Subtype VWL 77/5 230V / VWL 77/5 230V S2 / VWL 79/5 230V / VWL 79/5 230V S2

Certificate Holder	Vaillant Deutschland GmbH & Co KG
Address	Berghauser Straße 40
ZIP	42859
City	Remscheid
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	VWL 77/5 230V / VWL 77/5 230V S2 / VWL 79/5 230V / VWL 79/5 230V S2
Registration number	011-1W0755
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	1.8 kg
Certification Date	10.08.2022
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 14825:2019-07; EN 14825:2018, DIN EN 12102-1:2018-02; EN 12102-1:2017

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Model VWL 77/5 230V

Model name	VWL 77/5 230V
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	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	5.77 kW	6.84 kW
El input	1.55 kW	2.60 kW
COP	3.72	2.63

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	47 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	169 %	133 %
Prated	7.34 kW	6.32 kW
SCOP	4.29	3.36
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.53 kW	5.62 kW
COP Tj = -7°C	2.63	1.98
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	3.84 kW	3.42 kW
COP Tj = +2°C	4.26	3.45
Cdh Tj = +2 °C	1.000	1.000

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Pdh Tj = +7°C	2.84 kW	2.64 kW
COP Tj = +7°C	5.67	4.29
Cdh Tj = +7 °C	0.970	0.966
Pdh Tj = 12°C	3.43 kW	3.22 kW
COP Tj = 12°C	7.48	6.01
Cdh Tj = +12 °C	0.967	0.961
Pdh Tj = Tbiv	6.53 kW	5.62 kW
COP Tj = Tbiv	2.63	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.96 kW	4.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.54	1.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.38 kW	1.74 kW
Annual energy consumption Qhe	3538 kWh	3849 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	47 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	157 %	114 %
Prated	6.25 kW	6.08 kW
SCOP	4.00	2.94
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	3.59 kW	3.81 kW
COP Tj = -7°C	3.38	2.53
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	2.55 kW	2.29 kW
COP Tj = +2°C	5.03	3.70
Cdh Tj = +2 °C	0.971	1.000
Pdh Tj = +7°C	2.86 kW	2.69 kW
COP Tj = +7°C	5.87	4.69
Cdh Tj = +7 °C	0.969	0.964
Pdh Tj = 12°C	3.42 kW	3.26 kW
COP Tj = 12°C	7.42	6.39

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Cdh Tj = +12 °C	0.967	0.959
Pdh Tj = Tbiv	5.14 kW	4.99 kW
COP Tj = Tbiv	2.36	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.81 kW	4.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.25 kW	6.08 kW
Annual energy consumption Qhe	3854 kWh	5106 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	44 dB(A)	47 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	221 %	154 %
Prated	4.45 kW	4.33 kW
SCOP	5.59	3.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.49 kW	4.36 kW
COP Tj = +2°C	3.63	2.45
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	2.82 kW	2.77 kW
COP Tj = +7°C	5.09	3.26
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	3.33 kW	3.14 kW
COP Tj = 12°C	6.87	5.30
Cdh Tj = +12 °C	0.969	0.965
Pdh Tj = Tbiv	4.49 kW	4.36 kW
COP Tj = Tbiv	3.63	2.45
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.49 kW	4.36 kW

This information was generated by the HP KEYMARK database on 19.05.2024

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.63	2.45
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 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	1073 kWh	1474 kWh

This information was generated by the HP KEYMARK database on 19.05.2024

Model VWL 79/5 230V	
Model name	VWL 79/5 230V
Application	Heating + DHW + low temp
Units	Indoor
Climate zone (for heating)	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 16147 | Average Climate	
Declared load profile	XL
Efficiency ηDHW	96 %
COP	2.33
Heating up time	02:24 h:min
Standby power input	38.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	270 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	90 %
COP	2.19
Heating up time	02:51 h:min
Standby power input	39.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	266 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	113 %
COP	2.75
Heating up time	01:15 h:min
Standby power input	34.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	275 l

EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

This information was generated by the HP KEYMARK database on 19.05.2024

Defrost test	passed	
Starting and operating test	passed	

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	5.77 kW	6.84 kW
El input	1.55 kW	2.60 kW
COP	3.72	2.63

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	169 %	133 %
Prated	7.34 kW	6.32 kW
SCOP	4.29	3.36
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.53 kW	5.62 kW
COP Tj = -7°C	2.63	1.98
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	3.84 kW	3.42 kW
COP Tj = +2°C	4.26	3.45
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	2.84 kW	2.64 kW
COP Tj = +7°C	5.67	4.29
Cdh Tj = +7 °C	0.970	0.966
Pdh Tj = 12°C	3.43 kW	3.22 kW
COP Tj = 12°C	7.48	6.01
Cdh Tj = +12 °C	0.970	0.961
Pdh Tj = Tbiv	6.53 kW	5.62 kW
COP Tj = Tbiv	2.63	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.96 kW	4.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.54	1.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W

This information was generated by the HP KEYMARK database on 19.05.2024

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.38 kW	1.74 kW
Annual energy consumption Qhe	3538 kWh	3849 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	157 %	114 %
Prated	6.25 kW	6.08 kW
SCOP	4.00	2.94
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	3.59 kW	3.81 kW
COP Tj = -7°C	3.38	2.53
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	2.55 kW	2.29 kW
COP Tj = +2°C	5.03	3.70
Cdh Tj = +2 °C	0.971	1.000
Pdh Tj = +7°C	2.86 kW	2.69 kW
COP Tj = +7°C	5.87	4.69
Cdh Tj = +7 °C	0.969	0.964
Pdh Tj = 12°C	3.42 kW	3.26 kW
COP Tj = 12°C	7.42	6.39
Cdh Tj = +12 °C	0.967	0.959
Pdh Tj = Tbiv	5.14 kW	4.99 kW
COP Tj = Tbiv	2.36	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.81 kW	4.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.25 kW	6.08 kW
Annual energy consumption Qhe	3854 kWh	5106 kWh
Pdh Tj = -15°C (if TOL		

This information was generated by the HP KEYMARK database on 19.05.2024

COP Tj = -15°C (if TOL	
Cdh Tj = -15 °C	

EN 12102-1 | Warmer Climate		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Warmer Climate		
	Low temperature	Medium temperature
ηs	221 %	154 %
Prated	4.45 kW	4.33 kW
SCOP	5.59	3.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.49 kW	4.36 kW
COP Tj = +2°C	3.63	2.45
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	2.82 kW	2.77 kW
COP Tj = +7°C	5.09	3.26
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	3.33 kW	3.14 kW
COP Tj = 12°C	6.87	5.30
Cdh Tj = +12 °C	0.969	0.965
Pdh Tj = Tbiv	4.49 kW	4.36 kW
COP Tj = Tbiv	3.63	2.45
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.49 kW	4.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.63	2.45
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 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	1073 kWh	1474 kWh

This information was generated by the HP KEYMARK database on 19.05.2024

Model VWL 77/5 230V S2

Model name	VWL 77/5 230V S2
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	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	5.77 kW	6.84 kW
El input	1.55 kW	2.60 kW
COP	3.72	2.63

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	47 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	167 %	131 %
Prated	7.34 kW	6.32 kW
SCOP	4.24	3.36
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.52 kW	5.62 kW
COP Tj = -7°C	2.63	1.98
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	3.84 kW	3.42 kW
COP Tj = +2°C	4.26	3.45
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	2.84 kW	2.64 kW

This information was generated by the HP KEYMARK database on 19.05.2024

COP Tj = +7°C	5.67	4.29
Cdh Tj = +7 °C	0.970	0.966
Pdh Tj = 12°C	3.43 kW	3.22 kW
COP Tj = 12°C	7.48	6.01
Cdh Tj = +12 °C	0.967	0.961
Pdh Tj = Tbiv	6.53 kW	5.62 kW
COP Tj = Tbiv	2.63	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.96 kW	4.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.54	1.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.38 kW	1.74 kW
Annual energy consumption Qhe	3574 kWh	3887 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	47 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	156 %	114 %
Prated	6.25 kW	6.08 kW
SCOP	3.98	2.92
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	3.59 kW	3.81 kW
COP Tj = -7°C	3.38	2.53
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	2.55 kW	2.29 kW
COP Tj = +2°C	5.03	3.70
Cdh Tj = +2 °C	0.971	1.000
Pdh Tj = +7°C	2.86 kW	2.69 kW
COP Tj = +7°C	5.87	4.69
Cdh Tj = +7 °C	0.969	0.964
Pdh Tj = 12°C	3.42 kW	3.26 kW
COP Tj = 12°C	7.42	6.39
Cdh Tj = +12 °C	0.967	0.959

This information was generated by the HP KEYMARK database on 19.05.2024

Pdh Tj = Tbiv	5.14 kW	4.99 kW
COP Tj = Tbiv	2.36	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.81 kW	4.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.25 kW	6.08 kW
Annual energy consumption Qhe	3875 kWh	5129 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	44 dB(A)	47 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	212 %	149 %
Prated	4.49 kW	4.36 kW
SCOP	5.37	3.81
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.49 kW	4.36 kW
COP Tj = +2°C	3.63	2.45
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	2.82 kW	2.77 kW
COP Tj = +7°C	5.09	3.26
Cdh Tj = +7 °C	1.000	0.930
Pdh Tj = 12°C	3.33 kW	3.14 kW
COP Tj = 12°C	6.87	5.30
Cdh Tj = +12 °C	0.969	0.965
Pdh Tj = Tbiv	4.49 kW	4.36 kW
COP Tj = Tbiv	3.63	2.45
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.49 kW	4.36 kW

This information was generated by the HP KEYMARK database on 19.05.2024

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.63	2.45
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 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	1107 kWh	1519 kWh

This information was generated by the HP KEYMARK database on 19.05.2024

Model VWL 79/5 230V S2	
Model name	VWL 79/5 230V S2
Application	Heating + DHW + low 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	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water EN 16147 | Average Climate	
Declared load profile	XL
Efficiency ηDHW	96 %
COP	2.33
Heating up time	02:24 h:min
Standby power input	38.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	270 l

EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	90 %
COP	2.19
Heating up time	02:51 h:min
Standby power input	39.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	266 l

EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	113 %
COP	2.75
Heating up time	01:15 h:min
Standby power input	34.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	275 l

EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

This information was generated by the HP KEYMARK database on 19.05.2024

Starting and operating test	passed	

EN 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	5.77 kW	6.84 kW
El input	1.55 kW	2.60 kW
COP	3.72	2.63

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	167 %	131 %
Prated	7.34 kW	6.32 kW
SCOP	4.24	3.36
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.53 kW	5.62 kW
COP Tj = -7°C	2.63	1.98
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	3.84 kW	3.42 kW
COP Tj = +2°C	4.26	3.45
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	2.84 kW	2.64 kW
COP Tj = +7°C	5.67	4.29
Cdh Tj = +7 °C	0.970	0.966
Pdh Tj = 12°C	3.43 kW	3.22 kW
COP Tj = 12°C	7.48	6.01
Cdh Tj = +12 °C	0.967	0.961
Pdh Tj = Tbiv	6.53 kW	5.62 kW
COP Tj = Tbiv	2.63	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.96 kW	4.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.54	1.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W

This information was generated by the HP KEYMARK database on 19.05.2024

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.38 kW	1.74 kW
Annual energy consumption Qhe	3574 kWh	3887 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	156 %	114 %
Prated	6.25 kW	6.08 kW
SCOP	3.98	2.92
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	3.59 kW	3.81 kW
COP Tj = -7°C	3.38	2.53
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	2.55 kW	2.29 kW
COP Tj = +2°C	5.03	3.70
Cdh Tj = +2 °C	0.971	1.000
Pdh Tj = +7°C	2.86 kW	2.69 kW
COP Tj = +7°C	5.87	4.69
Cdh Tj = +7 °C	0.969	0.964
Pdh Tj = 12°C	3.42 kW	3.26 kW
COP Tj = 12°C	7.42	6.39
Cdh Tj = +12 °C	0.967	0.959
Pdh Tj = Tbiv	5.14 kW	4.99 kW
COP Tj = Tbiv	2.36	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.81 kW	4.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.25 kW	6.08 kW
Annual energy consumption Qhe	3875 kWh	5129 kWh
Pdh Tj = -15°C (if TOL		

This information was generated by the HP KEYMARK database on 19.05.2024

COP Tj = -15°C (if TOL	
Cdh Tj = -15 °C	

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)
Sound power level outdoor	- dB(A)	- dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	212 %	149 %
Prated	4.49 kW	4.36 kW
SCOP	5.37	3.81
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.49 kW	4.36 kW
COP Tj = +2°C	3.63	2.45
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	2.82 kW	2.77 kW
COP Tj = +7°C	5.09	3.26
Cdh Tj = +7 °C	1.000	0.930
Pdh Tj = 12°C	3.33 kW	3.14 kW
COP Tj = 12°C	6.87	5.30
Cdh Tj = +12 °C	0.969	0.965
Pdh Tj = Tbiv	4.49 kW	4.36 kW
COP Tj = Tbiv	3.63	2.45
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.49 kW	4.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.63	2.45
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 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	1107 kWh	1519 kWh

This information was generated by the HP KEYMARK database on 19.05.2024