

## Subtype Thermia Calibra 7

Certificate Holder	Thermia
Address	Snickaregatan 1
ZIP	
City	Arvika
Country	SE
Certification Body	RISE CERT
Subtype title	Thermia Calibra 7
Registration number	012-SC0066-19
Heat Pump Type	Brine/Water and Water/Water
Refrigerant	R410A
Mass of Refrigerant	0.95 kg
Certification Date	04.10.2019
Testing basis	EN 14511:2018, EN 14825:2016, EN 12102:2017
Testing laboratory	RISE Research Institutes of Sweden

## Model Thermia Calibra 7 400V

Model name	Thermia Calibra 7 400V
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
COP	4.65	2.90

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	214 %	150 %
Prated	7.11 kW	6.39 kW
SCOP	5.56	3.96
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.29 kW	5.65 kW
COP Tj = -7°C	4.85	3.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55

Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW
COP Tj = 12°C	6.01	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	2597 kWh	3291 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	223 %	157 %
Prated	7.11 kW	6.39 kW
SCOP	5.77	4.12
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.30 kW	3.87 kW
COP Tj = -7°C	5.67	3.84
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	3008 kWh	3802 kWh
Pdh Tj = -15°C (if TOL	5.80	5.21
COP Tj = -15°C (if TOL	5.05	3.33
Cdh Tj = -15 °C	0.99	0.99

#### 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.43 kW	8.51 kW
El input	1.58 kW	2.35 kW
COP	5.96	3.63

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	305 %	211 %
Prated	9.43 kW	8.51 kW
SCOP	7.82	5.47
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.34 kW	7.53 kW
COP Tj = -7°C	6.48	4.03
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	5.08 kW	4.58 kW
COP Tj = +2°C	7.93	5.47
Cdh Tj = +2 °C	0.99	1.00

Pdh Tj = +7°C	3.26 kW	2.95 kW
COP Tj = +7°C	8.76	6.55
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
COP Tj = 12°C	8.65	6.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2463 kWh	3186 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	317 %	219 %
Prated	9.43 kW	8.51 kW
SCOP	8.12	5.68
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.71 kW	5.15 kW
COP Tj = -7°C	7.77	5.12
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW
COP Tj = +7°C	8.76	6.85
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW

COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2847 kWh	3676 kWh
Pdh Tj = -15°C (if TOL	7.69	6.94
COP Tj = -15°C (if TOL	6.87	4.37
Cdh Tj = -15 °C	1.00	1.00

## Model Thermia Calibra 7 Duo 400V

Model name	Thermia Calibra 7 Duo 400V
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
COP	4.65	2.90

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	214 %	150 %
Prated	7.11 kW	6.39 kW
SCOP	5.56	3.96
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.29 kW	5.65 kW
COP Tj = -7°C	4.85	3.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55

Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW
COP Tj = 12°C	6.01	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	2597 kWh	3291 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	223 %	157 %
Prated	7.11 kW	6.39 kW
SCOP	5.77	4.12
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.30 kW	3.87 kW
COP Tj = -7°C	5.67	3.84
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW



COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	3008 kWh	3802 kWh
Pdh Tj = -15°C (if TOL	5.80	5.21
COP Tj = -15°C (if TOL	5.05	3.33
Cdh Tj = -15 °C	0.99	0.99

#### 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.43 kW	8.51 kW
El input	1.58 kW	2.35 kW
COP	5.96	3.63

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	305 %	211 %
Prated	9.43 kW	8.51 kW
SCOP	7.82	5.47
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.34 kW	7.53 kW
COP Tj = -7°C	6.48	4.03
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	5.08 kW	4.58 kW
COP Tj = +2°C	7.93	5.47
Cdh Tj = +2 °C	0.99	1.00

Pdh Tj = +7°C	3.26 kW	2.95 kW
COP Tj = +7°C	8.76	6.55
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
COP Tj = 12°C	8.65	6.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2463 kWh	3186 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	317 %	219 %
Prated	9.43 kW	8.51 kW
SCOP	8.12	5.68
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.71 kW	5.15 kW
COP Tj = -7°C	7.77	5.12
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW
COP Tj = +7°C	8.76	6.85
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW

COP $T_j = T_{biv}$	5.96	3.63
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	9.43 kW	8.51 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	5.96	3.63
WTOL	65 °C	65 °C
P <sub>off</sub>	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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 <sub>he</sub>	2847 kWh	3676 kWh
$P_{dh} T_j = -15^{\circ}C$ (if TOL	7.69	6.94
COP $T_j = -15^{\circ}C$ (if TOL	6.87	4.37
C <sub>dh</sub> $T_j = -15^{\circ}C$	1.00	1.00

## Model Thermia Calibra 7 230V

Model name	Thermia Calibra 7 230V
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
COP	4.65	2.90

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	214 %	150 %
Prated	7.11 kW	6.39 kW
SCOP	5.56	3.96
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.29 kW	5.65 kW
COP Tj = -7°C	4.85	3.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55

Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW
COP Tj = 12°C	6.01	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	2597 kWh	3291 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	223 %	157 %
Prated	7.11 kW	6.39 kW
SCOP	5.77	4.12
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.30 kW	3.87 kW
COP Tj = -7°C	5.67	3.84
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	3008 kWh	3802 kWh
Pdh Tj = -15°C (if TOL	5.80	5.21
COP Tj = -15°C (if TOL	5.05	3.33
Cdh Tj = -15 °C	0.99	0.99

#### 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.43 kW	8.51 kW
El input	1.58 kW	2.35 kW
COP	5.96	3.63

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	305 %	211 %
Prated	9.43 kW	8.51 kW
SCOP	7.82	5.47
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.34 kW	7.53 kW
COP Tj = -7°C	6.48	4.03
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	5.08 kW	4.58 kW
COP Tj = +2°C	7.93	5.47
Cdh Tj = +2 °C	0.99	1.00

Pdh Tj = +7°C	3.26 kW	2.95 kW
COP Tj = +7°C	8.76	6.55
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
COP Tj = 12°C	8.65	6.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2463 kWh	3186 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	317 %	219 %
Prated	9.43 kW	8.51 kW
SCOP	8.12	5.68
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.71 kW	5.15 kW
COP Tj = -7°C	7.77	5.12
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW
COP Tj = +7°C	8.76	6.85
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW

COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2847 kWh	3676 kWh
Pdh Tj = -15°C (if TOL	7.69	6.94
COP Tj = -15°C (if TOL	6.87	4.37
Cdh Tj = -15 °C	1.00	1.00



## Model Thermia Calibra 7 Duo 230V

Model name	Thermia Calibra 7 Duo 230V
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

### General data

Power supply	1x230V 50Hz
Off-peak product	n/a

### 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
COP	4.65	2.90

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	214 %	150 %
Prated	7.11 kW	6.39 kW
SCOP	5.56	3.96
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.29 kW	5.65 kW
COP Tj = -7°C	4.85	3.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55

Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW
COP Tj = 12°C	6.01	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	2597 kWh	3291 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	223 %	157 %
Prated	7.11 kW	6.39 kW
SCOP	5.77	4.12
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.30 kW	3.87 kW
COP Tj = -7°C	5.67	3.84
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	3008 kWh	3802 kWh
Pdh Tj = -15°C (if TOL	5.80	5.21
COP Tj = -15°C (if TOL	5.05	3.33
Cdh Tj = -15 °C	0.99	0.99

#### 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.43 kW	8.51 kW
El input	1.58 kW	2.35 kW
COP	5.96	3.63

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	305 %	211 %
Prated	9.43 kW	8.51 kW
SCOP	7.82	5.47
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.34 kW	7.53 kW
COP Tj = -7°C	6.48	4.03
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	5.08 kW	4.58 kW
COP Tj = +2°C	7.93	5.47
Cdh Tj = +2 °C	0.99	1.00

Pdh Tj = +7°C	3.26 kW	2.95 kW
COP Tj = +7°C	8.76	6.55
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
COP Tj = 12°C	8.65	6.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2463 kWh	3186 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	317 %	219 %
Prated	9.43 kW	8.51 kW
SCOP	8.12	5.68
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.71 kW	5.15 kW
COP Tj = -7°C	7.77	5.12
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW
COP Tj = +7°C	8.76	6.85
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW

COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2847 kWh	3676 kWh
Pdh Tj = -15°C (if TOL	7.69	6.94
COP Tj = -15°C (if TOL	6.87	4.37
Cdh Tj = -15 °C	1.00	1.00

## Model Thermia Calibra 7 400V (White)

Model name	Thermia Calibra 7 400V (White)
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
COP	4.65	2.90

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	214 %	150 %
Prated	7.11 kW	6.39 kW
SCOP	5.56	3.96
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.29 kW	5.65 kW
COP Tj = -7°C	4.85	3.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55

Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW
COP Tj = 12°C	6.01	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	2597 kWh	3291 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	223 %	157 %
Prated	7.11 kW	6.39 kW
SCOP	5.77	4.12
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.30 kW	3.87 kW
COP Tj = -7°C	5.67	3.84
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	3008 kWh	3802 kWh
Pdh Tj = -15°C (if TOL	5.80	5.21
COP Tj = -15°C (if TOL	5.05	3.33
Cdh Tj = -15 °C	0.99	0.99

#### 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.43 kW	8.51 kW
El input	1.58 kW	2.35 kW
COP	5.96	3.63

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	305 %	211 %
Prated	9.43 kW	8.51 kW
SCOP	7.82	5.47
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.34 kW	7.53 kW
COP Tj = -7°C	6.48	4.03
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	5.08 kW	4.58 kW
COP Tj = +2°C	7.93	5.47
Cdh Tj = +2 °C	0.99	1.00



Pdh Tj = +7°C	3.26 kW	2.95 kW
COP Tj = +7°C	8.76	6.55
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
COP Tj = 12°C	8.65	6.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2463 kWh	3186 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	317 %	219 %
Prated	9.43 kW	8.51 kW
SCOP	8.12	5.68
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.71 kW	5.15 kW
COP Tj = -7°C	7.77	5.12
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW
COP Tj = +7°C	8.76	6.85
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW

COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2847 kWh	3676 kWh
Pdh Tj = -15°C (if TOL	7.69	6.94
COP Tj = -15°C (if TOL	6.87	4.37
Cdh Tj = -15 °C	1.00	1.00

## Model Thermia Calibra Cool 7 400V BW

Model name	Thermia Calibra Cool 7 400V BW
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
COP	4.65	2.90

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	214 %	150 %
Prated	7.11 kW	6.39 kW
SCOP	5.56	3.96
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.29 kW	5.65 kW
COP Tj = -7°C	4.85	3.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55

Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW
COP Tj = 12°C	6.01	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	2597 kWh	3291 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	223 %	157 %
Prated	7.11 kW	6.39 kW
SCOP	5.77	4.12
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.30 kW	3.87 kW
COP Tj = -7°C	5.67	3.84
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	3008 kWh	3802 kWh
Pdh Tj = -15°C (if TOL	5.80	5.21
COP Tj = -15°C (if TOL	5.05	3.33
Cdh Tj = -15 °C	0.99	0.99

#### 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.43 kW	8.51 kW
El input	1.58 kW	2.35 kW
COP	5.96	3.63

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	305 %	211 %
Prated	9.43 kW	8.51 kW
SCOP	7.82	5.47
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.34 kW	7.53 kW
COP Tj = -7°C	6.48	4.03
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	5.08 kW	4.58 kW
COP Tj = +2°C	7.93	5.47
Cdh Tj = +2 °C	0.99	1.00

Pdh Tj = +7°C	3.26 kW	2.95 kW
COP Tj = +7°C	8.76	6.55
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
COP Tj = 12°C	8.65	6.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2463 kWh	3186 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	317 %	219 %
Prated	9.43 kW	8.51 kW
SCOP	8.12	5.68
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.71 kW	5.15 kW
COP Tj = -7°C	7.77	5.12
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW
COP Tj = +7°C	8.76	6.85
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW

COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2847 kWh	3676 kWh
Pdh Tj = -15°C (if TOL	7.69	6.94
COP Tj = -15°C (if TOL	6.87	4.37
Cdh Tj = -15 °C	1.00	1.00

## Model Thermia Calibra Cool 7 400V WW

Model name	Thermia Calibra Cool 7 400V WW
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
COP	4.65	2.90

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	214 %	150 %
Prated	7.11 kW	6.39 kW
SCOP	5.56	3.96
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.29 kW	5.65 kW
COP Tj = -7°C	4.85	3.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55



Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW
COP Tj = 12°C	6.01	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	2597 kWh	3291 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	223 %	157 %
Prated	7.11 kW	6.39 kW
SCOP	5.77	4.12
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.30 kW	3.87 kW
COP Tj = -7°C	5.67	3.84
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.11 kW	6.39 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 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	3008 kWh	3802 kWh
Pdh Tj = -15°C (if TOL	5.80	5.21
COP Tj = -15°C (if TOL	5.05	3.33
Cdh Tj = -15 °C	0.99	0.99

#### 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.43 kW	8.51 kW
El input	1.58 kW	2.35 kW
COP	5.96	3.63

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	305 %	211 %
Prated	9.43 kW	8.51 kW
SCOP	7.82	5.47
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.34 kW	7.53 kW
COP Tj = -7°C	6.48	4.03
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	5.08 kW	4.58 kW
COP Tj = +2°C	7.93	5.47
Cdh Tj = +2 °C	0.99	1.00

Pdh Tj = +7°C	3.26 kW	2.95 kW
COP Tj = +7°C	8.76	6.55
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
COP Tj = 12°C	8.65	6.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.43 kW	8.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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	2463 kWh	3186 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	317 %	219 %
Prated	9.43 kW	8.51 kW
SCOP	8.12	5.68
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.71 kW	5.15 kW
COP Tj = -7°C	7.77	5.12
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW
COP Tj = +7°C	8.76	6.85
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW

COP $T_j = T_{biv}$	5.96	3.63
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	9.43 kW	8.51 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	5.96	3.63
WTOL	65 °C	65 °C
P <sub>off</sub>	8 W	8 W
PTO	4 W	4 W
PSB	4 W	4 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 <sub>he</sub>	2847 kWh	3676 kWh
$P_{dh} T_j = -15^{\circ}C$ (if TOL	7.69	6.94
COP $T_j = -15^{\circ}C$ (if TOL	6.87	4.37
C <sub>dh</sub> $T_j = -15^{\circ}C$	1.00	1.00