DHP-A Opti air source heat pump

Renewable energy to provide **domestic heating and hot water**

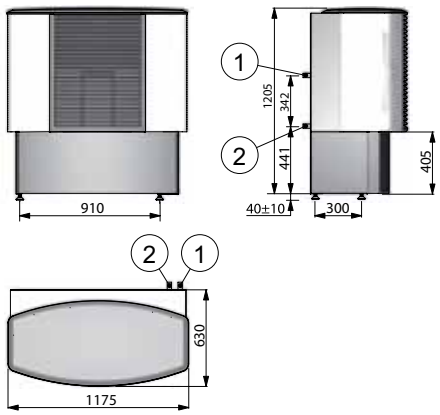
The DHP-A Opti air source heat pump uses new innovative technology to operate at the highest possible annual efficiency, using renewable energy stored in the outdoor air. This provides a sustainable and environmentally friendly heating solution.

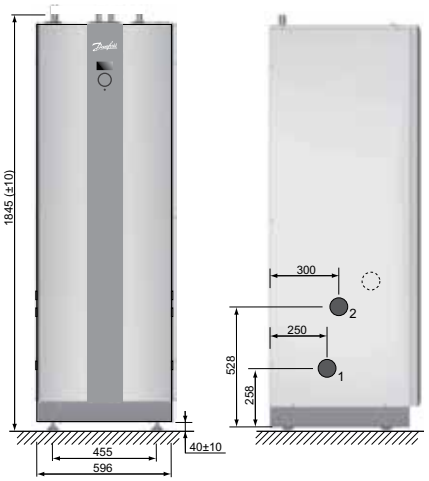
The new Opti technology incorporates an intelligent control system that via speed controlled circulation pumps, ensures that the performance is always adjusted to the prevailing requirements and conditions of the heating system. This makes the heat pump work under the most ideal conditions available, guaranteeing maximum efficiency, second by second, hour by hour.

The integrated hot water tank (180 l) incorporates our patented TWS* technology, producing hot water faster and at higher temperatures than with traditional technology. This heat pump operates at a low sound level and can be controlled and monitored via the Internet. The control system, although highly advanced is both intuitive and very user friendly.

Connection heat pump

1 Brine in, 28 Cu
2 Brine out, 28 Cu

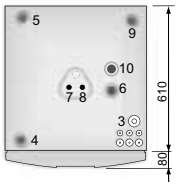




Connection heat pump

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

1 Brine in, 28 Cu
2 Brine out, 28 Cu
3 Lead-in for incoming power supply, sensors and communication cable
4 Heating system supply line, 22 Cu: 6-10 kW, 28 Cu: 12 kW
5 Heating system return line, 22 Cu: 6-10 kW, 28 Cu: 12 kW
6 Expansion pipe, 22 Cu
7 Hot water pipe, 22 Brass
8 Cold water pipe, 22 Brass
9 Expansion outlet brine circuit, DN25 int.
10 Temperature and pressure valve



DHP-A Opti			***6***	***8***	***10***	***12***
Refrigerant	Type		R404A	R404A	R404A	R404A
	Amount	kg	0.95	1.45	1.50	1.60
Compressor	Type		Scroll	Scroll	Scroll	Scroll
Electrical data 3-N~50Hz	Main supply	Volt	400	400	400	400
	Rated power, compressor	kW	3.0	3.2	4.2	5.0
	Rated power, circulation pumps	kW	0.3	0.3	0.4	0.6
	Auxiliary heater, 3 steps	kW	3/6/9/12/15	3/6/9/12/15	3/6/9/12/15	3/6/9/12/15
	Start current[1]	A	9	10	12	14
	Fuse	A	10[4]/16[5]/20[6]/20[7]/ 25[8]/25[9]/30[10]	16[4]/16[5]/20[6]/20[7]/ 25[8]/25[9]/30[10]	16[4]/16[5]/20[6]/20[7]/ 25[8]/30[9]/35[10]	16[4]/20[5]/25[6]/25[7]/ 25[8]/30[9]/35[10]
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	0.3	0.3	0.4	0.6
	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
	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]
Performance	COP[2]		3.88	4.06	4.21	4.06
	COP[3]		3.26	3.45	3.29	3.35
	Heating capacity[3]	kW	5.90	7.96	9.85	11.3
	Power input[3]	kW	1.8	2.3	2.9	3.3
Max/min temperature	Cooling circuit	°C	–20	–20	–20	–20
	Heating circuit	°C	55/20	55/20	55/20	55/20
Anti freeze media[11]			Ethylene glycol + Water solution with a freezing point -32 ±1°C			
Indoor unit	Dimensions LxWxH	mm	690x596x1845	690x596x1845	690x596x1845	690x596x1845
	Weight empty	kg	260	260	260	268
	Weight filled	kg	440	440	440	448
	Sound power level[12]	dB(A)	43	48	46	48
Outdoorunit	Dimensions LxWxH	mm	630x1175x1245	630x1175x1245	630x1175x1245	630x1175x1245
	Weight empty	kg	94	94	94	94
	Sound power level[13]	dB(A)	53/63	53/63	54/67	54/67
Max. pipe length (Cu pipe Ø 28 mm between heat pump and outdoor unit)		m	60 (30+30)	60 (30+30)	60 (30+30)	60 (30+30)

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.

*) TWS - Tap Water Stratification, our patented technology developed to ensure that the stored heat is always used optimally.

1) According to IEC61000.
2) At A7W35 Δ10 warm side (excluding circulation pumps and outdoor unit).
3) At A7W35 according to EN 14511 (including circulation pumps and outdoor unit).
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) 12 kW auxiliary heater (compressor off).
8) 15 kW auxiliary heater (compressor off).
9) Heat pump with 12 kW auxiliary heater.
10) Heat pump with 15 kW auxiliary heater.
11) Propylene glycol or ethanol may not be used. Always check local rules and regulations before using antifreeze.
12) Sound power level measured according to EN ISO 3741 at A7W45 (EN 12102).
13) Sound power level measured according to EN ISO 3741.