

aroTHERM plus

Air source heat pump



Overview

The aroTHERM plus is our flagship air source heat pump range, available in a wide range of heat output sizes for many types of property with 3.5, 5, 7, 10 and 12kW models available.

This heat pump continues to win awards around the world for its innovative use of the refrigerant R290, which gives it a Global Warming Potential (GWP) of just 3. This refrigerant is already used in household appliances all over the world and offers many advantages over refrigerants traditionally used in heat pumps. Coupled with market leading technical features that improve efficiency and deliver higher flow temperatures, the aroTHERM plus is perfect for new and existing heating systems (including hybrid). All aroTHERM heat pumps are impressively quiet in operation and has been certified by Quiet Mark, making them suitable for use even in densely built-up terraced housing estates.

Features & benefits



High performance ASHP range

With a flow temperature of up to 75°C, the aroTHERM plus can deliver more usable hot water with high hot water comfort levels whilst removing the need for direct electric immersion to sterilise the water, protecting from legionella.



Super quiet operation

From just three metres away, the acoustic pressure level is less than 30 dB(A) for easier planning and siting.



Higher energy-efficiency performance

With a SCOP of up to 5.03, the aroTHERM plus is extremely energy efficient, enabling high energy savings against certain fossil fuels.



R290 natural refrigerant with low GWP

Already fulfilling the next NZEB requirements, the aroTHERM plus uses monobloc technology with a hermetically sealed refrigerant circuit.



Fully adaptable system approach

The aroTHERM plus can also be combined with photovoltaic systems and integrated into smart power grids (SG-ready), so your customers can enjoy the benefits of variable electricity tariffs.



Quality by design

Suitable for coastal installations with salt resistant construction C5 class.

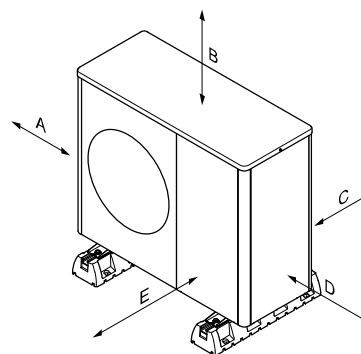
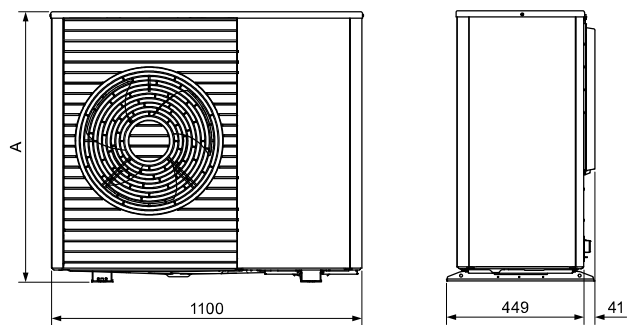


Technical data	Unit	3.5kW	5kW	7kW	10kW (230V)	12kW (230V)	10kW (400V)	12kW (400V)
General								
Dimensions (H x W x D)	mm	765 x 1,100 x 450		965 x 1,100 x 450	1,565 x 1,100 x 450			
Weight, ready for operation	kg	114		128	194		210	
Connection, heating circuit		G 1 1/4"						
Rated voltage		230 V (+10%/-15%), 50 Hz, 1~/N/PE					400 V (+10%/-15%), 50 Hz,3~/N/PE	
Rated current, maximum	A	14.3		15.0	23.3		15	
Fuse size	A	16			25		16	
Fuse type		Characteristic C, slow-blow, singlepole switching						
RCD type		Type B rated to 20kHz or greater and with a minimum trigger point of 150mA above 1kHz						
eBUS (2-core communication cable)	mm²	0.75						
Maximum length eBUS cable (polarity sensitive)	m	50						
IP rating		IP 15 B						
Fan power consumption	W	40			50			
Fan quantity		1			2			
Fan air flow, maximum	m³/h	2300			5100			
Heating pump, power consumption	W	2 - 50			3 - 87			
Heating circuit								
Heating water temperature, minimum/ maximum	°C	20 - 75						
Basic length of the heating water pipe, maximum, between the outdoor unit and indoor unit	m	20						
Maximum static height difference between outdoor unit and the highest point in the heating system	m	18			13			
Minimum operating pressure	bar	3.0			2.5			
Maximum operating pressure	bar	20						
Minimum volume flow	l/h	400		540	995			
Maximum volume flow	l/h	860		1205	2065			
Water volume, in the outdoor unit	l	1.5		2.0	4.5			
Minimum open water volume	l	15		20	45			
Refrigerant circuit								
Fluid type		R290						
Fluid fill quantity	kg	0.6		0.9	1.3			
Refrigerant, Global Warming Potential (GWP)		3						
CO ₂ equivalent	t	0.0018		0.0027	0.0039			
Permissible operating pressure	bar	31.5						
Compressor type		Rotary piston			Scroll compressor			
Compressor oil type		Specific polyalkylene glycol (PAG)						
Compressor, control		Electronic						
Noise emissions, heating mode								
Sound power, EN 12102, EN 14511 LWA, A7/W35	dB(A)	48		49	51			
Sound power, EN 12102, EN 14511 LWA, A7/W55	dB(A)	48		49	51			
Efficiency								
Energy efficiency class 35°C	(A+++ to F)	A++	A+++					
Energy efficiency class 55°C	(A+++ to F)	A+	A++					
Combination with uniTOWER								
Energy efficiency class	(A+++ to F)	A+		A++				

* 490mm (including back plate and mounting brackets).

** 400v models 10 and 12kW only.

Dimensions and clearances

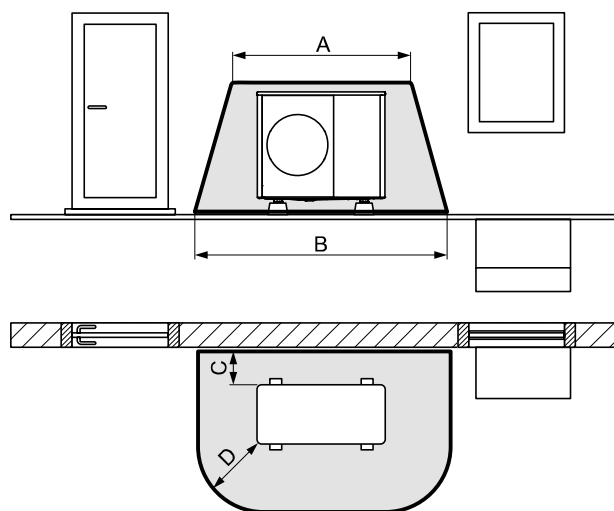


aroTHERM plus	Unit	Dimension A
3.5kW	mm	765
5kW	mm	765
7kW	mm	965
10kW	mm	1565
12kW	mm	1565

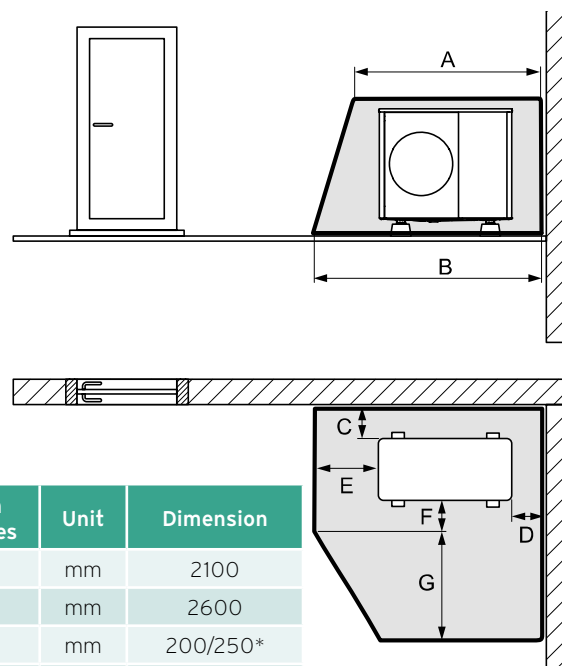
minimum clearances	Unit	Heating mode	Heating and cooling mode
A	mm	100	100
B	mm	1000	1000
C	mm	200	250
D	mm	500	500
E	mm	600	600

R290 clearances

Clearances required for any drains, light wells or other openings.



Minimum clearances	Unit	Dimension
A	mm	2100
B	mm	3100
C	mm	200= heating only 250 = heating and cooling
D	mm	1000

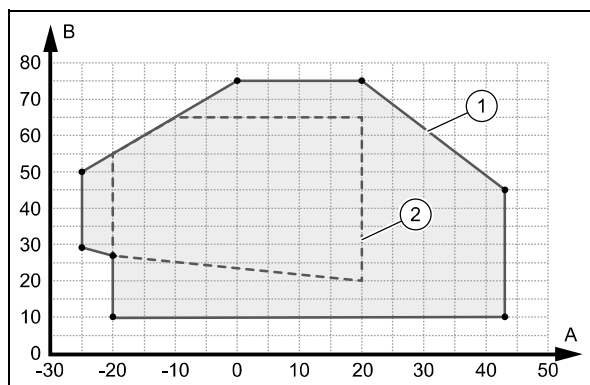


Minimum clearances	Unit	Dimension
A	mm	2100
B	mm	2600
C	mm	200/250*
D	mm	500
E	mm	1000
F	mm	500
G	mm	1800

* 200 = heating only
250 = heating and cooling

Application limits heating mode

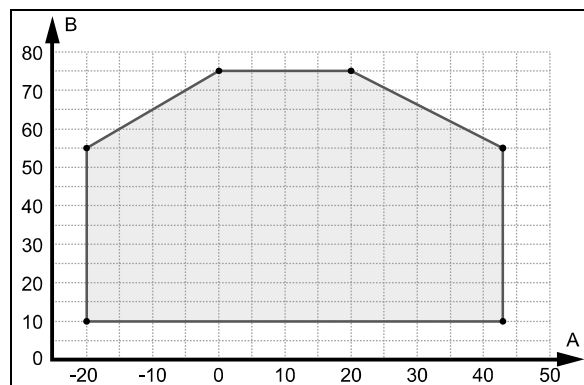
In heating mode, the product works at outdoor temperatures of -25°C to 46°C.



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|---|---------------------------|---|--|
| A | Outdoor temperature | 1 | Application limits, heating mode |
| B | Heating water temperature | 2 | Area of application, in accordance with EN 14511 |

DHW mode

For domestic hot water generation, the product works at outdoor temperatures of -20°C to 46°C.



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|---|---------------------|---|---------------------------|
| A | Outdoor temperature | B | Heating water temperature |
|---|---------------------|---|---------------------------|