

Summary of	Thermia Calibra 7	Reg. No.	012-SC0066-19
Certificate Holder			
Name	Thermia		
Address	Snickaregatan 1	Zip	
City	Arvika	Country	Sweden
Certification Body	RISE CERT	·	
Name of testing laboratory	RISE		
Subtype title	Thermia Calibra 7		
Heat Pump Type	Brine/Water and Water	r/Water	
Refrigerant	R410a		
Mass Of Refrigerant	0.95 kg		
Certification Date	04.10.2019		



Model: Thermia Calibra 7 400V

General Data	
Power supply	3x400V 50Hz

Brine/Water Heat Pump

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
СОР	4.65	2.90
Indoor water flow rate	0.77 m³/h	0.55 m³/h

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{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	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55
Cdh	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW





COP Tj = 12°C	6.01	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW
COP Tj = TOL	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	o 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

Colder Climate

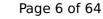
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature





η_{s}	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	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW





COP Tj = TOL	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<-20°C)	5.80	5.21
COP Tj = -15 °C (if TOL< -20 °C)	5.05	3.33
Cdh	0.99	0.99

Water/Water Heat Pump

Heating

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

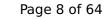


EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.43 kW	8.51 kW
El input	1.58 kW	2.35 kW
СОР	5.96	3.63
Indoor water flow rate	1.65 m³/h	0.94 m³/h

Average Climate

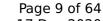
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{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





	enerated by the fill RETI	milit database on 17 Dec 202
Cdh	1.00	1.00
Pdh Tj = +2°C	5.08 kW	4.58 kW
COP Tj = +2°C	7.93	5.47
Cdh	0.99	1.00
Pdh Tj = $+7^{\circ}$ C	3.26 kW	2.95 kW
$COP Tj = +7^{\circ}C$	8.76	6.55
Cdh	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
COP Tj = 12°C	8.65	6.84
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COP Tj = TOL	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
РТО	4 W	4 W
PSB	4 W	4 W
РСК	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW



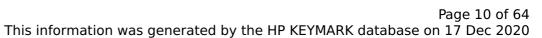


Annual energy consumption Qhe	2463 kWh	3186 kWh	

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	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	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW





6.85 0.99 2.79 kW 7.06 0.99 8.51 kW 3.63 8.51 kW
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7.06 0.99 8.51 kW 3.63
0.99 8.51 kW 3.63
8.51 kW 3.63
3.63
8.51 kW
3.63
65 °C
8 W
4 W
4 W
0 W
Electricity
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n 3676 kWh
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4.37
1.00



Model: Thermia Calibra 7 Duo 400V

General Data	
Power supply	3x400V 50Hz

Brine/Water Heat Pump

Heating

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

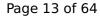
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Average Climate



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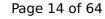


COP Tj = 12°C	6.01	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW
COP Tj = TOL	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
PTO	15 W	13 W
PSB	15 W	13 W
PCK	0 W	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2597 kWh	3291 kWh

Colder Climate

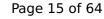
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COP Tj = Tbiv	4.43	2.81
dh Tj = TOL	7.11 kW	6.39 kW





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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
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Water/Water Heat Pump

Heating

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

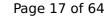


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	Low temperature	Medium temperature	
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El input	1.58 kW	2.35 kW	
СОР	5.96	3.63	
Indoor water flow rate	1.65 m³/h	0.94 m³/h	

Average Climate

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

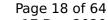
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Prated	9.43 kW	8.51 kW	
SCOP	7.82	5.47	
Tbiv	-10 °C	-10 °C	
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Pdh Tj = -7°C	8.34 kW	7.53 kW	
COP Tj = -7°C	6.48	4.03	





$$\operatorname{\textit{Page}}\ 17$$ of 64 This information was generated by the HP KEYMARK database on 17 Dec 2020

	enerated by the fill RETI	milit database on 17 Dec 202
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Poff	8 W	8 W
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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	

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	317 %	219 %
Prated	9.43 kW	8.51 kW
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 $COP Tj = +7^{\circ}C$ 8.76 6.85 Cdh 0.99 0.99 Pdh Tj = 12° C 2.89 kW 2.79 kW $COP Tj = 12^{\circ}C$ 8.39 7.06 Cdh 0.99 0.99 Pdh Tj = Tbiv9.43 kW 8.51 kW COP Tj = Tbiv5.96 3.63 9.43 kW Pdh Tj = TOL8.51 kW COPTj = TOL5.96 3.63 65 °C 65 °C WTOL Poff 8 W 8 W PTO 4 W 4 W 4 W 4 W **PSB 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<-20°C) 7.69 6.94 COP Tj = -15°C (if TOL<-20°C) 6.87 4.37 1.00 1.00 Cdh



Model: Thermia Calibra 7 230V

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	
Defrost test	passed	

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
СОР	4.65	2.90
Indoor water flow rate	0.77 m³/h	0.55 m³/h

Average Climate



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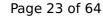
 $$\operatorname{\textit{Page}}\xspace$ 22 of 64 This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = 12°C	6.01	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
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WTOL	65 °C	65 °C
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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

Colder Climate

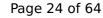
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4.43	2.81
65 °C	65 °C
12 W	10 W
15 W	13 W
15 W	13 W
0 W	0 W
Electricity	Electricity
0.00 kW	0.00 kW
3008 kWh	3802 kWh
5.80	5.21
5.05	3.33
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Water/Water Heat Pump

Heating

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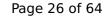


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Average Climate

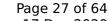
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65 °C	65 °C
8 W	8 W
4 W	4 W
4 W	4 W
0 W	o w
Electricity	Electricity
0.00 kW	0.00 kW
	5.08 kW 7.93 0.99 3.26 kW 8.76 0.99 2.91 kW 8.65 0.99 9.43 kW 5.96 9.43 kW 5.96 65 °C 8 W 4 W 4 W 0 W Electricity



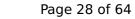


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Pdh Tj = +7°C	2.91 kW	2.78 kW





	Tierated by the HE KLIM	ANN database on 17 Dec 2020
COP Tj = +7°C	8.76	6.85
Cdh	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL	9.43 kW	8.51 kW
COP Tj = TOL	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
РТО	4 W	4 W
PSB	4 W	4 W
PCK	0 W	o 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<-20°C)	7.69	6.94
COP Tj = -15°C (if TOL<-20°C)	6.87	4.37
Cdh	1.00	1.00
	· ·	



Model: Thermia Calibra 7 Duo 230V

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
Defrost test	passed

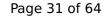
EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
СОР	4.65	2.90
Indoor water flow rate	0.77 m³/h	0.55 m³/h

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{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	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55
Cdh	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW



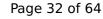


COP Tj = 12°C	6.01	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW
COP Tj = TOL	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
РТО	15 W	13 W
PSB	15 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2597 kWh	3291 kWh

Colder Climate

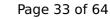
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

EN 14825		
	Low temperature	Medium temperature





η_{s}	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	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW





COP Tj = TOL	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	o 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<-20°C)	5.80	5.21
COP Tj = -15°C (if TOL<-20°C)	5.05	3.33
Cdh	0.99	0.99

Water/Water Heat Pump

Heating

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

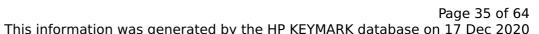


EN 14511-2			
Low temperature Medium temperature			
Heat output	9.43 kW	8.51 kW	
El input	1.58 kW	2.35 kW	
СОР	5.96	3.63	
Indoor water flow rate	1.65 m³/h	0.94 m³/h	

Average Climate

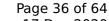
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{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





This information was generated by the HP KEYMARK database on 17 Dec 202			
Cdh	1.00	1.00	
Pdh Tj = $+2$ °C	5.08 kW	4.58 kW	
COP Tj = +2°C	7.93	5.47	
Cdh	0.99	1.00	
Pdh Tj = $+7^{\circ}$ C	3.26 kW	2.95 kW	
$COP Tj = +7^{\circ}C$	8.76	6.55	
Cdh	0.99	0.99	
Pdh Tj = 12°C	2.91 kW	2.78 kW	
COP Tj = 12°C	8.65	6.84	
Cdh	0.99	0.99	
Pdh Tj = Tbiv	9.43 kW	8.51 kW	
COP Tj = Tbiv	5.96	3.63	
Pdh Tj = TOL	9.43 kW	8.51 kW	
COP Tj = TOL	5.96	3.63	
WTOL	65 °C	65 °C	
Poff	8 W	8 W	
РТО	4 W	4 W	
PSB	4 W	4 W	
PCK	o w	0 W	
Supplementary Heater: Type of energy input	Electricity	Electricity	
Supplementary Heater: PSUP	0.00 kW	0.00 kW	



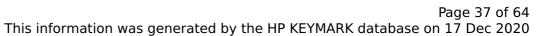


Annual energy consumption Qhe	2463 kWh	3186 kWh	

Colder Climate

	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

EN 14825				
	Low temperature	Medium temperature		
η_{s}	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	1.00	1.00		
Pdh Tj = +2°C	3.47 kW	3.14 kW		
COP Tj = +2°C	8.76	6.31		
Cdh	0.99	0.99		
Pdh Tj = +7°C	2.91 kW	2.78 kW		





This information was generated by the HP RETMARK database on 17 Dec 2020			
COP Tj = +7°C	8.76	6.85	
Cdh	0.99	0.99	
Pdh Tj = 12°C	2.89 kW	2.79 kW	
COP Tj = 12°C	8.39	7.06	
Cdh	0.99	0.99	
Pdh Tj = Tbiv	9.43 kW	8.51 kW	
COP Tj = Tbiv	5.96	3.63	
Pdh Tj = TOL	9.43 kW	8.51 kW	
COP Tj = TOL	5.96	3.63	
WTOL	65 °C	65 °C	
Poff	8 W	8 W	
РТО	4 W	4 W	
PSB	4 W	4 W	
PCK	0 W	o 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<-20°C)	7.69	6.94	
COP Tj = -15°C (if TOL<-20°C)	6.87	4.37	
Cdh	1.00	1.00	



Model: Thermia Calibra 7 400V (White)

General Data	
Power supply	3x400V 50Hz

Brine/Water Heat Pump

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
СОР	4.65	2.90
Indoor water flow rate	0.77 m³/h	0.55 m³/h

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{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	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55
Cdh	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW



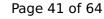


COP Tj = 12°C	6.01	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW
COP Tj = TOL	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
РТО	15 W	13 W
PSB	15 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2597 kWh	3291 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature





η_{s}	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	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW





COP Tj = TOL	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<-20°C)	5.80	5.21
COP Tj = -15 °C (if TOL< -20 °C)	5.05	3.33
Cdh	0.99	0.99

Water/Water Heat Pump

Heating

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



EN 14511-2			
	Low temperature	Medium temperature	
Heat output	9.43 kW	8.51 kW	
El input	1.58 kW	2.35 kW	
СОР	5.96	3.63	
Indoor water flow rate	1.65 m³/h	0.94 m³/h	

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{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





This information was g	generated by the in itali	With database on 17 Dec 2020
Cdh	1.00	1.00
Pdh Tj = +2°C	5.08 kW	4.58 kW
COP Tj = +2°C	7.93	5.47
Cdh	0.99	1.00
Pdh Tj = $+7^{\circ}$ C	3.26 kW	2.95 kW
$COP Tj = +7^{\circ}C$	8.76	6.55
Cdh	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
COP Tj = 12°C	8.65	6.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL	9.43 kW	8.51 kW
COP Tj = TOL	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
РТО	4 W	4 W
PSB	4 W	4 W
PCK	o w	o 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	

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	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	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW





ins mornation was get		
$COP Tj = +7^{\circ}C$	8.76	6.85
Cdh	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL	9.43 kW	8.51 kW
COP Tj = TOL	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
РТО	4 W	4 W
PSB	4 W	4 W
PCK	o w	o 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<-20°C)	7.69	6.94
COP Tj = -15°C (if TOL<-20°C)	6.87	4.37
Cdh	1.00	1.00
	1	1



Model: Thermia Calibra Cool 7 400V BW

General Data	
Power supply 3x400V 50Hz	

Brine/Water Heat Pump

Heating

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

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.45 kW	5.05 kW	
El input	0.96 kW	1.74 kW	
СОР	4.65	2.90	
Indoor water flow rate	0.77 m³/h	0.55 m³/h	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{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	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55
Cdh	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW



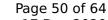


COP Tj = 12°C	6.01	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW
COP Tj = TOL	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
РТО	15 W	13 W
PSB	15 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2597 kWh	3291 kWh

Colder Climate

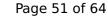
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature





η_{s}	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	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW





COP Tj = TOL	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
РТО	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<-20°C)	5.80	5.21
COP Tj = -15°C (if TOL<-20°C)	5.05	3.33
Cdh	0.99	0.99

Water/Water Heat Pump

Heating

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

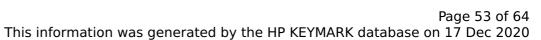


EN 14511-2			
	Low temperature	Medium temperature	
Heat output	9.43 kW	8.51 kW	
El input	1.58 kW	2.35 kW	
СОР	5.96	3.63	
Indoor water flow rate	1.65 m³/h	0.94 m³/h	

Average Climate

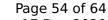
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{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





3		IARK database on 17 Dec 202
Cdh	1.00	1.00
Pdh Tj = $+2$ °C	5.08 kW	4.58 kW
COP Tj = +2°C	7.93	5.47
Cdh	0.99	1.00
Pdh Tj = $+7^{\circ}$ C	3.26 kW	2.95 kW
COP Tj = +7°C	8.76	6.55
Cdh	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
COP Tj = 12°C	8.65	6.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL	9.43 kW	8.51 kW
COP Tj = TOL	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
РТО	4 W	4 W
PSB	4 W	4 W
РСК	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	

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	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	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW



This information was get		
$COP Tj = +7^{\circ}C$	8.76	6.85
Cdh	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL	9.43 kW	8.51 kW
COP Tj = TOL	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
РТО	4 W	4 W
PSB	4 W	4 W
PCK	o w	o 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<-20°C)	7.69	6.94
COP Tj = -15°C (if TOL<-20°C)	6.87	4.37
Cdh	1.00	1.00



Model: Thermia Calibra Cool 7 400V WW

General Data	
Power supply	3x400V 50Hz

Brine/Water Heat Pump

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.45 kW	5.05 kW
El input	0.96 kW	1.74 kW
СОР	4.65	2.90
Indoor water flow rate	0.77 m³/h	0.55 m³/h

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{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	0.99	0.99
Pdh Tj = +2°C	3.83 kW	3.44 kW
COP Tj = +2°C	5.70	4.03
Cdh	0.98	0.99
Pdh Tj = +7°C	2.46 kW	2.21 kW
COP Tj = +7°C	6.15	4.55
Cdh	0.96	0.97
Pdh Tj = 12°C	2.16 kW	2.07 kW



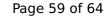


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COP Tj = 12°C	6.01	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW
COP Tj = TOL	4.43	2.81
WTOL	65 °C	65 °C
Poff	12 W	10 W
РТО	15 W	13 W
PSB	15 W	13 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2597 kWh	3291 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





η_{s}	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	0.98	0.99
Pdh Tj = +2°C	2.62 kW	2.35 kW
COP Tj = +2°C	6.21	4.51
Cdh	0.97	0.98
Pdh Tj = +7°C	2.17 kW	2.07 kW
COP Tj = +7°C	6.09	4.65
Cdh	0.96	0.97
Pdh Tj = 12°C	2.15 kW	2.09 kW
COP Tj = 12°C	5.84	4.54
Cdh	0.96	0.97
Pdh Tj = Tbiv	7.11 kW	6.39 kW
COP Tj = Tbiv	4.43	2.81
Pdh Tj = TOL	7.11 kW	6.39 kW





4.43	2.81
65 °C	65 °C
12 W	10 W
15 W	13 W
15 W	13 W
0 W	0 W
Electricity	Electricity
0.00 kW	0.00 kW
3008 kWh	3802 kWh
5.80	5.21
5.05	3.33
0.99	0.99
	65 °C 12 W 15 W 0 W Electricity 0.00 kW 3008 kWh 5.80 5.05

Water/Water Heat Pump

Heating

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

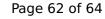


EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.43 kW	8.51 kW
El input	1.58 kW	2.35 kW
СОР	5.96	3.63
Indoor water flow rate	1.65 m³/h	0.94 m³/h

Average Climate

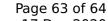
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

	Low temperature	Medium temperature
η_{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





5.08 kW 7.93 0.99 3.26 kW 8.76 0.99	4.58 kW 5.47 1.00 2.95 kW 6.55
0.99 3.26 kW 8.76	1.00 2.95 kW 6.55
3.26 kW 8.76	2.95 kW 6.55
8.76	6.55
0.99	
	0.99
2.91 kW	2.78 kW
8.65	6.84
0.99	0.99
9.43 kW	8.51 kW
5.96	3.63
9.43 kW	8.51 kW
5.96	3.63
65 °C	65 °C
8 W	8 W
4 W	4 W
4 W	4 W
0 W	0 W
Electricity	Electricity
0.00 kW	0.00 kW
{ (() () () () () () () () ()	2.91 kW 3.65 0.99 9.43 kW 5.96 9.43 kW 5.96 65 °C 8 W 4 W 0 W Electricity



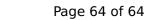


Annual energy consumption Qhe	2463 kWh	3186 kWh	

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	32 dB(A)	32 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	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	1.00	1.00
Pdh Tj = +2°C	3.47 kW	3.14 kW
COP Tj = +2°C	8.76	6.31
Cdh	0.99	0.99
Pdh Tj = +7°C	2.91 kW	2.78 kW





	Therated by the HF KLTM	ANN database on 17 Dec 2020
$COP Tj = +7^{\circ}C$	8.76	6.85
Cdh	0.99	0.99
Pdh Tj = 12°C	2.89 kW	2.79 kW
COP Tj = 12°C	8.39	7.06
Cdh	0.99	0.99
Pdh Tj = Tbiv	9.43 kW	8.51 kW
COP Tj = Tbiv	5.96	3.63
Pdh Tj = TOL	9.43 kW	8.51 kW
COP Tj = TOL	5.96	3.63
WTOL	65 °C	65 °C
Poff	8 W	8 W
РТО	4 W	4 W
PSB	4 W	4 W
PCK	0 W	o 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<-20°C)	7.69	6.94
COP Tj = -15°C (if TOL<-20°C)	6.87	4.37
Cdh	1.00	1.00