Login

Summary of	Thermia Calibra 12	Reg. No.	012-SC0356-19
Certificate Holder			
Name	Thermia		
Address	Snickaregatan 1	Zip	
City	Arvika	Country	Sweden
Certification Body	RISE CERT		
Subtype title	Thermia Calibra 12		
Heat Pump Type	Brine/Water and Water/Water		
Refrigerant	R410A		
Mass of Refrigerant	1.4 kg		
Certification Date	04.10.2019		

Model: Thermia Calibra 12 400V

Configure model	
Model name	Thermia Calibra 12 400V
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder 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

EN 14511-2		
	Low temperature	**Medium temperature**
El input	1.10 kW	1.68 kW
COP	4.75	2.85

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	35 dB(A)	35 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	219 %	157 %
Prated	11.69 kW	10.60 kW
SCOP	5.68	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.34 kW	9.38 kW
COP Tj = -7°C	4.77	3.15
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	6.29 kW	5.71 kW
COP Tj = +2°C	5.82	4.20
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	4.05 kW	3.67 kW
COP Tj = +7°C	6.40	4.81
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.91 kW	2.91 kW

COP Tj = 12°C	5.97	4.66
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.69 kW	10.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.88
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W
PSB	18 W	18 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	4249 kWh	5320 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	224 %	163 %
Prated	11.69 kW	10.60 kW
SCOP	5.80	4.29

Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.07 kW	6.41 kW
COP Tj = -7°C	5.46	3.99
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.31 kW	3.90 kW
COP Tj = +2°C	6.39	4.77
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.77 kW	2.92 kW
COP Tj = +7°C	6.32	4.71
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.89 kW	2.92 kW
COP Tj = 12°C	5.78	4.74
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.69 kW	10.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.88
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

PSB	18 W	18 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	4963 kWh	6094 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.53	8.65
COP Tj = -15°C (if TOL<-20°C)	4.92	3.44
Cdh Tj = -15 °C	0.99	1.00

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

EN 14511-2		
	Low temperature	**Medium temperature**
El input	1.08 kW	1.71 kW
COP	6.56	3.66

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	35 dB(A)	35 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	290 %	206 %
Prated	10.42 kW	11.60 kW
SCOP	7.45	5.36
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.22 kW	10.26 kW
COP Tj = -7°C	6.60	4.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.61 kW	6.25 kW
COP Tj = +2°C	7.78	5.49
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	3.88 kW	4.02 kW
COP Tj = +7°C	8.02	6.19
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.88 kW	3.74 kW

COP Tj = 12°C	8.04	6.34
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.34	3.73
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W
PSB	18 W	18 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	2890 kWh	4473 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	299 %	214 %
Prated	10.42 kW	11.60 kW
SCOP	7.68	5.56

Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.31 kW	7.02 kW
COP Tj = -7°C	7.84	5.18
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	3.84 kW	4.27 kW
COP Tj = +2°C	7.93	6.12
Cdh Tj = +2 °C	0.96	0.98
Pdh Tj = +7°C	3.88 kW	3.75 kW
COP Tj = +7°C	8.07	6.35
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.89 kW	3.78 kW
COP Tj = 12°C	7.88	6.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.34	3.73
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

PSB	18 W	18 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	3346 kWh	5142 kWh
Pdh Tj = -15°C (if TOL<-20°C)	8.50	9.46
COP Tj = -15°C (if TOL<-20°C)	7.09	4.46
Cdh Tj = -15 °C	0.99	0.99

Model: Thermia Calibra 12 Duo 400V

Configure model	
Model name	Thermia Calibra 12 Duo 400V
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder 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

EN 14511-2		
	Low temperature	**Medium temperature**
El input	1.10 kW	1.68 kW
COP	4.75	2.85

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	219 %	157 %
Prated	11.69 kW	10.60 kW
SCOP	5.68	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.34 kW	9.38 kW
COP Tj = -7°C	4.77	3.15
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	6.29 kW	5.71 kW
COP Tj = +2°C	5.82	4.20
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	4.05 kW	3.67 kW
COP Tj = +7°C	6.40	4.81
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.91 kW	2.91 kW

COP Tj = 12°C	5.97	4.66
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.69 kW	10.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.88
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W
PSB	18 W	18 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	4249 kWh	5320 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	224 %	163 %
Prated	11.69 kW	10.60 kW
SCOP	5.80	4.29

Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.07 kW	6.41 kW
COP Tj = -7°C	5.46	3.99
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.31 kW	3.90 kW
COP Tj = +2°C	6.39	4.77
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.77 kW	2.92 kW
COP Tj = +7°C	6.32	4.71
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.89 kW	2.92 kW
COP Tj = 12°C	5.78	4.74
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.69 kW	10.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.88
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

PSB	18 W	18 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	4963 kWh	6094 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.53	8.65
COP Tj = -15°C (if TOL<-20°C)	4.92	3.44
Cdh Tj = -15 °C	0.99	1.00

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

EN 14511-2		
	Low temperature	**Medium temperature**
El input	1.08 kW	1.71 kW
COP	6.56	3.66

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	290 %	206 %
Prated	10.42 kW	11.60 kW
SCOP	7.45	5.36
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.22 kW	10.26 kW
COP Tj = -7°C	6.60	4.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.61 kW	6.25 kW
COP Tj = +2°C	7.78	5.49
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	3.88 kW	4.02 kW
COP Tj = +7°C	8.02	6.19
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.88 kW	3.74 kW

COP Tj = 12°C	8.04	6.34
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.34	3.73
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W
PSB	18 W	18 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	2890 kWh	4473 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	299 %	214 %
Prated	10.42 kW	11.60 kW
SCOP	7.68	5.56

Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.31 kW	7.02 kW
COP Tj = -7°C	7.84	5.18
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	3.84 kW	4.27 kW
COP Tj = +2°C	7.93	6.12
Cdh Tj = +2 °C	0.96	0.98
Pdh Tj = +7°C	3.88 kW	3.75 kW
COP Tj = +7°C	8.07	6.35
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.89 kW	3.78 kW
COP Tj = 12°C	7.88	6.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.34	3.73
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

PSB	18 W	18 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	3346 kWh	5142 kWh
Pdh Tj = -15°C (if TOL<-20°C)	8.50	9.46
COP Tj = -15°C (if TOL<-20°C)	7.09	4.46
Cdh Tj = -15 °C	0.99	0.99

Model: Thermia Calibra 12 230V

Configure model	
Model name	Thermia Calibra 12 230V
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 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

EN 14511-2		
	Low temperature	**Medium temperature**
El input	1.10 kW	1.68 kW
COP	4.75	2.85

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	35 dB(A)	35 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	219 %	157 %
Prated	11.69 kW	10.60 kW
SCOP	5.68	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.34 kW	9.38 kW
COP Tj = -7°C	4.77	3.15
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	6.29 kW	5.71 kW
COP Tj = +2°C	5.82	4.20
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	4.05 kW	3.67 kW
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WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W
PSB	18 W	18 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	4249 kWh	5320 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	224 %	163 %
Prated	11.69 kW	10.60 kW
SCOP	5.80	4.29

Tbiv	-22 °C	-22 °C
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WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

PSB	18 W	18 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	4963 kWh	6094 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.53	8.65
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Water/Water Heat Pump

Heating

EN 14511-4	
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Complete power supply failure	passed

EN 14511-2		
	Low temperature	**Medium temperature**
El input	1.08 kW	1.71 kW
COP	6.56	3.66

Average Climate

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	Low temperature	**Medium temperature**
Sound power level indoor	35 dB(A)	35 dB(A)

EN 14825		
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COP Tj = -7°C	6.60	4.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.61 kW	6.25 kW
COP Tj = +2°C	7.78	5.49
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	3.88 kW	4.02 kW
COP Tj = +7°C	8.02	6.19
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.88 kW	3.74 kW

COP Tj = 12°C	8.04	6.34
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.34	3.73
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W
PSB	18 W	18 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	2890 kWh	4473 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	299 %	214 %
Prated	10.42 kW	11.60 kW
SCOP	7.68	5.56

Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.31 kW	7.02 kW
COP Tj = -7°C	7.84	5.18
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	3.84 kW	4.27 kW
COP Tj = +2°C	7.93	6.12
Cdh Tj = +2 °C	0.96	0.98
Pdh Tj = +7°C	3.88 kW	3.75 kW
COP Tj = +7°C	8.07	6.35
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.89 kW	3.78 kW
COP Tj = 12°C	7.88	6.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.34	3.73
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

PSB	18 W	18 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	3346 kWh	5142 kWh
Pdh Tj = -15°C (if TOL<-20°C)	8.50	9.46
COP Tj = -15°C (if TOL<-20°C)	7.09	4.46
Cdh Tj = -15 °C	0.99	0.99

Model: Thermia Calibra 12 Duo 230V

Configure model	
Model name	Thermia Calibra 12 Duo 230V
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 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

EN 14511-2		
	Low temperature	**Medium temperature**
El input	1.10 kW	1.68 kW
COP	4.75	2.85

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	219 %	157 %
Prated	11.69 kW	10.60 kW
SCOP	5.68	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.34 kW	9.38 kW
COP Tj = -7°C	4.77	3.15
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	6.29 kW	5.71 kW
COP Tj = +2°C	5.82	4.20
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	4.05 kW	3.67 kW
COP Tj = +7°C	6.40	4.81
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.91 kW	2.91 kW

COP Tj = 12°C	5.97	4.66
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.69 kW	10.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.88
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W
PSB	18 W	18 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	4249 kWh	5320 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	224 %	163 %
Prated	11.69 kW	10.60 kW
SCOP	5.80	4.29

Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.07 kW	6.41 kW
COP Tj = -7°C	5.46	3.99
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.31 kW	3.90 kW
COP Tj = +2°C	6.39	4.77
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.77 kW	2.92 kW
COP Tj = +7°C	6.32	4.71
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.89 kW	2.92 kW
COP Tj = 12°C	5.78	4.74
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.69 kW	10.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.88
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

PSB	18 W	18 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	4963 kWh	6094 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.53	8.65
COP Tj = -15°C (if TOL<-20°C)	4.92	3.44
Cdh Tj = -15 °C	0.99	1.00

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

EN 14511-2		
	Low temperature	**Medium temperature**
El input	1.08 kW	1.71 kW
COP	6.56	3.66

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	290 %	206 %
Prated	10.42 kW	11.60 kW
SCOP	7.45	5.36
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.22 kW	10.26 kW
COP Tj = -7°C	6.60	4.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.61 kW	6.25 kW
COP Tj = +2°C	7.78	5.49
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	3.88 kW	4.02 kW
COP Tj = +7°C	8.02	6.19
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.88 kW	3.74 kW

COP Tj = 12°C	8.04	6.34
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.34	3.73
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W
PSB	18 W	18 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	2890 kWh	4473 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	299 %	214 %
Prated	10.42 kW	11.60 kW
SCOP	7.68	5.56

Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.31 kW	7.02 kW
COP Tj = -7°C	7.84	5.18
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	3.84 kW	4.27 kW
COP Tj = +2°C	7.93	6.12
Cdh Tj = +2 °C	0.96	0.98
Pdh Tj = +7°C	3.88 kW	3.75 kW
COP Tj = +7°C	8.07	6.35
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.89 kW	3.78 kW
COP Tj = 12°C	7.88	6.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.34	3.73
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

PSB	18 W	18 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	3346 kWh	5142 kWh
Pdh Tj = -15°C (if TOL<-20°C)	8.50	9.46
COP Tj = -15°C (if TOL<-20°C)	7.09	4.46
Cdh Tj = -15 °C	0.99	0.99

Model: Thermia Calibra 12 400V (White)

Configure model	
Model name	Thermia Calibra 12 400V (White)
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder 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

EN 14511-2		
	Low temperature	**Medium temperature**
El input	1.10 kW	1.68 kW
COP	4.75	2.85

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	35 dB(A)	35 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	219 %	157 %
Prated	11.69 kW	10.60 kW
SCOP	5.68	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.34 kW	9.38 kW
COP Tj = -7°C	4.77	3.15
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	6.29 kW	5.71 kW
COP Tj = +2°C	5.82	4.20
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	4.05 kW	3.67 kW
COP Tj = +7°C	6.40	4.81
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.91 kW	2.91 kW

COP Tj = 12°C	5.97	4.66
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.69 kW	10.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.88
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W
PSB	18 W	18 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	4249 kWh	5320 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	224 %	163 %
Prated	11.69 kW	10.60 kW
SCOP	5.80	4.29

Tbiv	-22 °C	-22 °C
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COP Tj = +7°C	6.32	4.71
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.39	2.88
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

PSB	18 W	18 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	4963 kWh	6094 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.53	8.65
COP Tj = -15°C (if TOL<-20°C)	4.92	3.44
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Water/Water Heat Pump

Heating

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	Low temperature	**Medium temperature**
Sound power level indoor	35 dB(A)	35 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	290 %	206 %
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Pdh Tj = +2°C	5.61 kW	6.25 kW
COP Tj = +2°C	7.78	5.49
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	3.88 kW	4.02 kW
COP Tj = +7°C	8.02	6.19
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.88 kW	3.74 kW

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Pdh Tj = Tbiv	10.42 kW	11.60 kW
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.34	3.73
WTOL	65 °C	65 °C
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PTO	18 W	18 W
PSB	18 W	18 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
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SCOP	7.68	5.56

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TOL	-22 °C	-22 °C
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COP Tj = -7°C	7.84	5.18
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	3.84 kW	4.27 kW
COP Tj = +2°C	7.93	6.12
Cdh Tj = +2 °C	0.96	0.98
Pdh Tj = +7°C	3.88 kW	3.75 kW
COP Tj = +7°C	8.07	6.35
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.89 kW	3.78 kW
COP Tj = 12°C	7.88	6.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.34	3.73
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

PSB	18 W	18 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	3346 kWh	5142 kWh
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COP Tj = -15°C (if TOL<-20°C)	7.09	4.46
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