



# Thermia Solid Eco



Solid Eco

## Optimum performance and low investment cost.

**Thermia Solid Eco** is the large capacity heat pump for those seeking optimum performance. You get a complete solution to cover basic needs that is perfectly suited to larger buildings, such as schools, churches, manors, business premises, sports halls etc., without the need for advanced extra functions.

Your Thermia Solid Eco can be easily upgraded to produce cooling too. This gives you a complete comfort system that provides a pleasant indoor climate all year round without the need for a separate cooler.

The newly developed cooling circuit with a more efficient compressor, new refrigerant and the latest generation of heat exchanger means that Solid Eco can work even more efficiently throughout the year. Hot gas exchangers as standard also give additional cost-effective production of hot water.

Classed as a hermetically sealed system, which means there is no requirement for a yearly inspection. Thermia Solid Eco can control two separate heating systems in the same building at the same time.

Using the Thermia Link and the Thermia Online optional feature, you can control your heat pump via the Internet. In the unlikely event that something needs rectifying, you will be alerted automatically via text message or e-mail.

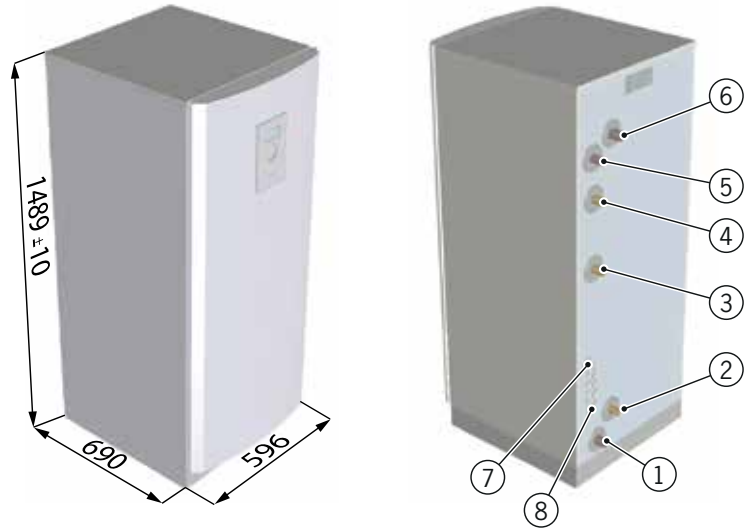
The pump utilises rock, surface ground, ground water, lake water or recycled exhaust air as its heat sources.



# Technical data Solid Eco

## Connection

- 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



Solid Eco			22	26	33	42
<b>Refrigerant</b>	Type		R410A	R410A	R410A	R410A
	Amount	kg	3.8	3.9	4.5	4.6
	Test pressure	MPa	4.5	4.5	4.5	4.5
	Design pressure	MPa	4.3	4.3	4.3	4.3
<b>Compressor</b>	Type		Scroll	Scroll	Scroll	Scroll
	Oil		POE	POE	POE	POE
<b>Electrical data 3-N</b>	Main supply	Volt	400	400	400	400
	Rated power, compressor	kW	9.91	12.40	14.83	19.12
	Rated power, circulation pumps	kW	0.5	0.5	0.6	0.6
	Start current	A	21.7	23.8	32.2	37.1
	Fuse	A	20	25	32	32
<b>Performance</b>	COP <sup>1</sup>		4.40	4.40	4.37	4.31
	Heating capacity <sup>1</sup>	kW	21.9	25.4	33.5	41.4
	Electrical power <sup>1</sup>	kW	5.0	5.8	7.7	9.6
<b>Nominal flow<sup>2</sup></b>	Cooling circuit <sup>3</sup>	l/s	1.4	1.5	2.1	2.4
	Heating circuit	l/s	0.5	0.6	0.8	0.9
<b>External available pressure drop<sup>4</sup></b>	Cooling circuit	kPa	81	75	73	63
	Heating circuit	kPa	75	70	66	50
<b>Internal pressure drop</b>	Condenser	kPa	2.3	6.6	5.0	16.0
	Evaporator	kPa	23.8	27.0	33.0	37.0
<b>Maximum system pressure</b>	Brine	bar	6	6	6	6
	Heat transfer fluid	bar	6	6	6	6
<b>Min/max temperature<sup>5</sup></b>	Cooling circuit	°C	20/-10	20/-10	20/-10	20/-10
	Heating circuit <sup>6</sup>	°C	65/20	65/20	65/20	65/20
<b>Pressure switches</b>	Low pressure	MPa	0.35	0.35	0.35	0.35
	Operating	MPa	4.0	4.0	4.0	4.0
	High pressure	MPa	4.3	4.3	4.3	4.3
<b>Sound power level<sup>7</sup></b>		dB (A)	<55.0	<55.2	<56.4	<56.0
<b>Anti freeze media</b>			Ethanol+water solution -17°C ± 2 <sup>8</sup>			
<b>Weight</b>		kg	225	241	262	271

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) B0/W35, According to EN14511 incl. circ.pump.
- 2) Nominal flow heating circuit Δ10K, cooling circuit Δ3K.
- 3) Anti-freeze in cooling circuit: Ethanol-water.
- 4) At nominal flow.

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

6) Min. incoming cooling circuit temperature 0°C.

7) B0/W35, according to ISO 3741.

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