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### This information was generated by the HP KEYMARK database on 7 Jul 2022

#### **Login**

Summary of	TTF 27	Reg. No.	011-1W0280				
Certificate Holder		<u> </u>					
Name	tecalor GmbH	tecalor GmbH					
Address	Fürstenbergerstr. 77	Zip	37603				
City	Holzminden	Country	Germany				
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH						
Subtype title	TTF 27	TTF 27					
Heat Pump Type	Brine/Water	Brine/Water					
Refrigerant	R410A	R410A					
Mass of Refrigerant	7.2 kg	7.2 kg					



# Model: TTF 27

Configure model				
Model name	TTF 27			
Application	Heating (medium temp)			
Units	Indoor + Outdoor			
Climate Zone	Colder Climate + Warmer Climate			
Reversibility	No			
Cooling mode application (optional)	n/a			

General Data		
Power supply	3x400V 50Hz	

# Heating

EN 14511-4				
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed			
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed			
Shutting off the heat transfer medium flow	passed			
Complete power supply failure	passed			

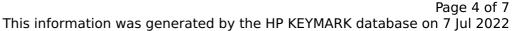
EN 14511-2						
	Low temperature	Medium temperature				
Heat output	29.69 kW	26.69 kW				
El input	6.12 kW	9.57 kW				
СОР	4.85	2.79				

## Warmer Climate



EN 12102-1						
	Low temperature	Medium temperature				
Sound power level indoor	55 dB(A)	55 dB(A)				
Sound power level outdoor	60 dB(A)	60 dB(A)				

EN 14825						
	Low temperature	Medium temperature				
$\eta_{s}$	201 %	131 %				
Prated	30.00 kW	27.00 kW				
SCOP	5.23	3.48				
Tbiv	2 °C	2 °C				
TOL	2 °C	2 °C				
Pdh Tj = $+2$ °C	29.70 kW	26.70 kW				
$COP Tj = +2^{\circ}C$	4.85	2.79				
Pdh Tj = $+7^{\circ}$ C	30.00 kW	27.60 kW				
$COPTj = +7^{\circ}C$	5.22	3.22				
Pdh Tj = 12°C	30.50 kW	28.90 kW				
COP Tj = 12°C	5.85	4.10				
Pdh Tj = Tbiv	29.70 kW	26.70 kW				
COP Tj = Tbiv	4.85	2.79				
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	29.70 kW	26.70 kW				





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 4.85 2.79 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 0.90 0.90 60 °C WTOL 60 °C 0 W Poff 0 W PTO 7 W 7 W **PSB** 7 W 7 W **PCK** 74 W 74 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW

## Colder Climate

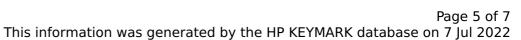
Annual energy consumption Qhe

EN 12102-1						
	Low temperature	Medium temperature				
Sound power level indoor	55 dB(A)	55 dB(A)				
Sound power level outdoor	60 dB(A)	60 dB(A)				

7587 kWh

10292 kWh

EN 14825					
	Low temperature	Medium temperature			
$\eta_{s}$	213 %	139 %			
Prated	37.00 kW	34.00 kW			





SCOP	5.53	3.68
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	30.20 kW	28.00 kW
COP Tj = -7°C	5.51	3.47
Pdh Tj = +2°C	30.50 kW	28.70 kW
COP Tj = +2°C	5.83	3.92
Pdh Tj = $+7^{\circ}$ C	30.60 kW	29.20 kW
$COP Tj = +7^{\circ}C$	6.09	4.36
Pdh Tj = 12°C	30.70 kW	29.60 kW
COP Tj = 12°C	6.13	4.73
Pdh Tj = Tbiv	30.10 kW	27.60 kW
COP Tj = Tbiv	5.38	3.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	29.70 kW	26.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.85	2.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	60 °C	60 °C
Poff	o w	o w
PTO	7 W	7 W
PSB	7 W	7 W
PCK	74 W	74 W





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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.26 kW	7.13 kW
Annual energy consumption Qhe	1646 kWh	22680 kWh

# **Average Climate**

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	55 dB(A)	55 dB(A)		
Sound power level outdoor	60 dB(A)	60 dB(A)		

EN 14825			
Low temperature	Medium temperature		
203 %	132 %		
30.00 kW	27.00 kW		
5.28	3.50		
-10 °C	-10 °C		
-10 °C	-10 °C		
29.80 kW	27.00 kW		
4.92	2.92		
30.10 kW	28.00 kW		
5.31	3.49		
	Low temperature  203 %  30.00 kW  5.28  -10 °C  -10 °C  29.80 kW  4.92  30.10 kW		



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Pdh Tj = $+7^{\circ}$ C	30.40 kW	28.70 kW
$COP Tj = +7^{\circ}C$	5.71	3.93
Pdh Tj = 12°C	30.70 kW	29.30 kW
COP Tj = 12°C	6.16	4.47
Pdh Tj = Tbiv	29.70 kW	26.70 kW
COP Tj = Tbiv	4.85	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	29.70 kW	26.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.85	2.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	60 °C	60 °C
Poff	0 W	0 W
РТО	7 W	7 W
PSB	7 W	7 W
PCK	74 W	74 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	11619 kWh	15758 kWh