

Subtype TTL 5.6 ACS, TTL 7.6 ACS

Certificate Holder	tecalor GmbH
Address	Fürstenbergerstr. 77
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Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	TTL 5.6 ACS, TTL 7.6 ACS
Registration number	011-1W0405
Heat Pump Type	Outdoor Air/Water
Refrigerant	R454C
Mass of Refrigerant	3 kg
Certification Date	30.11.2020

Model TTL 5.6 ACS

Model name	TTL 5.6 ACS
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	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 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	185 %	151 %
Prated	5.50 kW	5.60 kW
SCOP	4.70	3.85
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.86 kW	4.89 kW
COP Tj = -7°C	3.40	2.64
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	2.95 kW	3.03 kW
COP Tj = +2°C	4.58	3.80
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.16 kW	2.99 kW
COP Tj = +7°C	6.32	4.84
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.74 kW	3.57 kW
COP Tj = 12°C	8.19	6.09
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	4.68 kW	4.89 kW
COP Tj = Tbiv	3.40	2.64

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.43 kW	4.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.06	2.22
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	10 W	10 W
PSB	12 W	12 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.07 kW	1.50 kW
Annual energy consumption Qhe	2415 kWh	3021 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	151 %	126 %
Prated	8.20 kW	7.80 kW
SCOP	3.84	3.23
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.94 kW	4.70 kW
COP Tj = -7°C	3.67	2.94
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	3.00 kW	2.86 kW
COP Tj = +2°C	5.03	4.30
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.21 kW	3.08 kW
COP Tj = +7°C	6.81	5.42
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.74 kW	3.63 kW
COP Tj = 12°C	8.20	6.56
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	4.94 kW	4.70 kW
COP Tj = Tbiv	3.67	2.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.04 kW	2.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.93	2.20
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	10 W	10 W
PSB	12 W	12 W

PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.13 kW	5.19 kW
Annual energy consumption Q _{he}	5239 kWh	5927 kWh
P _{dh} T _j = -15°C (if TOL	4.00	3.64
COP T _j = -15°C (if TOL	2.93	2.20
C _{dh} T _j = -15 °C	0.90	0.90

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	208 %	143 %
Prated	3.00 kW	3.00 kW
SCOP	5.26	3.66
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	3.03 kW	2.97 kW
COP T _j = +2°C	4.29	2.86
C _{dh} T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	3.07 kW	2.72 kW
COP T _j = +7°C	5.52	3.61
C _{dh} T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	3.69 kW	3.46 kW
COP T _j = 12°C	7.51	5.33
C _{dh} T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	3.03 kW	2.97 kW
COP T _j = T _{biv}	4.29	2.86
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	3.03 kW	2.97 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.29	2.86
WTOL	75 °C	75 °C
P _{off}	12 W	12 W
PTO	10 W	10 W
PSB	12 W	12 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	768 kWh	1085 kWh

Model TTL 7.6 ACS

Model name	TTL 7.6 ACS
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	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 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	192 %	153 %
Prated	8.10 kW	8.00 kW
SCOP	4.88	3.90
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.13 kW	7.04 kW
COP Tj = -7°C	3.00	2.43
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.34 kW	4.28 kW
COP Tj = +2°C	4.82	3.79
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.19 kW	3.05 kW
COP Tj = +7°C	6.66	5.22
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.75 kW	3.60 kW
COP Tj = 12°C	8.40	6.33
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	7.13 kW	7.04 kW
COP Tj = Tbiv	3.00	2.43

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.86 kW	6.53 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.43
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	10 W	10 W
PSB	12 W	12 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.20 kW	1.43 kW
Annual energy consumption Qhe	3413 kWh	4219 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	151 %	128 %
Prated	11.80 kW	11.90 kW
SCOP	3.84	3.26
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.15 kW	7.21 kW
COP Tj = -7°C	3.17	2.70
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.35 kW	4.39 kW
COP Tj = +2°C	5.24	4.31
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.24 kW	3.15 kW
COP Tj = +7°C	7.18	5.99
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.75 kW	3.66 kW
COP Tj = 12°C	8.41	6.88
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	7.15 kW	7.21 kW
COP Tj = Tbiv	3.17	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.49 kW	6.29 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.74	2.22
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	10 W	10 W
PSB	12 W	12 W

PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.90 kW	6.90 kW
Annual energy consumption Q _{he}	7574 kWh	9005 kWh
P _{dh} T _j = -15°C (if TOL	6.49	6.29
COP T _j = -15°C (if TOL	2.74	2.22
C _{dh} T _j = -15 °C	0.90	0.90

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	230 %	163 %
Prated	4.30 kW	4.30 kW
SCOP	5.84	4.14
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	4.30 kW	4.30 kW
COP T _j = +2°C	4.30	2.93
C _{dh} T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	3.10 kW	2.80 kW
COP T _j = +7°C	5.77	3.90
C _{dh} T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	3.70 kW	3.49 kW
COP T _j = 12°C	7.69	5.53
C _{dh} T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	4.30 kW	4.30 kW
COP T _j = T _{biv}	4.30	2.93
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	4.30 kW	4.30 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.30	2.93
WTOL	75 °C	75 °C
P _{off}	12 W	12 W
PTO	10 W	10 W
PSB	12 W	12 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	984 kWh	1388 kWh