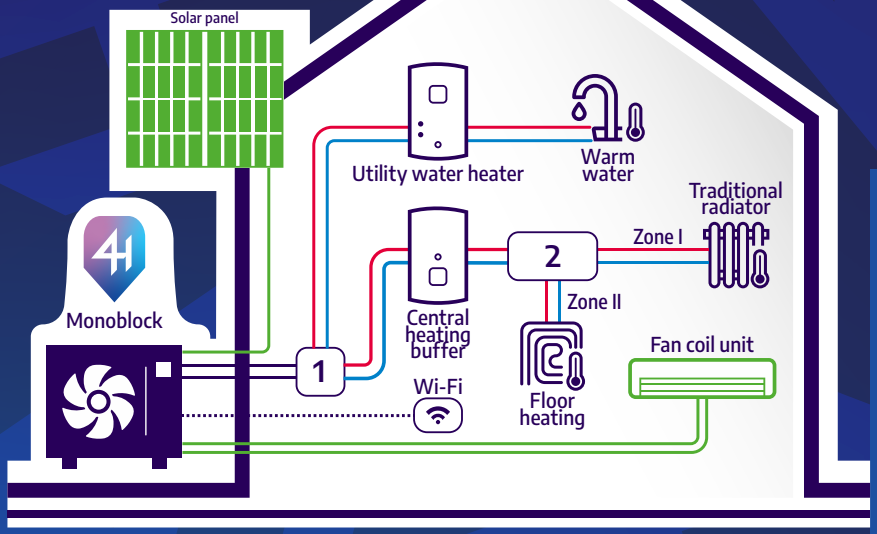
4Heat — external unit

List of the main components and elements of the **external** unit in **4Heat** pumps (parts marked on the technical drawing on the previous page):

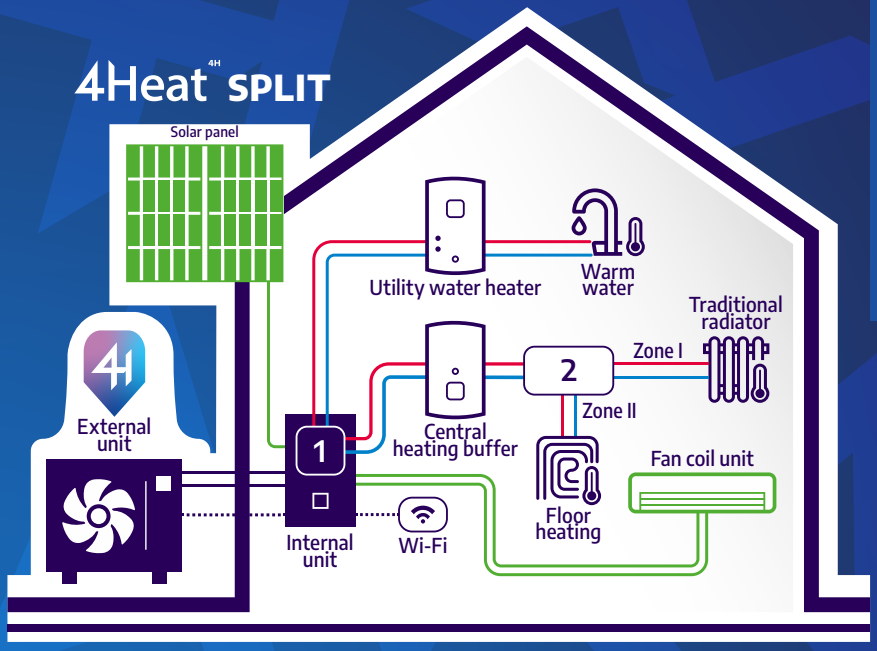
- A Condenser
- B Control module
- C Four-way valve system
- D Refrigerant stop valve
- E External fan
- F EVI-technology **Panasonic** compressor
- G Liquid tank
- H Throttling system



4Heat MONOBLOCK



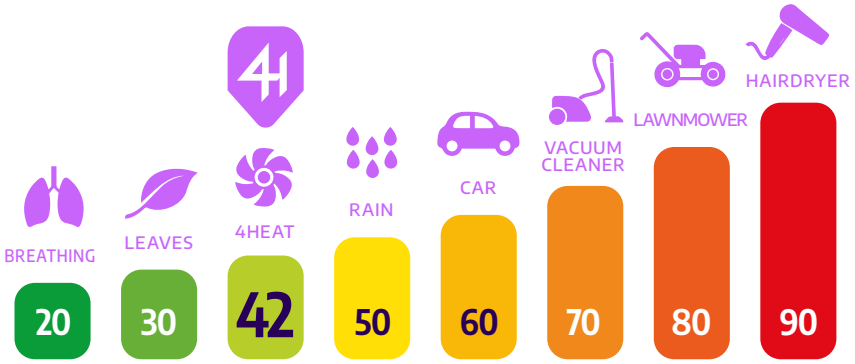
4Heat SPLIT



Pump installation diagrams

The diagrams show various configurations of heat pump installations in houses. An example installation with the use of Monoblock- (top) or split-type heat pumps.

1	Three-way valve
1	Three-way valve Built into the internal unit
2	Mixer valve



dB

Bar graph (left) showing the loudness of the external unit of the 4Heat pump compared to other sounds common in our lives: leaves rustling or rain. **4Heat is only 42 dB.**

Monoblock vs Split

Both versions enable comprehensive solutions in your home. The choice depends on the user's preferences.

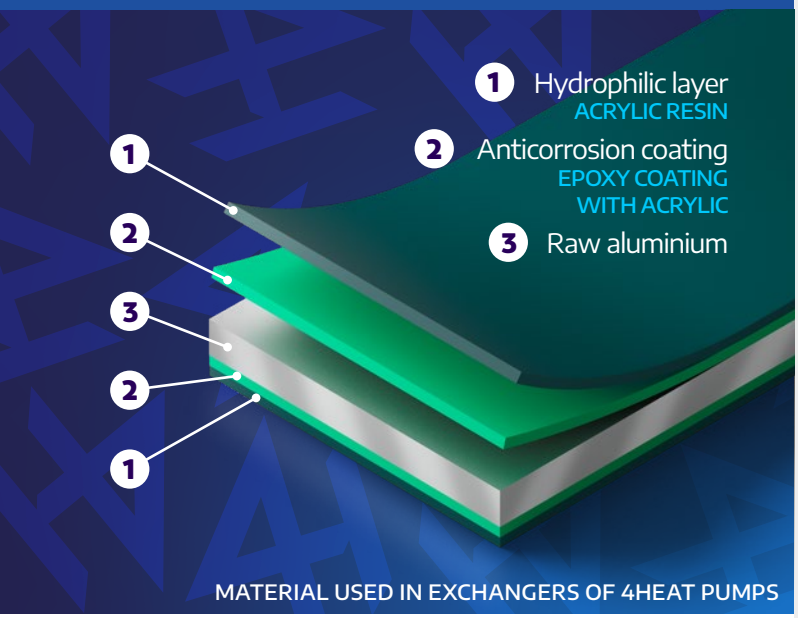
Either monoblock or split version used in heat pumps is sufficient for most households.

What to choose: **MONO** or **SPLIT**?

Monoblock-type heat pump is a device consisting of a single external unit. Spit-type device consists of two units: external and internal. Monoblock and split are in fact two very similar solutions. The choice, therefore, depends on the details and the individual preferences of the investor. Monoblock'a advantage is its lower price. Split does not have a medium in the circulation system that could freeze during power outages. Monoblock's advantage is its quicker and easier installation (no F-GAZ allowance needed).

4Heat MONO

4Heat SPLIT



MATERIAL USED IN EXCHANGERS OF 4HEAT PUMPS

Monoblok
Installation and purchase of device without F-GAZ allowance.

Split
Two units: external and internal. F-GAZ allowance required.

Monoblok
No external unit. Everything in a single unit.

Split
Circulation system does not freeze during power outages.

Monoblok
Greater range of thermal input in monoblock- than in split-type heat pumps.

Split
More popular on the market.

Split EVI

Inverter air water heat pump designed in **split EVI** technology						
Model		**VS90-DCS**	**VS120-DCS**	**VS150-DCS**	**VS180-DCS**	**VS220-DCS**
Electric power supply	/	380V~50Hz/3 faz				
Heating External temperature (DB/WB): 7/6°C, Water temperature (in/out): 40/45°C						
Heating power	kW	3.8~9.0	3.8~12.0	5.5~16.0	5.5~17.5	7.3~21.5
Input heating power range	kW	0.89~2.48	0.89~3.05	1.31~4.39	1.31~4.85	1.73~5.91
COP coefficient		4.25~3.63	4.25~4.88	4.90~3.65	4.20~3.61	4.22~3.64
Heating External temperature (DB/WB): 7/6°C, Water temperature (in/out): 30/35°C						
Heating power	kW	3.7~8.5	3.7~10.7	5.2~14.6	5.2~17.4	7.0~21.2
Input heating power range	kW	0.67~1.91	0.67~2.40	0.94~3.28	0.94~3.95	1.27~4.75
COP coefficient		5.55~4.45	5.55~4.46	5.56~4.75	5.56~4.41	5.52~4.46
Cooling External temperature (DB/WB): 35/24°C, Water temperature (in/out): 12/7°C						
Cooling power	kW	2.3~6.5	2.3~8.0	3.2~11.0	3.2~13.0	4.5~15.0
Input cooling power range	kW	0.65~2.45	0.65~3.04	0.90~4.10	0.90~4.96	1.25~5.68
EER efficiency coefficient		3.53~2.65	3.53~2.63	3.55~2.68	3.55~2.62	3.6~2.64
ErP 35°C	/	A+++	A+++	A+++	A+++	A+++
SCOP 35°C	/	4,81	4,82	4,82	4,80	4,81
Water flow	m^3	1,1	1,4	1,9	2,2	2,6
Refrigerant/Weight	kg	R32/1.2kg	R32/1.2kg	R32/1.8kg	R32/1.8kg	R32/2.3kg
Acoustic pressure of ext. unit at flow (1m)	dB(A)	42	43	45	46	47
Acoustic pressure of EN12102 ext. unit (35°C)	dB(A)	57	62	63	61	62
Casing type	/	Galvanized sheet + ABS				
Compressor	/	Panasonic / Double rotary				
Fan	/	DC				
External temperature during operation	°C	-35~43				
External water connections	cal	1"	1"	1"	1"	1"
Dimensions of external unit (L/W/H)	mm	896×440×750	896×440×750	1100×440×950	1100×440×950	1005×440×1400
Dimensions of external packaging (L/W/H)	mm	990×450×900	992×450×898	1195×450×1100	1195×450×1100	1100×450×1550
Power of additional electric heater	kW	2,0 (4,0)	2,0 (4,0)	2,0 (4,0)	2,0 (4,0)	2,0 (4,0)
Internal water connections	cal	G1"	G1"	G1"	G1"	G1"
Refrigerant connections	cal	3/8", 5/8"	3/8", 5/8"	3/8", 5/8"	3/8", 5/8"	3/8", 5/8"
Acoustic pressure of int. unit at flow (1m)	dB(A)	35,00	35,00	36,00	36,00	37,00
Dimensions of internal unit (L/W/H)	mm	765×500×325	765×500×325	765×500×325	765×500×325	765×500×325
Dimensions of internal packaging (L/W/H)	mm	800×550×375	800×550×375	800×550×375	800×550×375	800×550×375

* The above data are for illustrative purposes only. The exact data is given on the product's nameplate.

Inverter air water heat pump designed in **split EVI** technology

Full domestic hot water supply | House heating

Monoblok EVI

Monoblok inverter heat pump

Model		VS90-DC	VS120-DC	VS150-DC	VS180-DC	VS220-DC	VS250-DC	VS300-DC	VS340-DC
Electric power supply	/	380V-420V~50Hz/3 faz							
Heating External temperature (DB/WB): 7/6°C, Water temperature (in/out): 40/45°C									
Heating power	kW	3.8~9.0	3.8~12.0	5.5~16.0	5.5~17.5	7.3~21.5	9.5~24.5	9.5~29.2	12.5~33.3
Input heating power range	kW	0.89~2.48	0.89~3.05	1.31~4.39	1.31~4.85	1.73~5.91	2.26~6.69	2.26~8.11	2.98~9.22
COP coefficient		4.25~3.63	4.25~4.88	4.90~3.65	4.20~3.61	4.22~3.64	4.21~3.66	4.21~3.6	4.20~3.61
Heating External temperature (DB/WB): 7/6°C, Water temperature (in/out): 30/35°C									
Heating power	kW	3.7~8.5	3.7~10.7	5.2~14.6	5.2~17.4	7.0~21.2	9.0~24.3	9.0~29.4	12.2~33.2
Input heating power range	kW	0.67~1.91	0.67~2.40	0.94~3.28	0.94~3.95	1.27~4.75	1.60~5.49	1.60~6.61	2.20~7.53
COP coefficient		5.55~4.45	5.55~4.46	5.56~4.75	5.56~4.41	5.52~4.46	5.60~4.43	5.60~4.45	5.54~4.41
Cooling External temperature (DB/WB): 35/24°C, Water temperature (in/out): 12/7°C									
Cooling power	kW	3.5~7.0	4.0~8.5	4.5~13.0	5.0~15.0	5.5~17.0	8.5~20.5	9.0~23.0	10.0~26.0
Input cooling power range	kW	0.91~2.33	1.06~2.85	1.17~4.30	1.30~5.98	1.40~5.45	2.16~6.83	2.23~7.59	2.47~8.38
EER efficiency coefficient		3.80~3.0	3.78~2.98	3.85~3.02	3.83~3.01	3.95~3.12	3.93~3.0	4.02~3.03	4.05~3.10
Cooling External temperature (DB/WB): -12/-13.5°C, Water temperature (in/out): 36/41°C									
Heating power	kW	3.0~6.0	4.0~7.5	4.0~11.0	4.5~13.0	5.0~15.0	8.0~18.0	9.0~21.0	9.8~24.0
Input heating power range	kW	1.11~2.45	1.50~3.06	1.45~4.40	1.63~5.30	1.79~5.88	2.88~7.20	3.27~8.47	3.54~9.64
COP coefficient		2.70~2.45	2.68~2.45	2.75~2.50	2.72~2.48	2.80~2.55	2.78~2.50	2.75~2.48	2.77~2.49
Cooling External temperature (DB/WB): -20/~°C, Water temperature (in/out): ~/41°C									
Heating power	kW	2.5~5.0	3.0~6.0	3.8~9.5	4.3~11.0	4.7~12.5	7.5~15.0	9.0~18.0	9.5~21.0
Input heating power range	kW	1.04~2.33	1.26~2.79	1.59~4.44	1.80~5.19	1.92~5.68	3.13~6.91	3.78~8.37	4.03~9.86
COP coefficient		2.40~2.15	2.38~2.15	2.39~2.14	2.38~2.12	2.45~2.20	2.40~2.17	2.38~2.15	2.36~2.13
Cooling External temperature (DB/WB): 35/24°C, Water temperature (in/out): 12/7°C									
Cooling power	kW	2.3~6.5	2.3~8.0	3.2~11.0	3.2~13.0	4.5~15.0	5.5~18.0	5.5~21.0	7.6~24.0
Input cooling power range	kW	0.65~2.45	0.65~3.04	0.90~4.10	0.90~4.96	1.25~5.68	1.52~6.67	1.52~7.92	2.15~8.99
EER efficiency coefficient		3.53~2.65	3.53~2.63	3.55~2.68	3.55~2.62	3.6~2.64	3.62~2.7	3.62~2.65	3.53~2.67
ErP 35°C	/	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
SCOP 35°C	/	4,81	4,82	4,82	4,80	4,81	4,82	4,80	4,80
Water flow	m^3	1,1	1,4	1,9	2,2	2,6	3,1	3,6	4,1
Refrigerant/Weight	kg	R32/1.2kg	R32/1.2kg	R32/1.8kg	R32/1.8kg	R32/2.3kg	R32/2.7kg	R32/2.7kg	R32/3.2kg
Acoustic pressure of ext. unit at flow (1m)	dB(A)	42	43	45	46	47	49	51	53
Acoustic pressure of EN12102 ext. unit (35°C)	dB(A)	57	62	63	61	62	64	66	68
Casing type	/	Galvanized sheet + ABS							
Compressor	/	Panasonic / Double rotary							
Fan	/	DC							
External temperature during operation	°C	-35~43							
External water connections	cal	1"	1"	1"	1"	1"	1"	1"	1"
Dimensions of external unit (L/W/H)	mm	896×440×750	896×440×750	1100×440×950	1100×440×950	1005×440×1400	1100×460×1440	1100×460×1440	1230×545×1525
Dimensions of external packaging (L/W/H)	mm	990×450×900	992×450×898	1195×450×1100	1195×450×1100	1100×450×1550	1195×470×1590	1195×470×1590	1330×555×1550

* The above data are for illustrative purposes only. The exact data is given on the product's nameplate.

4Heat **Monoblok** inverter heat pump

Full domestic hot water supply | House heating

There is only one choice – 4Heat

Our 4Heat pumps ensure the highest possible reliability. High energy class. Silence and comfort of 4Silent. Ease of operation 4Everyone and easy installation 4Easy.

42 dB

Exceptionally quiet.
Nights well slept.

10-year warranty

10-year warranty
for 4Heat pumps.

4 Everyone

Ease of operation.
Wi-Fi. Mobile app.

4 Easy

Extremely easy installation.
Easy maintenance.

Quiet operation
Easy installation
Mobile app. Wi-Fi
Hot water
Floor heating
Traditional heater

4Heat

4Heat[4H] *Monoblock inverter heat pump*

COOLING
20 ~ 45°C

-35 ~ 35°C
HEATING

The New Source of Energy

Inverter air water heat pump designed in **split EVI** technology
Monoblock inverter air water heat pump
Full domestic hot water supply | House heating

4Heat 4H

The New Source of Energy

Inverter air water heat pump designed in **split EVI** technology

Monoblock inverter air water heat pump

Full domestic hot water supply | House heating