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Summary of	TTF 7 basic	Reg. No.	011-1W0045
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 7 basic		
Heat Pump Type	Brine/Water		
Refrigerant	R410A		
Mass of Refrigerant	2 kg		
Certification Date	28.10.2016		

Model: TTF 7 basic, all climates

Configure model	
Model name	TTF 7 basic, 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	7.64 kW
El input	1.70 kW
COP	4.50

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

Warmer Climate

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EN 12102-1

	Low temperature
Sound power level indoor	55 dB(A)

EN 14825

	Low temperature
η_s	191 %
Prated	8.00 kW
SCOP	4.97
Tbiv	2 °C
TOL	2 °C
Pdh Tj = +2°C	7.60 kW
COP Tj = +2°C	4.49
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	7.70 kW
COP Tj = +7°C	4.85
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.90 kW
COP Tj = 12°C	5.45
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.60 kW

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COP $T_j = T_{biv}$	4.49
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	7.60 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	4.49
WTOL	60 °C
Poff	0 W
PTO	78 W
PSB	3 W
PCK	0 W
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Q_{he}	2052 kWh

Colder Climate

EN 12102-1	
	Low temperature
Sound power level indoor	55 dB(A)

EN 14825	
	Low temperature
η_s	200 %
Prated	10.00 kW

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SCOP	5.20
Tbiv	-15 °C
TOL	-22 °C
Pdh Tj = -7°C	7.80 kW
COP Tj = -7°C	5.13
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	7.90 kW
COP Tj = +2°C	5.42
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	7.90 kW
COP Tj = +7°C	5.42
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.90 kW
COP Tj = 12°C	5.68
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.80 kW
COP Tj = Tbiv	5.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.00
WTOL	60 °C
Poff	0 W

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PTO	78 W
PSB	3 W
PCK	0 W
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	1.89 kW
Annual energy consumption Q _{he}	4517 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	6.80
COP T _j = -15°C (if TOL<-20°C)	2.53
C _{dh} T _j = -15 °C	0.90

Average Climate

EN 12102-1	
	Low temperature
Sound power level indoor	55 dB(A)

EN 14825	
	Low temperature
η_s	192 %
Prated	8.00 kW
SCOP	5.01
T _{biv}	-10 °C

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TOL	-20 °C
Pdh Tj = -7°C	7.70 kW
COP Tj = -7°C	4.56
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	7.80 kW
COP Tj = +2°C	4.93
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	7.80 kW
COP Tj = +7°C	5.31
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	7.90 kW
COP Tj = 12°C	5.74
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	7.60 kW
COP Tj = Tbiv	4.49
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.49
WTOL	60 °C
Poff	0 W
PTO	78 W
PSB	3 W

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PCK	0 W
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Q _{he}	3153 kWh

Model: TTF 7 basic, average climates

Configure model	
Model name	TTF 7 basic, 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	7.64 kW	6.76 kW
El input	1.70 kW	2.67 kW
COP	4.50	2.53

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	55 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	192 %	122 %
Prated	8.00 kW	7.00 kW
SCOP	5.01	3.25
Tbiv	-10 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	7.70 kW	6.80 kW
COP Tj = -7°C	4.56	2.66
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.80 kW	7.10 kW
COP Tj = +2°C	4.93	3.19
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	7.80 kW	7.30 kW
COP Tj = +7°C	5.31	3.60
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	7.90 kW	7.50 kW

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COP Tj = 12°C	5.74	4.11
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	7.60 kW	6.80 kW
COP Tj = Tbiv	4.49	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.60 kW	6.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.49	2.53
WTOL	60 °C	60 °C
Poff	0 W	0 W
PTO	78 W	78 W
PSB	3 W	3 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	3153 kWh	4298 kWh