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Login

Summary of	TTF 13 basic	Reg. No.	011-1W0047
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 13 basic		
Heat Pump Type	Brine/Water		
Refrigerant	R410A		
Mass of Refrigerant	2.5 kg		
Certification Date	01.11.2016		

Model: TTF 13 basic, all climates

Configure model	
Model name	TTF 13 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	12.59 kW
El input	2.85 kW
COP	4.42

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	53 dB(A)

EN 14825	
	Low temperature
η_s	189 %
Prated	13.00 kW
SCOP	4.92
Tbiv	-10 °C
TOL	-20 °C
Pdh Tj = -7°C	12.60 kW
COP Tj = -7°C	4.48
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	12.70 kW
COP Tj = +2°C	4.84
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	12.80 kW
COP Tj = +7°C	5.21
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	12.90 kW

COP Tj = 12°C	5.63
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	12.60 kW
COP Tj = Tbiv	4.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.42
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 Qhe	5285 kWh

Warmer Climate

EN 14825	
	Low temperature
η_s	189 %
Prated	13.00 kW
SCOP	4.94

Tbiv	2 °C
TOL	0 °C
Pdh Tj = +2°C	12.60 kW
COP Tj = +2°C	4.42
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	12.70 kW
COP Tj = +7°C	4.76
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	12.90 kW
COP Tj = 12°C	5.34
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	12.60 kW
COP Tj = Tbiv	4.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.42
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 Qhe	3407 kWh

Colder Climate

EN 14825	
	Low temperature
η_s	196 %
Prated	16.00 kW
SCOP	5.10
Tbiv	-15 °C
TOL	-22 °C
Pdh Tj = -7°C	12.80 kW
COP Tj = -7°C	5.02
Cdh Tj = -7 °C	0.90
Pdh Tj = +2°C	12.80 kW
COP Tj = +2°C	5.31
Cdh Tj = +2 °C	0.90
Pdh Tj = +7°C	12.90 kW
COP Tj = +7°C	5.56
Cdh Tj = +7 °C	0.90
Pdh Tj = 12°C	12.90 kW

COP Tj = 12°C	5.60
Cdh Tj = +12 °C	0.90
Pdh Tj = Tbiv	12.70 kW
COP Tj = Tbiv	4.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.90
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	3.02 kW
Annual energy consumption Qhe	7542 kWh
Pdh Tj = -15°C (if TOL<-20°C)	12.70
COP Tj = -15°C (if TOL<-20°C)	4.90
Cdh Tj = -15 °C	0.90

Model: TTF 13 basic, average climates

Configure model	
Model name	TTF 13 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	12.59 kW	11.60 kW
El input	2.85 kW	4.52 kW
COP	4.42	2.57

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	53 dB(A)	53 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	189 %	122 %
Prated	13.00 kW	12.00 kW
SCOP	4.92	3.26
Tbiv	-10 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	12.60 kW	11.70 kW
COP Tj = -7°C	4.48	2.69
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	12.70 kW	12.00 kW
COP Tj = +2°C	4.84	3.20
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	12.80 kW	12.30 kW
COP Tj = +7°C	5.21	3.60
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	12.90 kW	12.50 kW

COP Tj = 12°C	5.63	4.09
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.60 kW	11.60 kW
COP Tj = Tbiv	4.42	2.57
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.60 kW	11.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.42	2.57
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	5285 kWh	7350 kWh