



## Danfoss Heat Pump DHP-L

Efficient and sustainable.

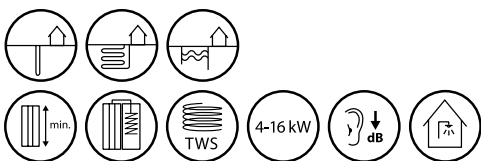
## Danfoss Water Heater DWH

Advanced domestic hot water storage.

Danfoss DHP-L uses new innovative technology to operate at the highest possible annual efficiency. This means 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.

DHP-L has a separate hot water tank, DWH (optional), ideal if you have a low ceiling or a high hot water demand. Danfoss DWH is available in different sizes. The tank incorporates our patented TWS\* technology, which produces hot water faster and at higher temperatures than with traditional technologies. You can also connect DHP-L to your existing hot water tank.

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-L via the Internet and the controller is advanced but very user friendly.



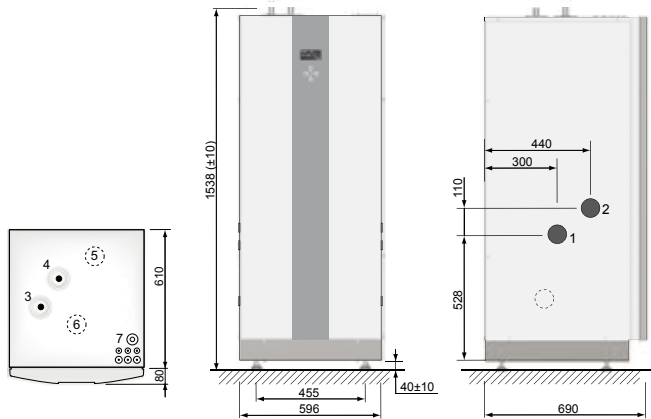
\* Tap Water Stratificator, our patented technology developed to stratify hot water in a tank to ensure that heat is used optimally.

# DANFOSS DHP-L

## Connection heat pump

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

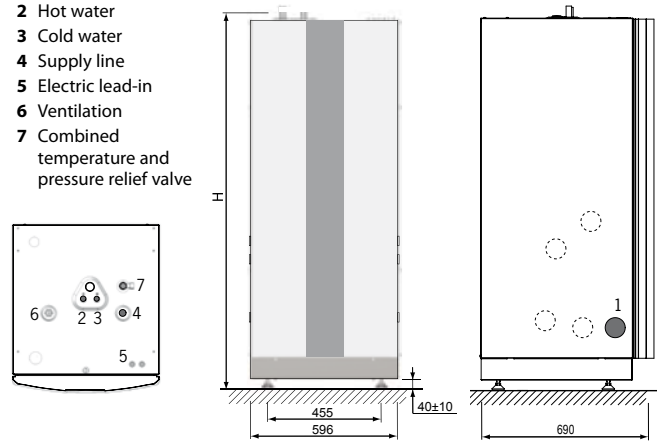
- 1 Brine in, 28 Cu
- 2 Brine out, 28 Cu
- 3 Heating system supply line, 22 Cu: 4-10 kW, 28 Cu: 12-16 kW
- 4 Heating system return line, 22 Cu: 4-10 kW, 28 Cu: 12-16 kW
- 5 Alternative for brine out
- 6 Alternative for brine in
- 7 Lead-in for supply, sensor and communication cables



# DANFOSS DWH

## Connection water heater

- 1 Return line
- 2 Hot water
- 3 Cold water
- 4 Supply line
- 5 Electric lead-in
- 6 Ventilation
- 7 Combined temperature and pressure relief valve



DWH			200	300
Volume	Sec/Prim	l	180/7.5	286/10
Design pressure	Sec/Prim	MPa	1.0/0.3	1.0/0.3
Test pressure	Sec/Prim	MPa	1.43/0.43	1.43/0.43
Dry weight		kg	141	147
Filled weight		kg	321	419
Height	H	mm	1538	1835

DHP-L			4	6	8	10	12	16
Refrigerant	Type		R407C	R407C	R407C	R407C	R407C	R407C
	Amount	kg	0.75	1.20	1.30	1.45	1.55	2.00
Compressor	Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
	Electrical data							
3-N~50Hz	Main supply	Volt	400	400	400	400	400	400
	Rated power, compressor	kW	2.7	2.0	2.3	3.6	4.4	5.6
	Rated power, circulation pumps	kW	0.2	0.2	0.2	0.4	0.5	0.5
	Auxillary heater, 3 steps	kW	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
	Start current <sup>1</sup>	A	17	12	10	18	17	18
	Circuit breaker	A	16 <sup>7</sup> /10 <sup>4</sup> /10 <sup>5</sup> /16 <sup>6</sup>	10 <sup>4</sup> /16 <sup>5</sup> /20 <sup>6</sup>	16 <sup>4</sup> /16 <sup>5</sup> /20 <sup>6</sup>	16 <sup>4</sup> /16 <sup>5</sup> /20 <sup>6</sup>	16 <sup>4</sup> /20 <sup>5</sup> /25 <sup>6</sup>	20 <sup>4</sup> /20 <sup>5</sup> /25 <sup>6</sup>
	Electrical data	Main supply	Volt	230	230	230	230	230
Rated power, compressor		kW	2.7	3.3	4.2	5.4	5.7	*
Rated power, circulation pumps		kW	0.2	0.2	0.2	0.4	0.5	
Auxillary heater, 3 steps		kW	1.5/3.0/4.5	1.5/3.0/4.5	1.5/3.0/4.5	1.5/3.0/4.5	1.5/3.0/4.5	*
Start current		A	17	11	21	26	28	*
Circuit breaker		A	20 <sup>4</sup> /25 <sup>5</sup> /32 <sup>6</sup>	25 <sup>4</sup> /32 <sup>5</sup> /40 <sup>6</sup>	25 <sup>4</sup> /32 <sup>5</sup> /40 <sup>6</sup>	32 <sup>4</sup> /40 <sup>5</sup> /50 <sup>6</sup>	32 <sup>4</sup> /40 <sup>5</sup> /50 <sup>6</sup>	*
Performance		COP <sup>2</sup>		4.37	4.74	4.88	4.84	4.75
	COP <sup>3</sup>		3.90	4.04	4.34	4.24	4.20	3.99
	Heating capacity <sup>3</sup>	kW	3.52	5.33	7.51	9.40	11.0	16.4
	Power input <sup>3</sup>	kW	0.9	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	20/-10
	Heating circuit	°C	55/20	55/20	55/20	55/20	55/20	55/20
Water volume	Water heater	l	*	*	*	*	*	*
	Condensor	l	0.8	1.6	1.9	2.1	2.1	2.9
	Evaporator	l	0.7	0.7	1.2	1.6	1.6	2.2
	De-superheater	l	*	*	*	*	*	*
Anti freeze media			Ethylene glycol/ Ethanol	Ethylene glycol/ Ethanol	Ethylene glycol/ Ethanol	Ethylene glycol/ Ethanol	Ethylene glycol/ Ethanol	Ethylene glycol/ Ethanol
Dimensions LxWxH	mm		690x596x1538	690x596x1538	690x596x1538	690x596x1538	690x596x1538	690x596x1538
Weight empty	kg		140	145	150	155	165	175
Weight filled	kg		145	151	157	162	172	184
Sound power level <sup>8</sup>	dB(A)		45.5	44.5	43.5	46.7	48.2	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) Fuse protection phase L1 (size 4 is equipped with an 1-phase compressor).
- 8) Sound power level measured according to EN ISO 3741 at B0W45 (EN 12102).
- \*) Not available in this version.

Danfoss assumes no responsibility for any errors found in the catalogues, brochures and any other printed material. Danfoss retains the right to make changes to their products, including products that have already been ordered, without prior notice, as long as these changes can be carried out without changing predetermined specifications. All trademarks in this material belong to respective companies. Danfoss and the Danfoss logo are trademarks that belong to Danfoss A/S. All rights reserved.

DHP-L Opti/March 2010