Subtype TTL 10.1 ACS eco

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 ACS eco
Registration number	011-1W0986
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.4 kg
Certification Date	04.02.2025
Testing basis	HP KEYMARK certification scheme rules rev. 14

Model TTL 10.1 ACS eco	
Model name	TTL 10.1 ACS eco
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	3x230V 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	4.26 kW	3.70 kW
El input	0.79 kW	1.11 kW
COP	5.40	3.33

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	181 %	148 %
Prated	10.64 kW	10.62 kW
SCOP	4.59	3.79
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.41 kW	9.40 kW
COP Tj = -7°C	2.82	2.38
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.52 kW	5.69 kW
COP Tj = +2°C	4.23	3.51
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.70 kW	3.69 kW

COP Tj = +7°C	6.76	5.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.31 kW	3.22 kW
COP Tj = 12°C	8.50	6.82
Cdh Tj = +12 °C	0.930	0.970
Pdh Tj = Tbiv	9.41 kW	9.40 kW
COP Tj = Tbiv	2.82	2.38
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.13 kW	9.26 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	2.21
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	75 °C	75 °C
Poff	9 W	9 W
PTO	26 W	18 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.51 kW	1.36 kW
Annual energy consumption Qhe	4791 kWh	5795 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	136 %
Prated	10.79 kW	10.58 kW
SCOP	4.20	3.48
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.43 kW	6.40 kW
COP Tj = -7°C	3.37	2.85
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.03 kW	3.94 kW
COP Tj = +2°C	5.01	4.00
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.87 kW	2.79 kW
COP Tj = +7°C	7.20	5.85
Cdh Tj = +7 °C	0.940	0.970
Pdh Tj = 12°C	3.31 kW	3.25 kW
COP Tj = 12°C	8.61	7.03
Cdh Tj = +12 °C	0.940	0.970
Pdh Tj = Tbiv	8.80 kW	8.64 kW

COP Tj = Tbiv	2.72	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.02 kW	7.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.34	1.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	75 °C	75 °C
Poff	9 W	9 W
PTO	26 W	18 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.77 kW	3.46 kW
Annual energy consumption Qhe	6334 kWh	7492 kWh
Pdh Tj = -15°C (if TOL	8.80	8.64
COP Tj = -15°C (if TOL	2.72	2.33
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	255 %	185 %
Prated	5.87 kW	6.05 kW
SCOP	6.44	4.69
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.87 kW	6.05 kW
COP Tj = +2°C	3.96	2.86
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.73 kW	3.84 kW
COP Tj = +7°C	5.95	4.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.28 kW	3.13 kW
COP Tj = 12°C	8.09	6.00
Cdh Tj = +12 °C	0.940	0.970
Pdh Tj = Tbiv	5.87 kW	6.05 kW
COP Tj = Tbiv	3.96	2.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.87 kW	6.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.96	2.86

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	75 °C	75 °C
Poff	9 W	9 W
PTO	26 W	18 W
PSB	9 W	9 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	1218 kWh	1722 kWh