

Subtype TTF 27 HT

Certificate Holder	tecalor GmbH
Address	Fürstenbergerstr. 77
ZIP	37603
City	Holzminden
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	TTF 27 HT
Registration number	011-1W0187
Heat Pump Type	Brine/Water
Refrigerant	R134a
Mass of Refrigerant	6 kg
Certification Date	04.09.2019

Model TTF 27 HT

Model name	TTF 27 HT
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Brine/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	60 dB(A)	64 dB(A)
Sound power level outdoor	60 dB(A)	64 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	175 %	131 %
Prated	27.00 kW	25.00 kW
SCOP	4.58	4.58
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	27.50 kW	25.30 kW
COP Tj = -7°C	4.38	3.06
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	27.70 kW	26.10 kW
COP Tj = +2°C	4.59	3.48
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	27.90 kW	26.60 kW
COP Tj = +7°C	4.80	3.78
Cdh Tj = +7 °C	0.90	
Pdh Tj = 12°C	28.20 kW	27.10 kW
COP Tj = 12°C	5.03	4.12
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	27.40 kW	25.10 kW
COP Tj = Tbiv	4.34	2.96

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	27.40 kW	25.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.34	2.96
WTOL	75 °C	75 °C
Poff	0 W	0 W
PTO	3 W	3 W
PSB	3 W	3 W
PCK	46 W	46 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	12359 kWh	14872 kWh

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	180 %	136 %
Prated	34.00 kW	32.00 kW
SCOP	4.58	4.58
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	27.80 kW	26.10 kW
COP Tj = -7°C	4.70	3.46
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	28.00 kW	26.60 kW
COP Tj = +2°C	4.86	3.77
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	28.10 kW	27.00 kW
COP Tj = +7°C	5.00	4.05
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	28.20 kW	27.30 kW
COP Tj = 12°C	5.02	4.28
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	27.80 kW	25.00 kW
COP Tj = Tbiv	4.63	3.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	27.40 kW	25.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.34	2.96
WTOL	75 °C	75 °C
Poff	0 W	0 W
PTO	3 W	3 W
PSB	3 W	3 W
PCK	46 W	46 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.61 kW	6.52 kW

Annual energy consumption Q _{he}	17849 kWh	21670 kWh
P _{dh} T _j = -15 °C (if TOL	27.80	25.00
COP T _j = -15 °C (if TOL	4.63	3.29
C _{dh} T _j = -15 °C	0.90	0.90

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	174 %	131 %
Prated	27.00 kW	25.00 kW
SCOP	4.58	4.58
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2 °C	27.40 kW	25.10 kW
COP T _j = +2 °C	4.34	2.96
C _{dh} T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7 °C	27.70 kW	25.80 kW
COP T _j = +7 °C	4.55	3.29
C _{dh} T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12 °C	28.00 kW	26.80 kW
COP T _j = 12 °C	4.88	3.89
C _{dh} T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	27.40 kW	25.10 kW
COP T _j = T _{biv}	4.34	2.96
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	27.40 kW	25.10 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.34	2.96
WTOL	75 °C	75 °C
P _{off}	0 W	0 W
PTO	3 W	3 W
PSB	3 W	3 W
PCK	46 W	46 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	8031 kWh	9675 kWh