

This information was generated by the HP KEYMARK database on 22 Jun 2022

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Summary of	TTF 33.5	Reg. No.	011-1W0457
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 33.5		
Heat Pump Type	Brine/Water		
Refrigerant	R410A		
Mass of Refrigerant	3.9 kg		
Certification Date	15.03.2021		
Testing basis	HP KEYMARK certification scheme rules V8		

Model: TTF 33.5

Configure model

Model name	TTF 33.5
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	20.18 kW	18.93 kW
El input	4.26 kW	6.42 kW
COP	4.73	2.95

EN 14511-4

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	failed
Starting and operating test	passed

Warmer Climate

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EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	214 %	160 %
Prated	33.28 kW	31.13 kW
SCOP	5.54	4.19
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	33.28 kW	31.13 kW
COP Tj = +2°C	4.26	2.86
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	21.39 kW	20.01 kW
COP Tj = +7°C	5.30	3.78
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	12.51 kW	12.08 kW
COP Tj = 12°C	6.06	4.85
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	33.28 kW	31.13 kW

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COP $T_j = T_{biv}$	4.26	2.86
P _{dh} $T_j = TOL$ or P _{dh} $T_j = T_{designh}$ if $TOL < T_{designh}$	33.28 kW	31.13 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	4.26	2.86
WTOL	65 °C	65 °C
P _{off}	12 W	12 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	7963 kWh	9906 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	221 %	165 %
Prated	33.28 kW	31.13 kW

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SCOP	5.72	4.33
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	20.14 kW	18.84 kW
COP Tj = -7°C	5.49	3.99
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	12.26 kW	11.47 kW
COP Tj = +2°C	6.11	4.73
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	12.53 kW	12.14 kW
COP Tj = +7°C	6.10	4.98
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	12.49 kW	12.22 kW
COP Tj = 12°C	5.91	5.12
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	33.28 kW	31.13 kW
COP Tj = Tbiv	4.26	2.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	33.28 kW	31.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.86
WTOL	65 °C	65 °C
Poff	12 W	12 W

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PTO	12 W	12 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	14325 kWh	17698 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	33.28	31.13
COP T _j = -15°C (if TOL<-20°C)	4.26	2.86
C _{dh} T _j = -15 °C	0.90	0.90

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	214 %	159 %
Prated	33.28 kW	31.13 kW
SCOP	5.55	4.18
T _{biv}	-10 °C	-10 °C

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TOL	-10 °C	-10 °C
Pdh Tj = -7°C	29.44 kW	27.54 kW
COP Tj = -7°C	4.63	3.14
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	17.92 kW	16.76 kW
COP Tj = +2°C	5.57	4.21
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	11.52 kW	10.78 kW
COP Tj = +7°C	6.11	4.83
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	12.52 kW	12.16 kW
COP Tj = 12°C	6.05	5.00
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	33.28 kW	31.13 kW
COP Tj = Tbiv	4.26	2.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	33.28 kW	31.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.86
WTOL	65 °C	65 °C
Poff	12 W	12 W
PTO	12 W	12 W
PSB	12 W	12 W

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PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	12358 kWh	15305 kWh