

## Subtype TTL 10.1 AC comfort

Certificate Holder	tecalor GmbH
Address	Lüchtringer 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
$\eta_s$	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

$C_{dh} T_j = TOL$  or  $P_{dh} T_j = T_{designh}$  if  $TOL < T_{designh}$

WTOL	75 °C	75 °C
P <sub>off</sub>	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 Q <sub>he</sub>	1262 kWh	1792 kWh