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#### <u>Login</u>

Summary of	Thermia Calibra Eco 8	Reg. No.	012-C700110	
Certificate Holder	<u> </u>			
Name	Thermia	Thermia		
Address	Snickaregatan 1	Zip		
City	Arvika	Country	Sweden	
Certification Body	RISE CERT	RISE CERT		
Subtype title	Thermia Calibra Eco 8	Thermia Calibra Eco 8		
Heat Pump Type	Brine/Water and Water/Water	Brine/Water and Water/Water		
Refrigerant	R452B	R452B		
Mass of Refrigerant	0.9 kg	0.9 kg		
Certification Date	25.08.2021	25.08.2021		
Testing basis	EN 14511:2018, EN 14825:2018, EN 12102:2017			

# **Model: Thermia Calibra Eco 8 400V**

Configure model		
Model name	Thermia Calibra Eco 8 400V	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

Brine/Water Heat Pump

## Heating

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

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.90 kW	6.21 kW	
El input	1.06 kW	2.20 kW	
СОР	4.60	2.83	

#### Warmer Climate



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	218 %	153 %
Prated	6.70 kW	6.24 kW
SCOP	5.65	4.01
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.70 kW	6.24 kW
COP Tj = +2°C	4.44	2.82
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	4.30 kW	4.01 kW
COP Tj = +7°C	5.47	3.61
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.54 kW	2.40 kW
COP Tj = 12°C	6.24	4.77
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	6.70 kW	6.24 kW





COP Tj = Tbiv	4.44	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1583 kWh	2076 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	
227 %	156 %	
6.70 kW	6.24 kW	
_	Low temperature 227 %	





SCOP	5.87	4.10
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.05 kW	3.77 kW
COP Tj = -7°C	5.68	3.81
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.47 kW	2.30 kW
COP Tj = +2°C	6.28	4.38
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	2.54 kW	2.41 kW
$COPTj = +7^{\circ}C$	6.30	4.93
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	2.53 kW	2.44 kW
COP Tj = 12°C	6.17	5.17
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	6.70 kW	6.24 kW
COP Tj = Tbiv	4.44	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W





РТО	9 W	9 W
PSB	9 W	9 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	2810 kWh	3748 kWh

## 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
$\eta_{s}$	215 %	156 %
Prated	6.70 kW	6.24 kW
SCOP	5.57	4.10
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.92 kW	5.52 kW
COP Tj = -7°C	4.73	3.12





inis information was gener	acca by the in items	int database on 22 jan 202
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.36 kW
COP Tj = +2°C	5.70	4.10
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.32 kW	2.16 kW
$COP Tj = +7^{\circ}C$	5.96	4.80
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	2.54 kW	2.16 kW
COP Tj = 12°C	6.28	5.05
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	6.70 kW	6.24 kW
COP Tj = Tbiv	4.44	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW





	0.40= 1.44	2.22.1.1.1	
Annual energy consumption Qhe	2485 kWh	3139 kWh	

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	8.88 kW	8.39 kW	
El input	1.53 kW	2.36 kW	
СОР	5.82	3.56	

### Warmer Climate

EN 14825			
		Low temperature	Medium temperature
$\eta_{S}$		291 %	193 %
Prated		8.88 kW	8.39 kW





SCOP	7.49	5.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.88 kW	8.39 kW
$COP Tj = +2^{\circ}C$	5.82	3.56
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	5.71 kW	5.39 kW
$COP Tj = +7^{\circ}C$	7.44	4.59
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.28 kW	3.20 kW
COP Tj = 12°C	8.08	5.84
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.88 kW	8.39 kW
COP Tj = Tbiv	5.82	3.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
РСК	9 W	9 W
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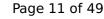




Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1585 kWh	2235 kWh

### Colder Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	306 %	205 %
Prated	8.88 kW	8.39 kW
SCOP	7.86	5.32
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.38 kW	5.08 kW
COP Tj = -7°C	7.81	4.79
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.27 kW	3.09 kW
COP Tj = +2°C	8.34	5.96
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	3.28 kW	3.21 kW
COP Tj = +7°C	8.17	6.09
Cdh Tj = +7 °C	0.98	0.98





Pdh Tj = 12°C	3.28 kW	3.22 kW
COP Tj = 12°C	7.98	6.45
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.88 kW	8.39 kW
COP Tj = Tbiv	5.82	3.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2785 kWh	3888 kWh
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## Average Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	294 %	201 %
Prated	8.88 kW	8.39 kW





TOL -10 °C -10 °	SCOP	7.56	5.23
Pdh Tj = -7°C  7.86 kW  7.42 kW  COP Tj = -7°C  6.27  3.92  Cdh Tj = -7 °C  0.99  1.00  Pdh Tj = +2°C  4.78 kW  4.52 kW  COP Tj = +2°C  7.94  5.34  Cdh Tj = +2 °C  0.99  0.99  Pdh Tj = +7°C  3.07 kW  3.20 kW  COP Tj = +7°C  8.00  5.84  Cdh Tj = +7 °C  0.98  0.98  Pdh Tj = 12°C  3.28 kW  2.16 kW  COP Tj = 12°C  8.14  6.63  Cdh Tj = +12 °C  0.98  0.98  Pdh Tj = Tbiv  8.88 kW  8.39 kW  COP Tj = Tbiv  5.82  3.56  WTOL  65 °C  65 °C  65 °C	Tbiv	-10 °C	-10 °C
COP Tj = -7°C  Cdh Tj = -7 °C  O.99  1.00  Pdh Tj = +2°C  4.78 kW  4.52 kW  COP Tj = +2°C  7.94  5.34  Cdh Tj = +2 °C  O.99  0.99  O.99  Pdh Tj = +7°C  3.07 kW  3.20 kW  COP Tj = +7°C  8.00  5.84  Cdh Tj = +7 °C  0.98  O.98  Pdh Tj = 12°C  3.28 kW  2.16 kW  COP Tj = 12°C  8.14  6.63  Cdh Tj = +12 °C  0.98  0.98  Pdh Tj = ToL or Pdh Tj = Tdesignh if TOL < Tdesignh  8.88 kW  8.39 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  5.82  3.56  WTOL	TOL	-10 °C	-10 °C
Cdh Tj = -7 °C  O.99  1.00  Pdh Tj = +2°C  4.78 kW  4.52 kW  COP Tj = +2°C  7.94  5.34  Cdh Tj = +2 °C  O.99  O.99  O.99  Pdh Tj = +7°C  3.07 kW  3.20 kW  COP Tj = +7°C  8.00  5.84  Cdh Tj = +7 °C  0.98  O.98  Pdh Tj = 12°C  3.28 kW  2.16 kW  COP Tj = 12°C  8.14  6.63  Cdh Tj = +12 °C  0.98  O.98  Pdh Tj = Tbiv  8.88 kW  8.39 kW  COP Tj = Tbiv  5.82  3.56  WTOL  65 °C  65 °C	Pdh Tj = -7°C	7.86 kW	7.42 kW
Pdh Tj = +2°C	COP Tj = -7°C	6.27	3.92
COP Tj = +2°C 7.94 5.34  Cdh Tj = +2 °C 0.99 0.99  Pdh Tj = +7°C 3.07 kW 3.20 kW  COP Tj = +7°C 8.00 5.84  Cdh Tj = +7 °C 0.98 0.98  Pdh Tj = 12°C 3.28 kW 2.16 kW  COP Tj = 12°C 8.14 6.63  Cdh Tj = +12 °C 0.98 0.98  Pdh Tj = Tbiv 8.88 kW 8.39 kW  COP Tj = Tbiv 5.82 3.56  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 5.82 3.56  WTOL 65°C 65°C 65°C	Cdh Tj = -7 °C	0.99	1.00
Cdh Tj = +2 °C       0.99       0.99         Pdh Tj = +7°C       3.07 kW       3.20 kW         COP Tj = +7°C       8.00       5.84         Cdh Tj = +7 °C       0.98       0.98         Pdh Tj = 12°C       3.28 kW       2.16 kW         COP Tj = 12°C       8.14       6.63         Cdh Tj = +12 °C       0.98       0.98         Pdh Tj = Tbiv       8.88 kW       8.39 kW         COP Tj = Tbiv       5.82       3.56         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = +2°C	4.78 kW	4.52 kW
Pdh Tj = +7°C 3.07 kW 3.20 kW  COP Tj = +7°C 8.00 5.84  Cdh Tj = +7 °C 0.98 0.98  Pdh Tj = 12°C 3.28 kW 2.16 kW  COP Tj = 12°C 8.14 6.63  Cdh Tj = +12 °C 0.98 0.98  Pdh Tj = Tbiv 8.88 kW 8.39 kW  COP Tj = Tbiv 5.82 3.56  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 8.88 kW 8.39 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 5.82 3.56  WTOL 65 °C 65 °C	COP Tj = +2°C	7.94	5.34
COP Tj = +7°C	Cdh Tj = +2 °C	0.99	0.99
Cdh Tj = +7 °C       0.98       0.98         Pdh Tj = 12°C       3.28 kW       2.16 kW         COP Tj = 12°C       8.14       6.63         Cdh Tj = +12 °C       0.98       0.98         Pdh Tj = Tbiv       8.88 kW       8.39 kW         COP Tj = Tbiv       5.82       3.56         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = $+7$ °C	3.07 kW	3.20 kW
Pdh Tj = 12°C       3.28 kW       2.16 kW         COP Tj = 12°C       8.14       6.63         Cdh Tj = +12 °C       0.98       0.98         Pdh Tj = Tbiv       8.88 kW       8.39 kW         COP Tj = Tbiv       5.82       3.56         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	$COPTj = +7^{\circ}C$	8.00	5.84
COP Tj = 12°C	Cdh Tj = +7 °C	0.98	0.98
Cdh Tj = +12 °C       0.98       0.98         Pdh Tj = Tbiv       8.88 kW       8.39 kW         COP Tj = Tbiv       5.82       3.56         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = 12°C	3.28 kW	2.16 kW
Pdh Tj = Tbiv       8.88 kW       8.39 kW         COP Tj = Tbiv       5.82       3.56         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	COP Tj = 12°C	8.14	6.63
COP Tj = Tbiv $5.82$ $3.56$ Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh $8.88 \text{ kW}$ $8.39 \text{ kW}$ COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh $5.82$ $3.56$ WTOL $65 ^{\circ}\text{C}$ $65 ^{\circ}\text{C}$	Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh  8.88 kW  8.39 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  5.82  3.56  WTOL  65 °C  65 °C	Pdh Tj = Tbiv	8.88 kW	8.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 5.82 3.56  WTOL 65 °C 65 °C	COP Tj = Tbiv	5.82	3.56
WTOL 65 °C 65 °C	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW
	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56
Poff 5 W 5 W	WTOL	65 °C	65 °C
	Poff	5 W	5 W



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PTO	9 W	9 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2428 kWh	3316 kWh



# **Model: Thermia Calibra Eco 8 Duo 400V**

Configure model		
Model name	Thermia Calibra Eco 8 Duo 400V	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data	
Power supply 3x400V 50Hz	

Brine/Water Heat Pump

## Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.90 kW	6.21 kW
El input	1.06 kW	2.20 kW
СОР	4.60	2.83

#### Warmer Climate



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	218 %	153 %
Prated	6.70 kW	6.24 kW
SCOP	5.65	4.01
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.70 kW	6.24 kW
COP Tj = +2°C	4.44	2.82
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = $+7^{\circ}$ C	4.30 kW	4.01 kW
$COP Tj = +7^{\circ}C$	5.47	3.61
Cdh Tj = +7 °C	0.99	0.99
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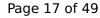


COP Tj = Tbiv	4.44	2.82
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WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1583 kWh	2076 kWh

### Colder Climate

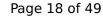
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

w temperature	Medium temperature
7 %	156 %
70 kW	6.24 kW





SCOP	5.87	4.10
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.05 kW	3.77 kW
COP Tj = -7°C	5.68	3.81
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	2.47 kW	2.30 kW
COP Tj = +2°C	6.28	4.38
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COP Tj = Tbiv	4.44	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W



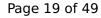


РТО	9 W	9 W
PSB	9 W	9 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2810 kWh	3748 kWh

## Average Climate

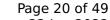
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	215 %	156 %
Prated	6.70 kW	6.24 kW
SCOP	5.57	4.10
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.92 kW	5.52 kW
COP Tj = -7°C	4.73	3.12





This information was gener	acca by the in Reimin	NK database on 22 juli 202.
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.36 kW
COP Tj = +2°C	5.70	4.10
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	2.32 kW	2.16 kW
$COP Tj = +7^{\circ}C$	5.96	4.80
Cdh Tj = +7 °C	0.98	0.98
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
РСК	0 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
	+	





	0.40= 1.44	2.22.1.1.1	
Annual energy consumption Qhe	2485 kWh	3139 kWh	

Water/Water Heat Pump

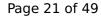
## Heating

EN 14511-4		
Starting and operating test	passed	
Starting and operating test	passeu	
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	8.88 kW	8.39 kW
El input	1.53 kW	2.36 kW
СОР	5.82	3.56

### Warmer Climate

Low temperature	Medium temperature
291 %	193 %
8.88 kW	8.39 kW





		RK database on 22 jun 2022
SCOP	7.49	5.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.88 kW	8.39 kW
COP Tj = +2°C	5.82	3.56
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = $+7^{\circ}$ C	5.71 kW	5.39 kW
$COP Tj = +7^{\circ}C$	7.44	4.59
Cdh Tj = $+7$ °C	0.99	0.99
Pdh Tj = 12°C	3.28 kW	3.20 kW
COP Tj = 12°C	8.08	5.84
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.88 kW	8.39 kW
COP Tj = Tbiv	5.82	3.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
РСК	9 W	9 W

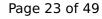




Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1585 kWh	2235 kWh

### Colder Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	306 %	205 %
Prated	8.88 kW	8.39 kW
SCOP	7.86	5.32
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.38 kW	5.08 kW
COP Tj = -7°C	7.81	4.79
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.27 kW	3.09 kW
$COP Tj = +2^{\circ}C$	8.34	5.96
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	3.28 kW	3.21 kW
COP Tj = +7°C	8.17	6.09
Cdh Tj = +7 °C	0.98	0.98





Pdh Tj = 12°C	3.28 kW	3.22 kW
COP Tj = 12°C	7.98	6.45
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.88 kW	8.39 kW
COP Tj = Tbiv	5.82	3.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2785 kWh	3888 kWh
· · · · · · · · · · · · · · · · · · ·		

## Average Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	294 %	201 %
Prated	8.88 kW	8.39 kW
	·	





SCOP	7.56	5.23
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.86 kW	7.42 kW
COP Tj = -7°C	6.27	3.92
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	4.78 kW	4.52 kW
COP Tj = +2°C	7.94	5.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7$ °C	3.07 kW	3.20 kW
$COP Tj = +7^{\circ}C$	8.00	5.84
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.28 kW	2.16 kW
COP Tj = 12°C	8.14	6.63
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.88 kW	8.39 kW
COP Tj = Tbiv	5.82	3.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56
WTOL	65 °C	65 °C
Poff	5 W	5 W



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РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2428 kWh	3316 kWh



# **Model: Thermia Calibra Eco 8 230V**

Configure model	
Model name Thermia Calibra Eco 8 230V	
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Brine/Water Heat Pump

## Heating

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

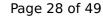
EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.90 kW	6.21 kW
El input	1.06 kW	2.20 kW
СОР	4.60	2.83

#### Warmer Climate



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	218 %	153 %
Prated	6.70 kW	6.24 kW
SCOP	5.65	4.01
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.70 kW	6.24 kW
COP Tj = +2°C	4.44	2.82
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	4.30 kW	4.01 kW
COP Tj = +7°C	5.47	3.61
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.54 kW	2.40 kW
COP Tj = 12°C	6.24	4.77
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	6.70 kW	6.24 kW





COP Tj = Tbiv	4.44	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 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	1583 kWh	2076 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	
227 %	156 %	
6.70 kW	6.24 kW	
_	Low temperature 227 %	





SCOP	5.87	4.10
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = $-7$ °C	4.05 kW	3.77 kW
COP Tj = -7°C	5.68	3.81
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	2.47 kW	2.30 kW
COP Tj = +2°C	6.28	4.38
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	2.54 kW	2.41 kW
$COP Tj = +7^{\circ}C$	6.30	4.93
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	2.53 kW	2.44 kW
COP Tj = 12°C	6.17	5.17
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	6.70 kW	6.24 kW
COP Tj = Tbiv	4.44	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W





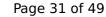
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This information was generated by the HP KEYMARK database on 22	! Jun 2022

РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2810 kWh	3748 kWh

# **Average Climate**

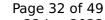
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	32 dB(A)	32 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	215 %	156 %	
Prated	6.70 kW	6.24 kW	
SCOP	5.57	4.10	
Tbiv	-10 °C	-10 °C	
TOL	-10 °C	-10 °C	
Pdh Tj = -7°C	5.92 kW	5.52 kW	
COP Tj = -7°C	4.73	3.12	





This information was gener	acca by the in Reimin	in adtabase on 22 jan 202
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.36 kW
COP Tj = +2°C	5.70	4.10
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	2.32 kW	2.16 kW
$COP Tj = +7^{\circ}C$	5.96	4.80
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	2.54 kW	2.16 kW
COP Tj = 12°C	6.28	5.05
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	6.70 kW	6.24 kW
COP Tj = Tbiv	4.44	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	9 W	9 W
PSB	9 W	9 W
PCK	0 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW





	0.40= 1.44	2.22.1.1.1	
Annual energy consumption Qhe	2485 kWh	3139 kWh	

Water/Water Heat Pump

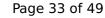
## Heating

EN 14511-4			
Starting and operating test	passed		
Starting and operating test	passeu		
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	8.88 kW	8.39 kW
El input	1.53 kW	2.36 kW
СОР	5.82	3.56

### Warmer Climate

EN 14825			
Low temperature	Medium temperature		
291 %	193 %		
8.88 kW	8.39 kW		
	Low temperature 291 %		





SCOP	7.49	5.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.88 kW	8.39 kW
COP Tj = +2°C	5.82	3.56
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = $+7^{\circ}$ C	5.71 kW	5.39 kW
$COP Tj = +7^{\circ}C$	7.44	4.59
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.28 kW	3.20 kW
COP Tj = 12°C	8.08	5.84
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.88 kW	8.39 kW
COP Tj = Tbiv	5.82	3.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
РСК	9 W	9 W



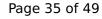


This information was genera	ted by the HP KEYMA	RK database on 22 Jun 2022	

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1585 kWh	2235 kWh

## Colder Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	306 %	205 %
Prated	8.88 kW	8.39 kW
SCOP	7.86	5.32
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.38 kW	5.08 kW
COP Tj = -7°C	7.81	4.79
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.27 kW	3.09 kW
COP Tj = +2°C	8.34	5.96
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	3.28 kW	3.21 kW
COP Tj = +7°C	8.17	6.09
Cdh Tj = +7 °C	0.98	0.98

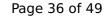




This information was generated by the first tartabase on 22 jun 2021			
Pdh Tj = 12°C	3.28 kW	3.22 kW	
COP Tj = 12°C	7.98	6.45	
Cdh Tj = +12 °C	0.98	0.98	
Pdh Tj = Tbiv	8.88 kW	8.39 kW	
COP Tj = Tbiv	5.82	3.56	
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW	
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56	
WTOL	65 °C	65 °C	
Poff	5 W	5 W	
РТО	9 W	9 W	
PSB	9 W	9 W	
PCK	o w	9 W	
Supplementary Heater: Type of energy input	Electricity	Electricity	
Supplementary Heater: PSUP	0.00 kW	0.00 kW	
Annual energy consumption Qhe	2785 kWh	3888 kWh	

## Average Climate

EN 14825			
	Low temperature	Medium temperature	
$\eta_s$	294 %	201 %	
Prated	8.88 kW	8.39 kW	





SCOP	7.56	5.23
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.86 kW	7.42 kW
COP Tj = -7°C	6.27	3.92
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = $+2^{\circ}$ C	4.78 kW	4.52 kW
COP Tj = +2°C	7.94	5.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.07 kW	3.20 kW
$COP Tj = +7^{\circ}C$	8.00	5.84
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.28 kW	2.16 kW
COP Tj = 12°C	8.14	6.63
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.88 kW	8.39 kW
COP Tj = Tbiv	5.82	3.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56
WTOL	65 °C	65 °C
Poff	5 W	5 W



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РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2428 kWh	3316 kWh

# **Model: Thermia Calibra Eco 8 Duo 230V**

Configure model		
Model name	Thermia Calibra Eco 8 Duo 230V	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

Brine/Water Heat Pump

## Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.90 kW	6.21 kW
El input	1.06 kW	2.20 kW
СОР	4.60	2.83

### Warmer Climate

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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	218 %	153 %
Prated	6.70 kW	6.24 kW
SCOP	5.65	4.01
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.70 kW	6.24 kW
COP Tj = +2°C	4.44	2.82
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	4.30 kW	4.01 kW
COP Tj = +7°C	5.47	3.61
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.54 kW	2.40 kW
COP Tj = 12°C	6.24	4.77
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	6.70 kW	6.24 kW

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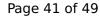


COP Tj = Tbiv	4.44	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1583 kWh	2076 kWh

## Colder Climate

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

w temperature	Medium temperature
7 %	156 %
70 kW	6.24 kW





SCOP	5.87	4.10
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.05 kW	3.77 kW
COP Tj = -7°C	5.68	3.81
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.47 kW	2.30 kW
COP Tj = +2°C	6.28	4.38
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.54 kW	2.41 kW
$COPTj = +7^{\circ}C$	6.30	4.93
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	2.53 kW	2.44 kW
COP Tj = 12°C	6.17	5.17
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	6.70 kW	6.24 kW
COP Tj = Tbiv	4.44	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W





	enerated by the in it	= 11 11 11 11 11 Carabase on 22 jan 2
РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2810 kWh	3748 kWh

# **Average Climate**

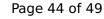
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	33 dB(A)	33 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	215 %	156 %
Prated	6.70 kW	6.24 kW
SCOP	5.57	4.10
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = $-7^{\circ}$ C	5.92 kW	5.52 kW
COP Tj = -7°C	4.73	3.12





This information was gener	<b>,</b>	,
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.36 kW
COP Tj = +2°C	5.70	4.10
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7$ °C	2.32 kW	2.16 kW
$COP Tj = +7^{\circ}C$	5.96	4.80
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	2.54 kW	2.16 kW
COP Tj = 12°C	6.28	5.05
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	6.70 kW	6.24 kW
COP Tj = Tbiv	4.44	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.44	2.82
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
РСК	0 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW





	0.40= 1.44	2.22.1.1.1	
Annual energy consumption Qhe	2485 kWh	3139 kWh	

Water/Water Heat Pump

## Heating

EN 14511-4		
Starting and operating test	passed	
Starting and operating test	passeu	
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	8.88 kW	8.39 kW	
El input	1.53 kW	2.36 kW	
СОР	5.82	3.56	

## Warmer Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	291 %	193 %
Prated	8.88 kW	8.39 kW
Prated	8.88 KW	8.39 KW





SCOP	7.49	5.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.88 kW	8.39 kW
$COP Tj = +2^{\circ}C$	5.82	3.56
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	5.71 kW	5.39 kW
$COP Tj = +7^{\circ}C$	7.44	4.59
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.28 kW	3.20 kW
COP Tj = 12°C	8.08	5.84
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.88 kW	8.39 kW
COP Tj = Tbiv	5.82	3.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56
WTOL	65 °C	65 °C
Poff	5 W	5 W
РТО	9 W	9 W
PSB	9 W	9 W
РСК	9 W	9 W
	•	





Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1585 kWh	2235 kWh

## Colder Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	306 %	205 %
Prated	8.88 kW	8.39 kW
SCOP	7.86	5.32
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.38 kW	5.08 kW
COP Tj = -7°C	7.81	4.79
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.27 kW	3.09 kW
COP Tj = +2°C	8.34	5.96
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	3.28 kW	3.21 kW
COP Tj = +7°C	8.17	6.09
Cdh Tj = +7 °C	0.98	0.98

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This intermediation was generated by the first term with database on 22 jan 2022			
Pdh Tj = 12°C	3.28 kW	3.22 kW	
COP Tj = 12°C	7.98	6.45	
Cdh Tj = +12 °C	0.98	0.98	
Pdh Tj = Tbiv	8.88 kW	8.39 kW	
COP Tj = Tbiv	5.82	3.56	
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW	
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56	
WTOL	65 °C	65 °C	
Poff	5 W	5 W	
РТО	9 W	9 W	
PSB	9 W	9 W	
PCK	o w	9 W	
Supplementary Heater: Type of energy input	Electricity	Electricity	
Supplementary Heater: PSUP	0.00 kW	0.00 kW	
Annual energy consumption Qhe	2785 kWh	3888 kWh	

## Average Climate

EN 14825		
Low temperature Medium temperature		
$\eta_s$	294 %	201 %
Prated	8.88 kW	8.39 kW





SCOP	7.56	5.23
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.86 kW	7.42 kW
COP Tj = -7°C	6.27	3.92
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = $+2^{\circ}$ C	4.78 kW	4.52 kW
COP Tj = +2°C	7.94	5.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.07 kW	3.20 kW
$COP Tj = +7^{\circ}C$	8.00	5.84
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.28 kW	2.16 kW
COP Tj = 12°C	8.14	6.63
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.88 kW	8.39 kW
COP Tj = Tbiv	5.82	3.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.88 kW	8.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.82	3.56
WTOL	65 °C	65 °C
Poff	5 W	5 W



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РТО	9 W	9 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2428 kWh	3316 kWh