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Summary of	TTL 5.6 ACS, TTL 7.6 ACS	Reg. No.	011-1W0405
Certificate Holder			
Name	tecalor GmbH		
Address	Fürstenbergerstr. 77	Zip	37603
City	Holzminden	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Subtype title	TTL 5.6 ACS, TTL 7.6 ACS		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R454C		
Mass of Refrigerant	3 kg		
Certification Date	30.11.2020		

Model: TTL 5.6 ACS

Configure model	
Model name	TTL 5.6 ACS
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	3.31 kW	2.70 kW
El input	0.61 kW	0.82 kW
COP	5.42	3.29

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	208 %	143 %
Prated	3.00 kW	3.00 kW
SCOP	5.26	3.66
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.03 kW	2.97 kW
COP Tj = +2°C	4.29	2.86
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.07 kW	2.72 kW
COP Tj = +7°C	5.52	3.61
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.69 kW	3.46 kW
COP Tj = 12°C	7.51	5.33
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	3.03 kW	2.97 kW

COP Tj = Tbiv	4.29	2.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.86
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	768 kWh	1085 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825		
	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 Qhe	5239 kWh	5927 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.00	3.64
COP Tj = -15°C (if TOL<-20°C)	2.93	2.20
Cdh Tj = -15 °C	0.90	0.90

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825		
	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

Model: TTL 7.6 ACS

Configure model	
Model name	TTL 7.6 ACS
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	3.31 kW	2.70 kW
El input	0.61 kW	0.82 kW
COP	5.42	3.29

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	230 %	163 %
Prated	4.30 kW	4.30 kW
SCOP	5.84	4.14
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.30 kW	4.30 kW
COP Tj = +2°C	4.30	2.93
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.10 kW	2.80 kW
COP Tj = +7°C	5.77	3.90
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.70 kW	3.49 kW
COP Tj = 12°C	7.69	5.53
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	4.30 kW	4.30 kW

COP Tj = Tbiv	4.30	2.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.30 kW	4.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.93
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	984 kWh	1388 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	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	5.25 kW	4.98 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	6.56 kW	6.93 kW
Annual energy consumption Qhe	7574 kWh	9005 kWh
Pdh Tj = -15°C (if TOL<-20°C)	6.49	6.29
COP Tj = -15°C (if TOL<-20°C)	2.74	2.22
Cdh Tj = -15 °C	0.90	0.90

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825		
	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