



DHP-S ground source heat pump

An efficient and low-cost solution for larger homes

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

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

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

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

Set and Forget

Intelligent control

Once the optimised system is installed, it's so easy to run that you will quickly forget it's even there.



Connection heat pump

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

- 1 Coolant 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 | | | 20 | 26 | 35 | 42 |
|--|---|--------|-----------|-----------|-----------|-----------|
| Refrigerant | Type | | R407C | R407C | R407C | R407C |
| | Amount | kg | 3.4 | 3.5 | 3.6 | 4.2 |
| | Test pressure | MPa | 3.4 | 3.4 | 3.4 | 3.4 |
| | Design pressure | MPa | 2.95 | 2.95 | 2.95 | 2.95 |
| 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 | 8.8 | 11.8 | 15.7 | 19.9 |
| | Rated power, circulation pumps | kW | 0.9 | 0.9 | 1.45 | 1.45 |
| | Start Current | A | 21.5 | 24 | 27 | 37.8 |
| | Fuse | A | 25 | 25 | 35 | 35 |
| Performance | COP ¹ | | 4.06 | 3.99 | 4.04 | 3.92 |
| | Heating capacity ² | kW | 18.2 | 24.5 | 32.8 | 38.4 |
| | COP ² | | 3.73 | 3.70 | 3.81 | 3.53 |
| | Power input ² | kW | 4.9 | 6.6 | 8.4 | 10.9 |
| Nominal flow ³ | Cooling circuit ⁴ | l/s | 1.2 | 1.6 | 2.2 | 2.4 |
| | Heating circuit | l/s | 0.5 | 0.6 | 0.8 | 1.0 |
| External available pressure ⁵ | Cooling circuit | kPa | 133 | 66.5 | 130 | 127 |
| | Heating circuit | kPa | 63.0 | 54.0 | 47 | 48 |
| Internal pressure drop | Condenser | kPa | 5 | 9 | 11 | 4 |
| | Evaporator | kPa | 37 | 72.5 | 58 | 53 |
| | De-superheater | kPa | 0.4 | 0.5 | 0.8 | 1.3 |
| Max/min temperature ⁶ | Cooling circuit | °C | 20/-10 | 20/-10 | 20/-10 | 20/-10 |
| | Heating circuit | °C | 60/20 | 60/20 | 60/20 | 60/20 |
| Pressure switches | Low pressure | MPa | 0.08 | 0.08 | 0.08 | 0.08 |
| | Operating | | 2.65 | 2.65 | 2.65 | 2.65 |
| | High pressure | MPa | 2.95 | 2.95 | 2.95 | 2.95 |
| Sound power level ⁷ | | dB (A) | 55 | 58 | 61 | 61 |
| Anti freeze media ⁸ | glycol + water solution with freezing point -17 ±2 °C | | | | | |
| Water volume | Condensator | l | 5.4 | 5.4 | 6.0 | 6.7 |
| | Evaporator | l | 3.4 | 3.8 | 5.6 | 5.1 |
| | De-superheater | l | 0.6 | 0.6 | 0.6 | 0.6 |
| Weight | | kg | 274 | 278 | 297 | 315 |

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.

3) Nominal flow heating circuit Δ10K, cooling circuit Δ3K.

4) Anti-freeze in cooling circuit: Ethanol-water.

5) At nominal flow.

6) Please note that not all cooling circuit temperatures and heating temperatures can be combined.

7) Sound power level measured according to EN ISO 3741 at B0W45 (EN12102).

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

1) B0/W35 Δ10K heating circuit (excl. circ.pump)

2) B0/W35, According to EN14511 incl. circ.pump.



Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without consequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are registered trademarks of Danfoss A/S. All rights reserved