

DHP-H Varius PRO+ ground source heat pump

Total **efficiency**, unsurpassed **performance** !

The newly developed inverter-controlled compressor is a part of the secret behind the DHP-H Varius PRO+, ground source heat pump with the highest SPF. The inverter-controlled compressor adjusts the heat load constantly according to the current heat demand. You never use more energy than is needed, and this of course reduces your energy bills further.

Our HGW* technical solution utilizes the normal heating space to also produce hot water. The result is that when the heat pump heats your home, it generates hot water at the same time. The built-in TWS technology** means that the hot water is produced faster and at higher temperatures than those methods used traditionally.

With the Danfoss DHP-H Varius PRO+ you can customize a one-system solution that meets all your requirements, including heating, cooling, pool heating and all in combination with additional heat sources.

With Danfoss Online you have the ability to remotely control and monitor your heat pump.



5.4

SCOP

One of the most efficient
ground source heat
pumps on the market.

Technical specification **DHP-H Varius PRO+**

Connection heat pump

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

- 1 Brine return line (Brine in), 28 mm
- 2 Brine supply line (Brine out), 28 mm
- 3 Heating system supply line, 28 mm
- 4 Heating system return line, 28 mm
- 5 Connection for bleed valve, 22 mm
- 6 Hot water pipe, 22 mm
- 7 Cold water pipe, 22 mm
- 8 Lead-in for incoming power supply, sensors and communication cable



DHP-H Varius PRO+		5-17 kW⁴	
Refrigerant	Type		R410A
	Amount	kg	2.0
	Test pressure	MPa	4.5
Compressor	Design pressure	MPa	4.3
	Type		Scroll
	Oil		POE
Electrical data 3-N	Mains power supply	Volt	400
	Rated power, compressor	kW	5.9
	Rated power, circulation pumps	kW	0.3
	Auxiliary heater, 3 steps	kW	3/6/9
	Fuse ^{1,9}	A	16/20/25/32
Performance	SCOP Floor heating (35°C) ²		5.45
	SCOP Radiator (55°C) ²		4.25
	COP ³		5.01
	COP ⁴		4.67
Energy class - system ⁷	Floor heating (35°C), Radiator (55°C)		A+++
Energy class - product ⁸	Floor heating (35°C), Radiator (55°C)		A++
	Domestic hot water		A
Max/min temperature	Cooling circuit	°C	20/-10
	Heating circuit	°C	65/20
Max/min refrigerant circuit	Low pressure	MPa	0.21
	Operating pressure	MPa	4.18
	High pressure	MPa	4.30
Sound power level ⁶		dB (A)	38-49
Anti-freeze ⁵			Ethanol + water solution -17°C ± 2
Water volume	Water heater	l	180
	Empty	kg	200
Weight	Filled	kg	380

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.

* Hot Gas Water: our patented technology that utilises existing heating production to heat domestic hot water simultaneously.
** Tap Water Stratification, our patented technology developed to ensure that the stored heat is always used optimally.

1) Fuse size depends on auxiliary heater (0/3/6/9 kW)
2) SCOP according to EN14825, Cold climate (Helsinki), P-design 15 kW
3) At B0W35 Δ10K warm side (excluding circulation pumps).
4) At B0W35 according to EN 14511 (including circulation pumps) at P=8,93 kW
5) Always check local rules and regulations before using antifreeze.
6) According to EN12102 and EN ISO 3741 (B0W35)

7) When the heat pump is part of an integrated system. According to Eco-design Directive 811/2013
8) When the heat pump is the sole heat generator and the built-in controller is not included. According to Eco-design Directive 811/2013.
9) Fulfil IEC 61000-3-12 when Ssc at interface point to the grid is ≥ 2,0 MVA

- A+++** energy class when the heat pump is part of an integrated system
- A++** energy class when the heat pump is the sole heat generator Energy class according to Eco-design Directive 811/2013

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