

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

Summary of	TTF 4.6, TTF 6.6, TTF 8.6	Reg. No.	011-1W0396
Certificate Holder			
Name	tecalor GmbH		
Address	Fürstenbergerstr. 77	Zip	37603
City	Holzminen	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Name of testing laboratory	RISE Research Institutes of Sweden AB		
Subtype title	TTF 4.6, TTF 6.6, TTF 8.6		
Heat Pump Type	Brine/Water		
Refrigerant	Other		
Mass Of Refrigerant	2.2 kg		
Certification Date	08.09.2020		

Model: TTF 4.6 (cool) / TTC 4.6 (cool)

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	1.96 kW	1.26 kW
El input	0.43 kW	0.47 kW
COP	4.60	2.73
Indoor water flow rate	0.34 m ³ /h	0.14 m ³ /h

EN 14511-4

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

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	38 dB(A)	38 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	195 %	153 %
Prated	4.23 kW	3.76 kW
SCOP	5.07	4.02
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.73 kW	3.32 kW
COP Tj = -7°C	5.01	3.58
Cdh	0.90	0.90
Pdh Tj = +2°C	2.26 kW	2.02 kW
COP Tj = +2°C	5.38	4.22
Cdh	0.90	0.90
Pdh Tj = +7°C	1.45 kW	1.30 kW
COP Tj = +7°C	5.34	4.47
Cdh	0.90	0.90
Pdh Tj = 12°C	1.13 kW	1.08 kW

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COP Tj = 12°C	5.32	4.49
Cdh	0.90	0.90
Pdh Tj = Tbiv	4.23 kW	3.76 kW
COP Tj = Tbiv	4.86	3.43
Pdh Tj = TOL	4.23 kW	3.76 kW
COP Tj = TOL	4.86	3.43
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 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	1723 kWh	1934 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	38 dB(A)	38 dB(A)

EN 14825		
	Low temperature	Medium temperature

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η_s	187 %	147 %
Prated	4.23 kW	3.76 kW
SCOP	4.87	3.87
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.23 kW	3.76 kW
COP Tj = +2°C	4.86	3.43
Cdh	0.90	0.90
Pdh Tj = +7°C	2.71 kW	2.41 kW
COP Tj = +7°C	5.24	3.95
Cdh	0.90	0.90
Pdh Tj = 12°C	1.20 kW	1.08 kW
COP Tj = 12°C	5.31	4.39
Cdh	0.90	0.90
Pdh Tj = Tbiv	4.23 kW	3.76 kW
COP Tj = Tbiv	4.86	3.43
Pdh Tj = TOL	4.23 kW	3.76 kW
COP Tj = TOL	4.86	3.43
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W

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PSB	16 W	16 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	1159 kWh	1300 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	38 dB(A)	38 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	201 %	157 %
Prated	4.23 kW	3.76 kW
SCOP	5.21	4.12
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.55 kW	2.27 kW
COP Tj = -7°C	5.37	4.10
Cdh	0.90	0.90

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Pdh Tj = +2°C	1.55 kW	1.38 kW
COP Tj = +2°C	5.45	4.37
Cdh	0.90	0.90
Pdh Tj = +7°C	1.13 kW	1.09 kW
COP Tj = +7°C	5.31	4.51
Cdh	0.90	0.90
Pdh Tj = 12°C	1.12 kW	1.09 kW
COP Tj = 12°C	5.21	4.52
Cdh	0.90	0.90
Pdh Tj = Tbiv	4.23 kW	3.76 kW
COP Tj = Tbiv	4.86	3.43
Pdh Tj = TOL	4.23 kW	3.76 kW
COP Tj = TOL	4.86	3.43
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 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	2000 kWh	2252 kWh

Model: TTF 6.6 (cool) / TTC 6.6 (cool)

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	2.37 kW	2.01 kW
El input	0.52 kW	0.69 kW
COP	4.60	2.91
Indoor water flow rate	0.41 m ³ /h	0.22 m ³ /h

EN 14511-4

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

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	41 dB(A)	41 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	200 %	160 %
Prated	6.70 kW	6.05 kW
SCOP	5.20	4.18
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.91 kW	5.34 kW
COP Tj = -7°C	4.71	3.55
Cdh	0.90	0.90
Pdh Tj = +2°C	3.59 kW	3.25 kW
COP Tj = +2°C	5.39	4.27
Cdh	0.90	0.90
Pdh Tj = +7°C	2.30 kW	2.09 kW
COP Tj = +7°C	5.60	4.76
Cdh	0.90	0.90
Pdh Tj = 12°C	1.14 kW	1.08 kW

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

COP Tj = 12°C	5.47	4.61
Cdh	0.90	0.90
Pdh Tj = Tbiv	6.70 kW	6.05 kW
COP Tj = Tbiv	4.52	3.34
Pdh Tj = TOL	6.70 kW	6.05 kW
COP Tj = TOL	4.52	3.34
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 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	2662 kWh	2988 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)

EN 14825		
	Low temperature	Medium temperature

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

η_s	198 %	158 %
Prated	6.70 kW	6.05 kW
SCOP	5.14	4.14
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.70 kW	6.05 kW
COP Tj = +2°C	4.52	3.34
Cdh	0.90	0.90
Pdh Tj = +7°C	4.29 kW	3.88 kW
COP Tj = +7°C	5.19	3.97
Cdh	0.90	0.90
Pdh Tj = 12°C	1.90 kW	1.72 kW
COP Tj = 12°C	5.71	4.81
Cdh	0.90	0.90
Pdh Tj = Tbiv	6.70 kW	6.05 kW
COP Tj = Tbiv	4.52	3.34
Pdh Tj = TOL	6.70 kW	6.05 kW
COP Tj = TOL	4.52	3.34
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W

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

PSB	16 W	16 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}	1741 kWh	1954 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	207 %	166 %
Prated	6.70 kW	6.05 kW
SCOP	5.38	4.34
T _{biv}	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	4.04 kW	3.65 kW
COP T _j = -7°C	5.36	4.15
C _{dh}	0.90	0.90

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

Pdh Tj = +2°C	2.45 kW	2.22 kW
COP Tj = +2°C	5.64	4.68
Cdh	0.90	0.90
Pdh Tj = +7°C	1.57 kW	1.42 kW
COP Tj = +7°C	5.76	4.80
Cdh	0.90	0.90
Pdh Tj = 12°C	1.13 kW	1.10 kW
COP Tj = 12°C	5.32	4.73
Cdh	0.90	0.90
Pdh Tj = Tbiv	6.70 kW	6.05 kW
COP Tj = Tbiv	4.52	3.34
Pdh Tj = TOL	6.70 kW	6.05 kW
COP Tj = TOL	4.52	3.34
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 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	3069 kWh	3439 kWh

Model: TTF 8.6 (cool) / TTC 8.6 (cool)

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	2.78 kW	2.42 kW
El input	0.60 kW	0.79 kW
COP	4.67	3.07
Indoor water flow rate	0.48 m ³ /h	0.27 m ³ /h

EN 14511-4

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

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	40 dB(A)	40 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	197 %	158 %
Prated	7.66 kW	6.93 kW
SCOP	5.12	4.14
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.76 kW	6.12 kW
COP Tj = -7°C	4.53	3.44
Cdh	0.90	0.90
Pdh Tj = +2°C	4.11 kW	3.72 kW
COP Tj = +2°C	5.25	4.21
Cdh	0.90	0.90
Pdh Tj = +7°C	2.64 kW	2.39 kW
COP Tj = +7°C	5.59	4.69
Cdh	0.90	0.90
Pdh Tj = 12°C	1.16 kW	1.08 kW

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

COP Tj = 12°C	5.52	4.61
Cdh	0.90	0.90
Pdh Tj = Tbiv	7.66 kW	6.93 kW
COP Tj = Tbiv	4.29	3.22
Pdh Tj = TOL	7.66 kW	6.93 kW
COP Tj = TOL	4.29	3.22
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 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	3094 kWh	3461 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

EN 14825		
	Low temperature	Medium temperature

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

η_s	197 %	157 %
Prated	7.66 kW	6.93 kW
SCOP	5.13	4.13
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.66 kW	6.93 kW
COP Tj = +2°C	4.29	3.22
Cdh	0.90	0.90
Pdh Tj = +7°C	4.91 kW	4.45 kW
COP Tj = +7°C	5.09	3.88
Cdh	0.90	0.90
Pdh Tj = 12°C	2.17 kW	1.97 kW
COP Tj = 12°C	5.75	4.85
Cdh	0.90	0.90
Pdh Tj = Tbiv	7.66 kW	6.93 kW
COP Tj = Tbiv	4.29	3.22
Pdh Tj = TOL	7.66 kW	6.93 kW
COP Tj = TOL	4.29	3.22
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W

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

PSB	16 W	16 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}	1997 kWh	2243 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	204 %	163 %
Prated	7.66 kW	6.93 kW
SCOP	5.29	4.29
T _{biv}	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	4.62 kW	4.18 kW
COP T _j = -7°C	5.17	4.07
C _{dh}	0.90	0.90

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

Pdh Tj = +2°C	2.81 kW	2.54 kW
COP Tj = +2°C	5.60	4.60
Cdh	0.90	0.90
Pdh Tj = +7°C	1.80 kW	1.63 kW
COP Tj = +7°C	5.76	4.90
Cdh	0.90	0.90
Pdh Tj = 12°C	1.13 kW	1.09 kW
COP Tj = 12°C	5.34	4.75
Cdh	0.90	0.90
Pdh Tj = Tbiv	7.66 kW	6.93 kW
COP Tj = Tbiv	4.29	3.22
Pdh Tj = TOL	7.66 kW	6.93 kW
COP Tj = TOL	4.29	3.22
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 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	3570 kWh	3985 kWh