

# Thermia Calibra Calibra Duo



Calibra

## Ground source heat pump with Thermia Inverter Technology, specially designed for the heating & cooling of modern and existing homes

Thermia Calibra covers the power range 1.5 to 12 kW and includes features that have been optimized to provide maximum energy savings when heating or cooling homes. Based on inverter technology, Calibra is an excellent choice for energy-efficient 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 Calibra can precisely adjusted to head demand and available energy source.

Thermia Calibra is geothermal heat pump and draws on rock, surface ground, ground water or lake water as its heat sources.

The variable-speed compressor has a power range of 1.5-7 kW and 3-12 kW (2 models) and constantly adjusts the supply of energy according to your needs. This enables you to enjoy an extremely high annual efficiency factor\*. Because you never use more energy than you actually need, you can reduce your electricity (bill) even further.

Together with a number of other technical innovations, Thermia TWS technology\*\* provides excellent hot water comfort for its size class. Calibra produces water faster and at higher temperatures than can be achieved using traditional techniques. Thermia Calibra is also available in a Duo variant with dedicated MBH Calibra hot water tank. The MBH Calibra hot water tank is available in two sizes: 200 and 300.

Using the integrated Thermia Online tool, you can remotely monitor your heat pump via a computer, tablet or smartphone.

\* 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.

\*\* TWS = Tap Water Stratification = a heating technique for water heaters, developed by Thermia.



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 Thermia Calibra

## Thermia Calibra Duo

### Connections Thermia Calibra

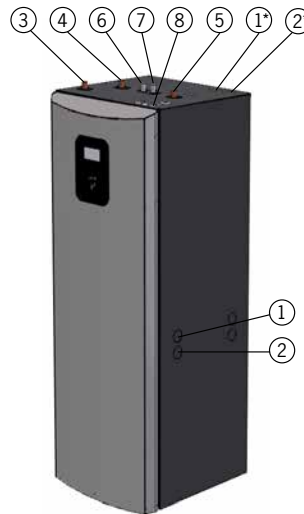
The brine lines can be connected on either the left or right-hand sides of the heat pump.

- 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 Thermia Calibra Duo

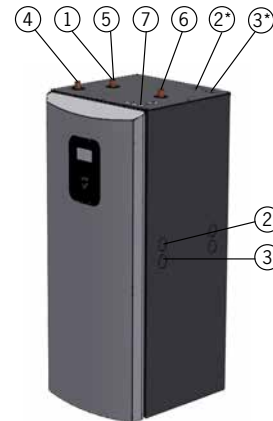
The brine lines can be connected on either the left or right-hand sides of the heat pump.

- 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

\*Additional pipes needed for this type of connection



Calibra Duo

\*Additional pipes needed for this type of connection

Thermia Calibra / Thermia Calibra Duo			Calibra 7 (1,5–7 kW)	Calibra 12 (3–12 kW)
<b>Refrigerant</b>	Type		R410A	R410A
	Amount <sup>2</sup>	kg	0,95	1,40
	Test pressure	MPa	4,5	4,5
	Design pressure	MPa	4,5	4,5
<b>Compressor</b>	Type		Scroll	Scroll
	Oil		POE	POE
<b>Electrical data 3-N, -50Hz</b>	Main power supply	V	400	400
	Max working power, compressor	kW	2,63	4,34
	Rated power, circulation pumps	kW	0,12	0,28
	Auxiliary heater, 3 steps	kW	0/2/4/6	0/3/6/9
	Fuse (heat pump + auxiliary heater) <sup>3</sup>	A	13/13/13/16 <sup>3A</sup>	10/13/20/25 <sup>3B</sup>
<b>Electrical data 1-N, -50Hz</b>	Main power supply	V	230	N/A
	Max working power, compressor	kW	2,63	N/A
	Rated power, circulation pumps	kW	0,12	N/A
	Auxiliary heater, 3 steps	kW	0/2/4/6	N/A
	Fuse (heat pump + auxiliary heater) <sup>3</sup>	A	13/25/32/40	N/A
	Fuse (heat pump, separated supply) <sup>4</sup>	A	13	N/A
	Fuse (auxiliary heater, separated supply) <sup>3,4</sup>	A	10/20/32	N/A
<b>Performance</b>	SCOP, Floor heating (35°C) <sup>5</sup>		5,77	5,80
	SCOP, Radiator (55°C) <sup>5</sup>		4,12	4,29
	COP <sup>1</sup>		4,65	4,75
<b>Energy class - system <sup>8</sup></b>	Floor heating (35°C)		A+++	A+++
	Radiator (55°C)		A+++	A+++
<b>Energy class - product <sup>9</sup></b>	Floor heating (35°C)		A++	A++
	Radiator (55°C)		A++	A++
	Domestic hot water		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>6</sup></b>	Ethanol + water solution -17+/- 2 °C			
<b>Max/min refrigerant circuit</b>	Low pressure	MPa(g)	0,23	0,23
	Operating pressure	MPa(g)	4,15	4,15
	High pressure	MPa(g)	4,50	4,50
<b>Sound power level</b>	Calibra	dB(A)	28-42 <sup>7A</sup> (32) <sup>7B</sup>	29-46 <sup>7A</sup> (35) <sup>7B</sup>
	Calibra Duo	dB(A)	29-43 <sup>7A</sup> (33) <sup>7B</sup>	30-48 <sup>7A</sup> (36) <sup>7B</sup>
<b>Hot water performance <sup>10</sup></b>	Volume 40°C hot water	l	260	260
	COP, Hot water		2,7	2,7
<b>Water volume</b>	Calibra	l	185	185
	Calibra Duo	l	optional	optional
<b>Weight</b>	Calibra, Empty	kg	150	162
	Calibra, Filled	kg	340	352
	Calibra Duo	kg	115	127
<b>Dimensions (WxDxH)</b>	Calibra	mm	598x703x1863 +/-10	598x703x1863 +/-10
	Calibra Duo	mm	598x703x1450 +/-10	598x703x1450 +/-10

1) At B0/W35, according to EN14511 ; 2) The refrigerant circuit is hermetically sealed and subject to the F-gas directive. Global Warming Potential (GWP) for R410A according to EC 517/2014 is 2088, giving a CO2 equivalent corresponding to: CALIBRA 7: 1,984 ton and CALIBRA 12: 2,923 ton. ; 3) 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. ; 3A) Controller and circulation pumps are connected by L1 and L2 and the frequency converter for the compressor is connected by L3. ; 3B) The recommended fuse group size depends on auxiliary heater setting (0/3/6/9 kW). Auxiliary heater and frequency converter for the compressor are connected by L1, L2 and L3. Controller and circulation pumps are connected by L1. Meets IEC 61000-3-12 at Ssc connection <1.3 MVA without action. ; 4) Connection of the 230V version can be done to single phase or 3 phase 230V grids, either with one common supply, or with physically separated supplies to heat pump (compressor) and to auxiliary heater to lower the fuse needed. ; 5) SCOP according to EN14825, Cold climate (Helsinki), P-design CALIBRA 7: 6,39 kW (BOW55), 7,11 kW (BOW35). P-design CALIBRA 12: 10,60 kW (BOW55), 11,69 kW (BOW35). ; 6) Always check local rules and regulations before using antifreeze. ; 7A) According to EN12102:2017 and EN 3741:2010 (max BOW55, min BOW35). ; 7B) Sound power level according to Energy label, EN 12102:2017 and EN 3741:2010 (BOW55). ; 8) When the heat pump is part of an integrated system. According to Eco-design Directive 811/2013. ; 9) When the heat pump is the sole heat generator and the built-in controller is not included. According to Eco-design Directive 811/2013. ; 10) Hot water performance according to EN 16147: 2017, V40 according to XL cycle, COP with the control computer set for economy mode and built-in tank.