Thermia Calibra Eco

Calibra Eco

The next generation ground source heat pump with eco-friendly technology for the European climate.

A smart choice for the future, Calibra Eco is the best step towards a better environment and a sustainable society. This inverter-driven ground source heat pump is equipped with the very latest technology and more environmentally friendly refrigerant – R452B. With Calibra Eco, we are setting trends in geothermal technologies and at the same time meeting the tough criteria of European Union's environmental policy.

Next-generation refrigerant (R452B)
Calibra Eco is the first ground source heat pump on the market that uses the more climate-friendly refrigerant R452B. This has a very low GWP value* and, thanks to the unique design Calibra Eco, requires less refrigerant then other heat pumps, giving it a very low CO2 equivalent. In fact, the GWP of R452B us around 66% lower than the previous standard R410A refrigerant in a similar heat pump.

Greener, better, higher – savings all year round
Not only does Calibra Eco offer the same smart technology as Calibra, it shares all its features and even achieves a slightly higher level of performance. Calibra Eco has a very high SCOP** value (5.96), which keeps energy consumption at a minimum throughout the year.

Inverter technology – adjusts to real-time demand
Based on inverter technology, Calibra Eco is an excellent choice for energy-efficient new builds 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 be precisely adjusted to the specific heat demand and available energy source. Calibra Eco comes in three power sizes: 2-8 kW, 3-12 kW and 4-16 kW.

Plenty of hot water
Calibra Eco produces hot water faster and at higher temperatures than can be achieved using traditional systems. Calibra Eco uses TWS*** technology and a variety of other technical innovations provide excellent hot water comfort for its size class. Calibra Eco 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 liters.

Thermia Online
Using the integrated Thermia Online tool, you can remotely monitor your heat pump via a computer, tablet or smartphone, any time and from anywhere you have an Internet connection.

RETAILER:

Technical data Calibra Eco

Connections Calibra Eco

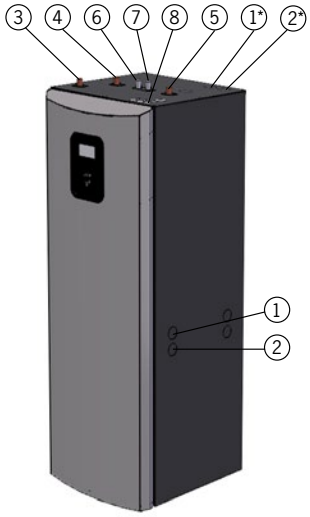
The brine lines can be connected on either the left or right-hand sides of the heat pump.

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 Eco Duo

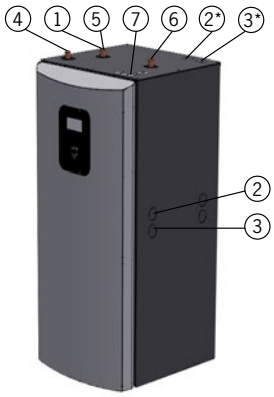
The brine lines can be connected on either the left or right-hand sides of the heat pump.

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 Eco

*Additional pipes needed for this type of connection



Calibra Eco Duo

((A lower model with separate hot water tank)

*Additional pipes needed for this type of connection

			Calibra Eco 8	Calibra Eco 12	Calibra Eco 16
Heating capacity		kW	2-8	3–12	4-16
Refrigerant	Typ		R452B	R452B	R452B
	Amount [1]	kg	0.90	1.30	1.85
	GWP (CO_2 equivalent)	tCO_2	0.628	0.907	1.291
	Design pressure	Bar(g)	45	45	45
Compressor	Typ		Inverter-controlled, Scroll	Inverter-controlled, Scroll	Inverter-controlled, Scroll
	Oil		POE	POE	POE
Electrical data 230V 1-N, ~50Hz	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 1N~[2, 2C]	A	(13)/25/32/40[2, 2C]	(25)/40/50/63[2, 2C]	
Electrical data 400V 3-N, ~50Hz	Main power supply	V	400	400	400
	Max working power, compressor	kW	2,8	4,1	6
	Rated power, circulation pumps	kW	0,1	0,2	0,3
	Auxiliary heater, 3 steps	kW	(0)2/4/6	(0)3/6/9	(0)3/6/9
	Fuse [2A, 2B]	A	(13)/13/13/16[2A]	(10)/13/20/25[2B]	(13)/16/25/25[2B]
Performance	SCOP, Floor heating (35°C) [3]		5,87	5,85	5,96
	SCOP, Radiator (55°C) [3]		4,10	4,39	4,54
	COP [4]		4,6	4,78	4.87
Energy class - system [5]	Floor heating (35°C)		A+++	A+++	A+++
	Radiator (55°C)		A+++	A+++	A+++
Energy class - product [6]	Floor heating (35°C)		A+++	A+++	A+++
	Radiator (55°C)		A+++	A+++	A+++
	Hot water (Economy)[7]		A+	A	A
	Hot water (Normal/Comfort)[8]		A	A	A
Max/min temperature	Cooling circuit	°C	20/-10	20/-10	20/-10
	Heating circuit	°C	65/20	65/20	65/20
Anti-freeze [9]			Ethanol + water solution -17+/- 2 °C		
Max/min refrigerant circuit	Low pressure	Bar(g)	2,3	2,3	2,3
	Operating pressure	Bar(g)	41,5	41,5	41,5
	High pressure	Bar(g)	45	45	45
Sound power level	Calibra Eco	dB(A)	30-42[10] (32)[11]	29-44[10] (34)[11]	32-46[10] (36)[11]
	Calibra Eco Duo	dB(A)	30-42[10] (33)[11]	30-46[10] (36)[11]	33-48[10] (38)[11]
Hot water performance	Volume 40°C hot water[12]	l	260	260	260
	COP, Hot water[7]		3.14	2.8	2.91
Water volume	Calibra Eco	l	184	184	184
	Calibra Eco Duo	l	optional	optional	optional
Weight	Calibra Eco, Empty	kg	150	162	176
	Calibra Eco, Filled	kg	340	352	366
	Calibra Eco Duo	kg	115	127	141
Dimensions (WxDxH)	Calibra Eco	mm	598x703x1863 +/-10	598x703x1863 +/-10	598x703x1863 +/-10
	Calibra Eco Duo	mm	598x703x1450 +/-10	598x703x1450 +/-10	598x703x1450 +/-10

* GWP, Global Warming Potential, is the amount of heat a greenhouse gas traps in the atmosphere compared to the heat trapped by the same amount of CO_2, which is the reference gas with a GWP of 1.
** SCOP (Seasonal Coefficient of Performance according to the international EN14825 standard) is a measurement that shows how effective the heat pump is on an annual basis under all seasonal weather conditions.
*** 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.
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 auxilliary 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 auxilliary 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 IEC61000-3-12 at Ssc connection point <1.3 MVA for Calibra Eco 12 and for Calibra Eco 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 Eco 8: 6 kW (BOW55), 7 kW (BOW35). P-design Calibra Eco 12: 11 kW (BOW55), 12 kW (BOW35). P-design Calibra Eco 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 B0W35, min B0W35).
11)Sound power level according to Energy label, EN 12102:2017 and EN 3741:2010 (B0W55)
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.

Thermia OnLine

Available on the iPhone App Store
Google play