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Summary of	VWF 87/4	Reg. No.	40046299
Certificate Holder			
Name	Vaillant Deutschland GmbH & Co KG		
Address	Berghauser Straße 40	Zip	42859
City	Remscheid	Country	Germany
Certification Body	VDE Testing and Certification Institute GmbH		
Subtype title	VWF 87/4		
Heat Pump Type	Brine/Water		
Refrigerant	R410A		
Mass of Refrigerant	2.4 kg		
Certification Date	28.04.2021		
Testing basis	DIN EN 14511-1:2019-07; EN 14511-1:2018 DIN EN 14511-2:2019-07; EN 14511-2:2018 DIN EN 14511-3:2019-07; EN 14511-3:2018 DIN EN 14511-4:2019-07; EN 14511-4:2018 DIN EN 12102-1:2018-02; EN 12102-1:2017		

Model: VWF 87/4

Configure model	
Model name	VWF 87/4
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.82 kW	8.94 kW
El input	1.82 kW	2.78 kW
COP	4.84	3.22

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
Defrost test	passed

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	50 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	202 %	147 %
Prated	8.82 kW	8.94 kW
SCOP	5.26	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.82 kW	8.93 kW
COP Tj = -7°C	4.90	3.33
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	8.81 kW	8.89 kW
COP Tj = +2°C	5.21	3.81
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.80 kW	8.86 kW
COP Tj = +7°C	5.52	4.19
Cdh Tj = +7 °C	1.00	1.00

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Pdh Tj = 12°C	8.78 kW	8.83 kW
COP Tj = 12°C	5.87	4.65
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	8.82 kW	8.94 kW
COP Tj = Tbiv	4.84	3.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.82 kW	8.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	3.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	4 W	4 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3469 kWh	4781 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	50 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	205 %	148 %
Prated	8.82 kW	8.94 kW
SCOP	5.32	3.89
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.82 kW	8.94 kW
COP Tj = +2°C	4.84	3.22
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.81 kW	8.91 kW
COP Tj = +7°C	5.14	3.59
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	8.79 kW	8.85 kW
COP Tj = 12°C	5.63	4.33
Cdh Tj = +12 °C	1.00	1.00

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Pdh Tj = Tbiv	8.82 kW	8.94 kW
COP Tj = Tbiv	4.84	3.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.82 kW	8.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	3.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	4 W	4 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2215 kWh	3069 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	50 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825

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	Low temperature	Medium temperature
η_s	207 %	149 %
Prated	8.82 kW	8.94 kW
SCOP	5.38	3.94
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.81 kW	8.90 kW
COP Tj = -7°C	5.25	3.70
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	8.79 kW	8.87 kW
COP Tj = +2°C	5.54	4.11
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.79 kW	8.84 kW
COP Tj = +7°C	5.77	4.50
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	8.78 kW	8.82 kW
COP Tj = 12°C	5.83	4.84
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	8.82 kW	8.94 kW
COP Tj = Tbiv	4.84	3.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.82 kW	8.94 kW

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COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	4.84	3.22
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.00	1.00
WTOL	65 °C	65 °C
P _{off}	7 W	7 W
PTO	4 W	4 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	4041 kWh	5600 kWh
Cdh $T_j = -15$ °C	1.00	1.00

Model: VWF 88/4

Configure model	
Model name	VWF 88/4
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.82 kW	8.94 kW
El input	1.82 kW	2.78 kW
COP	4.84	3.22

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
Defrost test	passed

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	50 dB(A)
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EN 14825

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PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3469 kWh	4781 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
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Sound power level outdoor	- dB(A)	- dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	205 %	148 %
Prated	8.82 kW	8.94 kW
SCOP	5.32	3.89
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.82 kW	8.94 kW
COP Tj = +2°C	4.84	3.22
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.81 kW	8.91 kW
COP Tj = +7°C	5.14	3.59
Cdh Tj = +7 °C	1.00	1.00
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WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	4 W	4 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2215 kWh	3069 kWh

Colder Climate

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Sound power level outdoor	- dB(A)	- dB(A)

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COP Tj = +2°C	5.54	4.11
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.79 kW	8.84 kW
COP Tj = +7°C	5.77	4.50
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	8.78 kW	8.82 kW
COP Tj = 12°C	5.83	4.84
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	8.82 kW	8.94 kW
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.82 kW	8.94 kW

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Supplementary Heater: PSUP	0.00 kW	0.00 kW
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