

Subtype Volan 18

Certificate Holder	THERMAGEN sp. z o.o.
Address	Ul. Warszawska 50
ZIP	82-100
City	Nowy Dwór Gdański
Country	PL
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Volan 18
Registration number	011-1W0533
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.37 kg
Certification Date	01.06.2022
Testing basis	Europäisches Zertifizierungsprogramm Wärmepumpen KEYMARK Version8 (Stand: 2020-09)

Model Volan 18 400V

Model name	Volan 18 400V
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.53 kW	8.48 kW
El input	1.50 kW	2.53 kW
COP	5.02	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	175 %	138 %
Prated	10.60 kW	10.50 kW
SCOP	4.46	3.53
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.44 kW	9.26 kW
COP Tj = -7°C	3.30	2.40
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.76 kW	5.63 kW
COP Tj = +2°C	3.97	3.13
Cdh Tj = +2 °C	0.990	0.990

Pdh Tj = +7°C	6.56 kW	6.18 kW
COP Tj = +7°C	6.27	5.18
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	4.25 kW	6.14 kW
COP Tj = 12°C	7.00	6.65
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.55 kW	10.47 kW
COP Tj = Tbiv	3.14	2.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.55 kW	10.47 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.14	2.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	9 W	9 W
PSB	8 W	8 W
PCK	9 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4914 kWh	6144 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	145 %	124 %
Prated	10.00 kW	10.00 kW
SCOP	3.70	3.16
Tbiv	-15 °C	-15 °C
TOL	-15 °C	-15 °C
Pdh Tj = -7°C	5.95 kW	6.04 kW
COP Tj = -7°C	3.73	3.16
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.47 kW	4.64 kW
COP Tj = +2°C	4.26	3.47
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	7.64 kW	6.48 kW
COP Tj = +7°C	6.50	5.65
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	4.80 kW	6.46 kW
COP Tj = 12°C	7.22	6.96

Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	8.16 kW	8.15 kW
COP Tj = Tbiv	3.11	2.40
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.16 kW	8.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.11	2.40
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	9 W	9 W
PSB	8 W	8 W
PCK	9 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.00 kW	10.00 kW
Annual energy consumption Qhe	6661 kWh	7795 kWh
Pdh Tj = -15°C (if TOL		
COP Tj = -15°C (if TOL		
Cdh Tj = -15 °C		

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	236 %	188 %
Prated	11.70 kW	11.00 kW
SCOP	5.98	4.77
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.69 kW	10.96 kW
COP Tj = +2°C	3.04	2.19
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	8.22 kW	7.47 kW
COP Tj = +7°C	5.70	4.25
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.99 kW	7.27 kW
COP Tj = 12°C	7.27	6.27
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.69 kW	10.96 kW
COP Tj = Tbiv	3.04	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.69 kW	10.96 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	2.19
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	9 W	9 W
PSB	8 W	8 W
PCK	9 W	9 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2613 kWh	3079 kWh

Model Volan 18

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Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.53 kW	8.48 kW
El input	1.50 kW	2.53 kW
COP	5.02	3.35

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Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4914 kWh	6144 kWh

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	Low temperature	Medium temperature
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Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	8.22 kW	7.47 kW
COP Tj = +7°C	5.70	4.25
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.99 kW	7.27 kW
COP Tj = 12°C	7.27	6.27
Cdh Tj = +12 °C	0.990	0.990
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.69 kW	10.96 kW

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