

This information was generated by the HP KEYMARK database on 17 Dec 2020

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		
Name of testing laboratory	RISE		
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

General Data

Power supply	3x400V 50Hz
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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
Indoor water flow rate	0.91 m ³ /h	0.52 m ³ /h

Average Climate

EN 12102-1

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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	0.99	0.99
Pdh Tj = +2°C	6.29 kW	5.71 kW
COP Tj = +2°C	5.82	4.20
Cdh	0.98	0.99
Pdh Tj = +7°C	4.05 kW	3.67 kW
COP Tj = +7°C	6.40	4.81
Cdh	0.97	0.98
Pdh Tj = 12°C	2.91 kW	2.91 kW
COP Tj = 12°C	5.97	4.66
Cdh	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88

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Pdh Tj = TOL	11.69 kW	10.60 kW
COP Tj = TOL	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

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Cdh	0.99	0.99
Pdh Tj = +2°C	4.31 kW	3.90 kW
COP Tj = +2°C	6.39	4.77
Cdh	0.98	0.98
Pdh Tj = +7°C	2.77 kW	2.92 kW
COP Tj = +7°C	6.32	4.71
Cdh	0.96	0.97
Pdh Tj = 12°C	2.89 kW	2.92 kW
COP Tj = 12°C	5.78	4.74
Cdh	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL	11.69 kW	10.60 kW
COP Tj = TOL	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

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Annual energy consumption Q_{he}	4963 kWh	6094 kWh
$P_{dh} T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$)	9.53	8.65
$COP T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$)	4.92	3.44
C_{dh}	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
Indoor water flow rate	1.23 m ³ /h	0.67 m ³ /h

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = 12°C	8.04	6.34
Cdh	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL	10.42 kW	11.60 kW
COP Tj = TOL	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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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 Q _{he}	3346 kWh	5142 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	8.50	9.46
COP T _j = -15°C (if TOL<-20°C)	7.09	4.46
C _{dh}	0.99	0.99

Model: Thermia Calibra 12 Duo 400V

General Data

Power supply	3x400V 50Hz
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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
Indoor water flow rate	0.91 m ³ /h	0.52 m ³ /h

Average Climate

EN 12102-1

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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	0.99	0.99
Pdh Tj = +2°C	6.29 kW	5.71 kW
COP Tj = +2°C	5.82	4.20
Cdh	0.98	0.99
Pdh Tj = +7°C	4.05 kW	3.67 kW
COP Tj = +7°C	6.40	4.81
Cdh	0.97	0.98
Pdh Tj = 12°C	2.91 kW	2.91 kW
COP Tj = 12°C	5.97	4.66
Cdh	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = TOL	11.69 kW	10.60 kW
COP Tj = TOL	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

This information was generated by the HP KEYMARK database on 17 Dec 2020

Cdh	0.99	0.99
Pdh Tj = +2°C	4.31 kW	3.90 kW
COP Tj = +2°C	6.39	4.77
Cdh	0.98	0.98
Pdh Tj = +7°C	2.77 kW	2.92 kW
COP Tj = +7°C	6.32	4.71
Cdh	0.96	0.97
Pdh Tj = 12°C	2.89 kW	2.92 kW
COP Tj = 12°C	5.78	4.74
Cdh	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL	11.69 kW	10.60 kW
COP Tj = TOL	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

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Annual energy consumption Q _{he}	4963 kWh	6094 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	9.53	8.65
COP T _j = -15°C (if TOL<-20°C)	4.92	3.44
C _{dh}	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
Indoor water flow rate	1.23 m ³ /h	0.67 m ³ /h

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = 12°C	8.04	6.34
Cdh	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL	10.42 kW	11.60 kW
COP Tj = TOL	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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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 Q _{he}	3346 kWh	5142 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	8.50	9.46
COP T _j = -15°C (if TOL<-20°C)	7.09	4.46
C _{dh}	0.99	0.99

Model: Thermia Calibra 12 230V

General Data

Power supply	1x230V 50Hz
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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
Indoor water flow rate	0.91 m ³ /h	0.52 m ³ /h

Average Climate

EN 12102-1

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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	0.99	0.99
Pdh Tj = +2°C	6.29 kW	5.71 kW
COP Tj = +2°C	5.82	4.20
Cdh	0.98	0.99
Pdh Tj = +7°C	4.05 kW	3.67 kW
COP Tj = +7°C	6.40	4.81
Cdh	0.97	0.98
Pdh Tj = 12°C	2.91 kW	2.91 kW
COP Tj = 12°C	5.97	4.66
Cdh	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88

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Pdh Tj = TOL	11.69 kW	10.60 kW
COP Tj = TOL	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

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Cdh	0.99	0.99
Pdh Tj = +2°C	4.31 kW	3.90 kW
COP Tj = +2°C	6.39	4.77
Cdh	0.98	0.98
Pdh Tj = +7°C	2.77 kW	2.92 kW
COP Tj = +7°C	6.32	4.71
Cdh	0.96	0.97
Pdh Tj = 12°C	2.89 kW	2.92 kW
COP Tj = 12°C	5.78	4.74
Cdh	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL	11.69 kW	10.60 kW
COP Tj = TOL	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

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Annual energy consumption Q _{he}	4963 kWh	6094 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	9.53	8.65
COP T _j = -15°C (if TOL<-20°C)	4.92	3.44
C _{dh}	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
Indoor water flow rate	1.23 m ³ /h	0.67 m ³ /h

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

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

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COP Tj = 12°C	8.04	6.34
Cdh	0.96	0.97
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WTOL	65 °C	65 °C
Poff	15 W	15 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	2890 kWh	4473 kWh

Colder Climate

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	Low temperature	Medium temperature
η_s	299 %	214 %
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SCOP	7.68	5.56

This information was generated by the HP KEYMARK database on 17 Dec 2020

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TOL	-22 °C	-22 °C
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Cdh	0.96	0.98
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Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL	10.42 kW	11.60 kW
COP Tj = TOL	6.34	3.73
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	18 W	18 W

This information was generated by the HP KEYMARK database on 17 Dec 2020

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 Q _{he}	3346 kWh	5142 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	8.50	9.46
COP T _j = -15°C (if TOL<-20°C)	7.09	4.46
C _{dh}	0.99	0.99

Model: Thermia Calibra 12 Duo 230V

General Data

Power supply	1x230V 50Hz
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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
Indoor water flow rate	0.91 m ³ /h	0.52 m ³ /h

Average Climate

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	Low temperature	Medium temperature
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EN 14825

	Low temperature	Medium temperature
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Cdh	0.98	0.99
Pdh Tj = +7°C	4.05 kW	3.67 kW
COP Tj = +7°C	6.40	4.81
Cdh	0.97	0.98
Pdh Tj = 12°C	2.91 kW	2.91 kW
COP Tj = 12°C	5.97	4.66
Cdh	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = TOL	11.69 kW	10.60 kW
COP Tj = TOL	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

This information was generated by the HP KEYMARK database on 17 Dec 2020

Cdh	0.99	0.99
Pdh Tj = +2°C	4.31 kW	3.90 kW
COP Tj = +2°C	6.39	4.77
Cdh	0.98	0.98
Pdh Tj = +7°C	2.77 kW	2.92 kW
COP Tj = +7°C	6.32	4.71
Cdh	0.96	0.97
Pdh Tj = 12°C	2.89 kW	2.92 kW
COP Tj = 12°C	5.78	4.74
Cdh	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL	11.69 kW	10.60 kW
COP Tj = TOL	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

This information was generated by the HP KEYMARK database on 17 Dec 2020

Annual energy consumption Q _{he}	4963 kWh	6094 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	9.53	8.65
COP T _j = -15°C (if TOL<-20°C)	4.92	3.44
C _{dh}	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
Indoor water flow rate	1.23 m ³ /h	0.67 m ³ /h

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = 12°C	8.04	6.34
Cdh	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL	10.42 kW	11.60 kW
COP Tj = TOL	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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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 Q _{he}	3346 kWh	5142 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	8.50	9.46
COP T _j = -15°C (if TOL<-20°C)	7.09	4.46
C _{dh}	0.99	0.99

Model: Thermia Calibra 12 400V (White)

General Data

Power supply	3x400V 50Hz
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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
Indoor water flow rate	0.91 m ³ /h	0.52 m ³ /h

Average Climate

EN 12102-1

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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	0.99	0.99
Pdh Tj = +2°C	6.29 kW	5.71 kW
COP Tj = +2°C	5.82	4.20
Cdh	0.98	0.99
Pdh Tj = +7°C	4.05 kW	3.67 kW
COP Tj = +7°C	6.40	4.81
Cdh	0.97	0.98
Pdh Tj = 12°C	2.91 kW	2.91 kW
COP Tj = 12°C	5.97	4.66
Cdh	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = TOL	11.69 kW	10.60 kW
COP Tj = TOL	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

This information was generated by the HP KEYMARK database on 17 Dec 2020

Cdh	0.99	0.99
Pdh Tj = +2°C	4.31 kW	3.90 kW
COP Tj = +2°C	6.39	4.77
Cdh	0.98	0.98
Pdh Tj = +7°C	2.77 kW	2.92 kW
COP Tj = +7°C	6.32	4.71
Cdh	0.96	0.97
Pdh Tj = 12°C	2.89 kW	2.92 kW
COP Tj = 12°C	5.78	4.74
Cdh	0.96	0.97
Pdh Tj = Tbiv	11.69 kW	10.60 kW
COP Tj = Tbiv	4.39	2.88
Pdh Tj = TOL	11.69 kW	10.60 kW
COP Tj = TOL	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

This information was generated by the HP KEYMARK database on 17 Dec 2020

Annual energy consumption Q _{he}	4963 kWh	6094 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	9.53	8.65
COP T _j = -15°C (if TOL<-20°C)	4.92	3.44
C _{dh}	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
Indoor water flow rate	1.23 m ³ /h	0.67 m ³ /h

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = 12°C	8.04	6.34
Cdh	0.96	0.97
Pdh Tj = Tbiv	10.42 kW	11.60 kW
COP Tj = Tbiv	6.34	3.73
Pdh Tj = TOL	10.42 kW	11.60 kW
COP Tj = TOL	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
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This information was generated by the HP KEYMARK database on 17 Dec 2020

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

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 Q _{he}	3346 kWh	5142 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	8.50	9.46
COP T _j = -15°C (if TOL<-20°C)	7.09	4.46
C _{dh}	0.99	0.99