

## Subtype TTF 66

Certificate Holder	tecalor GmbH
Address	Lüchtringer Weg 3
ZIP	37603
City	Holzminden
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	TTF 66
Registration number	011-1W0282
Heat Pump Type	Brine/Water
Refrigerant	R410A
Mass of Refrigerant	14.5 kg

## Model TTF 66

Model name	TTF 66
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	n/a

## Brine/Water

### EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
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### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	67.10 kW	62.30 kW
El input	14.23 kW	21.60 kW
COP	4.56	2.82

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	59 dB(A)	59 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	190 %	131 %
Prated	67.00 kW	62.00 kW
SCOP	4.95	3.48
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	67.20 kW	62.80 kW
COP Tj = -7°C	4.62	2.94
Pdh Tj = +2°C	67.20 kW	62.80 kW
COP Tj = +2°C	4.93	3.44
Pdh Tj = +7°C	68.20 kW	65.50 kW
COP Tj = +7°C	5.25	3.82
Pdh Tj = 12°C	68.70 kW	66.50 kW
COP Tj = 12°C	5.61	4.28
Pdh Tj = Tbiv	67.10 kW	62.30 kW

COP Tj = Tbiv	4.56	2.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	67.10 kW	62.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.56	2.82
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	99 W	99 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	28022 kWh	37120 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	59 dB(A)	59 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	197 %	136 %
Prated	83.00 kW	78.00 kW
SCOP	5.13	3.60
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	68.00 kW	64.40 kW
COP Tj = -7°C	5.09	3.42
Pdh Tj = +2°C	68.30 kW	65.50 kW
COP Tj = +2°C	5.34	3.81
Pdh Tj = +7°C	68.60 kW	66.30 kW
COP Tj = +7°C	5.55	4.18
Pdh Tj = 12°C	68.70 kW	67.00 kW
COP Tj = 12°C	5.58	4.49
Pdh Tj = Tbiv	67.80 kW	63.70 kW
COP Tj = Tbiv	4.99	3.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	67.10 kW	62.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.56	2.82
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	99 W	99 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	16.03 kW	15.83 kW
Annual energy consumption Q <sub>he</sub>	39996 kWh	53447 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	59 dB(A)	59 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	190 %	130 %
Prated	67.00 kW	62.00 kW
SCOP	4.95	3.45
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>d,h</sub> T <sub>j</sub> = +2°C	67.10 kW	62.30 kW
COP T <sub>j</sub> = +2°C	4.56	2.82
P <sub>d,h</sub> T <sub>j</sub> = +7°C	67.60 kW	63.70 kW
COP T <sub>j</sub> = +7°C	4.86	3.20
P <sub>d,h</sub> T <sub>j</sub> = 12°C	68.40 kW	65.90 kW
COP T <sub>j</sub> = 12°C	5.37	3.96
P <sub>d,h</sub> T <sub>j</sub> = T <sub>biv</sub>	67.10 kW	62.30 kW
COP T <sub>j</sub> = T <sub>biv</sub>	4.56	2.82
P <sub>d,h</sub> T <sub>j</sub> = TOL or P <sub>d,h</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	67.10 kW	62.30 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	4.56	2.82
C <sub>d,h</sub> T <sub>j</sub> = TOL or P <sub>d,h</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.90	0.90
WTOL	60 °C	60 °C
P <sub>off</sub>	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	99 W	99 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	18119 kWh	24059 kWh