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Summary of	TTL 25 A, TTL 25 AC	Reg. No.	011-1W0049
Certificate Holder			
Name	tecalor GmbH		
Address	Fürstenbergerstr. 77	Zip	37603
City	Holzminden	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Name of testing laboratory	VDE Prüf- und Zertifizierungsinstitut GmbH		
Subtype title	TTL 25 A, TTL 25 AC		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	Other		
Mass Of Refrigerant	4.7 kg		
Certification Date	01.11.2016		

Model: TTL 25 A

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	7.84 kW	7.36 kW
El input	1.54 kW	2.33 kW
COP	5.09	3.16
Indoor water flow rate	1.44 m³/h	0.82 m³/h

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	182 %	141 %
Prated	15.00 kW	15.00 kW
SCOP	4.63	3.59
Tbiv	-5 °C	-5 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.80 kW	13.80 kW
COP Tj = -7°C	2.98	2.48
Cdh	1.00	1.00
Pdh Tj = +2°C	8.30 kW	8.40 kW
COP Tj = +2°C	4.72	3.51
Cdh	1.00	1.00
Pdh Tj = +7°C	8.00 kW	7.80 kW
COP Tj = +7°C	6.16	4.61
Cdh	1.00	1.00
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	8.11	6.66
Cdh	1.00	1.00
Pdh Tj = Tbiv	11.80 kW	12.50 kW
COP Tj = Tbiv	3.16	2.59

Pdh Tj = TOL	12.60 kW	13.40 kW
COP Tj = TOL	2.87	2.28
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	38 W	38 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.21 kW	0.00 kW
Annual energy consumption Qhe	6689 kWh	8620 kWh

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	219 %	163 %
Prated	8.00 kW	8.00 kW
SCOP	5.54	4.14
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.30 kW	8.40 kW
COP Tj = +2°C	4.14	2.74

Cdh	1.00	1.00
Pdh Tj = +7°C	7.90 kW	7.50 kW
COP Tj = +7°C	5.47	3.64
Cdh	1.00	1.00
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	7.72	6.11
Cdh	1.00	1.00
Pdh Tj = Tbiv	8.30 kW	8.40 kW
COP Tj = Tbiv	4.14	2.74
Pdh Tj = TOL	16.90 kW	18.80 kW
COP Tj = TOL	2.61	2.31
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	38 W	38 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1930 kWh	2581 kWh

Colder Climate

EN 14825

	Low temperature	Medium temperature
η_s	159 %	130 %
Prated	21.00 kW	22.00 kW
SCOP	4.05	3.33
Tbiv	-10 °C	-10 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.60 kW	13.30 kW
COP Tj = -7°C	3.13	2.67
Cdh	1.00	1.00
Pdh Tj = +2°C	8.30 kW	8.30 kW
COP Tj = +2°C	5.15	3.92
Cdh	1.00	1.00
Pdh Tj = +7°C	8.00 kW	7.90 kW
COP Tj = +7°C	6.57	5.12
Cdh	1.00	1.00
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	8.11	6.95
Cdh	1.00	1.00
Pdh Tj = Tbiv	14.10 kW	15.20 kW
COP Tj = Tbiv	2.90	2.53

Pdh Tj = TOL	16.70 kW	18.30 kW
COP Tj = TOL	2.66	2.37
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	38 W	38 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	20.59 kW	22.15 kW
Annual energy consumption Qhe	12796 kWh	16285 kWh
Pdh Tj = -15°C (if TOL<-20°C)	16.70	18.30
COP Tj = -15°C (if TOL<-20°C)	2.66	2.37
Cdh	1.00	1.00

Model: TTL 25 AC

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	7.84 kW	7.36 kW
El input	1.54 kW	2.33 kW
COP	5.09	3.16
Indoor water flow rate	1.44 m³/h	0.82 m³/h

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	187 %	144 %
Prated	15.00 kW	15.00 kW
SCOP	4.76	3.67
Tbiv	-5 °C	-5 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.80 kW	13.80 kW
COP Tj = -7°C	2.98	2.48
Cdh	1.00	1.00
Pdh Tj = +2°C	8.30 kW	8.40 kW
COP Tj = +2°C	4.72	3.51
Cdh	1.00	1.00
Pdh Tj = +7°C	8.00 kW	7.80 kW
COP Tj = +7°C	6.16	4.61
Cdh	1.00	1.00
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	8.11	6.66
Cdh	1.00	1.00
Pdh Tj = Tbiv	11.80 kW	12.50 kW
COP Tj = Tbiv	3.16	2.59

Pdh Tj = TOL	12.60 kW	13.40 kW
COP Tj = TOL	2.87	2.28
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	38 W	38 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.21 kW	0.00 kW
Annual energy consumption Qhe	6513 kWh	8444 kWh

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	246 %	177 %
Prated	8.00 kW	8.00 kW
SCOP	6.22	4.51
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.30 kW	8.40 kW
COP Tj = +2°C	4.14	2.74

Cdh	1.00	1.00
Pdh Tj = +7°C	7.90 kW	7.50 kW
COP Tj = +7°C	5.47	3.64
Cdh	1.00	1.00
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	7.72	6.11
Cdh	1.00	1.00
Pdh Tj = Tbiv	8.30 kW	8.40 kW
COP Tj = Tbiv	4.14	2.74
Pdh Tj = TOL	16.90 kW	18.80 kW
COP Tj = TOL	2.61	2.31
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	38 W	38 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1718 kWh	2369 kWh

Colder Climate

EN 14825

	Low temperature	Medium temperature
η_s	160 %	131 %
Prated	21.00 kW	22.00 kW
SCOP	4.08	3.35
Tbiv	-10 °C	-10 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.60 kW	13.30 kW
COP Tj = -7°C	3.13	2.67
Cdh	1.00	1.00
Pdh Tj = +2°C	8.30 kW	8.30 kW
COP Tj = +2°C	5.15	3.92
Cdh	1.00	1.00
Pdh Tj = +7°C	8.00 kW	7.90 kW
COP Tj = +7°C	6.57	5.12
Cdh	1.00	1.00
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	8.11	6.95
Cdh	1.00	1.00
Pdh Tj = Tbiv	14.10 kW	15.20 kW
COP Tj = Tbiv	2.90	2.53

Pdh Tj = TOL	16.70 kW	18.30 kW
COP Tj = TOL	2.66	2.37
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	38 W	38 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	20.59 kW	22.15 kW
Annual energy consumption Qhe	12690 kWh	16179 kWh
Pdh Tj = -15°C (if TOL<-20°C)	16.70	18.30
COP Tj = -15°C (if TOL<-20°C)	2.66	2.37
Cdh	1.00	1.00