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Summary of	TTF 07, TTF 07 cool, TTC 07, TTC 07 cool	Reg. No.	011-1W0040	
Certificate Holder	·			
Name	tecalor GmbH			
Address	Fürstenbergerstr. 77	Zip	37603	
City	Holzminden	Country	Germany	
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH			
Subtype title	TTF 07, TTF 07 cool, TTC 07, TTC 07 cool	TTF 07, TTF 07 cool, TTC 07, TTC 07 cool		
Heat Pump Type	Brine/Water			
Refrigerant	R410A			
Mass of Refrigerant	nt 1.72 kg			
Certification Date	ion Date 28.10.2016			



# Model: TTF 07, all climates

Configure model		
Model name	TTF 07, all climates	
Application Heating (low temp)		
Units Indoor		
Climate Zone Colder Climate + Warmer Climate		
Reversibility	No	
Cooling mode application (optional) n/a		

General Data		
Power supply	3x400V 50Hz	

## Heating

EN 14511-2		
Low temperature		
Heat output	7.50 kW	
El input	1.55 kW	
СОР	4.84	

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



EN 12102-1		
	Low temperature	
Sound power level indoor	44 dB(A)	

EN 14825		
	Low temperature	
$\eta_s$	205 %	
Prated	8.00 kW	
SCOP	5.32	
Tbiv	-10 °C	
TOL	-10 °C	
Pdh Tj = -7°C	7.50 kW	
COP Tj = -7°C	4.90	
Cdh Tj = -7 °C	0.90	
Pdh Tj = +2°C	7.60 kW	
$COP Tj = +2^{\circ}C$	5.25	
Cdh Tj = +2 °C	0.90	
Pdh Tj = +7°C	7.60 kW	
$COP Tj = +7^{\circ}C$	5.60	
Cdh Tj = +7 °C	0.90	
Pdh Tj = 12°C	7.70 kW	
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Cdh Tj = +12 °C       0.90         Pdh Tj = Tbiv       7.50 kW         COP Tj = Tbiv       4.84         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       7.50 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       4.84         WTOL       65 °C         Poff       0 W         PTO       54 W         PSB       9 W         PCK       0 W         Supplementary Heater: Type of energy input       Electricity         Supplementary Heater: PSUP       0.00 kW		
Pdh Tj = Tbiv  7.50 kW  COP Tj = Tbiv  4.84  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh  7.50 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  4.84  WTOL  65 °C  Poff  0 W  PTO  54 W  PSB  9 W  PCK  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP	COP Tj = 12°C	5.99
COP Tj = Tbiv  4.84  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 7.50 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 4.84  WTOL 65 °C  Poff 0 W  PTO 54 W  PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP	Cdh Tj = +12 °C	0.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh  7.50 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  4.84  WTOL  65 °C  Poff  0 W  PTO  54 W  PSB  9 W  PCK  0 W  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP  0.00 kW	Pdh Tj = Tbiv	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  4.84  WTOL  65 °C  Poff  0 W  PTO  54 W  PSB  9 W  PCK  0 W  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP  0.00 kW	COP Tj = Tbiv	4.84
WTOL  Poff  0 W  PTO  54 W  PSB  9 W  PCK  0 W  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP  0.00 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW
Poff 0 W  PTO 54 W  PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84
PTO 54 W  PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	WTOL	65 °C
PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	Poff	o w
PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	PTO	54 W
Supplementary Heater: Type of energy input  Supplementary Heater: PSUP  0.00 kW	PSB	9 W
Supplementary Heater: PSUP 0.00 kW	PCK	o w
	Supplementary Heater: Type of energy input	Electricity
Annual energy consumption Qhe 2912 kWh	Supplementary Heater: PSUP	0.00 kW
	Annual energy consumption Qhe	2912 kWh

#### Warmer Climate

EN 14825		
	Low temperature	
$\eta_{s}$	204 %	
Prated	8.00 kW	
SCOP	5.31	
	·	





This information was generated by the fir KEIN	IAIN database on 10 Mai 2022
Tbiv	2 °C
TOL	0 °C
Pdh Tj = +2°C	7.50 kW
COP Tj = +2°C	4.84
Cdh Tj = +2 °C	0.90
Pdh Tj = $+7^{\circ}$ C	7.60 kW
$COPTj = +7^{\circ}C$	5.17
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.70 kW
COP Tj = 12°C	5.73
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.50 kW
COP Tj = Tbiv	4.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84
WTOL	65 °C
Poff	0 W
РТО	54 W
PSB	9 W
РСК	o w
Supplementary Heater: Type of energy input	Electricity





Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	1888 kWh

## Colder Climate

	EN 14825	
	Low temperature	
ls	211 %	
rated	9.00 kW	
СОР	5.48	
biv	-15 °C	
OL .	-22 °C	
Pdh Tj = -7°C	7.60 kW	
OP Tj = -7°C	5.42	
Cdh Tj = -7 °C	0.90	
dh Tj = +2°C	7.70 kW	
COP Tj = +2°C	5.70	
Cdh Tj = +2 °C	0.90	
dh Tj = +7°C	7.70 kW	
COP Tj = +7°C	5.93	
Cdh Tj = +7 °C	0.90	
dh Tj = 12°C	7.70 kW	





This information was generated by the fir Kern	
COP Tj = 12°C	5.97
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.60 kW
COP Tj = Tbiv	5.31
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.31
WTOL	65 °C
Poff	o w
PTO	54 W
PSB	9 W
PCK	o w
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	1.80 kW
Annual energy consumption Qhe	4184 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.60
COP Tj = -15°C (if TOL<-20°C)	5.31
Cdh Tj = -15 °C	0.90



# Model: TTF 07, average climates

Configure model		
Model name	TTF 07, average climates	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	n/a	
Reversibility	No	
Cooling mode application (optional) n/a		

General Data		
Power supply 3x400V 50Hz		

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	7.50 kW	6.91 kW
El input	1.55 kW	2.35 kW
СОР	4.84	2.94

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



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	205 %	139 %
Prated	8.00 kW	7.00 kW
SCOP	5.32	3.67
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = $-7^{\circ}$ C	7.50 kW	7.00 kW
$COP Tj = -7^{\circ}C$	4.90	3.07
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.60 kW	7.20 kW
COP Tj = +2°C	5.25	3.61
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	7.60 kW	7.30 kW
$COPTj = +7^{\circ}C$	5.60	4.02
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	7.70 kW	7.40 kW



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COP Tj = 12°C	5.99	4.52
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	7.50 kW	6.90 kW
COP Tj = Tbiv	4.84	2.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW	6.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	2.94
WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	54 W	54 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	2912 kWh	3891 kWh



# Model: TTF 07 cool, all climates

Configure model		
Model name TTF 07 cool, all climates		
Application	Heating (low temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x400V 50Hz		

## Heating

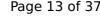
EN 14511-2	
Low temperature	
Heat output	7.50 kW
El input	1.55 kW
СОР	4.84

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



EN 12102-1	
	Low temperature
Sound power level indoor	44 dB(A)

EN 14825	
	Low temperature
$\eta_{s}$	205 %
Prated	8.00 kW
SCOP	5.32
Tbiv	-10 °C
TOL	-10 °C
Pdh Tj = -7°C	7.50 kW
COP Tj = -7°C	4.90
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	7.60 kW
COP Tj = +2°C	5.25
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	7.60 kW
$COP Tj = +7^{\circ}C$	5.60
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.70 kW





 $$\operatorname{\textit{Page}}\ 13$$  of 37 This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = 12°C	5.99
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.50 kW
COP Tj = Tbiv	4.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84
WTOL	65 °C
Poff	o w
РТО	54 W
PSB	9 W
PCK	o w
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	2912 kWh

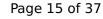
## Warmer Climate

EN 14825	
	Low temperature
ηs	204 %
Prated	8.00 kW
SCOP	5.31





This information was generated by the fir KEIN	IAIN database on 10 Mai 2022
Tbiv	2 °C
TOL	0 °C
Pdh Tj = +2°C	7.50 kW
COP Tj = +2°C	4.84
Cdh Tj = +2 °C	0.90
Pdh Tj = $+7^{\circ}$ C	7.60 kW
COP Tj = +7°C	5.17
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.70 kW
COP Tj = 12°C	5.73
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.50 kW
COP Tj = Tbiv	4.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84
WTOL	65 °C
Poff	0 W
РТО	54 W
PSB	9 W
РСК	o w
Supplementary Heater: Type of energy input	Electricity

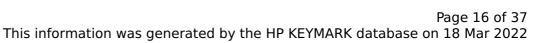




Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	1888 kWh

## Colder Climate

	EN 14825
	Low temperature
ls	211 %
rated	9.00 kW
СОР	5.48
biv	-15 °C
OL .	-22 °C
Pdh Tj = -7°C	7.60 kW
OP Tj = -7°C	5.42
Cdh Tj = -7 °C	0.90
dh Tj = +2°C	7.70 kW
COP Tj = +2°C	5.70
Cdh Tj = +2 °C	0.90
dh Tj = +7°C	7.70 kW
COP Tj = +7°C	5.93
Cdh Tj = +7 °C	0.90
dh Tj = 12°C	7.70 kW





COP Tj = 12°C	5.97
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.60 kW
COP Tj = Tbiv	5.31
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.31
WTOL	65 °C
Poff	0 W
РТО	54 W
PSB	9 W
PCK	0 W
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	1.80 kW
Annual energy consumption Qhe	4184 kWh
Pdh Tj = $-15$ °C (if TOL< $-20$ °C)	7.60
COP Tj = -15°C (if TOL<-20°C)	5.31
Cdh Tj = -15 °C	0.90



# Model: TTF 07 cool, average climates

Configure model		
Model name	TTF 07 cool, average climates	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	n/a	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	7.50 kW	6.91 kW
El input	1.55 kW	2.35 kW
СОР	4.84	2.94

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



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	205 %	139 %
Prated	8.00 kW	7.00 kW
SCOP	5.32	3.67
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.50 kW	7.00 kW
COP Tj = -7°C	4.90	3.07
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.60 kW	7.20 kW
COP Tj = +2°C	5.25	3.61
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	7.60 kW	7.30 kW
COP Tj = +7°C	5.60	4.02
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	7.70 kW	7.40 kW



# $$\operatorname{\textit{Page}}\ 19$ of 37$$ This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = 12°C	5.99	4.52
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	7.50 kW	6.90 kW
COP Tj = Tbiv	4.84	2.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW	6.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	2.94
WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	54 W	54 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	2912 kWh	3891 kWh



# Model: TTC 07, all climates

Configure model		
Model name TTC 07, all climates		
Application	Heating (low temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

## Heating

EN 14511-2	
	Low temperature
Heat output	7.50 kW
El input	1.55 kW
СОР	4.84

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



EN 12102-1	
	Low temperature
Sound power level indoor	44 dB(A)

EN 14825	
	Low temperature
$\eta_s$	205 %
Prated	8.00 kW
SCOP	5.32
Tbiv	-10 °C
TOL	-10 °C
Pdh Tj = -7°C	7.50 kW
COP Tj = -7°C	4.90
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	7.60 kW
$COP Tj = +2^{\circ}C$	5.25
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	7.60 kW
$COP Tj = +7^{\circ}C$	5.60
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.70 kW
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# $$\operatorname{\textit{Page}}\xspace$ 22 of 37 This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +12 °C       0.90         Pdh Tj = Tbiv       7.50 kW         COP Tj = Tbiv       4.84         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       7.50 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       4.84         WTOL       65 °C         Poff       0 W         PTO       54 W         PSB       9 W         PCK       0 W         Supplementary Heater: Type of energy input       Electricity         Supplementary Heater: PSUP       0.00 kW		
Pdh Tj = Tbiv  7.50 kW  COP Tj = Tbiv  4.84  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh  7.50 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  4.84  WTOL  65 °C  Poff  0 W  PTO  54 W  PSB  9 W  PCK  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP	COP Tj = 12°C	5.99
COP Tj = Tbiv  4.84  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 7.50 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 4.84  WTOL 65 °C  Poff 0 W  PTO 54 W  PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP	Cdh Tj = +12 °C	0.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh  7.50 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  4.84  WTOL  65 °C  Poff  0 W  PTO  54 W  PSB  9 W  PCK  0 W  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP  0.00 kW	Pdh Tj = Tbiv	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  4.84  WTOL  65 °C  Poff  0 W  PTO  54 W  PSB  9 W  PCK  0 W  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP  0.00 kW	COP Tj = Tbiv	4.84
WTOL  Poff  0 W  PTO  54 W  PSB  9 W  PCK  0 W  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP  0.00 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW
Poff 0 W  PTO 54 W  PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84
PTO 54 W  PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	WTOL	65 °C
PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	Poff	o w
PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	PTO	54 W
Supplementary Heater: Type of energy input  Supplementary Heater: PSUP  0.00 kW	PSB	9 W
Supplementary Heater: PSUP 0.00 kW	PCK	o w
	Supplementary Heater: Type of energy input	Electricity
Annual energy consumption Qhe 2912 kWh	Supplementary Heater: PSUP	0.00 kW
	Annual energy consumption Qhe	2912 kWh

#### Warmer Climate

EN 14825	
	Low temperature
$\eta_{S}$	204 %
Prated	8.00 kW
SCOP	5.31
	,





This information was generated by the fir KEIN	IAIN database on 10 Mai 2022
Tbiv	2 °C
TOL	0 °C
Pdh Tj = +2°C	7.50 kW
COP Tj = +2°C	4.84
Cdh Tj = +2 °C	0.90
Pdh Tj = $+7^{\circ}$ C	7.60 kW
COP Tj = +7°C	5.17
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.70 kW
COP Tj = 12°C	5.73
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.50 kW
COP Tj = Tbiv	4.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84
WTOL	65 °C
Poff	0 W
РТО	54 W
PSB	9 W
РСК	o w
Supplementary Heater: Type of energy input	Electricity

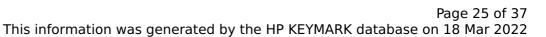




Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	1888 kWh

## Colder Climate

EN 14825		
	Low temperature	
ls	211 %	
rated	9.00 kW	
СОР	5.48	
biv	-15 °C	
OL .	-22 °C	
Pdh Tj = -7°C	7.60 kW	
OP Tj = -7°C	5.42	
Cdh Tj = -7 °C	0.90	
dh Tj = +2°C	7.70 kW	
COP Tj = +2°C	5.70	
Cdh Tj = +2 °C	0.90	
dh Tj = +7°C	7.70 kW	
COP Tj = +7°C	5.93	
Cdh Tj = +7 °C	0.90	
dh Tj = 12°C	7.70 kW	





This information was generated by the Hill KETH	THIN database on 10 Mai 202.
COP Tj = 12°C	5.97
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.60 kW
COP Tj = Tbiv	5.31
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.31
WTOL	65 °C
Poff	0 W
РТО	54 W
PSB	9 W
PCK	0 W
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	1.80 kW
Annual energy consumption Qhe	4184 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.60
COP Tj = -15°C (if TOL<-20°C)	5.31
Cdh Tj = -15 °C	0.90



# Model: TTC 07, average climates

Configure model		
Model name	TTC 07, average climates	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	n/a	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

## Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	7.50 kW	6.91 kW	
El input	1.55 kW	2.35 kW	
СОР	4.84	2.94	

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



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

	Low temperature	Medium temperature
$\eta_{s}$	205 %	139 %
Prated	8.00 kW	7.00 kW
SCOP	5.32	3.67
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.50 kW	7.00 kW
COP Tj = -7°C	4.90	3.07
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.60 kW	7.20 kW
COP Tj = +2°C	5.25	3.61
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	7.60 kW	7.30 kW
COP Tj = +7°C	5.60	4.02
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	7.70 kW	7.40 kW



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COP Tj = 12°C	5.99	4.52
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	7.50 kW	6.90 kW
COP Tj = Tbiv	4.84	2.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW	6.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	2.94
WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	54 W	54 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	2912 kWh	3891 kWh



# Model: TTC 07 cool, all climates

Configure model		
Model name	TTC 07 cool, all climates	
Application	Heating (low temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data	
Power supply	3x400V 50Hz

## Heating

EN 14511-2	
	Low temperature
Heat output	7.50 kW
El input	1.55 kW
СОР	4.84

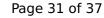
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Shutting on the heat transfer medium now	passeu
Complete power supply failure	passed
Starting and operating test	passed





EN 12102-1	
	Low temperature
Sound power level indoor	44 dB(A)

	EN 14825
	Low temperature
$\eta_{s}$	205 %
Prated	8.00 kW
SCOP	5.32
Tbiv	-10 °C
TOL	-10 °C
Pdh Tj = -7°C	7.50 kW
COP Tj = -7°C	4.90
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	7.60 kW
COP Tj = +2°C	5.25
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	7.60 kW
$COP Tj = +7^{\circ}C$	5.60
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.70 kW





Cdh Tj = +12 °C       0.90         Pdh Tj = Tbiv       7.50 kW         COP Tj = Tbiv       4.84         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       7.50 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       4.84         WTOL       65 °C         Poff       0 W         PTO       54 W         PSB       9 W         PCK       0 W         Supplementary Heater: Type of energy input       Electricity         Supplementary Heater: PSUP       0.00 kW		
Pdh Tj = Tbiv  7.50 kW  COP Tj = Tbiv  4.84  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh  7.50 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  4.84  WTOL  65 °C  Poff  0 W  PTO  54 W  PSB  9 W  PCK  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP	COP Tj = 12°C	5.99
COP Tj = Tbiv  4.84  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 7.50 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 4.84  WTOL 65 °C  Poff 0 W  PTO 54 W  PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP	Cdh Tj = +12 °C	0.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh  7.50 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  4.84  WTOL  65 °C  Poff  0 W  PTO  54 W  PSB  9 W  PCK  0 W  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP  0.00 kW	Pdh Tj = Tbiv	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  4.84  WTOL  65 °C  Poff  0 W  PTO  54 W  PSB  9 W  PCK  0 W  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP  0.00 kW	COP Tj = Tbiv	4.84
WTOL  Poff  0 W  PTO  54 W  PSB  9 W  PCK  0 W  Supplementary Heater: Type of energy input  Electricity  Supplementary Heater: PSUP  0.00 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW
Poff 0 W  PTO 54 W  PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84
PTO 54 W  PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	WTOL	65 °C
PSB 9 W  PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	Poff	o w
PCK 0 W  Supplementary Heater: Type of energy input Electricity  Supplementary Heater: PSUP 0.00 kW	PTO	54 W
Supplementary Heater: Type of energy input  Supplementary Heater: PSUP  0.00 kW	PSB	9 W
Supplementary Heater: PSUP 0.00 kW	PCK	o w
	Supplementary Heater: Type of energy input	Electricity
Annual energy consumption Qhe 2912 kWh	Supplementary Heater: PSUP	0.00 kW
	Annual energy consumption Qhe	2912 kWh

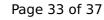
#### Warmer Climate

EN 14825	
	Low temperature
$\eta_{s}$	204 %
Prated	8.00 kW
SCOP	5.31
	j





This information was generated by the fir KEIN	IAIN database on 10 Mai 2022
Tbiv	2 °C
TOL	0 °C
Pdh Tj = +2°C	7.50 kW
COP Tj = +2°C	4.84
Cdh Tj = +2 °C	0.90
Pdh Tj = $+7^{\circ}$ C	7.60 kW
COP Tj = +7°C	5.17
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.70 kW
COP Tj = 12°C	5.73
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.50 kW
COP Tj = Tbiv	4.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84
WTOL	65 °C
Poff	0 W
РТО	54 W
PSB	9 W
РСК	o w
Supplementary Heater: Type of energy input	Electricity





Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	1888 kWh

## Colder Climate

EN 14825	
	Low temperature
$\eta_{s}$	211 %
Prated	9.00 kW
SCOP	5.48
Γbiv	-15 °C
ГОL	-22 °C
Pdh Tj = -7°C	7.60 kW
COP Tj = -7°C	5.42
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	7.70 kW
COP Tj = +2°C	5.70
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	7.70 kW
COP Tj = +7°C	5.93
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.70 kW





This information was generated by the HF KETI	IANK database on 10 Mai 202.
COP Tj = 12°C	5.97
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.60 kW
COP Tj = Tbiv	5.31
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.31
WTOL	65 °C
Poff	0 W
РТО	54 W
PSB	9 W
PCK	0 W
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	1.80 kW
Annual energy consumption Qhe	4184 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.60
COP Tj = $-15$ °C (if TOL< $-20$ °C)	5.31
Cdh Tj = -15 °C	0.90



# Model: TTC 07 cool, average climates

Configure model	
Model name	TTC 07 cool, average climates
Application	Heating (medium temp)
Units	Indoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data		
Power supply	3x400V 50Hz	

## Heating

EN 14511-2				
	Low temperature	Medium temperature		
Heat output	7.50 kW	6.91 kW		
El input	1.55 kW	2.35 kW		
СОР	4.84	2.94		

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



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	44 dB(A)	44 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	205 %	139 %	
Prated	8.00 kW	7.00 kW	
SCOP	5.32	3.67	
Tbiv	-10 °C	-10 °C	
TOL	-10 °C	-10 °C	
Pdh Tj = -7°C	7.50 kW	7.00 kW	
COP Tj = -7°C	4.90	3.07	
Cdh Tj = -7 °C	0.90	0.90	
Pdh Tj = +2°C	7.60 kW	7.20 kW	
COP Tj = +2°C	5.25	3.61	
Cdh Tj = +2 °C	0.90	0.90	
Pdh Tj = +7°C	7.60 kW	7.30 kW	
COP Tj = +7°C	5.60	4.02	
Cdh Tj = +7 °C	0.90	0.90	
Pdh Tj = 12°C	7.70 kW	7.40 kW	



# $$\operatorname{\textit{Page}}\xspace$ 37 of 37 This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = 12°C	5.99	4.52
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	7.50 kW	6.90 kW
COP Tj = Tbiv	4.84	2.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.50 kW	6.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	2.94
WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	54 W	54 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	2912 kWh	3891 kWh