

## Subtype VWF 87/4

Certificate Holder	Vaillant Deutschland GmbH & Co KG
Address	Berghauser Straße 40
ZIP	42859
City	Remscheid
Country	DE
Certification Body	VDE Testing and Certification Institute GmbH
Subtype title	VWF 87/4
Registration number	40046299
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

Model name	VWF 87/4
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

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

## Brine/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 12102-1 | Average Climate

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

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	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
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

#### EN 12102-1 | Colder Climate

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

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	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
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	4041 kWh	5600 kWh
Cdh Tj = -15 °C	1.00	1.00

#### EN 12102-1 | Warmer Climate

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

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	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
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 Q <sub>he</sub>	2215 kWh	3069 kWh

## Model VWF 88/4

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

## General data

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

## Brine/Water

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Defrost test	passed
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### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
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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

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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
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Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4041 kWh	5600 kWh
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Sound power level outdoor	- dB(A)	- dB(A)

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$\eta_s$	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
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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 Q <sub>he</sub>	2215 kWh	3069 kWh