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Login

Summary of	Volan 12	Reg. No.	011-1W0532	
Certificate Holder				
Name	THERMAGEN sp. z o.o.	THERMAGEN sp. z o.o.		
Address	UI. Warszawska 50	Zip	82-100	
City	Nowy Dwór Gdański	Country	Poland	
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH			
Subtype title	Volan 12			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R290			
Mass of Refrigerant	0.85 kg			
Certification Date	01.06.2022			
Testing basis	European KEYMARK Scheme for Heat Pumps Rev. 9 (as of 2021-03)			



Model: Volan 12 400V

Configure model		
Model name	Volan 12 400V	
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	5.30 kW	4.60 kW	
El input	1.11 kW	1.60 kW	
СОР	4.80	2.90	

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	57 dB(A)	57 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
η_{s}	175 %	150 %	
Prated	6.30 kW	6.10 kW	
SCOP	4.45	3.82	
Tbiv	2 °C	2 °C	
TOL	2 °C	2 °C	
Pdh Tj = +2°C	6.32 kW	6.13 kW	
COP Tj = +2°C	2.62	1.90	
Cdh Tj = +2 °C	1.00	1.00	
Pdh Tj = +7°C	4.37 kW	4.03 kW	
COP Tj = +7°C	5.34	3.80	
Cdh Tj = +7 °C	0.99	0.99	
Pdh Tj = 12°C	2.57 kW	2.61 kW	
COP Tj = 12°C	4.41	4.51	
Cdh Tj = +12 °C	0.98	0.98	
Pdh Tj = Tbiv	6.32 kW	6.13 kW	

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COP Tj = Tbiv	2.62	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.32 kW	6.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.62	1.90
WTOL	70 °C	70 °C
Poff	0 W	0 W
РТО	10 W	10 W
PSB	8 W	8 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	1890 kWh	2133 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	57 dB(A)	57 dB(A)	

EN 14825		
Low temperature	Medium temperature	
136 %	113 %	
6.60 kW	6.60 kW	
	Low temperature	





SCOP	3.47	2.89
Tbiv	-12 °C	-12 °C
TOL	-15 °C	-15 °C
Pdh Tj = -7°C	4.06 kW	4.05 kW
COP Tj = -7°C	3.52	2.55
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	2.47 kW	2.41 kW
COP Tj = +2°C	4.48	3.70
Cdh Tj = +2 °C	0.980	0.990
Pdh Tj = $+7$ °C	2.32 kW	2.32 kW
$COP Tj = +7^{\circ}C$	4.50	4.46
Cdh Tj = +7 °C	0.980	0.980
Pdh Tj = 12°C	2.54 kW	2.57 kW
COP Tj = 12°C	4.28	4.48
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	4.86 kW	4.86 kW
COP Tj = Tbiv	2.74	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.04 kW	4.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C





Poff	o w	o w
РТО	10 W	10 W
PSB	8 W	8 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.60 kW	6.60 kW
Annual energy consumption Qhe	4692 kWh	5628 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.04	4.98
COP Tj = -15°C (if TOL $<$ -20°C)	2.64	2.04
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	57 dB(A)	57 dB(A)	

EN 14825		
Low temperature	Medium temperature	
154 %	125 %	
6.50 kW	6.50 kW	
3.93	3.21	
	Low temperature 154 % 6.50 kW	





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Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7° C	5.76 kW	5.76 kW
$COP Tj = -7^{\circ}C$	2.72	2.02
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	3.55 kW	3.56 kW
$COPTj = +2^{\circ}C$	4.25	3.20
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7$ °C	2.31 kW	2.31 kW
$COPTj = +7^{\circ}C$	4.53	4.24
Cdh Tj = $+7$ °C	0.980	0.980
Pdh Tj = 12°C	2.52 kW	2.56 kW
COP Tj = 12°C	4.26	4.50
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	5.76 kW	5.76 kW
COP Tj = Tbiv	2.72	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.68 kW	5.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	0 W	0 W



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РТО	10 W	10 W
PSB	8 W	8 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.82 kW	0.85 kW
Annual energy consumption Qhe	3418 kWh	4190 kWh



Model: Volan 12

Configure model		
Model name	Volan 12	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply 1x230V 50Hz		

EN 14511-2

Heating

Low temperature	Medium temperature
5.30 kW	4.60 kW

Heat output	5.30 kW	4.60 kW
El input	1.11 kW	1.60 kW
COP	4.80	2.90

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

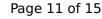
Warmer Climate



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EN 14825		
	Low temperature	Medium temperature
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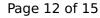


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Colder Climate

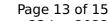
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