

Thermia Diplomat Optimum Diplomat Duo Optimum



Diplomat Optimum



Diplomat Duo Optimum



Minimum energy consumption thanks to speed control.

The **Thermia Diplomat Optimum** has speed control, which means that its performance can be continuously adjusted to the prevailing requirements and conditions. No unnecessary work – maximum efficiency and minimum energy consumption all the time. The high annual efficiency, which is a measurement of the heat pump's efficiency over the whole year, means that you can reduce your heating costs by more than 75 percent.

The hot water tank is fitted with our TWS* technique, which means that the hot water is produced faster and at higher temperatures than with traditional technique.

The pump utilises rock, surface ground, ground water or lake water as its heat sources.

The **Thermia Diplomat Duo Optimum** is a variant of the Thermia Diplomat Optimum. What separates them is that the Thermia Diplomat Duo Optimum does not have an integrated hot water tank. A separate hot water tank (Thermia MBH) is available in volumes of 200 and 300 litres.

The Thermia Diplomat Duo Optimum is a good choice if you have a low ceiling height or require very large amounts of hot water.

A⁺⁺

A⁺⁺

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

Technical data Diplomat Optimum Diplomat Duo Optimum

Connection Diplomat Optimum

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 Cu
- 2 Brine supply line (Brine out), 28 Cu
- 3 Heating system supply line, 22 Cu: 4-10 kW, 28 Cu: 12-16 kW
- 4 Heating system return line, 22 Cu: 4-10 kW, 28 Cu: 12-16 kW
- 5 Connection for bleed valve, 22 Cu
- 6 Hot water pipe, 22 mm
- 7 Cold water pipe, 22 mm
- 8 Lead-in for incoming power supply, sensors and communication cable



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- 4 Heating system return line, 22 Cu: 4-10 kW, 28 Cu: 12-16 kW
- 5 Lead-in for incoming power supply, sensors and communication cable
- 6 Return line from water heater, 22 mm

Diplomat Optimum/Diplomat Duo Optimum			4	6	8	10	12	16**
Refrigerant	Type		R407C	R407C	R407C	R407C	R407C	R407C
	Amount ¹²	kg		1.20	1.35	1.45	1.55	2.00
Compressor	Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Electrical data 3-N, -50Hz	Main supply	Volt	400	400	400	400	400	400
	Rated power, compressor	kW	2.3	3.0	3.2	4.2	5.0	7.2
	Rated power, circulation pumps	kW	0.1	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	3/6/9
	Start current ¹	A	15	9	10	12	14	20
	Fuse	A	16 ⁹ /10 ⁴ /10 ⁵ /16 ⁶	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	230	***
	Rated power, compressor	kW	2.3	3.2	4.1	4.5	5.5	***
	Rated power, circulation pumps	kW	0.1	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	1.5/3/4.5	***
	Start current ¹	A	15	22	24	26	28	***
	Fuse	A	20 ⁴ /25 ⁵ /32 ⁶	25 ⁴ /32 ⁵ /40 ⁶	32 ⁴ /40 ⁵ /50 ⁶	32 ⁴ /40 ⁵ /50 ⁶	32 ⁴ /40 ⁵ /50 ⁶	***
Performance	COP ²		4.57	4.74	4.88	4.84	4.75	4.80
	COP ³		4.09	4.04	4.34	4.24	4.20	4.19
	Heating capacity ³	kW	4.09	5.33	7.51	9.40	11.0	16.8
	Electrical power ³	kW	1.0	1.3	1.7	2.2	2.6	4.0
Energy class - system ¹⁰	Floor heating (35°C)/Radiator (55°C)		A++/A+	A++/A+	A++/A++	A++/A++	A+++/A++	A++/A++
Energy class - product ¹¹	Floor heating (35°C)/Radiator (55°C)		A++/A+	A++/A+	A++/A++	A++/A++	A++/A++	A++/A++
	Domestic hot water		A	A	A	A	A	A
Max/min temperature	Cooling circuit	°C	20/-10	20/-10	20/-10	20/-10	20/-10	20/-10
	Heating circuit	°C	60/20	60/20	60/20	60/20	60/20	60/20
Anti freeze media			Ethanol + water solution with freezing point-17 ±2 °C ⁸					
Sound power level ⁷	Diplomat Optimum	dB(A)	42	47	44	46	49	***
	Diplomat Duo Optimum	dB(A)	42	44	44	47	48	50
Water volume	Diplomat Optimum	l	180	180	180	180	180	***
	Diplomat Duo Optimum	l	Optional	Optional	Optional	Optional	Optional	Optional
Weight	Diplomat Optimum, empty	kg	160	175	180	185	195	***
	Diplomat Optimum, filled	kg	340	355	360	365	375	***
	Diplomat Duo Optimum	kg	120	135	140	145	155	165

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 = Patented heating technique for water heaters, developed by Thermia.
 ***) Only Diplomat Duo Optimum.
 ***) Not available in this version.

- 1) According to IEC61000.
- 2) At BOW35 Δ10K warm side (excluding circulation pumps).
- 3) At BOW35 according to EN 14511 (including circulation pumps).
- 4) Heat pump with 3 kW auxiliary heater (I-N 1.5 kW).
- 5) Heat pump with 6 kW auxiliary heater (I-N 3 kW).
- 6) Heat pump with 9 kW auxiliary heater (I-N 4.5 kW).
- 7) Sound power level measured according to EN ISO 3741 at BOW45 (EN 12102).
- 8) Always check local rules and regulations before using antifreeze.
- 9) Fuse phase L1 (size 4 has 1-phase compressor).

- 10) When the heat pump is part of an integrated system. According to Eco-design Directive 811/2013
- 11) When the heat pump is the sole heat generator and the built-in controller is not included. According to Eco-design Directive 811/2013.
- 12) The refrigerant circuit is hermetically sealed and subject to the F-gas directive. Global Warming Potential (GWP) for R407C according to EC 517/2014 is 1774, giving a CO₂ equivalent corresponding to 4: 1331 kg, 6: 2129kg, 8: 2395, 10: 2572kg, 12: 2750kg, 16: 3548kg.