



DHP-AQ air source heat pump

Celebrating one of the best seasonal performances

The DHP-AQ (air-water heat pump) provides both heating and domestic hot water to the dwelling, with the addition of a cooling option for the summer.

Supporting a wide range of applications, the DHP-AQ features class leading seasonal performance, thanks to the unique control system that constantly monitors and optimises three key processes of the appliance and system: Airflow (efficient variable speed EC fan), Refrigerant circuit (electronic expansion valve) and Heat distribution (OPTI technology).

The unique design of the DHP-AQ enables it to perform efficiently at low outdoor temperatures keeping the dwelling comfortable whatever the weather.

State-of-the-art defrost technology will ensure both energy efficiency and complete functionality of the heat pump throughout a sustained cold winter.

The DHP-AQ is available with a choice of three distinct indoor kits: Mini, Midi and Maxi.



Excellence

in seasonal performance

The DHP-AQ provides one of the best seasonal performances on the market.



Connection heat pump

- 1 Supply line heating system (all sizes) - 28 mm Cu
- 2 Return line heating system (all sizes) - 28 mm Cu


Indoor kit

- Mini:** controller
Midi: controller, circulation pump (class A), auxiliary heater (400V - 3/6/9/12/15 kW; 230V - 3/6/9 kW), three way valve
Maxi: controller, hot water tank (180 l), circulation pump (class A), auxiliary heater (400V - 3/6/9/12/15 kW; 230V - 3/6/9 kW), three way valve



DHP-AQ			6	9	11	13	16	18
Refrigerant	Type		R407C	R407C	R407C	R407C	R407C	R407C
	Amount	kg	4.0	4.3	5.0	5.1	5.7	6.0
	Design pressure	MPa	3.1	3.1	3.1	3.1	3.1	3.1
Compressor	Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
	Oil		POE	POE	POE	POE	POE	POE
Electrical data 3-N, ~50Hz	Main supply	Volt	400	400	400	400	400	400
	Rated power, compressor	kW	2.2	2.9	3.3	4.2	5.0	6.1
	Rated power, fan	kW	0.2	0.2	0.2	0.3	0.3	0.7
	Start current	A	12	10	18	17	18	18
	Fuse	A	10	10	16	16	16	16
Electrical data 1-N, ~50Hz	Main supply	Volt	230	230	230	230	230	-
	Rated power, compressor	kW	2.4	2.8	3.6	4.3	5.5	-
	Rated power, fan	kW	0.2	0.2	0.2	0.3	0.3	-
	Start current	A	11	21	26	28	38	-
	Fuse	A	20	20	25	32	32	-
Performance ⁸	COP ¹		4.7	4.7	5.0	4.7	4.6	4.3
	COP ²		4.3	4.4	4.7	4.4	4.1	4.0
	Heating capacity ²	kW	6.5	8.6	11.1	12.3	15.2	17.6
	Power input - heating ²	kW	1.5	2.0	2.4	2.8	3.7	4.4
	EER ³		2.2	2.4	2.5	2.4	2.3	2.3
	Cooling capacity ³		4.2	5.9	7.5	8.9	10.4	13.1
	Power input - cooling ³		1.9	2.5	3.0	3.7	4.5	5.7
Nominal flow ⁴	Heating circuit	l/s	0.150	0.216	0.263	0.299	0.372	0.432
Operating range (outdoor)	Heating circuit	°C	-20~+45°C	-20~+45°C	-20~+45°C	-20~+45°C	-20~+45°C	-20~+45°C
Max temperature ⁵	Heating circuit	°C	60	60	60	60	60	60
Pressure levels	Low pressure	MPa	0.05	0.05	0.05	0.05	0.05	0.05
	Operating	MPa	2.85	2.85	2.85	2.85	2.85	2.85
	High pressure	MPa	3.1	3.1	3.1	3.1	3.1	3.1
Sound power level	Regular mode ⁶	dB(A)	61	61	61	62	66	76
	Silent mode ⁶	dB(A)	60	59	60	61	64	71
Sound pressure level (1 meter)	Regular mode ⁷	dB(A)	46	46	46	47	51	61
	Silent mode ⁷	dB(A)	45	44	44	46	48	55
Weight	Outdoor unit	kg	125	131	150	155	185	191
	Mini	kg	18	18	18	18	18	18
	Midi	kg	21	21	21	21	21	21
	Maxi	kg	106	106	106	106	-	-
Outdoor unit	Width x Depth x Height	mm	856x510x1272	856x510x1272	1016x564x1477	1016x564x1477	1166x570x1557	1166x570x1557
Mini (Indoor kit)	Width x Depth x Height	mm			380x204x600			
Midi (Indoor kit)	Width x Depth x Height	mm			420x255x625 (+50mm pipes)			
Maxi (Indoor kit)	Width x Depth x Height	mm		596x690x1845 ±10				

The measurements are performed on a limited number of heat pumps which can cause variations in the results. Tolerances in the measuring methods can also cause variations.

- 1) At A7/W35 Δ10K warm side. (EN 255)
- 2) At A7/W35 according to EN 14511.
- 3) At A35/W7 according to EN14511.
- 4) Nominal flow: heating circuit Δ10K.

- 5) At outdoor temperature 0°C
- 6) According to SS-EN 12102, EN ISO 3741.
- 7) According to ISO 11203, cuboid-shaped measuring surface
- 8) The values apply to a new heat pump with clean heat exchangers.

* The Swedish Energy Agency has conducted an extensive test of air/water heat pumps. The new Danfoss DHP-AQ has the best annual efficiency, and consequently delivers the biggest savings. Test performed by the Swedish Energy Agency has been announced September 2011. More information you can find on <http://www.energimyndigheten.se/sv/Hushall/Testerresultat/Testresultat/Luftvattenvarmepumpar/>

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