

This information was generated by the HP KEYMARK database on 21 Jun 2022

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Summary of	TTF 04, TTF 04 cool, TTC 04, TTC 04 cool	Reg. No.	011-1W0038
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 04, TTF 04 cool, TTC 04, TTC 04 cool		
Heat Pump Type	Brine/Water		
Refrigerant	R410A		
Mass of Refrigerant	1.05 kg		
Certification Date	01.11.2016		

Model: TTF 04, all climates

Configure model	
Model name	TTF 04, 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	4.77 kW
El input	1.06 kW
COP	4.50

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

Average Climate

This information was generated by the HP KEYMARK database on 21 Jun 2022

EN 12102-1

	Low temperature
Sound power level indoor	43 dB(A)

EN 14825

	Low temperature
η_s	189 %
Prated	5.00 kW
SCOP	4.92
Tbiv	-10 °C
TOL	-10 °C
Pdh Tj = -7°C	4.80 kW
COP Tj = -7°C	4.55
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	4.80 kW
COP Tj = +2°C	4.87
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	4.90 kW
COP Tj = +7°C	5.18
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	4.90 kW

This information was generated by the HP KEYMARK database on 21 Jun 2022

COP Tj = 12°C	5.52
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50
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
Annual energy consumption Qhe	2002 kWh

Warmer Climate

EN 14825	
	Low temperature
η_s	187 %
Prated	5.00 kW
SCOP	4.87

This information was generated by the HP KEYMARK database on 21 Jun 2022

Tbiv	2 °C
TOL	0 °C
Pdh Tj = +2°C	4.80 kW
COP Tj = +2°C	4.50
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	4.80 kW
COP Tj = +7°C	4.80
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	4.90 kW
COP Tj = 12°C	5.29
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50
WTOL	65 °C
Poff	0 W
PTO	54 W
PSB	9 W
PCK	0 W
Supplementary Heater: Type of energy input	Electricity

This information was generated by the HP KEYMARK database on 21 Jun 2022

Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Q_{he}	1310 kWh

Colder Climate

EN 14825	
	Low temperature
η_s	195 %
Prated	6.00 kW
SCOP	5.07
Tbiv	-15 °C
TOL	-22 °C
Pdh Tj = -7°C	4.90 kW
COP Tj = -7°C	5.03
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	4.90 kW
COP Tj = +2°C	5.27
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	4.90 kW
COP Tj = +7°C	5.47
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	4.90 kW

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COP Tj = 12°C	5.50
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.92
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	1.17 kW
Annual energy consumption Qhe	2888 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.80
COP Tj = -15°C (if TOL<-20°C)	4.92
Cdh Tj = -15 °C	0.90

Model: TTF 04, average climates

Configure model	
Model name	TTF 04, 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	4.77 kW	4.25 kW
El input	1.06 kW	1.56 kW
COP	4.50	2.72

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

Average Climate

This information was generated by the HP KEYMARK database on 21 Jun 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	189 %	128 %
Prated	5.00 kW	4.00 kW
SCOP	4.92	3.40
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.80 kW	4.30 kW
COP Tj = -7°C	4.55	2.85
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.80 kW	4.50 kW
COP Tj = +2°C	4.87	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.90 kW	4.60 kW
COP Tj = +7°C	5.18	3.73
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	4.90 kW	4.70 kW

This information was generated by the HP KEYMARK database on 21 Jun 2022

COP Tj = 12°C	5.52	4.18
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	4.80 kW	4.30 kW
COP Tj = Tbiv	4.50	2.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW	4.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50	2.72
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	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	2002 kWh	2583 kWh

Model: TTF 04 cool, all climates

Configure model	
Model name	TTF 04 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	4.77 kW
El input	1.06 kW
COP	4.50

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

Average Climate

EN 12102-1

	Low temperature
Sound power level indoor	43 dB(A)

EN 14825

	Low temperature
η_s	189 %
Prated	5.00 kW
SCOP	4.92
Tbiv	-10 °C
TOL	-10 °C
Pdh Tj = -7°C	4.80 kW
COP Tj = -7°C	4.55
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	4.80 kW
COP Tj = +2°C	4.87
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	4.90 kW
COP Tj = +7°C	5.18
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	4.90 kW

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Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50
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
Annual energy consumption Qhe	2002 kWh

Warmer Climate

EN 14825	
	Low temperature
η_s	187 %
Prated	5.00 kW
SCOP	4.87

This information was generated by the HP KEYMARK database on 21 Jun 2022

Tbiv	2 °C
TOL	0 °C
Pdh Tj = +2°C	4.80 kW
COP Tj = +2°C	4.50
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	4.80 kW
COP Tj = +7°C	4.80
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	4.90 kW
COP Tj = 12°C	5.29
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50
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
Annual energy consumption Q _{he}	1310 kWh

Colder Climate

EN 14825	
	Low temperature
η_s	195 %
Prated	6.00 kW
SCOP	5.07
T _{biv}	-15 °C
TOL	-22 °C
P _{dh} T _j = -7°C	4.90 kW
COP T _j = -7°C	5.03
C _{dh} T _j = -7 °C	0.90
P _{dh} T _j = +2°C	4.90 kW
COP T _j = +2°C	5.27
C _{dh} T _j = +2 °C	0.90
P _{dh} T _j = +7°C	4.90 kW
COP T _j = +7°C	5.47
C _{dh} T _j = +7 °C	0.90
P _{dh} T _j = 12°C	4.90 kW

This information was generated by the HP KEYMARK database on 21 Jun 2022

COP Tj = 12°C	5.50
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.92
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	1.17 kW
Annual energy consumption Qhe	2888 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.80
COP Tj = -15°C (if TOL<-20°C)	4.92
Cdh Tj = -15 °C	0.90

Model: TTF 04 cool, average climates

Configure model	
Model name	TTF 04 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	4.77 kW	4.25 kW
El input	1.06 kW	1.56 kW
COP	4.50	2.72

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	189 %	128 %
Prated	5.00 kW	4.00 kW
SCOP	4.92	3.40
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.80 kW	4.30 kW
COP Tj = -7°C	4.55	2.85
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.80 kW	4.50 kW
COP Tj = +2°C	4.87	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.90 kW	4.60 kW
COP Tj = +7°C	5.18	3.73
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	4.90 kW	4.70 kW

This information was generated by the HP KEYMARK database on 21 Jun 2022

COP Tj = 12°C	5.52	4.18
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	4.80 kW	4.30 kW
COP Tj = Tbiv	4.50	2.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW	4.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50	2.72
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	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	2002 kWh	2583 kWh

Model: TTC 04, all climates

Configure model	
Model name	TTC 04, 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	4.77 kW
El input	1.06 kW
COP	4.50

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

Average Climate

EN 12102-1

	Low temperature
Sound power level indoor	43 dB(A)

EN 14825

	Low temperature
η_s	189 %
Prated	5.00 kW
SCOP	4.92
Tbiv	-10 °C
TOL	-10 °C
Pdh Tj = -7°C	4.80 kW
COP Tj = -7°C	4.55
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	4.80 kW
COP Tj = +2°C	4.87
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	4.90 kW
COP Tj = +7°C	5.18
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	4.90 kW

This information was generated by the HP KEYMARK database on 21 Jun 2022

COP Tj = 12°C	5.52
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50
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
Annual energy consumption Qhe	2002 kWh

Warmer Climate

EN 14825	
	Low temperature
η_s	187 %
Prated	5.00 kW
SCOP	4.87

This information was generated by the HP KEYMARK database on 21 Jun 2022

Tbiv	2 °C
TOL	0 °C
Pdh Tj = +2°C	4.80 kW
COP Tj = +2°C	4.50
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	4.80 kW
COP Tj = +7°C	4.80
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	4.90 kW
COP Tj = 12°C	5.29
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50
WTOL	65 °C
Poff	0 W
PTO	54 W
PSB	9 W
PCK	0 W
Supplementary Heater: Type of energy input	Electricity

This information was generated by the HP KEYMARK database on 21 Jun 2022

Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Q _{he}	1310 kWh

Colder Climate

EN 14825	
	Low temperature
η_s	195 %
Prated	6.00 kW
SCOP	5.07
T _{biv}	-15 °C
TOL	-22 °C
P _{dh} T _j = -7°C	4.90 kW
COP T _j = -7°C	5.03
C _{dh} T _j = -7 °C	0.90
P _{dh} T _j = +2°C	4.90 kW
COP T _j = +2°C	5.27
C _{dh} T _j = +2 °C	0.90
P _{dh} T _j = +7°C	4.90 kW
COP T _j = +7°C	5.47
C _{dh} T _j = +7 °C	0.90
P _{dh} T _j = 12°C	4.90 kW

This information was generated by the HP KEYMARK database on 21 Jun 2022

COP Tj = 12°C	5.50
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.92
WTOL	65 °C
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PSB	9 W
PCK	0 W
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	1.17 kW
Annual energy consumption Qhe	2888 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.80
COP Tj = -15°C (if TOL<-20°C)	4.92
Cdh Tj = -15 °C	0.90

Model: TTC 04, average climates

Configure model	
Model name	TTC 04, 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	4.77 kW	4.25 kW
El input	1.06 kW	1.56 kW
COP	4.50	2.72

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

Average Climate

This information was generated by the HP KEYMARK database on 21 Jun 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	189 %	128 %
Prated	5.00 kW	4.00 kW
SCOP	4.92	3.40
Tbiv	-10 °C	-10 °C
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Pdh Tj = -7°C	4.80 kW	4.30 kW
COP Tj = -7°C	4.55	2.85
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.80 kW	4.50 kW
COP Tj = +2°C	4.87	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.90 kW	4.60 kW
COP Tj = +7°C	5.18	3.73
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	4.90 kW	4.70 kW

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WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	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	2002 kWh	2583 kWh

Model: TTC 04 cool, all climates

Configure model	
Model name	TTC 04 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	4.77 kW
El input	1.06 kW
COP	4.50

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

Average Climate

EN 12102-1

	Low temperature
Sound power level indoor	43 dB(A)

EN 14825

	Low temperature
η_s	189 %
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Pdh Tj = Tbiv	4.80 kW
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50
WTOL	65 °C
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Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	2002 kWh

Warmer Climate

EN 14825	
	Low temperature
η_s	187 %
Prated	5.00 kW
SCOP	4.87

This information was generated by the HP KEYMARK database on 21 Jun 2022

Tbiv	2 °C
TOL	0 °C
Pdh Tj = +2°C	4.80 kW
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Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	4.80 kW
COP Tj = +7°C	4.80
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	4.90 kW
COP Tj = 12°C	5.29
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50
WTOL	65 °C
Poff	0 W
PTO	54 W
PSB	9 W
PCK	0 W
Supplementary Heater: Type of energy input	Electricity

This information was generated by the HP KEYMARK database on 21 Jun 2022

Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Q_{he}	1310 kWh

Colder Climate

EN 14825	
	Low temperature
η_s	195 %
Prated	6.00 kW
SCOP	5.07
Tbiv	-15 °C
TOL	-22 °C
Pdh Tj = -7°C	4.90 kW
COP Tj = -7°C	5.03
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	4.90 kW
COP Tj = +2°C	5.27
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	4.90 kW
COP Tj = +7°C	5.47
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	4.90 kW

This information was generated by the HP KEYMARK database on 21 Jun 2022

COP Tj = 12°C	5.50
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	4.80 kW
COP Tj = Tbiv	4.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.92
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	1.17 kW
Annual energy consumption Qhe	2888 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.80
COP Tj = -15°C (if TOL<-20°C)	4.92
Cdh Tj = -15 °C	0.90

Model: TTC 04 cool, average climates

Configure model	
Model name	TTC 04 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	4.77 kW	4.25 kW
El input	1.06 kW	1.56 kW
COP	4.50	2.72

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	189 %	128 %
Prated	5.00 kW	4.00 kW
SCOP	4.92	3.40
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.80 kW	4.30 kW
COP Tj = -7°C	4.55	2.85
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.80 kW	4.50 kW
COP Tj = +2°C	4.87	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.90 kW	4.60 kW
COP Tj = +7°C	5.18	3.73
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	4.90 kW	4.70 kW

This information was generated by the HP KEYMARK database on 21 Jun 2022

COP Tj = 12°C	5.52	4.18
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	4.80 kW	4.30 kW
COP Tj = Tbiv	4.50	2.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.80 kW	4.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50	2.72
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	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	2002 kWh	2583 kWh