DHP-R Eco ground source heat pump

Combining savings and a **powerful control system**

The DHP-R Eco is a large capacity heat pump with capacities between 22 and 42 kW. Up to 8 heat pumps can be installed and combined together to create an out put of 336 kW. The newly developed refrigerant circuit with a more efficient compressor, new refrigerant and the latest generation of heat exchanger means that DHP-R Eco can work even more efficiently throughout the year.

The DHP-R Eco can be integrated with existing heating systems, such as an oil-fired boilers, which then can supply extra energy for peak demands. A built in de-super-heater increases the temperature of hot water produced and is twinned with an anti-legionella function to clean the system.

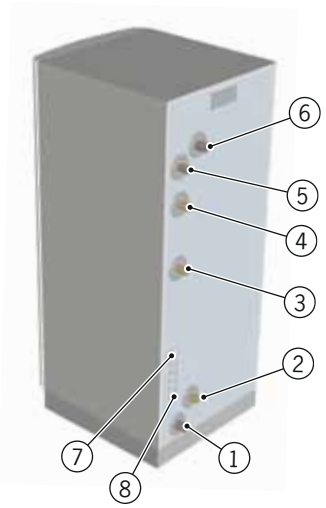
An intelligent controller monitors the whole system (heat pumps, auxiliary heat, cooling, subshunt groups, hot water) and an internet monitoring facility provides you with the reassurance with SMS or email in the unlikely event that a fault should occur. The DHP-R Eco can also be integrated with other control systems, Modbus communication is standard and OPC is available as an option.

This heat pump is perfect for those who have several buildings or large properties and want to control the system from a distance.

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-R 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	MPa	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
8) Always check local rules and regulations before using antifreeze.

APPROVED PRODUCT