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Summary of	TTF 40	Reg. No.	011-1W0281
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	TÜV Rheinland Energy GmbH		
Subtype title	TTF 40		
Heat Pump Type	Brine/Water		
Refrigerant	R410a		
Mass Of Refrigerant	10 kg		

Model: TTF 40

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	43.10 kW	40.20 kW
El input	9.23 kW	17.45 kW
COP	4.67	2.99
Indoor water flow rate	5.30 m³/h	5.30 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	58 dB(A)	58 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	194 %	133 %
Prated	43.00 kW	40.00 kW
SCOP	5.05	3.53
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	43.20 kW	40.50 kW
COP Tj = -7°C	4.73	3.00
Pdh Tj = +2°C	43.50 kW	41.50 kW
COP Tj = +2°C	5.05	3.51
Pdh Tj = +7°C	43.80 kW	42.10 kW
COP Tj = +7°C	5.38	3.90
Pdh Tj = 12°C	44.10 kW	42.80 kW
COP Tj = 12°C	5.76	4.38
Pdh Tj = Tbiv	43.10 kW	40.20 kW
COP Tj = Tbiv	4.67	2.88

Pdh Tj = TOL	43.10 kW	40.20 kW
COP Tj = TOL	4.67	2.88
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	74 W	74 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	17606 kWh	23479 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	58 dB(A)	58 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	194 %	133 %
Prated	43.00 kW	40.00 kW

SCOP	5.05	3.53
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	43.10 kW	40.20 kW
COP Tj = +2°C	4.67	2.88
Pdh Tj = +7°C	43.40 kW	41.10 kW
COP Tj = +7°C	4.98	3.27
Pdh Tj = 12°C	43.90 kW	42.40 kW
COP Tj = 12°C	5.51	4.05
Pdh Tj = Tbiv	43.10 kW	40.20 kW
COP Tj = Tbiv	4.67	2.88
Pdh Tj = TOL	43.10 kW	40.20 kW
COP Tj = TOL	4.67	2.88
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	74 W	74 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW

Annual energy consumption Qhe	11415 kWh	15248 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	58 dB(A)	58 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	202 %	139 %
Prated	53.00 kW	50.00 kW
SCOP	5.25	3.68
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	43.60 kW	41.50 kW
COP Tj = -7°C	5.22	3.49
Pdh Tj = +2°C	43.90 kW	42.10 kW
COP Tj = +2°C	5.48	3.90
Pdh Tj = +7°C	44.00 kW	42.60 kW
COP Tj = +7°C	5.70	4.28
Pdh Tj = 12°C	44.00 kW	41.10 kW

COP Tj = 12°C	5.11	3.27
Pdh Tj = Tbiv	43.10 kW	41.10 kW
COP Tj = Tbiv	5.11	3.27
Pdh Tj = TOL	43.10 kW	40.20 kW
COP Tj = TOL	4.67	2.88
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	74 W	74 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	10.27 kW	10.14 kW
Annual energy consumption Qhe	25071 kWh	33723 kWh