



Thermia Calibra E Cool



A ground source heat pump that both heats and cools

The Thermia Calibra E Cool is a ground-source heat pump that ensures a pleasant indoor climate all year round as it both heats and cools. It is an inverter-driven heat pump which uses the refrigerant R452B and has built-in passive cooling that can provide cooling on the hottest days of the year at very low cost.

Inverter technology – adjusts to real-time demand

The inverter-controlled compressor adjusts the heat load constantly according to the current heat demand. This means you never use more energy than is needed, which obviously reduces your energy bills.

High level of performance

The Calibra E Cool has a very high SCOP* (Seasonal Coefficient of Performance) value (up to 5.87), which helps successfully manage energy consumption throughout the year.

Built-in cooling

In addition to heating and providing hot water, the Calibra E Cool has a built-in passive cooling function. In passive cooling, the cold brine circulating in the underground loops is used to produce natural cooling to the house. Cooling can be distributed in different ways, such as by certain under floor heating systems or by fan coils. Using a heat pump to provide passive cooling is significantly more cost efficient than traditional air conditioning in terms of both initial investment and running costs.

Extremely versatile

The Calibra E Cool is an excellent choice for new-build houses and provides the opportunity to meet additional energy needs, such as a swimming pool or future extensions to the house. It is also ideal for retrofitting projects, where the Calibra E Cool can be precisely adjusted to the specific heat demand and available energy source. The Calibra E Cool is available in two power sizes: 2-8 kW and 3-12 kW.

Plenty of hot water

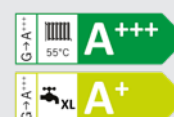
The Calibra E Cool produces hot water extremely fast to a high temperature. The Calibra E Cool uses TWS** technology, and a variety of other technical innovations provide superb hot water delivery for a heat pump of its size and class.

Thermia Online

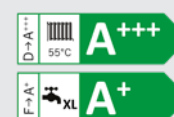
Using the integrated Thermia Online functionality, you can remotely monitor and control your heat pump from your smartphone via an app. Spot price control is also possible through the free Smart Price add-on service.



System:



Product:



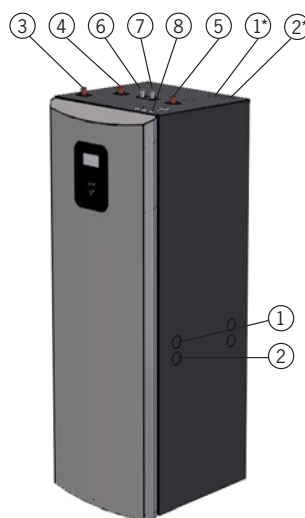
Read more about the energy class in footnotes 6–7 on the next page.

Technical data Calibra E Cool

Connections Calibra E Cool

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

- 1 Brine return line (Brine in), Ø28 mm
- 2 Brine supply line (Brine out), Ø28 mm
- 3 Heating system supply line, Ø28 mm
- 4 Heating system return line, Ø28 mm
- 5 Connection for bleed valve, Ø28 mm
- 6 Hot water, Ø22 mm
- 7 Cold water, Ø22 mm
- 8 Lead-in for incoming power supply, sensors and communication cable



Calibra E Cool

*Additional pipes needed for this type of connection

			Calibra E Cool 8	Calibra E Cool 12
Heating capacity		kW	2-8	3-12
Refrigerant	Type		R452B	R452B
	Amount ¹	kg	0.90	1.30
	GWP (CO ₂ equivalent)	tCO ₂	0.628	0.907
	Design pressure	Bar(g)	45	45
Compressor	Type		Inverter-controlled, Scroll	Inverter-controlled, Scroll
	Oil		POE	POE
Electrical data 400V 3-N, ~50Hz	Main power supply	V	400	400
	Max working power, compressor	kW	2,8	4,1
	Rated power, circulation pumps	kW	0,1	0,2
	Auxiliary heater, 3 steps	kW	(0)2/4/6	(0)3/6/9
	Fuse ^{2A, 2B}	A	(13)/13/13/16 ^{2A}	(10)/13/20/25 ^{2B}
Performance	SCOP, Floor heating (35°C) ³		5,87	5,85
	SCOP, Radiator (55°C) ³		4,10	4,39
	SCOP, Floor heating (35°C) ⁴		5,57	5,67
	SCOP, Radiator (55°C) ⁴		4,10	4,25
	COP ⁵		4,6	4,78
Energy class - system⁶	Floor heating (35°C)		A+++	A+++
	Radiator (55°C)		A+++	A+++
Energy class - product⁷	Floor heating (35°C)		A+++	A+++
	Radiator (55°C)		A+++	A+++
	Hot water (Economy) ⁸		A+	A
	Hot water (Normal/Comfort) ⁹		A	A
Max/min temperature	Cooling circuit	°C	20/-10 ¹⁴	20/-10
	Heating circuit	°C	65/20	65/20
Anti-freeze¹⁰			Ethanol + water solution ¹⁴ -17/+2 °C	
Max/min refrigerant circuit	Low pressure	Bar(g)	2,3	2,3
	Operating pressure	Bar(g)	41,5	41,5
	High pressure	Bar(g)	45	45
Sound power level	Calibra E Cool	dB(A)	30-42 ¹¹ (33) ¹²	29-44 ¹¹ (35) ¹²
Hot water performance	Volume 40°C hot water ¹³	l	260	260
	COP, Hot water ⁷		3.14	2.8
Water volume	Calibra E Cool	l	184	184
Weight	Calibra E Cool, Empty	kg	157	169
	Calibra E Cool, Filled	kg	347	359
Dimensions (WxDxH)	Calibra E Cool	mm	598x703x1863 +/-10	598x703x1863 +/-10

* SCOP 5,87 refers to the Calibra E Cool 8's seasonal coefficient of performance according to the measurement standard EN 14825, based on underfloor heating in a cold climate. The SCOP figure according to the standard EN 14825, for underfloor heating in an average climate is 5,57
 ** TWS = Tap Water Stratification = a heating technique for water heaters, developed by Thermia.

1) The refrigerant circuit is hermetically sealed and subject to the F-gas directive. Global Warming Potential (GWP) for R452B according to EC 517/2014 is 698.
 2a) The minimum recommended fuse size depends on auxiliary heater setting in combination with compressor. The maximal steps of auxiliary heater may be configured differently with/without compressor in the controller. Controller and circulation pumps are connected by L1, electrical immersion heater is connected by L1 and L2 and the frequency converter for the compressor is connected by L3. Meets IEC 61000-3-12 without action.
 2b) The minimum recommended fuse size depends on auxiliary heater setting in combination with compressor. The maximal steps of auxiliary heater may be configured differently with/without compressor in the controller. Controller and circulation pumps are connected by L1. Electrical immersion heater and frequency converter for the compressor are connected by L1, L2 and L3. Meets IEC 61000-3-12 at Ssc connection point min 1,3 MVA without action.
 3) SCOP according to EN14825, Cold climate (Helsinki). P-design: (All climate zones) P-design Calibra E Cool 8: 6 kW (BOW55), 7 kW (BOW35). P-design Calibra E Cool 12: 11 kW (BOW55), 12 kW (BOW35).
 4) SCOP according to EN14825, Average climate (Strasbourg). P-design: (All climate zones) P-design Calibra E Cool 8: 6 kW (BOW55), 7 kW (BOW35). P-design Calibra E Cool 12: 11 kW (BOW55), 12 kW (BOW35).
 5) At B0/W35, according to EN14511.
 6) When the heat pump is part of an integrated system.
 7) When the heat pump is the sole heat generator and the built-in controller is not included. According to Eco-design Directive 811/2013.
 8) Hot water performance according to EN16147, COP according to XL cycle with the control computer set for Economy mode and built-in tank.
 9) Hot water performance according to EN16147, COP according to XL cycle with the control computer set for Normal / Comfort mode and built-in tank.
 10) Always check local rules and regulations before using antifreeze.
 11) According to EN12102:2017 and EN 3741:2010 (max BOW35, min BOW35).
 12) Sound power level according to Energy label, EN 12102:2017 and EN 3741:2010 (BOW55).
 13) Hot water performance according to EN 16147: 2017, V40 according to XL cycle, COP with the control computer set for Comfort mode and built-in tank.
 14) Applies only to Calibra E Cool 400V BW (Brine/Water) versions. Calibra E Cool 8 400V WW (Water/Water) version is intended for specific applications only within +20/+8 °C.