Login

Summary of	Thermia Calibra Eco 16	Reg. No.	012-C700112
Certificate Holder			
Name	Thermia		
Address	Snickaregatan 1	Zip	
City	Arvika	Country	Sweden
Certification Body	RISE CERT		
Subtype title	Thermia Calibra Eco 16		
Heat Pump Type	Brine/Water and Water/Water		
Refrigerant	R452B		
Mass of Refrigerant	1.85 kg		
Certification Date	25.08.2021		
Testing basis	EN 14511:2018, EN 14825:2018, EN 12102:2017		

Model: Thermia Calibra Eco 16 400V

Configure model	
Model name	Thermia Calibra Eco 16 400V
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Brine/Water Heat Pump

Heating

EN 14511-4	
Starting and operating test	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	10.42 kW	12.19 kW
El input	2.14 kW	4.00 kW
COP	4.87	3.05

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	36 dB(A)	36 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	224 %	169 %
Prated	15.88 kW	14.68 kW
SCOP	5.79	4.42
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	15.88 kW	14.68 kW
COP Tj = +2°C	4.59	3.11
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	10.21 kW	9.44 kW
COP Tj = +7°C	5.56	3.98
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	4.54 kW	4.20 kW
COP Tj = 12°C	6.37	5.21
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	15.88 kW	14.68 kW

COP Tj = Tbiv	4.59	3.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.88 kW	14.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.59	3.11
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3666 kWh	4441 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	36 dB(A)	36 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	230 %	174 %
Prated	15.88 kW	14.68 kW

SCOP	5.96	4.54
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.61 kW	8.89 kW
COP Tj = -7°C	5.79	4.21
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.85 kW	5.41 kW
COP Tj = +2°C	6.40	4.98
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	4.28 kW	4.20 kW
COP Tj = +7°C	6.13	5.15
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	4.23 kW	4.22 kW
COP Tj = 12°C	5.83	5.21
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	15.88 kW	14.68 kW
COP Tj = Tbiv	4.59	3.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.88 kW	14.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.59	3.11
WTOL	65 °C	65 °C
Poff	13 W	13 W

PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6574 kWh	7969 kWh

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	36 dB(A)	36 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	222 %	168 %
Prated	15.88 kW	14.68 kW
SCOP	5.76	4.40
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.05 kW	12.99 kW
COP Tj = -7°C	4.89	3.35

Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	8.55 kW	7.91 kW
COP Tj = +2°C	5.86	4.48
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.50 kW	5.08 kW
COP Tj = +7°C	6.38	5.07
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	4.26 kW	4.18 kW
COP Tj = 12°C	6.02	5.08
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	15.88 kW	14.68 kW
COP Tj = Tbiv	4.59	3.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.88 kW	14.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.59	3.11
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW

Annual energy consumption Qhe	5700 kWh	6893 kWh

Water/Water Heat Pump

Heating

EN 14511-4	
Starting and operating test	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.68 kW	18.11 kW
El input	1.88 kW	4.60 kW
COP	6.73	3.94

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	301 %	219 %
Prated	12.68 kW	18.11 kW

SCOP	7.72	5.66
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.68 kW	18.11 kW
COP Tj = +2°C	6.73	3.94
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	8.15 kW	11.64 kW
COP Tj = +7°C	7.78	5.15
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.79 kW	5.17 kW
COP Tj = 12°C	8.34	6.65
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.68 kW	18.11 kW
COP Tj = Tbiv	6.73	3.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.68 kW	18.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.73	3.94
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2195 kWh	4271 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	312 %	227 %
Prated	12.68 kW	18.11 kW
SCOP	8.00	5.88
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.68 kW	10.96 kW
COP Tj = -7°C	8.04	5.48
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	5.79 kW	6.67 kW
COP Tj = +2°C	8.32	6.44
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.80 kW	5.61 kW
COP Tj = +7°C	8.46	6.66
Cdh Tj = +7 °C	0.98	0.98

Pdh Tj = 12°C	5.79 kW	5.64 kW
COP Tj = 12°C	8.35	6.80
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.68 kW	18.11 kW
COP Tj = Tbiv	6.73	3.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.68 kW	18.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.73	3.94
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3908 kWh	7589 kWh

Average Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	303 %	220 %
Prated	12.68 kW	18.11 kW

SCOP	7.78	5.70
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.22 kW	16.02 kW
COP Tj = -7°C	7.04	4.25
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	6.83 kW	9.75 kW
COP Tj = +2°C	8.03	5.83
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.79 kW	6.27 kW
COP Tj = +7°C	8.26	6.57
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	5.80 kW	5.61 kW
COP Tj = 12°C	8.49	6.63
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.68 kW	18.11 kW
COP Tj = Tbiv	6.73	3.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.68 kW	18.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.73	3.94
WTOL	65 °C	65 °C
Poff	13 W	13 W

PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3370 kWh	6569 kWh

Model: Thermia Calibra Eco 16 Duo 400V

Configure model	
Model name	Thermia Calibra Eco 16 Duo 400V
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Brine/Water Heat Pump

Heating

EN 14511-4	
Starting and operating test	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	10.42 kW	12.19 kW
El input	2.14 kW	4.00 kW
COP	4.87	3.05

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	38 dB(A)	38 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	224 %	169 %
Prated	15.88 kW	14.68 kW
SCOP	5.79	4.42
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	15.88 kW	14.68 kW
COP Tj = +2°C	4.59	3.11
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	10.21 kW	9.44 kW
COP Tj = +7°C	5.56	3.98
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	4.54 kW	4.20 kW
COP Tj = 12°C	6.37	5.21
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	15.88 kW	14.68 kW

COP Tj = Tbiv	4.59	3.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.88 kW	14.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.59	3.11
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3666 kWh	4441 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	38 dB(A)	38 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	230 %	174 %
Prated	15.88 kW	14.68 kW

SCOP	5.96	4.54
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.61 kW	8.89 kW
COP Tj = -7°C	5.79	4.21
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.85 kW	5.41 kW
COP Tj = +2°C	6.40	4.98
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	4.28 kW	4.20 kW
COP Tj = +7°C	6.13	5.15
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	4.23 kW	4.22 kW
COP Tj = 12°C	5.83	5.21
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.59	3.11
WTOL	65 °C	65 °C
Poff	13 W	13 W

PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6574 kWh	7969 kWh

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	38 dB(A)	38 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	222 %	168 %
Prated	15.88 kW	14.68 kW
SCOP	5.76	4.40
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.05 kW	12.99 kW
COP Tj = -7°C	4.89	3.35

Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	8.55 kW	7.91 kW
COP Tj = +2°C	5.86	4.48
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.50 kW	5.08 kW
COP Tj = +7°C	6.38	5.07
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	4.26 kW	4.18 kW
COP Tj = 12°C	6.02	5.08
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	15.88 kW	14.68 kW
COP Tj = Tbiv	4.59	3.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.88 kW	14.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.59	3.11
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW

Annual energy consumption Qhe	5700 kWh	6893 kWh

Water/Water Heat Pump

Heating

EN 14511-4	
Starting and operating test	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.68 kW	18.11 kW
El input	1.88 kW	4.60 kW
COP	6.73	3.94

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	301 %	219 %
Prated	12.68 kW	18.11 kW

SCOP	7.72	5.66
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.68 kW	18.11 kW
COP Tj = +2°C	6.73	3.94
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	8.15 kW	11.64 kW
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.73	3.94
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2195 kWh	4271 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	312 %	227 %
Prated	12.68 kW	18.11 kW
SCOP	8.00	5.88
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.68 kW	10.96 kW
COP Tj = -7°C	8.04	5.48
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	5.79 kW	6.67 kW
COP Tj = +2°C	8.32	6.44
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.80 kW	5.61 kW
COP Tj = +7°C	8.46	6.66
Cdh Tj = +7 °C	0.98	0.98

Pdh Tj = 12°C	5.79 kW	5.64 kW
COP Tj = 12°C	8.35	6.80
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Pdh Tj = Tbiv	12.68 kW	18.11 kW
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WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3908 kWh	7589 kWh

Average Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	303 %	220 %
Prated	12.68 kW	18.11 kW

SCOP	7.78	5.70
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.22 kW	16.02 kW
COP Tj = -7°C	7.04	4.25
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	6.83 kW	9.75 kW
COP Tj = +2°C	8.03	5.83
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.79 kW	6.27 kW
COP Tj = +7°C	8.26	6.57
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	5.80 kW	5.61 kW
COP Tj = 12°C	8.49	6.63
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.68 kW	18.11 kW
COP Tj = Tbiv	6.73	3.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.68 kW	18.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.73	3.94
WTOL	65 °C	65 °C
Poff	13 W	13 W

PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3370 kWh	6569 kWh