

Subtype Thermia Calibra Eco 16

Certificate Holder	Thermia
Address	Snickaregatan 1
ZIP	
City	Arvika
Country	SE
Certification Body	RISE CERT
Subtype title	Thermia Calibra Eco 16
Registration number	012-C700112
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

Model name	Thermia Calibra Eco 16 400V
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Brine/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)

EN 14825 | Average Climate

	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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 Q _{he}	6574 kWh	7969 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	224 %	169 %
Prated	15.88 kW	14.68 kW
SCOP	5.79	4.42
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	15.88 kW	14.68 kW
COP T _j = +2°C	4.59	3.11
C _{dh} T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7°C	10.21 kW	9.44 kW
COP T _j = +7°C	5.56	3.98
C _{dh} T _j = +7 °C	0.99	0.99
P _{dh} T _j = 12°C	4.54 kW	4.20 kW
COP T _j = 12°C	6.37	5.21
C _{dh} T _j = +12 °C	0.98	0.98
P _{dh} T _j = T _{biv}	15.88 kW	14.68 kW
COP T _j = T _{biv}	4.59	3.11
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	15.88 kW	14.68 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.59	3.11
WTOL	65 °C	65 °C
P _{off}	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 Q _{he}	3666 kWh	4441 kWh

Water/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14825 | Average Climate

	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

EN 14825 | Colder Climate

	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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	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 $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	6.73	3.94
WTOL	65 °C	65 °C
P _{off}	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 Q _{he}	2195 kWh	4271 kWh

Model Thermia Calibra Eco 16 Duo 400V

Model name	Thermia Calibra Eco 16 Duo 400V
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Brine/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	38 dB(A)	38 dB(A)

EN 14825 | Average Climate

	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	38 dB(A)	38 dB(A)

EN 14825 | Colder Climate

	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
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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 Q _{he}	6574 kWh	7969 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	38 dB(A)	38 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	224 %	169 %
Prated	15.88 kW	14.68 kW
SCOP	5.79	4.42
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	15.88 kW	14.68 kW
COP T _j = +2°C	4.59	3.11
C _{dh} T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7°C	10.21 kW	9.44 kW
COP T _j = +7°C	5.56	3.98
C _{dh} T _j = +7 °C	0.99	0.99
P _{dh} T _j = 12°C	4.54 kW	4.20 kW
COP T _j = 12°C	6.37	5.21
C _{dh} T _j = +12 °C	0.98	0.98
P _{dh} T _j = T _{biv}	15.88 kW	14.68 kW
COP T _j = T _{biv}	4.59	3.11
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	15.88 kW	14.68 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.59	3.11
WTOL	65 °C	65 °C
P _{off}	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 Q _{he}	3666 kWh	4441 kWh

Water/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14825 | Average Climate

	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
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WTOL	65 °C	65 °C
Poff	13 W	13 W
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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

EN 14825 | Colder Climate

	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 = 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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	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 $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	6.73	3.94
WTOL	65 °C	65 °C
P _{off}	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 Q _{he}	2195 kWh	4271 kWh