



DHP-L Opti Pro ground source heat pump

Save energy without economising on hot water

Danfoss DHP-L Opti Pro uses new innovative technology to operate at the highest possible annual efficiency saving you more on energy and CO₂ emissions. The Opti technology incorporates an intelligent control system that via speed controlled circulation pumps ensures that the performance is always adjusted to the prevailing requirements and conditions of the heating system.

This makes the heat pump always work under the most ideal conditions available, guaranteeing maximum efficiency, second by second, hour by hour. DHP-L Opti Pro produces large amounts of hot water, using

less energy than any other heat pump on the market. Surplus heat from indoor heating is used to produce hot water by means of our new, patented HGW* technique.

DHP-L Opti Pro operates at a 18 percent higher annual efficiency than standard heat pumps. A separate hot water tank (the Danfoss DWH Opti) is available in volumes of 200 and 300 litres. These hot water tanks are fitted with our TWS** technique, ensuring that hot water is produced faster and at higher temperatures than with traditional techniques.



Highest

annual efficiency (SPF)

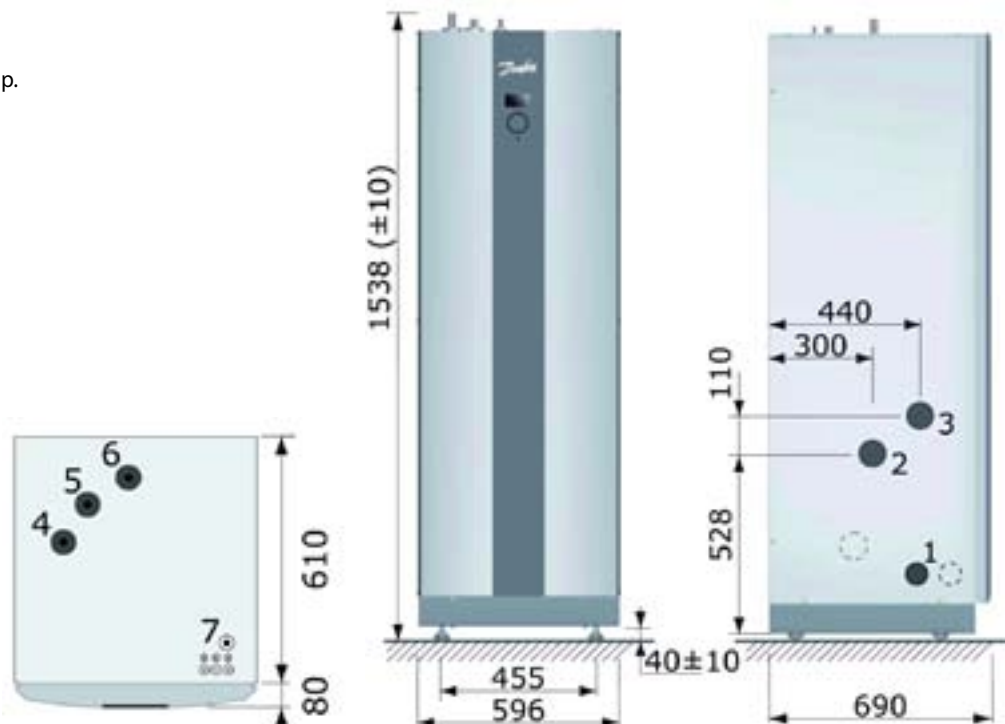
using Opti Pro technique



Connection

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

- 1 Return pipe from water heater
- 2 Brine return line (Brine in), 28 Cu
- 3 Brine supply line (Brine out), 28 Cu
- 4 Heating system supply line, 22 Cu: 6-10 kW, 28 Cu: 12-16 kW
- 5 Heating system return line, 22 Cu: 6-10 kW, 28 Cu: 12-16 kW
- 6 Supply line to water heater
- 7 Lead-in for incoming power supply, sensors and communication cable



| DHP-L Opti Pro | | | 6 | 8 | 10 | 12 | 16 |
|--------------------------------|---|--------------|---|---|---|---|---|
| Refrigerant | Type | | R407C | R407C | R407C | R407C | R407C |
| | Amount | kg | 1.15 | 1.35 | 1.40 | 1.55 | 1.70 |
| Compressor | Type | | Scroll | Scroll | Scroll | Scroll | Scroll |
| | Main supply | Volt | 400 | 400 | 400 | 400 | 400 |
| Electrical data 3-N~50Hz | Rated power, compressor | kW | 3.0 | 3.2 | 4.2 | 5.0 | 7.2 |
| | Rated power, circulation pumps | kW | 0.1 | 0.1 | 0.3 | 0.3 | 0.5 |
| | Auxiliary heater, 3 steps | kW | 3/6/9 | 3/6/9 | 3/6/9 | 3/6/9 | 3/6/9 |
| | Start current ¹ | A | 9 | 10 | 12 | 14 | 20 |
| | Fuse | A | 10 ⁴ /16 ⁵ /20 ⁶ | 16 ⁴ /16 ⁵ /20 ⁶ | 16 ⁴ /16 ⁵ /20 ⁶ | 16 ⁴ /20 ⁵ /25 ⁶ | 20 ⁴ /20 ⁵ /25 ⁶ |
| Electrical data 1-N~50Hz | Main supply | Volt | 230 | 230 | 230 | 230 | *** |
| | Rated power, compressor | kW | 3.2 | 3.6 | 4.5 | 5.5 | *** |
| | Rated power, circulation pumps | kW | 0.1 | 0.1 | 0.3 | 0.3 | *** |
| | Auxiliary heater, 3 steps | kW | 1.5/3/4.5 | 1.5/3/4.5 | 1.5/3/4.5 | 1.5/3/4.5 | *** |
| | Start current ¹ | A | 22 | 24 | 26 | 28 | *** |
| Performance | Fuse | A | 25 ⁴ /32 ⁵ /40 ⁶ | 25 ⁴ /32 ⁵ /40 ⁶ | 32 ⁴ /40 ⁵ /50 ⁶ | 32 ⁴ /40 ⁵ /50 ⁶ | *** |
| | COP ² | | 4.74 | 4.88 | 4.84 | 4.75 | 4.80 |
| | COP ³ | | 4.04 | 4.34 | 4.24 | 4.20 | 3.99 |
| | Heating capacity ³ | kW | 5.33 | 7.51 | 9.40 | 11.0 | 16.4 |
| Max/min temperature | Power input ³ | kW | 1.3 | 1.7 | 2.2 | 2.6 | 4.1 |
| | Cooling circuit | °C | 20/-10 | 20/-10 | 20/-10 | 20/-10 | 20/-10 |
| Anti freeze media ⁷ | Heating circuit | °C | 60/20 | 60/20 | 60/20 | 60/20 | 60/20 |
| | glycol + water solution with freezing point -17 ±2 °C | | | | | | |
| Dimensions LxWxH | mm | 690x596x1538 | 690x596x1538 | 690x596x1538 | 690x596x1538 | 690x596x1538 | |
| Sound power level ⁸ | dB(A) | 45 | 44 | 47 | 48 | 50 | |
| Weight | kg | 150 | 155 | 160 | 170 | 180 | |

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 Δ10°K 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) Always check local rules and regulations before using antifreeze.

8) Sound power level measured according to EN ISO 3741 at B0W45 (EN 12102).

***) Not available in this version.

*) 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.



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