

# Thermia Diplomat Optimum G3 Diplomat Duo Optimum G3



## Superior performance in all aspects.

**Thermia Diplomat Optimum G3** is a ground source heat pump that offers you superior annual efficiency\* thanks to its unique technical solutions. It allows you to reduce your energy consumption by up to 80%.

The newly developed cooling circuit with a more efficient compressor, new refrigerant and the latest generation of heat exchanger means that G3 works at maximum efficiency throughout the year. The Optimum technology ensures that the heat pump always works under ideal conditions, which further reduces the overall energy consumption.

Our HGW\*\* technical solution utilizes the regular space heating 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 with traditional techniques.

With G3 you can customize a one-system solution that meets all your requirements, including heating, cooling, pool heating and in combination with additional heat sources.

With the optional accessory Thermia Online you have the ability to remotely control and monitor your heat pump via a computer, tablet and smartphone.

**The Thermia Diplomat Duo Optimum G3** is a good choice if you have a low ceiling height or require very large amounts of hot water.

\* Annual efficiency is a measure that describes how efficiently your heat pump works over a whole year, including both warm and cold periods as well as hot water production.

\*\* HGW = Patent pending heating technology, developed by Thermia.

\*\*\* TWS = Patented heating technology for hot water production, developed by Thermia.

Diplomat Optimum G3



Diplomat Duo Optimum G3



# Technical data Diplomat Optimum G3

## Diplomat Duo Optimum G3

### Connection Diplomat Optimum G3

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: 6-8 kW, 28 Cu: 10-17 kW
- 4 Heating system return line, 22 Cu: 6-8 kW, 28 Cu: 10-17 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



Diplomat Optimum G3



Diplomat Duo Optimum G3

### Connection Diplomat Duo Optimum G3

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: 6-8 kW, 28 Cu: 10-17 kW
- 5 Heating system return line, 22 Cu: 6-8 kW, 28 Cu: 10-17 kW
- 6 Supply line to water heater
- 7 Lead-in for incoming power supply, sensors and communication cable

Diplomat Optimum G3/Diplomat Duo Optimum G3			6	8	10	13	17*
<b>Refrigerant</b>	Type		R410A	R410A	R410A	R410A	R410A
	Amount	kg	1,35	1,8	2,3	2,3	2,8
	Test pressure	MPa	4,5	4,5	4,5	4,5	4,5
	Design pressure	MPa	4,3	4,3	4,3	4,3	4,3
<b>Compressor</b>	Type		Scroll	Scroll	Scroll	Scroll	Scroll
	Oil		POE	POE	POE	POE	POE
<b>Electrical data 3-N, -50Hz</b>	Main supply	Volt	400	400	400	400	400
	Rated power, compressor	kW	3,0	3,9	4,8	6,2	8,1
	Rated power, circulation pumps	kW	0,2	0,2	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 <sup>1</sup>	A	9	10	11	20	30
	Fuse	A	10 <sup>4</sup> /16 <sup>5</sup> /20 <sup>6</sup>	16 <sup>4</sup> /16 <sup>5</sup> /20 <sup>6</sup>	16 <sup>4</sup> /20 <sup>5</sup> /25 <sup>6</sup>	16 <sup>4</sup> /20 <sup>5</sup> /25 <sup>6</sup>	20 <sup>4</sup> /25 <sup>5</sup> /32 <sup>6</sup>
<b>Performance</b>	COP <sup>2</sup>		4,5	4,7	5,0	4,9	4,8
	COP <sup>3</sup>		4,3	4,4	4,8	4,6	4,5
	Heating capacity <sup>3</sup>	kW	5,8	7,6	10,3	13,0	17,1
	Power input – heating <sup>3</sup>	kW	1,4	1,7	2,2	2,8	3,8
<b>Max/Min temperature</b>	Cooling circuit	°C	20/8	20/8	20/8	20/8	20/8
	Heating circuit	°C	60/20	60/20	60/20	60/20	60/20
<b>Anti freeze media <sup>8</sup></b>	Ethanol + water solution with freezing point -17 ± 2 °C 8						
<b>Pressure levels</b>	Low pressure	MPa(g)	0,35	0,35	0,35	0,35	0,35
	Operating	MPa(g)	4,0	4,0	4,0	4,0	4,0
	High pressure	MPa(g)	4,3	4,3	4,3	4,3	4,3
<b>Sound power level <sup>7</sup></b>	Diplomat Optimum G3	dB(A)	41	44,5	46,5	47	**
	Diplomat Duo Optimum G3	dB(A)	41	44,5	46,5	47	53
<b>Water volume</b>	Diplomat Optimum G3	l	180	180	180	180	**
	Diplomat Duo Optimum G3	l	Optional	Optional	Optional	Optional	Optional
<b>Weight</b>	Diplomat Optimum G3, empty	kg	170	185	195	200	**
	Diplomat Optimum G3, filled	kg	350	365	375	380	**
	Diplomat Duo Optimum G3	kg	130	145	155	160	175

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 B0/35 Δ10K warm side (EN 255).
- 3) At B0/W35 according to EN 14511 (incl. circ.pump).
- 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 12102 and EN 3741.
- 8) Always check local rules and regulations before using antifreeze.
- \*) Only Diplomat Duo Optimum G3.
- \*\*\*) Not available in this version.



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