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Summary of	TTF 12.6, TTF 15.6	Reg. No.	011-1W0397
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 12.6, TTF 15.6		
Heat Pump Type	Brine/Water		
Refrigerant	R454C		
Mass of Refrigerant	3.1 kg		
Certification Date	08.09.2020		

Model: TTF 12.6 (cool), TTC 12.6 (cool)

Configure model	
Model name	TTF 12.6 (cool), TTC 12.6 (cool)
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

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.19 kW	4.20 kW
El input	0.84 kW	1.34 kW
COP	5.01	3.13

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

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EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	216 %	169 %
Prated	12.03 kW	11.99 kW
SCOP	5.59	4.42
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.61 kW	10.59 kW
COP Tj = -7°C	4.81	3.55
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.45 kW	6.44 kW
COP Tj = +2°C	5.72	4.49
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.14 kW	4.13 kW
COP Tj = +7°C	6.12	4.99
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	2.30 kW	2.21 kW

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COP Tj = 12°C	6.29	5.25
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.03 kW	11.99 kW
COP Tj = Tbiv	4.53	3.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.03 kW	11.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.53	3.29
WTOL	75 °C	75 °C
Poff	19 W	19 W
PTO	19 W	19 W
PSB	19 W	19 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	4445 kWh	5607 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)

EN 14825		
	Low temperature	Medium temperature

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η_s	214 %	168 %
Prated	12.03 kW	11.99 kW
SCOP	5.55	4.39
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.03 kW	11.99 kW
COP Tj = +2°C	4.53	3.29
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	7.71 kW	7.69 kW
COP Tj = +7°C	5.51	4.12
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.41 kW	3.41 kW
COP Tj = 12°C	6.14	5.10
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.03 kW	11.99 kW
COP Tj = Tbiv	4.53	3.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.03 kW	11.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.53	3.29
WTOL	75 °C	75 °C
Poff	19 W	19 W

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PTO	19 W	19 W
PSB	19 W	19 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}	2896 kWh	3650 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	224 %	174 %
Prated	12.03 kW	11.99 kW
SCOP	5.80	4.56
T _{biv}	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	7.26 kW	7.24 kW
COP T _j = -7°C	5.69	4.31

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Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.41 kW	4.40 kW
COP Tj = +2°C	6.16	4.91
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	2.82 kW	2.82 kW
COP Tj = +7°C	6.19	5.16
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	2.29 kW	2.23 kW
COP Tj = 12°C	6.12	5.40
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.03 kW	11.99 kW
COP Tj = Tbiv	4.53	3.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.03 kW	11.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.53	3.29
WTOL	75 °C	75 °C
Poff	19 W	19 W
PTO	19 W	19 W
PSB	19 W	19 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}	5108 kWh	6485 kWh
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Model: TTF 15.6 (cool), TTC 15.6 (cool)

Configure model	
Model name	TTF 15.6 (cool), TTC 15.6 (cool)
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

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	5.18 kW	4.72 kW
El input	1.07 kW	1.48 kW
COP	4.86	3.18

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

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	210 %	168 %
Prated	14.46 kW	13.77 kW
SCOP	5.44	4.39
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.77 kW	12.16 kW
COP Tj = -7°C	4.46	3.40
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.76 kW	7.40 kW
COP Tj = +2°C	5.51	4.44
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.98 kW	4.75 kW
COP Tj = +7°C	6.13	5.03
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	2.29 kW	2.22 kW

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COP Tj = 12°C	6.18	5.31
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	14.46 kW	13.77 kW
COP Tj = Tbiv	4.30	3.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	14.46 kW	13.77 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	3.26
WTOL	75 °C	75 °C
Poff	19 W	19 W
PTO	19 W	19 W
PSB	19 W	19 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	5489 kWh	6476 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)

EN 14825		
	Low temperature	Medium temperature

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η_s	208 %	167 %
Prated	14.46 kW	13.77 kW
SCOP	5.41	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	14.46 kW	13.77 kW
COP Tj = +2°C	4.30	3.26
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	9.27 kW	8.83 kW
COP Tj = +7°C	5.13	3.99
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	4.11 kW	3.92 kW
COP Tj = 12°C	6.17	5.16
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	14.46 kW	13.77 kW
COP Tj = Tbiv	4.30	3.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	14.46 kW	13.77 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	3.26
WTOL	75 °C	75 °C
Poff	19 W	19 W

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PTO	19 W	19 W
PSB	19 W	19 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}	3573 kWh	4211 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	218 %	174 %
Prated	14.46 kW	13.77 kW
SCOP	5.66	4.56
T _{biv}	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	8.73 kW	8.32 kW
COP T _j = -7°C	5.32	4.24

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Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.30 kW	5.05 kW
COP Tj = +2°C	6.15	4.94
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.40 kW	3.24 kW
COP Tj = +7°C	6.27	5.24
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	2.29 kW	2.23 kW
COP Tj = 12°C	6.12	5.44
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	14.46 kW	13.77 kW
COP Tj = Tbiv	4.30	3.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	14.46 kW	13.77 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	3.26
WTOL	75 °C	75 °C
Poff	19 W	19 W
PTO	19 W	19 W
PSB	19 W	19 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}	6298 kWh	7451 kWh
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