DHP-S Eco ground source heat pump

An efficient and low-cost solution for larger homes

The DHP-S Eco is a high-capacity heat pump designed for use in the large home and light commercial sector.

The newly developed refrigeration circuit features a more efficient compressor, new refrigerant and the latest generation of heat exchanger means that DHP-S Eco can work even more efficiently throughout the year.

Ideal for nurseries, multi-family homes, offices and shops, the DHP-S Eco offers outstanding performance and capacity, combined with upgrade flexibility and a streamlined control system that simplifies operation and keeps costs down.

The DHP-S Eco is an intelligent heat pump solution that extracts energy from the ground, rock or water.

The solution is easy to size and install, and the "set and forget" control system ensures hassle-free operation for building owners and managers.

Efficiency

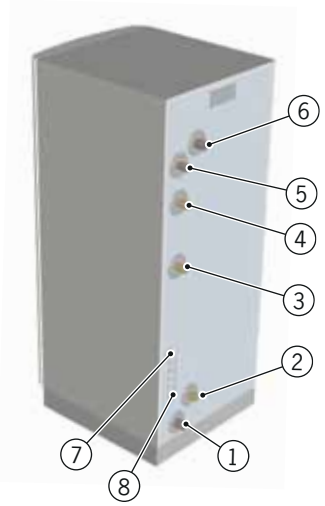
Higher COPs

The new design and components of the DHP-S Eco means greater efficiencies, and greater savings.

www.heatpumps.danfoss.co.uk

Connection heat pump

1 Collector out (from HP)
2 Heat return (return line)
3 Return line hot-gas exchanger
4 Supply line hot-gas exchanger
5 Heat supply (supply line)
6 Coolant in (to HP)
7 Lead-in for communication cable
8 Lead-in for incoming power supply and sensors



DHP-S Eco			***22***	***26***	***33***	***42***
Refrigerant	Type		R410A	R410A	R410A	R410A
	Amount	kg	3.8	3.9	4.5	4.6
	Test pressure	MPa	4.5	4.5	4.5	4.5
	Design pressure	MPa	4.3	4.3	4.3	4.3
Compressor	Type		Scroll	Scroll	Scroll	Scroll
	Oil		POE	POE	POE	POE
Electrical data 3-N	Main supply	Volt	400	400	400	400
	Rated power, compressor	kW	13.86	17.32	20.78	26.81
	Rated power, circulationpumps	kW	0.5	0.5	0.6	0.6
	Start Current	A	21.7	23.8	32.2	37.1
	Fuse	A	20	25	32	35
Performance	COP [1]		4.40	4.40	4.37	4.31
	Heating capacity [1]	kW	21.9	25.4	33.5	41.4
	Power input [1]	kW	5.0	5.8	7.7	9.6
Nominal flow [2]	Cooling circuit [3]	l/s	1.4	1.5	2.1	2.4
	Heating circuit	l/s	0.5	0.6	0.8	0.9
External available pressure [4]	Cooling circuit	kPa	81	75	73	63
	Heating circuit	kPa	75	70	66	50
Internal pressure drop	Condenser	kPa	2.3	6.6	5.0	16.0
	Evaporator	kPa	23.8	27.0	33.0	37.0
Maximum system pressure	Brine	bar	6	6	6	6
	Heating circuit	bar	6	6	6	6
Max/min temperature [5]	Cooling circuit	°C	20/-10	20/-10	20/-10	20/-10
	Heating circuit [6]	°C	65/20	65/20	65/20	65/20
Pressure switches	Low pressure	MPa	0.35	0.35	0.35	0.35
	Operating		4.0	4.0	4.0	4.0
	High pressure	MPa	4.3	4.3	4.3	4.3
Sound power level [7]		dB (A)	55.0	55.2	56.4	56.0
Anti freeze media [8]			Ethanol + water solution with freezing point -17 ±2 °C			
Dimensions LxWxH		mm	690x596x1489			
Weight		kg	244	260	281	290

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) B0/W35, According to EN14511 incl. circ.pump.
2) Nominal flow heating circuit Δ10K , cooling circuit Δ3K.
3) Anti-freeze in cooling circuit: Ethanol-water.
4) At nominal flow.

5) Please note that not all cooling circuit temperatures and heating temperatures can be combined.
6) Min. incoming cooling circuit temperature 0°C.
7) Sound power level measured according to EN ISO 3741 at B0W35 (EN12102).
8) Always check local rules and regulations before using antifreeze.