

Subtype TTL 10.1 AC comfort

Certificate Holder	tecalor GmbH
Address	Lütztringer Weg 3
ZIP	37603
City	Holzminden
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	TTL 10.1 AC comfort
Registration number	011-1W0984
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.6 kg
Certification Date	04.02.2025
Testing basis	HP KEYMARK certification scheme rules rev. 14

**Model TTL 10.1 AC comfort**

Model name	TTL 10.1 AC comfort
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

**General data**

Power supply	3x400V 50Hz
Off-peak product	n/a

**Outdoor Air/Water****EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

**EN 14511-2 | Heating**

	Low temperature	Medium temperature
Heat output	4.32 kW	4.05 kW
El input	0.80 kW	1.27 kW
COP	5.40	3.18

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level outdoor	46 dB(A)	46 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	195 %	157 %
Prated	11.66 kW	11.50 kW
SCOP	4.96	3.99
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.32 kW	10.17 kW
COP Tj = -7°C	3.15	2.63
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	6.32 kW	6.17 kW
COP Tj = +2°C	4.71	3.79
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.08 kW	3.93 kW

COP Tj = +7°C	6.90	5.32
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.38 kW	4.37 kW
COP Tj = 12°C	8.28	6.57
Cdh Tj = +12 °C	0.950	0.970
Pdh Tj = Tbiv	10.32 kW	10.17 kW
COP Tj = Tbiv	3.15	2.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.78 kW	9.53 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.97	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	75 °C	75 °C
Poff	12 W	13 W
PTO	28 W	17 W
PSB	12 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.88 kW	1.97 kW
Annual energy consumption Qhe	4855 kWh	5951 kWh

**EN 12102-1 | Colder Climate**

	Low temperature	Medium temperature
Sound power level outdoor	46 dB(A)	46 dB(A)

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
ηs	175 %	143 %
Prated	11.34 kW	11.13 kW
SCOP	4.46	3.66
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.91 kW	6.77 kW
COP Tj = -7°C	3.73	3.13
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.21 kW	4.07 kW
COP Tj = +2°C	5.32	4.22
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.88 kW	3.76 kW
COP Tj = +7°C	7.00	5.56
Cdh Tj = +7 °C	0.950	0.970
Pdh Tj = 12°C	4.37 kW	4.39 kW
COP Tj = 12°C	8.08	6.76
Cdh Tj = +12 °C	0.950	0.970
Pdh Tj = Tbiv	9.25 kW	9.08 kW

COP Tj = Tbiv	2.93	2.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.03 kW	6.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.45	1.98
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	7 °C	75 °C
Poff	12 W	13 W
PTO	28 W	17 W
PSB	12 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.31 kW	4.45 kW
Annual energy consumption Qhe	6274 kWh	7499 kWh
Pdh Tj = -15°C (if TOL)	9.25	9.08
COP Tj = -15°C (if TOL)	2.93	2.46
Cdh Tj = -15 °C	0.900	0.900

**EN 12102-1 | Warmer Climate**

	Low temperature	Medium temperature
Sound power level outdoor	46 dB(A)	46 dB(A)

**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
ηs	248 %	180 %
Prated	5.92 kW	6.14 kW
SCOP	6.27	4.58
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.92 kW	6.14 kW
COP Tj = +2°C	4.21	2.90
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.77 kW	3.86 kW
COP Tj = +7°C	5.97	4.02
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.36 kW	4.26 kW
COP Tj = 12°C	7.71	5.76
Cdh Tj = +12 °C	0.950	0.980
Pdh Tj = Tbiv	5.92 kW	6.14 kW
COP Tj = Tbiv	4.21	2.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.92 kW	6.14 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.21	2.90

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL  
< Tdesignh

WTOL	75 °C	75 °C
Poff	12 W	13 W
PTO	28 W	17 W
PSB	12 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1262 kWh	1792 kWh