Login

Summary of	TTL 20 A		Reg. No.	011-1W0072
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 20 A			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R410A			
Mass of Refrigerant	4.7 kg			
Certification Date	10.04.2017			

Model: TTL 20 A

Configure model	
Model name	TTL 20 A
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/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

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	185 %	143 %
Prated	11.00 kW	12.00 kW
SCOP	4.70	3.65
Tbiv	-5 °C	-5 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.50 kW	10.60 kW
COP Tj = -7°C	3.30	2.69
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.30 kW	8.40 kW
COP Tj = +2°C	4.72	3.51
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	8.00 kW	7.80 kW
COP Tj = +7°C	6.16	4.61
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	9.10 kW	9.00 kW

COP Tj = 12°C	8.11	6.66
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	8.80 kW	9.90 kW
COP Tj = Tbiv	3.46	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.53 kW	9.48 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.15	2.29
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	0.48 kW	0.69 kW
Annual energy consumption Qhe	4839 kWh	6801 kWh

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	214 %	163 %
Prated	7.00 kW	8.00 kW
SCOP	5.44	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 Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	7.90 kW	7.50 kW
COP Tj = +7°C	5.47	3.64
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	7.72	6.11
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	8.30 kW	8.40 kW
COP Tj = Tbiv	4.14	2.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.90 kW	12.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.98	2.45
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	1720 kWh	2581 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	165 %	132 %
Prated	15.00 kW	17.00 kW
SCOP	4.20	3.38
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.20 kW	10.10 kW
COP Tj = -7°C	3.50	2.91
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.30 kW	8.30 kW
COP Tj = +2°C	5.15	3.92
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	8.00 kW	7.90 kW
COP Tj = +7°C	6.57	5.12
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	9.10 kW	9.00 kW

COP Tj = 12°C	8.11	6.95
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	9.20 kW	10.10 kW
COP Tj = Tbiv	3.50	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	12.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.06	2.56
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	15.27 kW	16.65 kW
Annual energy consumption Qhe	8804 kWh	12405 kWh
Pdh Tj = -15°C (if TOL<-20°C)	11.80	12.60
COP Tj = -15°C (if TOL<-20°C)	3.06	2.56
Cdh Tj = -15 °C	0.90	0.90