

DHP-H Opti Pro+ ground source heat pump

A heat pump which provides an unbeatable **level of comfort**

The DHP-H Opti Pro+ uses Opti technology that incorporates an intelligent control system using speed controlled circulation pumps to ensure the output is constantly adjusted to the prevailing requirements and conditions of both the heating system and collector. This means the heat pump will always operate under ideal conditions, therefore guaranteeing maximum efficiency, second by second, hour by hour.

DHP-H Opti Pro+ can produce large quantities of hot water whilst using a minimum amount of energy, made possible by our two patented technologies; the integrated hot water tank (180 l) incorporates TWS* technology, producing hot water faster than

traditional alternatives can allow and HGW** (Hot Gas Water) allows the hot water to be constantly topped up to the desired temperature during heat production, meaning simultaneous production and fewer cycles, increased domestic hot water temperature, and significantly improved seasonal performance.

The DHP-H Opti Pro+ operates at a very low sound level and it can easily be adapted to produce cost effective cooling. There is an option to control and monitor DHP-H Opti Pro+ via the Internet. The control system, although highly advanced is both intuitive and very user friendly.



4.8 SPF***

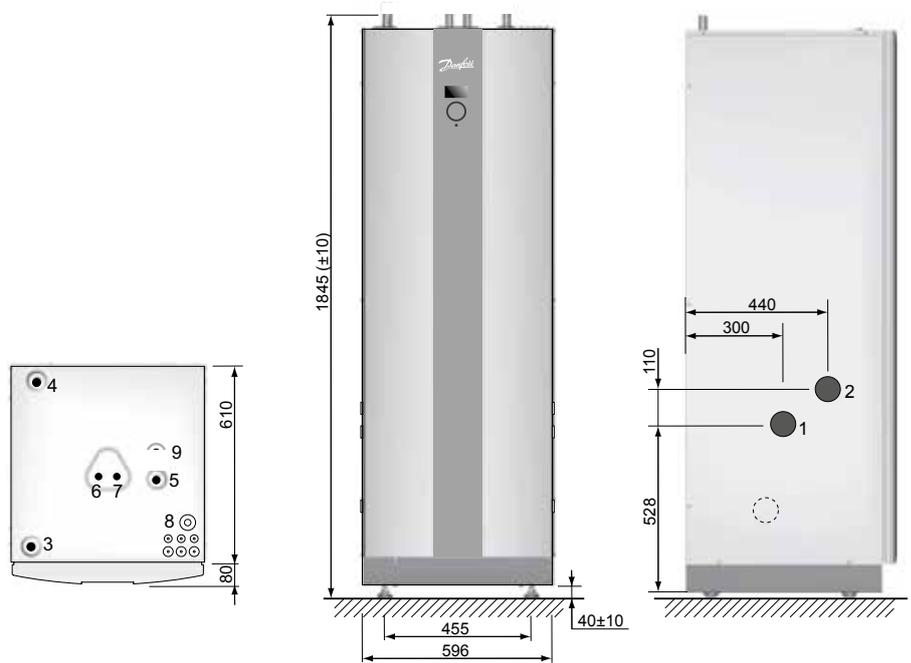
Superior Seasonal Performance Factor. DHP-H Opti Pro+ delivers maximal energy savings.

Technical specification Danfoss DHP-H Opti Pro+

Connection

The brine pipes 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
- 3 Heating system supply line, 22 Cu: 6-8 kW, 28 Cu: 10-13 kW
- 4 Heating system return line, 22 Cu: 6-8 kW, 28 Cu: 10-13 kW
- 5 Connection for bleed valve, 22 Cu
- 6 Hot water line, 22 Brass
- 7 Cold water line, 22 Brass
- 8 Lead-in for supply, sensor and communication cables and sensors



DHP-H Opti Pro+		6	8	10	13	
Refrigerant	Type	R410A	R410A	R410A	R410A	
	Amount	kg	1.35	1.8	2.3	2.3
Compressor	Type	Scroll	Scroll	Scroll	Scroll	
	Main supply	Volt	400	400	400	400
Electrical data 3-N~50Hz	Rated power, compressor	kW	3.0	3.9	4.8	6.2
	Rated power, circulation pumps	kW	0.2	0.2	0.3	0.3
	Auxiliary heater, 3 steps	kW	3/6/9	3/6/9	3/6/9	3/6/9
	Start current ¹	A	9	10	11	20
	Fuse	A	10 ⁴ /16 ⁵ /20 ⁶	16 ⁴ /16 ⁵ /20 ⁶	16 ⁴ /20 ⁵ /25 ⁶	16 ⁴ /20 ⁵ /25 ⁶
Performance	COP ²		4.5	4.7	5.0	4.9
	COP ³		4.2	4.4	4.8	4.4
	Heating capacity ³	kW	5.8	7.5	10.3	13.0
	Power input ³	kW	1.4	1.7	2.2	2.9
Energy class - system ⁹	Floor heating (35°C)/Radiator (55°C)		A+++/A++	A+++/A++	A+++/A++	A+++/A++
	Floor heating (35°C), Radiator (55°C) Domestic hot water		A++ A	A++ A	A++ A	A++ A
Max/min temperature	Cooling circuit	°C	20/-8	20/-8	20/-8	20/-8
	Heating circuit	°C	60/20	60/20	60/20	60/20
Water volume	Water heater	l	180	180	180	180
Anti freeze media ⁷			Ethanol + water solution with freezing point -17 ±2 °C			
Dimensions LxWxH	mm	690x596x1845	690x596x1845	690x596x1845	690x596x1845	
Weight empty	kg	196	211	222	223	
Weight filled	kg	376	391	402	403	
Sound power level ⁸	dB(A)	41	44.5	46.5	47	

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.

* - Tap Water Stratification, our patented technology developed to ensure that the stored heat is always used optimally.

** - Hot Gas Water: our patented technology that utilises existing heating production to heat domestic hot water simultaneously.

*** - 4.8 SPF applies to a house with an annual heating demand of 34.300 kWh (heating and hot water), supply line floor heating at 35 °C and has been

confirmed by the external Swedish energy authority.

1) According to IEC61000.

2) At B0/35 ΔT10K warm side (EN 255).

3) At B0W35 according to EN 14511 (including circulation pumps).

4) Heat pump with 3 kW auxiliary heater (1-N 1.5 kW).

5) Heat pump with 6 kW auxiliary heater (1-N 3 kW).

6) Heat pump with 9 kW auxiliary heater (1-N 4.5 kW).

7) Always check local rules and regulations before using antifreeze.

8) Sound power level measured according to EN ISO 3741 at B0W45 (EN 12102).

9) When the heat pump is part of an integrated system.

According to Eco-design Directive 811/2013

10) When the heat pump is the sole heat generator and the built-in controller is not included. According to Eco-design Directive 811/2013.

A+++ energy class when the heat pump is part of an integrated system, low temperature applications

A++ energy class when the heat pump is the sole heat generator, Energy class according to Eco-design Directive 811/2013

