

Subtype Thermia Calibra Eco 12

Certificate Holder	Thermia
Address	Snickaregatan 1
ZIP	
City	Arvika
Country	SE
Certification Body	RISE CERT
Subtype title	Thermia Calibra Eco 12
Registration number	012-C700111
Heat Pump Type	Brine/Water and Water/Water
Refrigerant	R452B
Mass of Refrigerant	1.3 kg
Certification Date	25.08.2021
Testing basis	EN 14511:2018, EN 14825:2018, EN 12102:2017

Model Thermia Calibra Eco 12 400V

Model name	Thermia Calibra Eco 12 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	34 dB(A)	34 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	219 %	162 %
Prated	11.52 kW	10.57 kW
SCOP	5.67	4.25
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.19 kW	9.35 kW
COP Tj = -7°C	4.66	3.23
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	6.20 kW	5.69 kW
COP Tj = +2°C	5.81	4.27
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.99 kW	3.66 kW
COP Tj = +7°C	6.39	5.06
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.77 kW	2.73 kW
COP Tj = 12°C	5.67	4.67
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	11.52 kW	10.57 kW
COP Tj = Tbiv	4.39	2.96

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.52 kW	10.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.96
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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	4195 kWh	5134 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	34 dB(A)	34 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	226 %	168 %
Prated	11.52 kW	10.57 kW
SCOP	5.85	4.39
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.97 kW	6.40 kW
COP Tj = -7°C	5.69	4.02
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.24 kW	3.89 kW
COP Tj = +2°C	6.38	4.92
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.73 kW	2.50 kW
COP Tj = +7°C	5.79	4.88
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	2.78 kW	2.74 kW
COP Tj = 12°C	5.51	4.74
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	11.52 kW	10.57 kW
COP Tj = Tbiv	4.39	2.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.52 kW	10.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.96
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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}	4856 kWh	5928 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	34 dB(A)	34 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	222 %	164 %
Prated	11.52 kW	10.57 kW
SCOP	5.76	4.29
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	11.52 kW	10.57 kW
COP T _j = +2°C	4.39	2.96
C _{dh} T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7°C	7.41 kW	6.79 kW
COP T _j = +7°C	5.38	3.81
C _{dh} T _j = +7 °C	0.99	1.00
P _{dh} T _j = 12°C	3.29 kW	3.02 kW
COP T _j = 12°C	6.47	5.12
C _{dh} T _j = +12 °C	0.98	0.99
P _{dh} T _j = T _{biv}	11.52 kW	10.57 kW
COP T _j = T _{biv}	4.39	2.96
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	11.52 kW	10.57 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.39	2.96
WTOL	65 °C	65 °C
P _{off}	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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}	2674 kWh	3290 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	292 %	213 %
Prated	12.24 kW	14.24 kW
SCOP	7.51	5.52
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.83 kW	12.60 kW
COP Tj = -7°C	6.35	4.09
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	6.59 kW	7.67 kW
COP Tj = +2°C	7.52	5.56
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.24 kW	4.93 kW
COP Tj = +7°C	8.40	6.49
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	3.70 kW	3.65 kW
COP Tj = 12°C	8.22	6.57
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.08	3.71
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 W
PCK	0 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3369 kWh	5331 kWh

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	300 %	223 %
Prated	12.24 kW	14.24 kW
SCOP	7.70	5.77
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.41 kW	8.62 kW

COP Tj = -7°C	7.43	5.28
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	4.51 kW	5.25 kW
COP Tj = +2°C	8.14	6.31
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	3.71 kW	3.37 kW
COP Tj = +7°C	8.35	7.00
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.68 kW	3.66 kW
COP Tj = 12°C	7.96	6.72
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.08	3.71
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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	3917 kWh	6086 kWh

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	295 %	214 %
Prated	12.24 kW	14.24 kW
SCOP	7.57	5.56
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.24 kW	14.24 kW
COP Tj = +2°C	6.08	3.71
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	7.87 kW	9.16 kW
COP Tj = +7°C	7.15	4.96
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.50 kW	4.07 kW
COP Tj = 12°C	8.40	6.62
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	6.08	3.71
WTOL	65 °C	65 °C
P _{off}	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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}	2161 kWh	3425 kWh

Model Thermia Calibra Eco 12 Duo 400V

Model name	Thermia Calibra Eco 12 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	36 dB(A)	36 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	219 %	162 %
Prated	11.52 kW	10.57 kW
SCOP	5.67	4.25
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.19 kW	9.35 kW
COP Tj = -7°C	4.66	3.23
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	6.20 kW	5.69 kW
COP Tj = +2°C	5.81	4.27
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.99 kW	3.66 kW
COP Tj = +7°C	6.39	5.06
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.77 kW	2.73 kW
COP Tj = 12°C	5.67	4.67
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	11.52 kW	10.57 kW
COP Tj = Tbiv	4.39	2.96

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.52 kW	10.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.96
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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	4195 kWh	5134 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
η_s	226 %	168 %
Prated	11.52 kW	10.57 kW
SCOP	5.85	4.39
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.97 kW	6.40 kW
COP Tj = -7°C	5.69	4.02
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.24 kW	3.89 kW
COP Tj = +2°C	6.38	4.92
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.73 kW	2.50 kW
COP Tj = +7°C	5.79	4.88
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	2.78 kW	2.74 kW
COP Tj = 12°C	5.51	4.74
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	11.52 kW	10.57 kW
COP Tj = Tbiv	4.39	2.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.52 kW	10.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.96
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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}	4856 kWh	5928 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	222 %	164 %
Prated	11.52 kW	10.57 kW
SCOP	5.76	4.29
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	11.52 kW	10.57 kW
COP T _j = +2°C	4.39	2.96
C _{dh} T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7°C	7.41 kW	6.79 kW
COP T _j = +7°C	5.38	3.81
C _{dh} T _j = +7 °C	0.99	1.00
P _{dh} T _j = 12°C	3.29 kW	3.02 kW
COP T _j = 12°C	6.47	5.12
C _{dh} T _j = +12 °C	0.98	0.99
P _{dh} T _j = T _{biv}	11.52 kW	10.57 kW
COP T _j = T _{biv}	4.39	2.96
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	11.52 kW	10.57 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.39	2.96
WTOL	65 °C	65 °C
P _{off}	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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}	2674 kWh	3290 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	292 %	213 %
Prated	12.24 kW	14.24 kW
SCOP	7.51	5.52
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.83 kW	12.60 kW
COP Tj = -7°C	6.35	4.09
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	6.59 kW	7.67 kW
COP Tj = +2°C	7.52	5.56
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.24 kW	4.93 kW
COP Tj = +7°C	8.40	6.49
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	3.70 kW	3.65 kW
COP Tj = 12°C	8.22	6.57
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.08	3.71
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 W
PCK	0 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3369 kWh	5331 kWh

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	300 %	223 %
Prated	12.24 kW	14.24 kW
SCOP	7.70	5.77
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.41 kW	8.62 kW

COP Tj = -7°C	7.43	5.28
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	4.51 kW	5.25 kW
COP Tj = +2°C	8.14	6.31
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	3.71 kW	3.37 kW
COP Tj = +7°C	8.35	7.00
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.68 kW	3.66 kW
COP Tj = 12°C	7.96	6.72
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.24 kW	14.24 kW
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.08	3.71
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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	3917 kWh	6086 kWh

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	295 %	214 %
Prated	12.24 kW	14.24 kW
SCOP	7.57	5.56
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.24 kW	14.24 kW
COP Tj = +2°C	6.08	3.71
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	7.87 kW	9.16 kW
COP Tj = +7°C	7.15	4.96
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.50 kW	4.07 kW
COP Tj = 12°C	8.40	6.62
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	6.08	3.71
WTOL	65 °C	65 °C
P _{off}	7 W	7 W
P _{TO}	9 W	9 W
P _{SB}	9 W	9 W
P _{CK}	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: P _{SUP}	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	2161 kWh	3425 kWh

Model Thermia Calibra Eco 12 230V

Model name	Thermia Calibra Eco 12 230V
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	1x230V 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	34 dB(A)	34 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	219 %	162 %
Prated	11.52 kW	10.57 kW
SCOP	5.67	4.25
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
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COP Tj = -7°C	4.66	3.23
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	6.20 kW	5.69 kW
COP Tj = +2°C	5.81	4.27
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.99 kW	3.66 kW
COP Tj = +7°C	6.39	5.06
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.77 kW	2.73 kW
COP Tj = 12°C	5.67	4.67
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	11.52 kW	10.57 kW
COP Tj = Tbiv	4.39	2.96

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.52 kW	10.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.96
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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	4195 kWh	5134 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	34 dB(A)	34 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	226 %	168 %
Prated	11.52 kW	10.57 kW
SCOP	5.85	4.39
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.97 kW	6.40 kW
COP Tj = -7°C	5.69	4.02
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.24 kW	3.89 kW
COP Tj = +2°C	6.38	4.92
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.73 kW	2.50 kW
COP Tj = +7°C	5.79	4.88
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	2.78 kW	2.74 kW
COP Tj = 12°C	5.51	4.74
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	11.52 kW	10.57 kW
COP Tj = Tbiv	4.39	2.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.52 kW	10.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.96
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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}	4856 kWh	5928 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	34 dB(A)	34 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	222 %	164 %
Prated	11.52 kW	10.57 kW
SCOP	5.76	4.29
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	11.52 kW	10.57 kW
COP T _j = +2°C	4.39	2.96
C _{dh} T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7°C	7.41 kW	6.79 kW
COP T _j = +7°C	5.38	3.81
C _{dh} T _j = +7 °C	0.99	1.00
P _{dh} T _j = 12°C	3.29 kW	3.02 kW
COP T _j = 12°C	6.47	5.12
C _{dh} T _j = +12 °C	0.98	0.99
P _{dh} T _j = T _{biv}	11.52 kW	10.57 kW
COP T _j = T _{biv}	4.39	2.96
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	11.52 kW	10.57 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.39	2.96
WTOL	65 °C	65 °C
P _{off}	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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}	2674 kWh	3290 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	292 %	213 %
Prated	12.24 kW	14.24 kW
SCOP	7.51	5.52
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.83 kW	12.60 kW
COP Tj = -7°C	6.35	4.09
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	6.59 kW	7.67 kW
COP Tj = +2°C	7.52	5.56
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.24 kW	4.93 kW
COP Tj = +7°C	8.40	6.49
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	3.70 kW	3.65 kW
COP Tj = 12°C	8.22	6.57
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.08	3.71
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 W
PCK	0 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3369 kWh	5331 kWh

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	300 %	223 %
Prated	12.24 kW	14.24 kW
SCOP	7.70	5.77
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.41 kW	8.62 kW

COP Tj = -7°C	7.43	5.28
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	4.51 kW	5.25 kW
COP Tj = +2°C	8.14	6.31
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	3.71 kW	3.37 kW
COP Tj = +7°C	8.35	7.00
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.68 kW	3.66 kW
COP Tj = 12°C	7.96	6.72
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.08	3.71
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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	3917 kWh	6086 kWh

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	295 %	214 %
Prated	12.24 kW	14.24 kW
SCOP	7.57	5.56
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.24 kW	14.24 kW
COP Tj = +2°C	6.08	3.71
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	7.87 kW	9.16 kW
COP Tj = +7°C	7.15	4.96
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.50 kW	4.07 kW
COP Tj = 12°C	8.40	6.62
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	6.08	3.71
WTOL	65 °C	65 °C
P _{off}	7 W	7 W
P _{TO}	9 W	9 W
P _{SB}	9 W	9 W
P _{CK}	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: P _{SUP}	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	2161 kWh	3425 kWh

Model Thermia Calibra Eco 12 Duo 230V

Model name	Thermia Calibra Eco 12 Duo 230V
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	1x230V 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	219 %	162 %
Prated	11.52 kW	10.57 kW
SCOP	5.67	4.25
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.19 kW	9.35 kW
COP Tj = -7°C	4.66	3.23
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	6.20 kW	5.69 kW
COP Tj = +2°C	5.81	4.27
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.99 kW	3.66 kW
COP Tj = +7°C	6.39	5.06
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.77 kW	2.73 kW
COP Tj = 12°C	5.67	4.67
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	11.52 kW	10.57 kW
COP Tj = Tbiv	4.39	2.96

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.52 kW	10.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.96
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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	4195 kWh	5134 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	226 %	168 %
Prated	11.52 kW	10.57 kW
SCOP	5.85	4.39
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.97 kW	6.40 kW
COP Tj = -7°C	5.69	4.02
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.24 kW	3.89 kW
COP Tj = +2°C	6.38	4.92
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.73 kW	2.50 kW
COP Tj = +7°C	5.79	4.88
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	2.78 kW	2.74 kW
COP Tj = 12°C	5.51	4.74
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	11.52 kW	10.57 kW
COP Tj = Tbiv	4.39	2.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.52 kW	10.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.96
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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}	4856 kWh	5928 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	222 %	164 %
Prated	11.52 kW	10.57 kW
SCOP	5.76	4.29
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	11.52 kW	10.57 kW
COP T _j = +2°C	4.39	2.96
C _{dh} T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7°C	7.41 kW	6.79 kW
COP T _j = +7°C	5.38	3.81
C _{dh} T _j = +7 °C	0.99	1.00
P _{dh} T _j = 12°C	3.29 kW	3.02 kW
COP T _j = 12°C	6.47	5.12
C _{dh} T _j = +12 °C	0.98	0.99
P _{dh} T _j = T _{biv}	11.52 kW	10.57 kW
COP T _j = T _{biv}	4.39	2.96
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	11.52 kW	10.57 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.39	2.96
WTOL	65 °C	65 °C
P _{off}	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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}	2674 kWh	3290 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	292 %	213 %
Prated	12.24 kW	14.24 kW
SCOP	7.51	5.52
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.83 kW	12.60 kW
COP Tj = -7°C	6.35	4.09
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	6.59 kW	7.67 kW
COP Tj = +2°C	7.52	5.56
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.24 kW	4.93 kW
COP Tj = +7°C	8.40	6.49
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	3.70 kW	3.65 kW
COP Tj = 12°C	8.22	6.57
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.08	3.71
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 W
PCK	0 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3369 kWh	5331 kWh

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	300 %	223 %
Prated	12.24 kW	14.24 kW
SCOP	7.70	5.77
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.41 kW	8.62 kW

COP Tj = -7°C	7.43	5.28
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	4.51 kW	5.25 kW
COP Tj = +2°C	8.14	6.31
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	3.71 kW	3.37 kW
COP Tj = +7°C	8.35	7.00
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.68 kW	3.66 kW
COP Tj = 12°C	7.96	6.72
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.08	3.71
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	9 W	9 W
PSB	9 W	9 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	3917 kWh	6086 kWh

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	295 %	214 %
Prated	12.24 kW	14.24 kW
SCOP	7.57	5.56
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.24 kW	14.24 kW
COP Tj = +2°C	6.08	3.71
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	7.87 kW	9.16 kW
COP Tj = +7°C	7.15	4.96
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.50 kW	4.07 kW
COP Tj = 12°C	8.40	6.62
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	12.24 kW	14.24 kW
COP Tj = Tbiv	6.08	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.24 kW	14.24 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	6.08	3.71
WTOL	65 °C	65 °C
P _{off}	7 W	7 W
P _{TO}	9 W	9 W
P _{SB}	9 W	9 W
P _{CK}	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}	2161 kWh	3425 kWh