



# Thermia Calibra E



## Committed to renewable energy

The Calibra E is an inverter-driven ground source heat pump that uses the refrigerant R452B. Ground source heat pumps are a good choice for the future as they use renewable energy instead of energy from fossil fuels. In addition, the Calibra E optimises the way energy is used with its inverter technology.

### 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 also has a very high SCOP\* (Seasonal Coefficient of Performance) value (5.96), which helps manage energy consumption throughout the year.

### Ideal for new builds and retrofitting projects

The Calibra E 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 can be precisely adjusted to the specific heat demand and available energy source. The Calibra E comes in three power sizes: 2-8 kW, 3-12 kW and 4-16 kW.

### Plenty of hot water

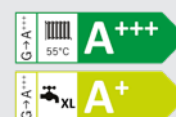
The Calibra E produces hot water extremely fast to a high temperature. The Calibra E uses TWS\*\* technology, and a variety of other technical innovations provide superb hot water delivery for a heat pump of its size and class. The Calibra E is also available in a Duo variant with a dedicated MBH Calibra hot water tank. The MBH Calibra hot water tank is available in two sizes: 200 and 300 litres.

### Thermia Online

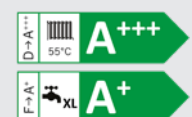
Using the integrated Thermia Online tool, you can remotely monitor and control your heat pump via an app on your smartphone, any time and from anywhere you have an Internet connection. Spot price management is also possible through the free Smart Price add-on service.



System:



Product:



Read more about the energy class in footnotes 5–6 on the next page.

# Technical data Calibra E

## Connections Calibra E

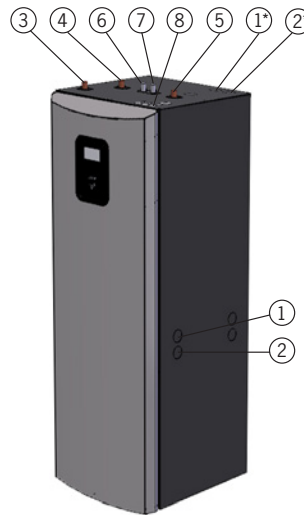
The brine lines can be connected on either the left or right-hand sides of the heat pump.

- 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

## Connections Calibra E Duo

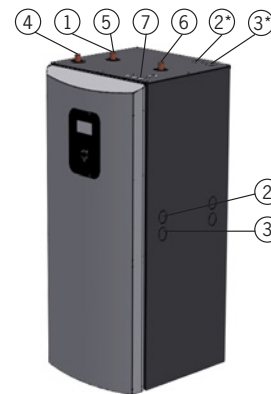
The brine lines can be connected on either the left or right-hand sides of the heat pump.

- 1 Return line hot water tank, Ø28 mm
- 2 Brine return line (Brine in), Ø28 mm
- 3 Brine supply line (Brine out), Ø28 mm
- 4 Heating system supply line, Ø28 mm
- 5 Heating system return line, Ø28 mm
- 6 Supply line hot water tank, Ø28 mm
- 7 Lead-in for incoming power supply, sensors and communication cable



Calibra E

\*Additional pipes needed for this type of connection



Calibra E Duo

(A lower model with separate hot water tank)

\*Additional pipes needed for this type of connection

		Calibra E 8	Calibra E 12	Calibra E 16
<b>Heating capacity</b>	kW	2-8	3-12	4-16
<b>Refrigerant</b>	Typ	R452B	R452B	R452B
	Amount <sup>1</sup>	kg	0.90	1.30
	GWP (CO <sub>2</sub> equivalent)	tCO <sub>2</sub>	0.628	0.907
	Design pressure	Bar(g)	45	45
<b>Compressor</b>	Typ	Inverter-controlled, Scroll	Inverter-controlled, Scroll	Inverter-controlled, Scroll
	Oil	POE	POE	POE
<b>Electrical data 230V 1-N, -50Hz</b>	Main power supply	V	230	230
	Max working power, compressor	kW	2,8	4,6
	Rated power, circulation pumps	kW	0,1	0,2
	Auxiliary heater, 3 steps	kW	(0)2/4/6	(0)3/5/8
	Fuse I <sub>N-2</sub> , 2C	A	(13)/25/32/40 <sup>2</sup> , 2C	(25)/40/50/63 <sup>2</sup> , 2C
<b>Electrical data 400V 3-N, -50Hz</b>	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 <sup>2A, 2B</sup>	A	(13)/13/13/16 <sup>2A</sup>	(10)/13/20/25 <sup>2B</sup>
<b>Performance</b>	SCOP, Floor heating (35°C) <sup>3</sup>	5,87	5,85	5,96
	SCOP, Radiator (55°C) <sup>3</sup>	4,10	4,39	4,54
	COP <sup>4</sup>	4,6	4,78	4,87
<b>Energy class - system <sup>5</sup></b>	Floor heating (35°C)	A+++	A+++	A+++
	Radiator (55°C)	A+++	A+++	A+++
<b>Energy class - product <sup>6</sup></b>	Floor heating (35°C)	A+++	A+++	A+++
	Radiator (55°C)	A+++	A+++	A+++
	Hot water (Economy) <sup>7</sup>	A+	A	A
	Hot water (Normal/Comfort) <sup>8</sup>	A	A	A
<b>Max/min temperature</b>	Cooling circuit	°C	20/-10	20/-10
	Heating circuit	°C	65/20	65/20
<b>Anti-freeze <sup>9</sup></b>		Ethanol + water solution -17+/- 2 °C		
<b>Max/min refrigerant circuit</b>	Low pressure	Bar(g)	2,3	2,3
	Operating pressure	Bar(g)	41,5	41,5
	High pressure	Bar(g)	45	45
<b>Sound power level</b>	Calibra E	dB(A)	30-42 <sup>10</sup> (32) <sup>11</sup>	29-44 <sup>10</sup> (34) <sup>11</sup>
	Calibra E Duo	dB(A)	30-42 <sup>10</sup> (33) <sup>11</sup>	30-46 <sup>10</sup> (36) <sup>11</sup>
<b>Hot water performance</b>	Volume 40°C hot water <sup>12</sup>	l	260	260
	COP, Hot water <sup>7</sup>		3.14	2.8
<b>Water volume</b>	Calibra E	l	184	184
	Calibra E Duo	l	optional	optional
<b>Weight</b>	Calibra E, Empty	kg	150	162
	Calibra E, Filled	kg	340	352
	Calibra E Duo	kg	115	127
<b>Dimensions (WxDxH)</b>	Calibra E	mm	598x703x1863 +/-10	598x703x1863 +/-10
	Calibra E Duo	mm	598x703x1450 +/-10	598x703x1450 +/-10

Thermia AB reserves the right to make changes without further notice.



Thermia Online



<sup>1</sup> SCOP 5.96 refers to the Calibra E 16'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 5,64

<sup>\*\*</sup> TWS = Tap Water Stratification

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.

2) The minimum recommended fuse group size depends on auxiliary heater setting (0/3/6/9 kW) in combination with compressor.

2a) The minimum recommended fuse group size depends on auxiliary heater setting. 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 group size depends on auxiliary heater setting (0/3/6/9 kW). 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 <1.3 MVA for Calibra E 12 and for Calibra E 16 <1.8 MVA without action.

2c) Connection of the 230V version can be made to 1-phase or 3-phase 230V grid, either with a normal supply, or with physically separate supplies for the heat pump (compressor) and for auxiliary heater to lower required fuse. Meets IEC 61000-3-12 without action.

3) SCOP according to EN14825, Cold climate (Helsinki), P-design: (All climate zones) Calibra E 8: 6 kW (BOW55), 7 kW (BOW35), P-design Calibra E 12: 11 kW (BOW55), 12 kW (BOW35), P-design Calibra E 16: 15 kW (BOW55), 16 kW (BOW35).

4) At B0/W35, according to EN14511

5) When the heat pump is part of an integrated system. According to Eco-design Directive 811/2013

6) When the heat pump is the sole heat generator and the built-in controller is not included. According to Eco-design Directive 811/2013.

7) Hot water performance according to EN16147, COP according to XL cycle with the control computer set for Economy mode and built-in tank.

8) Hot water performance according to EN16147, COP according to XL cycle with the control computer set for Normal / Comfort mode and built-in tank.

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

10) According to EN12102:2017 and EN 3741:2010 (max BOW35, min BOW35).

11) Sound power level according to Energy label, EN 12102:2017 and EN 3741:2010 (BOW55)

12) 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.

