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# Technical Data

## Enviroair Heat Pump Sizing Guide

ERP Rating up to A+++

A heat pump that uses air as its heat source will perform better as the air temperature increases. The industry standard for quoting the output and efficiency of an air to water (ATW) heat pump is 7°C external temperature and a 35°C flow temperature. However, to meet MCS (Microgeneration Certification Scheme) criteria, the heat pump should be sized according to the lowest geographical temperature where the heat pump is to be installed.

The heat requirement for a property should be designed in accordance with MCS 3005 and include a room by room heat loss calculation. The calculated heat requirement should then be matched to the output of the heat pump (shown below). Please note that the information contained in these tables is for guidance purposes only. For exact quotations please contact the Firebird Technical Hub on **01752 691177** or **[technicalhub@firebird.uk.com](mailto:technicalhub@firebird.uk.com)**.

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### Water Flow Temperature 30-35°C

Enviroair Model*	Product Code	Outdoor Air Temperature 7°C		Outdoor Air Temperature -7°C	
		Capacity <sup>1</sup> (kW)	COP <sup>1</sup>	Capacity <sup>2</sup> (kW)	COP <sup>2</sup>
Enviroair 7.5kW	ASH075MOR	7.50	4.55	5.80	2.57
Enviroair 11kW	ASH011MOR	11.00	5.00	9.70	2.74
Enviroair 14kW	ASH014MOR	14.00	4.71	11.50	2.65
Enviroair 16kW	ASH016MOR	16.00	4.57	12.00	2.57

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### Water Flow Temperature 40-45°C

Enviroair Model*	Product Code	Outdoor Air Temperature 7°C		Outdoor Air Temperature -7°C	
		Capacity <sup>1</sup> (kW)	COP <sup>1</sup>	Capacity <sup>2</sup> (kW)	COP <sup>2</sup>
Enviroair 7.5kW	ASH075MOR	7.50	3.50	6.00	2.25
Enviroair 11kW	ASH011MOR	11.00	3.80	10.00	2.45
Enviroair 14kW	ASH014MOR	14.00	3.61	11.00	2.25
Enviroair 16kW	ASH016MOR	16.00	3.40	11.50	2.15

\* Three phase capacities of 11 kW to 17.5 kW are also available - please contact Firebird Products Ltd for further information.

## Water Flow Temperature 47-55°C

Enviroair Model*	Product Code	Outdoor Air Temperature 7°C		Outdoor Air Temperature -7°C	
		Capacity <sup>1</sup> (kW)	COP <sup>1</sup>	Capacity <sup>2</sup> (kW)	COP <sup>2</sup>
Enviroair 7.5kW	ASH075MOR	7.50	2.70	5.00	1.72
Enviroair 11kW	ASH011MOR	11.00	3.00	8.70	1.78
Enviroair 14kW	ASH014MOR	14.00	2.80	9.70	1.85
Enviroair 16kW	ASH016MOR	16.00	2.50	10.50	1.75

\* Three phase capacities of 11 kW to 17.5 kW are also available – please contact Firebird Products Ltd for further information.

It is essential that the design of the heat emitter (whether for underfloor heating or radiators), is calculated correctly to ensure best performance for the Enviroair air source heat pump. For exact quotations please contact the Firebird Technical Hub on **01752 691177** or [technicalhub@firebird.uk.com](mailto:technicalhub@firebird.uk.com).

## Enviroair Heating Capacity

	Outdoor Unit Model	Enviroair 7kW	Enviroair 11kW	Enviroair 14kW	Enviroair 16kW
Nominal Capacity (max) Water 30/35°C, Ambient 7db/6wb°C	kW	7.50 (11.00)	11.00 (15.20)	14.00 (16.70)	16.00 (17.80)
	COP	4.55	5.00	4.71	4.57
Nominal Capacity (max) Water 40/45°C, Ambient 7db/6wb°C	kW	7.50 (10.00)	11.00 (14.10)	14.00 (15.70)	16.00 (17.30)
	COP	3.50	3.80	3.61	3.40
Nominal Capacity (max) Water 47/55°C, Ambient 7db/6wb°C	kW	7.50 (9.20)	11.00 (13.50)	14.00 (15.20)	16.00 (17.00)
	COP	2.70	3.00	2.80	2.50
Nominal Capacity (max) Water 30/35°C, Ambient 2db/1wb°C	kW	5.50 (8.90)	9.50 (12.80)	10.50 (13.90)	11.10 (15.00)
	COP	3.53	3.70	3.55	3.41
Nominal Capacity (max) Water 30/35°C, Ambient -7db/-8wb°C	kW	5.80 (6.70)	9.70 (10.60)	11.50 (12.00)	12.00 (13.00)
	COP	2.57	2.74	2.65	2.57
Nominal Capacity (max) Water 40/45°C, Ambient -7db/-8wb°C	kW	6.00 (6.40)	10.00 (10.00)	11.00 (11.60)	11.50 (12.50)
	COP	2.25	2.45	2.25	2.15
Nominal Capacity (max) Water 47/55°C, Ambient -7db/-8wb°C	kW	5.00 (5.50)	8.70 (9.70)	9.70 (11.20)	10.50 (12.00)
	COP	1.72	1.78	1.85	1.75
Water Flow Rate (min/max)	(m <sup>3</sup> /hr)	0.6/2.1	1.0/2.8	1.1/3.0	1.2/3.0
Minimum Water Volume (defrost)	(l)	28.0	38.0	46.0	55.0
Water Connections	(in)	1 1/4" female			
Expansion Vessel Size	(l)	6.0			
Water Temperature Range	(°C)	20-55	20-60		
Power Supply		230V/1Ph/50Hz	230V/1Ph/50Hz + 400V/3Ph/50Hz		
Circuit Breaker Size (with DHW tank heater)	A	32.0	50/32		
Circuit Breaker Size (without DHW tank heater)	A	20.0	32/20		
Maximum Operating Current (with DHW tank heater)	A	33.0	45.8/30.0		45.8/39.4
Maximum Operating Current (without DHW tank heater)	A	18.0	30.8		
Sound Power Level @7/35*	dB(A)	61.0	63.0	64.0	65.0
Dimensions (H x W x D) Including Connections	(mm)	800 x 1252 x 370		1380 x 1252 x 370	
Gross Weight	(kg)	115.0	135.0	140.0	144.0

\* Sound power level in accordance to the standard EN 12102 at conditions specified in EN 14511 performance test.