



Danfoss Heat Pump DHP-AL

Air/water heat pump that provides heating and hot water.



Danfoss DHP-AL is an air/water heat pump that uses new innovative technology to operate at the highest possible annual efficiency meaning you can save more on fuel bills and CO₂ emissions.



DHP-AL has a separate hot water tank, ideal if you have a low ceiling. The tank incorporates our patented TWS* technology, which produces hot water faster and at higher temperatures than with traditional technologies.



Defrosting is done automatically only on demand which further boosts efficiency.



DHP-AL operates at a low sound level and can be controlled and monitored via the Internet. The controller is advanced but very user friendly.



* Tap Water Stratificator, our patented technology developed to stratify hot water in a tank to ensure that heat is used optimally.



Kiwa applies to single phase models only

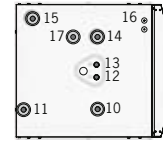
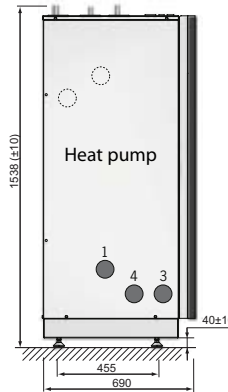
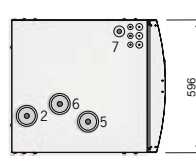
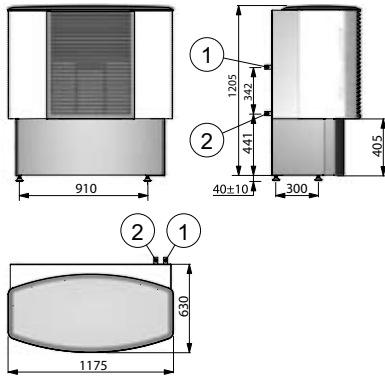
DANFOSS HEAT PUMPS

DANFOSS DHP-AL

Connection

The brine lines can be connected on either the left or right-hand sides of the heat pump.

- 1 Brine in, 28 Cu
- 2 Brine out, 28 Cu



Heat pump

- 1 Brine in, 28 Cu
- 2 Brine out, during normal operation, 28 Cu
- 3 Brine out, during defrosting to hwh pos 8, 28 Cu
- 4 Return pipe from water heater pos 9, 28 Cu
- 5 Heating system supply line, 22 Cu: 6-10 kW, 28 Cu: 12 kW
- 6 Heating system return line, 22 Cu: 6-10 kW, 28 Cu: 12 kW
- 7 Lead-in power and sensor lead

Water heater

- 8 Connection for brine out when defrosting from pos 3
- 9 Water heater, return pipe to pos 4
- 10 Bleed valve, at stainless steel water heater
- 11 Brine out during defrosting, 28 Cu
- 12 Domestic hot water, 22 Brass
- 13 Cold water, 22 Brass
- 14 Supply to water heater coil
- 15 Brine, expansion outlet when outdoor unit is positioned at high level
- 16 Lead-in sensor lead
- 17 Temperature and pressure valve

DHP-AL			6	8	10	12
Refrigerant	Type		R404A	R404A	R404A	R404A
	Amount	kg	0.95	1.45	1.50	1.60
Compressor	Type		Scroll	Scroll	Scroll	Scroll
Electrical data 3-N ~50Hz	Main supply	Volt	400	400	400	400
	Rated power compressor	kW	2.0	2.3	3.6	4.4
	Rated power, circulation-pumps/fan	W	0.4	0.6	0.6	0.6
	Auxiliary heater, 5 steps	kW	3/6/9/12/15	3/6/9/12/15	3/6/9/12/15	3/6/9/12/15
	Start current per phase	A	12	10	18	17
	Circuit breaker	A	10 ³ /16 ³ /20 ³ /20 ³ /25 ³ /25 ³ /30 ³	16 ³ /16 ³ /20 ³ /20 ³ /25 ³ /25 ³ /30 ³	16 ³ /16 ³ /20 ³ /20 ³ /25 ³ /30 ³ /35 ³	16 ³ /20 ³ /25 ³ /25 ³ /25 ³ /30 ³ /35 ³
Electrical data 1-N ~50Hz	Main supply	Volt	230	230	230	230
	Rated power compressor	kW	3.3	4.2	5.4	5.7
	Rated power, circulation-pumps/fan	W	0.4	0.6	0.6	0.6
	Auxiliary heater, 3 steps	kW	1.5/3/4.5	1.5/3/4.5	1.5/3/4.5	1.5/3/4.5
	Start current - soft start	A	11	21	26	28
	Circuit breaker	A	25 ³ /32 ³ /40 ³	25 ³ /32 ³ /40 ³	32 ³ /40 ³ /50 ³	32 ³ /40 ³ /50 ³
Performance	COP ¹		3.88	4.06	4.21	4.06
	COP ²		3.26	3.45	3.29	3.35
	Heating capacity ²	kW	5.90	7.96	9.85	11.3
	Power input ²	kW	1.8	2.3	3.0	3.4
Lowest outdoor temperature allowed for compressor start	°C		-20	-20	-20	-20
Max/min temperature	Cooling circuit	°C	20/-25	20/-25	20/-25	20/-25
	Heating circuit	°C	55/20	55/20	55/20	55/20
Water volume	Water heater	l	180	180	180	180
Anti freeze media ¹⁰			Ethylene glycol + water solution to -32°C +/- 1°C			
Indoor unit	Dimensions LxWxH	mm	690x596x1538	690x596x1538	690x596x1538	690x596x1538
	Weight	kg	154	154	154	162
	Sound power level ¹¹	dB(A)	42.5	47.7	45.5	48.1
Water heater unit	Dimensions LxWxH	mm	690x596x1538	690x596x1538	690x596x1538	690x596x1538
	Weight empty	kg	172	172	172	172
	Weight filled	kg	352	352	352	352
Outdoor unit	Dimensions LxWxH	mm	630x1175x1245	630x1175x1245	630x1175x1245	630x1175x1245
	Weight	kg	94	94	94	94
	Sound power level, low/high ¹²	dB(A)	53/63	53/63	54/67	54/67
Max pipe/cable length between indoor & outdoor units	m		60 (30 + 30)	60 (30 + 30)	60 (30 + 30)	60 (30 + 30)

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 A7W35 Δ10 warm side (excluding circulation pumps and outdoor unit).
- 2) At A7W35 according to EN 14511 (including circulation pumps and outdoor unit).
- 3) Heat pump with 3 kW auxiliary heater (1-N 1.5 kW).
- 4) Heat pump with 6 kW auxiliary heater (1-N 3 kW).
- 5) Heat pump with 9 kW auxiliary heater (1-N 4.5 kW).
- 6) 12 kW auxiliary heater (compressor off).

- 7) 15 kW auxiliary heater (compressor off).
- 8) Heat pump with 12 kW auxiliary heater.
- 9) Heat pump with 15 kW auxiliary heater.
- 10) Propylene glycol or ethanol may not be used.
- 11) Sound power level measured according to EN ISO 3741 at A7W45 (EN 12102).
- 12) Sound power level measured according to EN ISO 3741.

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