Heating Hot water Renewables

aroTHERM plus

Air source heat pump



Dimensions

Model	Width	Height	Depth
aroTHERM plus 3.5kW aroTHERM plus 5kW	1100mm	765mm	490mm (including back plate and mounting brackets)
aroTHERM plus 7kW		965mm	
aroTHERM plus 10kW aroTHERM plus 12kW		1565mm	

QUIET MARK

Overview

The aroTHERM plus is our flagship air source heat pump range, available in a wide range of heat output sizes for many times 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 three. 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). It's also impressively quiet in operation and has been accreddited by Quiet Mark*, making it suitable for use even in densley 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 installations less than 150m away from the sea with salt resistant construction C5 class.

MADE IN THE MIDLANDS WINNER 2023

NATIONAL AWARDS 2021 WINNER

GREEN HOME AWARDS 2021 WINNER

* Models 3.5, 5 and 12kW.

Technical data	Unit	3.5kW	5kW	7kW	10kW	12kW
Dimensions						
Product dimensions (H x W x D)	mm	765 x 1100 x 450		965 x 1100 x 450	1565 x 1100 x 450	
Weight, with packaging	kg	132		150	223	
Weight, ready for operation	kg	114		128	194	
Electrical data						
Rated voltage	V	230 V (+10%/- 15%), 50 Hz, 1~/N/PE			400 V (+10%/-15%), 50 Hz,3~/N/PE*	
Fuse type		Type C, slow blow, single pole switching				
RCD type**		B				
Inrush current (with inrush current limiter)	A	14.3		15	23.3	15*
Rated current, maximum	A	14.3		15	23.3	15*
IP rating		IP 15B				
eBUS cable minimum size (communication)	mm²	0.75				
eBUS cable maximum length (communication)	m	50				
Fan power consumption	W	40			50	
Fan quantity		1			2	
Fan air flow, maximum	m³/h	2300			5100	
Hydraulic connection						
Heating flow / return	BSP male	G 1 1/4"				
Heating circuit / building circuit						
Water volume in the heat pump	l	1.5		2.0	4.5	
Minimum heating circuit volume for defrost, backup activated/deactivated	l	15 / 40		20 / 55	45 / 150	
Minimum operating pressure	bar	≥0.5				
Maximum operating pressure	bar	≤2.5				
Minimum flow temperature heating	°C	20				
Maximum flow temperature heating	°C	75				
Minimum volume flow	l/h	400		540	995	
Maximum volume flow	l/h	860		1205	2065	
Maximum electrical power heating circuit pump	W	2-50			3-87	
Max. length heating pipework, outside to inside	m	20				
Pump remaining feed pressure	kPA / mbar	56 / 560		44 / 440	55 / 550	
Refrigerant circuit						
Refrigerant type		R 290				
Volume of refrigerant circuit in the heat pump	kg	0.60		0.90	1.30	
Global Warming Potential (GWP) in accordance with EU No. 517/2014		3				
CO_2 equivalent	t	0.0018		0.0027	0.0039	
Expansion valve type		Electronic				
Oil type	bar	31.5				
Compressor type		Rotary			Scroll	
Oil type		Specific polyalkylene glycol (PAG)				
Compressor control		Electronic				
Noise emissions, heating mode						
Sound power, EN 12102, EN 14511 LWA, A7/W35	dB(A)	51		53	58	
Sound power, EN 12102, EN 14511 LWA, A7/W45	dB(A)	53			58	
Sound power, EN 12102, EN 14511 LWA, A7/W55	dB(A)	54		55	60	
Energy efficiency class						
Energy efficiency class 35°C and 55°C	(A+++ to F)	A+++				

*400v models 10 and 12kW only.

**All Vaillant heat pumps must be installed with a type B RCD rated to 20kHz or greater and with a minimum trigger point of 150mA above 1kHz.