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Summary of	TTF 10 basic	Reg. No.	011-1W0046
Certificate Holder			
Name	tecalor GmbH		
Address	Fürstenbergerstr. 77	Zip	37603
City	Holzminden	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Name of testing laboratory	VDE Prüf- und Zertifizierungsinstitut		
Subtype title	TTF 10 basic		
Heat Pump Type	Brine/Water		
Refrigerant	Other		
Mass Of Refrigerant	2.6 kg		
Certification Date	28.10.2016		

Model: TTF 10 basic, all climates

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2	
	Low temperature
Heat output	9.70 kW
El input	2.22 kW
COP	4.37
Indoor water flow rate	1.71 m³/h

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	51 dB(A)

EN 14825

	Low temperature
η_s	190 %
Prated	10.00 kW
SCOP	4.94
Tbiv	-10 °C
TOL	-20 °C
Pdh Tj = -7°C	9.70 kW
COP Tj = -7°C	4.44
Cdh	0.90
Pdh Tj = +2°C	9.80 kW
COP Tj = +2°C	4.85
Cdh	0.90
Pdh Tj = +7°C	10.00 kW
COP Tj = +7°C	5.28
Cdh	0.90
Pdh Tj = 12°C	10.10 kW
COP Tj = 12°C	5.78
Cdh	0.90
Pdh Tj = Tbiv	9.70 kW
COP Tj = Tbiv	4.37

Pdh Tj = TOL	9.70 kW
COP Tj = TOL	4.37
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	4053 kWh

Warmer Climate

EN 14825	
	Low temperature
η_s	190 %
Prated	10.00 kW
SCOP	4.95
Tbiv	2 °C
TOL	0 °C
Pdh Tj = +2°C	9.70 kW
COP Tj = +2°C	4.37

Cdh	0.90
Pdh Tj = +7°C	9.80 kW
COP Tj = +7°C	4.76
Cdh	0.90
Pdh Tj = 12°C	10.00 kW
COP Tj = 12°C	5.44
Cdh	0.90
Pdh Tj = Tbiv	9.70 kW
COP Tj = Tbiv	4.37
Pdh Tj = TOL	9.70 kW
COP Tj = TOL	4.37
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	2617 kWh

Colder Climate

EN 14825

	Low temperature
η_s	199 %
Prated	12.00 kW
SCOP	5.17
Tbiv	-15 °C
TOL	-22 °C
Pdh Tj = -7°C	9.90 kW
COP Tj = -7°C	5.07
Cdh	0.90
Pdh Tj = +2°C	10.00 kW
COP Tj = +2°C	5.41
Cdh	0.90
Pdh Tj = +7°C	10.10 kW
COP Tj = +7°C	5.70
Cdh	0.90
Pdh Tj = 12°C	10.10 kW
COP Tj = 12°C	5.75
Cdh	0.90
Pdh Tj = Tbiv	9.90 kW
COP Tj = Tbiv	4.93

Pdh Tj = TOL	9.90 kW
COP Tj = TOL	4.93
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	2.40 kW
Annual energy consumption Qhe	5768 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.90
COP Tj = -15°C (if TOL<-20°C)	4.93
Cdh	0.90

Model: TTF 10 basic, average climates

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	9.70 kW	8.57 kW
El input	2.22 kW	3.67 kW
COP	4.37	2.34
Indoor water flow rate	1.71 m³/h	1.22 m³/h

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	51 dB(A)	51 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	190 %	114 %
Prated	10.00 kW	9.00 kW
SCOP	4.94	3.06
Tbiv	-10 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	9.70 kW	8.70 kW
COP Tj = -7°C	4.44	2.46
Cdh	0.90	0.90
Pdh Tj = +2°C	9.80 kW	9.10 kW
COP Tj = +2°C	4.85	2.99
Cdh	0.90	0.90
Pdh Tj = +7°C	10.00 kW	9.30 kW
COP Tj = +7°C	5.28	3.42
Cdh	0.90	0.90
Pdh Tj = 12°C	10.10 kW	9.50 kW
COP Tj = 12°C	5.78	3.95
Cdh	0.90	0.90
Pdh Tj = Tbiv	9.70 kW	8.60 kW
COP Tj = Tbiv	4.37	2.34

Pdh Tj = TOL	9.70 kW	8.60 kW
COP Tj = TOL	4.37	2.34
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	4053 kWh	5788 kWh