



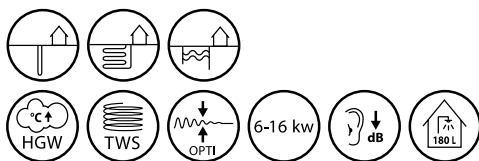
Danfoss Heat Pump DHP-H Opti Pro

An unbeatable level of comfort at the highest possible cost-effectiveness.

Danfoss DHP-H Opti Pro uses new innovative technology to operate at the highest possible annual efficiency, meaning you can get 75% or more of your energy consumption for free – using renewable energy stored in the bedrock, the ground or the water. This provides a sustainable and environmentally friendly heating solution.

The new Opti technology incorporates an intelligent control system that via speed controlled circulation pumps ensures that the performance is always adjusted to the prevailing requirements and conditions of the heating system. This makes the heat pump always work under the most ideal conditions available, guaranteeing maximum efficiency, second by second, hour by hour.

DHP-H Opti Pro produces large amounts of hot water whilst using a minimum of energy. This is made possible by our two patented technologies, HGW* and TWS**. This heat pump operates at a low sound level and it can easily be adapted to produce cost effective cooling. You can control and monitor DHP-H Opti Pro via the Internet.



* Hot Gas Water heater, our new patented technology that utilizes existing house heating to produce hot water at the same time, which gives hot water as a bonus when you heat your home.

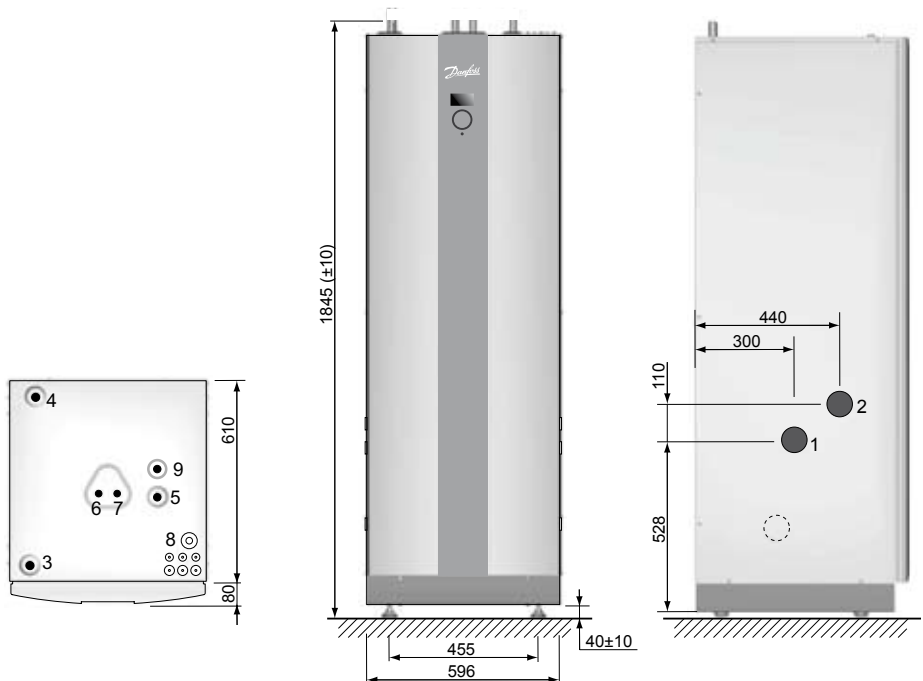
** Tap Water Stratificator, our patented technology developed to stratify hot water in the tank to ensure that heat is used optimally.

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: 4-10 kW, 28 Cu: 12-16 kW
- 4 Heating system return line, 22 Cu: 4-10 kW, 28 Cu: 12-16 kW
- 5 Expansion line, 22 Cu
- 6 Hot water line, 22 Brass
- 7 Cold water line, 22 Brass
- 8 Lead-in for supply, sensor and communication cables
- 9 Temperature and pressure valve (valid only on certain models and markets)



DHP-H Opti Pro			6	8	10	12	16
Refrigerant	Type		R407C	R407C	R407C	R407C	R407C
	Amount	kg	1.15	1.30	1.40	1.55	1.70
Compressor	Type		Scroll	Scroll	Scroll	Scroll	Scroll
Electrical data 3-N~50Hz	Main supply	Volt	400	400	400	400	400
	Rated power, compressor	kW	2.0	2.3	3.6	4.4	5.6
	Rated power, circulation pumps	kW	0.3	0.3	0.3	0.3	0.4
	Auxiliary heater, 3 steps	kW	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
	Start current ¹	A	12	10	18	17	18
	Circuit breaker	A	10 ⁴ /16 ⁵ /20 ⁶	16 ⁴ /16 ⁵ /20 ⁶	16 ⁴ /16 ⁵ /20 ⁶	16 ⁴ /20 ⁵ /25 ⁶	20 ⁴ /20 ⁵ /25 ⁶
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	kW	0.3	0.3	0.3	0.3	*
	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	A	11	21	26	28	*
	Circuit breaker	A	25 ⁴ /32 ⁵ /40 ⁶	25 ⁴ /32 ⁵ /40 ⁶	32 ⁴ /40 ⁵ /50 ⁶	32 ⁴ /40 ⁵ /50 ⁶	*
Performance	COP ²		4.74	4.88	4.84	4.75	4.80
	COP ³		4.04	4.34	4.24	4.20	3.99
	Heating capacity ³	kW	5.33	7.51	9.40	11.0	16.4
	Power input ³	kW	1.3	1.7	2.2	2.6	4.1
Max/min temperature	Cooling circuit	°C	20/-10	20/-10	20/-10	20/-10	20/-10
	Heating circuit	°C	55/20	55/20	55/20	55/20	55/20
Water volume	Water heater	l	180	180	180	180	180
	Condenser	l	1.6	1.9	2.1	2.1	2.9
	Evaporator	l	0.7	1.2	1.6	1.6	2.2
	De-superheater	l	0.2	0.2	0.2	0.2	0.2
	Anti freeze media		Ethylene glycol/ Ethanol	Ethylene glycol/ Ethanol	Ethylene glycol/ Ethanol	Ethylene glycol/ Ethanol	Ethylene glycol/ Ethanol
Dimensions LxWxH	mm	690x596x1845	690x596x1845	690x596x1845	690x596x1845	690x596x1845	
Weight empty	kg	231	231	231	240	244	
Weight filled	kg	411	411	411	420	424	
Sound power level⁷	dB(A)	45.4	41.5	44.7	49.2	49.9	

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) According to IEC61000.

2) At B0W35 Δ10K warm side (excluding circulation pumps).

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

8) Fuse protection phase L1 (size 4 is equipped with an 1-phase compressor).

*) Not available in this version.