

## Subtype TTL 57

Certificate Holder	tecalor GmbH
Address	Lüchtringer Weg 3
ZIP	37603
City	Holzminde
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	TTL 57
Registration number	011-1W0512
Heat Pump Type	Outdoor Air/Water
Refrigerant	R407c
Mass of Refrigerant	7.5 kg
Certification Date	07.06.2023
Testing basis	HP KEYMARK certification scheme rules V11

## Model TTL 57

Model name	TTL 57
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
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	31.01 kW	29.91 kW
El input	8.64 kW	11.22 kW
COP	3.59	2.67

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	69 dB(A)	69 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	134 %	110 %
Prated	31.00 kW	33.00 kW
SCOP	3.42	2.84
Tbiv	-5 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	23.90 kW	25.50 kW
COP Tj = -7°C	2.88	2.30
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	29.60 kW	30.50 kW
COP Tj = +2°C	3.46	2.84
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	31.30 kW	30.70 kW
COP Tj = +7°C	3.87	3.24

Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	39.60 kW	38.70 kW
COP Tj = 12°C	4.78	4.05
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	25.20 kW	26.50 kW
COP Tj = Tbiv	3.03	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	22.10 kW	23.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.67	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C
Poff	7 W	7 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.90 kW	9.10 kW
Annual energy consumption Qhe	18707 kWh	24031 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	69 dB(A)	69 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	108 %	92 %
Prated	32.00 kW	34.00 kW
SCOP	2.78	2.37
Tbiv	-10 °C	-10 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	23.70 kW	24.90 kW
COP Tj = -7°C	3.03	2.48
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	29.50 kW	30.30 kW
COP Tj = +2°C	3.60	2.98
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	31.30 kW	30.80 kW
COP Tj = +7°C	3.98	3.40
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	39.60 kW	38.90 kW
COP Tj = 12°C	4.76	4.16
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	21.70 kW	23.10 kW
COP Tj = Tbiv	2.84	2.32

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.60 kW	17.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.07	1.73
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C
Poff	7 W	7 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	32.00 kW	34.00 kW
Annual energy consumption Qhe	28347 kWh	35394 kWh
Pdh Tj = -15°C (if TOL		
COP Tj = -15°C (if TOL		
Cdh Tj = -15 °C		

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	69 dB(A)	69 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	133 %	108 %
Prated	30.00 kW	31.00 kW
SCOP	3.39	2.78
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	29.80 kW	31.20 kW
COP Tj = +2°C	3.30	2.53
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	31.10 kW	30.30 kW
COP Tj = +7°C	3.70	2.90
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	39.50 kW	38.40 kW
COP Tj = 12°C	4.66	3.87
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	29.80 kW	31.20 kW
COP Tj = Tbiv	3.30	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	29.80 kW	31.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.30	2.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		

WTOL	60 °C	60 °C
Poff	7 W	7 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	25 W	25 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	11817 kWh	14885 kWh