

Subtype TTF 40

Certificate Holder	tecalor GmbH
Address	Fürstenbergerstr. 77
ZIP	37603
City	Holzminden
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	TTF 40
Registration number	011-1W0281
Heat Pump Type	Brine/Water
Refrigerant	R410A
Mass of Refrigerant	10 kg

Model TTF 40

Model name	TTF 40
Application	Heating (medium temp)
Units	Indoor
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	n/a

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	58 dB(A)	58 dB(A)

EN 14825 | Average Climate

	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	43.10 kW	40.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.67	2.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	58 dB(A)	58 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	43.10 kW	40.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.67	2.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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 Q _{he}	25071 kWh	33723 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	58 dB(A)	58 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	194 %	133 %
Prated	43.00 kW	40.00 kW
SCOP	5.05	3.53
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	43.10 kW	40.20 kW
COP T _j = +2°C	4.67	2.88
P _{dh} T _j = +7°C	43.40 kW	41.10 kW
COP T _j = +7°C	4.98	3.27
P _{dh} T _j = 12°C	43.90 kW	42.40 kW
COP T _j = 12°C	5.51	4.05
P _{dh} T _j = T _{biv}	43.10 kW	40.20 kW
COP T _j = T _{biv}	4.67	2.88
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	43.10 kW	40.20 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.67	2.88
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.90	0.90
WTOL	60 °C	60 °C
P _{off}	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 Q _{he}	11415 kWh	15248 kWh