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Summary of	VWL 105/5 AS 230V / VWL 125/5 AS 230V / VWL 105/5 AS / VWL 125/5 AS		Reg. No.	40049245
Certificate Holder				
Name	Vaillant Deutschland GmbH & Co KG			
Address	Berghauser Straße 40		Zip	42859
City	Remscheid		Country	Germany
Certification Body	VDE Prüf- und Zertifizierungsinstitut GmbH			
Subtype title	VWL 105/5 AS 230V / VWL 125/5 AS 230V / VWL 105/5 AS / VWL 125/5 AS			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R410A			
Mass of Refrigerant	3.6 kg			
Certification Date	10.03.2021			
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 14825:2019-07; EN 14825:2018 DIN EN 16147:2017-08; EN 16147:2017+AC:2017 DIN EN 12			

Model: VWL 105/5 AS 230V + VWL 127/5 IS

Configure model	
Model name	VWL 105/5 AS 230V + VWL 127/5 IS
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.70 kW	10.35 kW
El input	2.12 kW	3.74 kW
COP	4.57	2.77

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	212 %	158 %
Prated	8.23 kW	9.30 kW
SCOP	5.37	4.03
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.99	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 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	2046 kWh	3076 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	152 %	111 %
Prated	9.49 kW	9.42 kW
SCOP	3.88	2.86
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	6.32 kW	6.14 kW
COP Tj = -7°C	3.41	2.56
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.94 kW	4.48 kW
COP Tj = +2°C	4.53	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.53 kW	5.31 kW
COP Tj = +7°C	5.86	4.59
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.44 kW	6.21 kW
COP Tj = 12°C	7.27	5.99
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	7.74 kW	7.68 kW
COP Tj = Tbiv	2.34	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.41 kW	7.68 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.49 kW	9.42 kW
Annual energy consumption Qhe	6025 kWh	8124 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.74	7.68
COP Tj = -15°C (if TOL<-20°C)	2.34	1.89
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	180 %	128 %
Prated	11.50 kW	9.56 kW
SCOP	4.58	3.28
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.18 kW	8.46 kW
COP Tj = -7°C	2.83	2.12
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.53 kW	5.05 kW
COP Tj = +2°C	4.57	3.14
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.66 kW	5.18 kW
COP Tj = +7°C	5.78	4.27
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.45 kW	1.59 kW
Annual energy consumption Qhe	5189 kWh	6029 kWh

Model: VWL 105/5 AS + VWL 127/5 IS

Configure model	
Model name	VWL 105/5 AS + VWL 127/5 IS
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.70 kW	10.35 kW
El input	2.12 kW	3.74 kW
COP	4.57	2.77

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	211 %	158 %
Prated	8.23 kW	9.29 kW
SCOP	5.34	4.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 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	2059 kWh	3090 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	152 %	111 %
Prated	9.49 kW	9.42 kW
SCOP	3.87	2.85
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	6.32 kW	6.14 kW
COP Tj = -7°C	3.41	2.56
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.94 kW	4.48 kW
COP Tj = +2°C	4.53	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.53 kW	5.31 kW
COP Tj = +7°C	5.86	4.59
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.44 kW	6.21 kW
COP Tj = 12°C	7.27	5.99
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	7.74 kW	7.68 kW
COP Tj = Tbiv	2.34	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.41 kW	7.68 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.49 kW	9.42 kW
Annual energy consumption Qhe	6040 kWh	8138 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.74	7.68
COP Tj = -15°C (if TOL<-20°C)	2.34	1.89
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	180 %	128 %
Prated	11.50 kW	9.56 kW
SCOP	4.57	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.18 kW	8.46 kW
COP Tj = -7°C	2.83	2.12
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.53 kW	5.05 kW
COP Tj = +2°C	4.57	3.14
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.66 kW	5.18 kW
COP Tj = +7°C	5.78	4.27
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.45 kW	1.59 kW
Annual energy consumption Qhe	5199 kWh	6040 kWh

Model: VWL 105/5 AS 230V S2 + VWL 127/5 IS

Configure model	
Model name	VWL 105/5 AS 230V S2 + VWL 127/5 IS
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.70 kW	10.35 kW
El input	2.12 kW	3.74 kW
COP	4.57	2.77

Warmer Climate

This information was generated by the HP KEYMARK database on 7 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	207 %	156 %
Prated	8.23 kW	9.29 kW
SCOP	5.25	3.97
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.99	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 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	2094 kWh	3125 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	152 %	111 %
Prated	9.49 kW	9.42 kW
SCOP	3.87	2.85
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	6.32 kW	6.14 kW
COP Tj = -7°C	3.41	2.56
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.94 kW	4.48 kW
COP Tj = +2°C	4.53	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.53 kW	5.31 kW
COP Tj = +7°C	5.86	4.59
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.44 kW	6.21 kW
COP Tj = 12°C	7.27	5.99
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	7.74 kW	7.68 kW
COP Tj = Tbiv	2.34	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.41 kW	7.68 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.49 kW	9.42 kW
Annual energy consumption Qhe	6049 kWh	8148 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.74	7.68
COP Tj = -15°C (if TOL<-20°C)	2.34	1.89
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	179 %	127 %
Prated	11.50 kW	9.56 kW
SCOP	4.54	3.26
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.18 kW	8.46 kW
COP Tj = -7°C	2.83	2.12
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.53 kW	5.05 kW
COP Tj = +2°C	4.57	3.14
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.66 kW	5.18 kW
COP Tj = +7°C	5.78	4.27
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.72	1.71
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.45 kW	1.59 kW
Annual energy consumption Q_{he}	5229 kWh	6069 kWh

Model: VWL 105/5 AS S2 + VWL 127/5 IS

Configure model	
Model name	VWL 105/5 AS S2 + VWL 127/5 IS
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.70 kW	10.35 kW
El input	2.12 kW	3.74 kW
COP	4.57	2.77

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	203 %	154 %
Prated	8.23 kW	9.29 kW
SCOP	5.15	3.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 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	2133 kWh	3164 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	151 %	111 %
Prated	9.49 kW	9.42 kW
SCOP	3.85	2.84
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	6.32 kW	6.14 kW
COP Tj = -7°C	3.41	2.56
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.94 kW	4.48 kW
COP Tj = +2°C	4.53	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.53 kW	5.31 kW
COP Tj = +7°C	5.86	4.59
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.44 kW	6.21 kW
COP Tj = 12°C	7.27	5.99
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	7.74 kW	7.68 kW
COP Tj = Tbiv	2.34	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.41 kW	7.68 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.49 kW	9.42 kW
Annual energy consumption Qhe	6077 kWh	8175 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.74	7.68
COP Tj = -15°C (if TOL<-20°C)	2.34	1.89
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	178 %	127 %
Prated	11.50 kW	9.56 kW
SCOP	4.52	3.24
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.18 kW	8.46 kW
COP Tj = -7°C	2.83	2.12
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.53 kW	5.05 kW
COP Tj = +2°C	4.57	3.14
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.66 kW	5.18 kW
COP Tj = +7°C	5.78	4.27
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.72	1.71
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
P _{off}	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.45 kW	1.59 kW
Annual energy consumption Q _{he}	5260 kWh	6102 kWh

Model: VWL 105/5 AS 230V + VWL 128/5 IS

Configure model	
Model name	VWL 105/5 AS 230V + VWL 128/5 IS
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.70 kW	10.35 kW
El input	2.12 kW	3.74 kW
COP	4.57	2.77

Warmer Climate

This information was generated by the HP KEYMARK database on 7 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	212 %	158 %
Prated	8.23 kW	9.30 kW
SCOP	5.37	4.03
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.99	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 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	2046 kWh	3076 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	152 %	111 %
Prated	9.49 kW	9.42 kW
SCOP	3.88	2.86
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	6.32 kW	6.14 kW
COP Tj = -7°C	3.41	2.56
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.94 kW	4.48 kW
COP Tj = +2°C	4.53	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.53 kW	5.31 kW
COP Tj = +7°C	5.86	4.59
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.44 kW	6.21 kW
COP Tj = 12°C	7.27	5.99
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	7.74 kW	7.68 kW
COP Tj = Tbiv	2.34	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.41 kW	7.68 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.49 kW	9.42 kW
Annual energy consumption Qhe	6025 kWh	8124 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.74	7.68
COP Tj = -15°C (if TOL<-20°C)	2.34	1.89
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	180 %	128 %
Prated	11.50 kW	9.56 kW
SCOP	4.58	3.28
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.18 kW	8.46 kW
COP Tj = -7°C	2.83	2.12
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.53 kW	5.05 kW
COP Tj = +2°C	4.57	3.14
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.66 kW	5.18 kW
COP Tj = +7°C	5.78	4.27
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.72	1.71
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.45 kW	1.59 kW
Annual energy consumption Qhe	5189 kWh	6029 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	108 %
COP	2.62
Heating up time	01:01 h:min
Standby power input	41.3 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	243 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	89 %
COP	2.14
Heating up time	01:13 h:min
Standby power input	51.6 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	246 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	97 %
COP	2.36
Heating up time	01:04 h:min
Standby power input	44.6 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	244 l

Model: VWL 105/5 AS + VWL 128/5 IS

Configure model	
Model name	VWL 105/5 AS + VWL 128/5 IS
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.70 kW	10.35 kW
El input	2.12 kW	3.74 kW
COP	4.57	2.77

Warmer Climate

This information was generated by the HP KEYMARK database on 7 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	211 %	158 %
Prated	8.23 kW	9.29 kW
SCOP	5.34	4.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 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	2059 kWh	3090 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	152 %	111 %
Prated	9.49 kW	9.42 kW
SCOP	3.87	2.85
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	6.32 kW	6.14 kW
COP Tj = -7°C	3.41	2.56
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.94 kW	4.48 kW
COP Tj = +2°C	4.53	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.53 kW	5.31 kW
COP Tj = +7°C	5.86	4.59
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.44 kW	6.21 kW
COP Tj = 12°C	7.27	5.99
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	7.74 kW	7.68 kW
COP Tj = Tbiv	2.34	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.41 kW	7.68 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.49 kW	9.42 kW
Annual energy consumption Qhe	6040 kWh	8138 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.74	7.68
COP Tj = -15°C (if TOL<-20°C)	2.34	1.89
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	180 %	128 %
Prated	11.50 kW	9.56 kW
SCOP	4.57	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.18 kW	8.46 kW
COP Tj = -7°C	2.83	2.12
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.53 kW	5.05 kW
COP Tj = +2°C	4.57	3.14
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.66 kW	5.18 kW
COP Tj = +7°C	5.78	4.27
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.72	1.71
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.45 kW	1.59 kW
Annual energy consumption Qhe	5199 kWh	6040 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	108 %
COP	2.62
Heating up time	01:01 h:min
Standby power input	41.3 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	243 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	89 %
COP	2.14
Heating up time	01:13 h:min
Standby power input	51.6 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	246 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	97 %
COP	2.36
Heating up time	01:04 h:min
Standby power input	44.6 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	244 l

Model: VWL 105/5 AS 230V S2 + VWL 128/5 IS

Configure model	
Model name	VWL 105/5 AS 230V S2 + VWL 128/5 IS
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.70 kW	10.35 kW
El input	2.12 kW	3.74 kW
COP	4.57	2.77

Warmer Climate

This information was generated by the HP KEYMARK database on 7 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	207 %	156 %
Prated	8.23 kW	9.29 kW
SCOP	5.25	3.97
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.99	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 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	2094 kWh	3125 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	152 %	111 %
Prated	9.49 kW	9.42 kW
SCOP	3.87	2.85
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	6.32 kW	6.14 kW
COP Tj = -7°C	3.41	2.56
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.94 kW	4.48 kW
COP Tj = +2°C	4.53	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.53 kW	5.31 kW
COP Tj = +7°C	5.86	4.59
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.44 kW	6.21 kW
COP Tj = 12°C	7.27	5.99
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	7.74 kW	7.68 kW
COP Tj = Tbiv	2.34	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.41 kW	7.68 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.49 kW	9.42 kW
Annual energy consumption Qhe	6049 kWh	8148 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.74	7.68
COP Tj = -15°C (if TOL<-20°C)	2.34	1.89
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	179 %	127 %
Prated	11.50 kW	9.56 kW
SCOP	4.54	3.26
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.18 kW	8.46 kW
COP Tj = -7°C	2.83	2.12
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.53 kW	5.05 kW
COP Tj = +2°C	4.57	3.14
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.66 kW	5.18 kW
COP Tj = +7°C	5.78	4.27
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.72	1.71
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.45 kW	1.59 kW
Annual energy consumption Qhe	5229 kWh	6069 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	108 %
COP	2.62
Heating up time	01:01 h:min
Standby power input	41.3 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	243 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	89 %
COP	2.14
Heating up time	01:13 h:min
Standby power input	51.6 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	246 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	97 %
COP	2.36
Heating up time	01:04 h:min
Standby power input	44.6 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	244 l

Model: VWL 105/5 AS S2 + VWL 128/5 IS

Configure model	
Model name	VWL 105/5 AS S2 + VWL 128/5 IS
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.70 kW	10.35 kW
El input	2.12 kW	3.74 kW
COP	4.57	2.77

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	203 %	154 %
Prated	8.23 kW	9.29 kW
SCOP	5.15	3.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 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	2133 kWh	3164 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	151 %	111 %
Prated	9.49 kW	9.42 kW
SCOP	3.85	2.84
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	6.32 kW	6.14 kW
COP Tj = -7°C	3.41	2.56
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.94 kW	4.48 kW
COP Tj = +2°C	4.53	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.53 kW	5.31 kW
COP Tj = +7°C	5.86	4.59
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.44 kW	6.21 kW
COP Tj = 12°C	7.27	5.99
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	7.74 kW	7.68 kW
COP Tj = Tbiv	2.34	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.41 kW	7.68 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.49 kW	9.42 kW
Annual energy consumption Qhe	6077 kWh	8175 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.74	7.68
COP Tj = -15°C (if TOL<-20°C)	2.34	1.89
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	178 %	127 %
Prated	11.50 kW	9.56 kW
SCOP	4.52	3.24
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.18 kW	8.46 kW
COP Tj = -7°C	2.83	2.12
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.53 kW	5.05 kW
COP Tj = +2°C	4.57	3.14
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.66 kW	5.18 kW
COP Tj = +7°C	5.78	4.27
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.72	1.71
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.45 kW	1.59 kW
Annual energy consumption Qhe	5260 kWh	6102 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	108 %
COP	2.62
Heating up time	01:01 h:min
Standby power input	41.3 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	243 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	89 %
COP	2.14
Heating up time	01:13 h:min
Standby power input	51.6 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	246 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	97 %
COP	2.36
Heating up time	01:04 h:min
Standby power input	44.6 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	244 l

Model: VWL 125/5 AS 230V + VWL 127/5 IS

Configure model	
Model name	VWL 125/5 AS 230V + VWL 127/5 IS
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.25 kW	10.90 kW
El input	2.26 kW	3.94 kW
COP	4.54	2.77

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	212 %	158 %
Prated	8.23 kW	9.29 kW
SCOP	5.37	4.03
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.99	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 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	2046 kWh	3076 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	153 %	111 %
Prated	12.31 kW	10.28 kW
SCOP	3.91	2.86
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	8.06 kW	6.50 kW
COP Tj = -7°C	3.40	2.57
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	4.95 kW	4.47 kW
COP Tj = +2°C	4.68	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.74 kW	5.33 kW
COP Tj = +7°C	5.94	4.61
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.48 kW	6.10 kW
COP Tj = 12°C	7.01	6.08
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	10.04 kW	8.38 kW
COP Tj = Tbiv	2.27	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.63 kW	8.38 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.31 kW	10.28 kW
Annual energy consumption Qhe	7757 kWh	8863 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.04	8.38
COP Tj = -15°C (if TOL<-20°C)	2.27	1.84
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	175 %	133 %
Prated	13.57 kW	10.97 kW
SCOP	4.45	3.39
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.01 kW	9.71 kW
COP Tj = -7°C	2.51	2.16
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.21 kW	5.81 kW
COP Tj = +2°C	4.47	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.68 kW	5.22 kW
COP Tj = +7°C	5.83	4.47
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.47	1.85
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.13 kW	2.01 kW
Annual energy consumption Q_{he}	6303 kWh	6691 kWh

Model: VWL 125/5 AS + VWL 127/5 IS

Configure model	
Model name	VWL 125/5 AS + VWL 127/5 IS
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.25 kW	10.90 kW
El input	2.26 kW	3.94 kW
COP	4.54	2.77

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	211 %	158 %
Prated	8.23 kW	9.29 kW
SCOP	5.34	4.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 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	2059 kWh	3090 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	153 %	111 %
Prated	12.31 kW	10.28 kW
SCOP	3.91	2.85
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	8.06 kW	6.50 kW
COP Tj = -7°C	3.40	2.57
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.95 kW	4.47 kW
COP Tj = +2°C	4.68	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.74 kW	5.33 kW
COP Tj = +7°C	5.94	4.61
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.48 kW	6.10 kW
COP Tj = 12°C	7.01	6.08
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	10.04 kW	8.38 kW
COP Tj = Tbiv	2.27	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.63 kW	8.38 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.31 kW	10.28 kW
Annual energy consumption Qhe	7766 kWh	8875 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.04	8.38
COP Tj = -15°C (if TOL<-20°C)	2.27	1.84
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	175 %	132 %
Prated	13.57 kW	10.97 kW
SCOP	4.44	3.38
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.01 kW	9.71 kW
COP Tj = -7°C	2.51	2.16
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.21 kW	5.81 kW
COP Tj = +2°C	4.47	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.68 kW	5.22 kW
COP Tj = +7°C	5.83	4.47
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.47	1.85
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.13 kW	2.01 kW
Annual energy consumption Qhe	6311 kWh	6700 kWh

Model: VWL 125/5 AS 230V S2 + VWL 127/5 IS

Configure model	
Model name	VWL 125/5 AS 230V S2 + VWL 127/5 IS
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.25 kW	10.90 kW
El input	2.26 kW	3.94 kW
COP	4.54	2.77

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	207 %	156 %
Prated	8.23 kW	9.29 kW
SCOP	5.25	3.97
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.99	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 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	2094 kWh	3125 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	153 %	111 %
Prated	12.31 kW	10.28 kW
SCOP	3.90	2.85
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	8.06 kW	6.50 kW
COP Tj = -7°C	3.40	2.57
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	4.95 kW	4.47 kW
COP Tj = +2°C	4.68	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.74 kW	5.33 kW
COP Tj = +7°C	5.94	4.61
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.48 kW	6.10 kW
COP Tj = 12°C	7.01	6.08
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	10.04 kW	8.38 kW
COP Tj = Tbiv	2.27	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.63 kW	8.38 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.31 kW	10.28 kW
Annual energy consumption Qhe	7781 kWh	8887 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.04	8.38
COP Tj = -15°C (if TOL<-20°C)	2.27	1.84
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	174 %	132 %
Prated	13.57 kW	10.97 kW
SCOP	4.42	3.37
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.01 kW	9.71 kW
COP Tj = -7°C	2.51	2.16
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.21 kW	5.81 kW
COP Tj = +2°C	4.47	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.68 kW	5.22 kW
COP Tj = +7°C	5.83	4.47
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.47	1.85
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.13 kW	2.01 kW
Annual energy consumption Qhe	6344 kWh	6731 kWh

Model: VWL 125/5 AS S2 + VWL 127/5 IS

Configure model	
Model name	VWL 125/5 AS S2 + VWL 127/5 IS
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.25 kW	10.90 kW
El input	2.26 kW	3.94 kW
COP	4.54	2.77

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	203 %	154 %
Prated	8.23 kW	9.29 kW
SCOP	5.15	3.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 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	2133 kWh	3164 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	152 %	111 %
Prated	12.31 kW	10.28 kW
SCOP	3.89	2.84
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	8.06 kW	6.50 kW
COP Tj = -7°C	3.40	2.57
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.95 kW	4.47 kW
COP Tj = +2°C	4.68	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.74 kW	5.33 kW
COP Tj = +7°C	5.94	4.61
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.48 kW	6.10 kW
COP Tj = 12°C	7.01	6.08
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	10.04 kW	8.38 kW
COP Tj = Tbiv	2.27	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.63 kW	8.38 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.31 kW	10.28 kW
Annual energy consumption Qhe	7803 kWh	8912 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.04	8.38
COP Tj = -15°C (if TOL<-20°C)	2.27	1.84
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	173 %	131 %
Prated	13.57 kW	10.97 kW
SCOP	4.40	3.35
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.01 kW	9.71 kW
COP Tj = -7°C	2.51	2.16
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.21 kW	5.81 kW
COP Tj = +2°C	4.47	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.68 kW	5.22 kW
COP Tj = +7°C	5.83	4.47
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.47	1.85
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
P _{off}	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.13 kW	2.01 kW
Annual energy consumption Q _{he}	6373 kWh	6762 kWh

Model: VWL 125/5 AS 230V + VWL 128/5 IS

Configure model	
Model name	VWL 125/5 AS 230V + VWL 128/5 IS
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.25 kW	10.90 kW
El input	2.26 kW	3.94 kW
COP	4.54	2.77

Warmer Climate

This information was generated by the HP KEYMARK database on 7 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	212 %	158 %
Prated	8.23 kW	9.29 kW
SCOP	5.37	4.03
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.99	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 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	2046 kWh	3076 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	153 %	111 %
Prated	12.31 kW	10.28 kW
SCOP	3.91	2.86
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	8.06 kW	6.50 kW
COP Tj = -7°C	3.40	2.57
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	4.95 kW	4.47 kW
COP Tj = +2°C	4.68	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.74 kW	5.33 kW
COP Tj = +7°C	5.94	4.61
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.48 kW	6.10 kW
COP Tj = 12°C	7.01	6.08
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	10.04 kW	8.38 kW
COP Tj = Tbiv	2.27	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.63 kW	8.38 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.31 kW	10.28 kW
Annual energy consumption Qhe	7757 kWh	8863 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.04	8.38
COP Tj = -15°C (if TOL<-20°C)	2.27	1.84
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	175 %	133 %
Prated	13.57 kW	10.97 kW
SCOP	4.45	3.39
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.01 kW	9.71 kW
COP Tj = -7°C	2.51	2.16
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.21 kW	5.81 kW
COP Tj = +2°C	4.47	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.68 kW	5.22 kW
COP Tj = +7°C	5.83	4.47
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.47	1.85
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.13 kW	2.01 kW
Annual energy consumption Qhe	6303 kWh	6691 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	108 %
COP	2.62
Heating up time	01:01 h:min
Standby power input	41.3 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	243 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	89 %
COP	2.14
Heating up time	01:13 h:min
Standby power input	51.6 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	246 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	97 %
COP	2.36
Heating up time	01:04 h:min
Standby power input	44.6 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	244 l

Model: VWL 125/5 AS + VWL 128/5 IS

Configure model	
Model name	VWL 125/5 AS + VWL 128/5 IS
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.25 kW	10.90 kW
El input	2.26 kW	3.94 kW
COP	4.54	2.77

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	211 %	158 %
Prated	8.23 kW	9.29 kW
SCOP	5.34	4.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 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	2059 kWh	3090 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	153 %	111 %
Prated	12.31 kW	10.28 kW
SCOP	3.91	2.85
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	8.06 kW	6.50 kW
COP Tj = -7°C	3.40	2.57
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.95 kW	4.47 kW
COP Tj = +2°C	4.68	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.74 kW	5.33 kW
COP Tj = +7°C	5.94	4.61
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.48 kW	6.10 kW
COP Tj = 12°C	7.01	6.08
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	10.04 kW	8.38 kW
COP Tj = Tbiv	2.27	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.63 kW	8.38 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.31 kW	10.28 kW
Annual energy consumption Qhe	7766 kWh	8875 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.04	8.38
COP Tj = -15°C (if TOL<-20°C)	2.27	1.84
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	175 %	132 %
Prated	13.57 kW	10.97 kW
SCOP	4.44	3.38
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.01 kW	9.71 kW
COP Tj = -7°C	2.51	2.16
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.21 kW	5.81 kW
COP Tj = +2°C	4.47	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.68 kW	5.22 kW
COP Tj = +7°C	5.83	4.47
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.47	1.85
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.13 kW	2.01 kW
Annual energy consumption Qhe	6311 kWh	6700 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	108 %
COP	2.62
Heating up time	01:01 h:min
Standby power input	41.3 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	243 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	89 %
COP	2.14
Heating up time	01:13 h:min
Standby power input	51.6 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	246 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	97 %
COP	2.36
Heating up time	01:04 h:min
Standby power input	44.6 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	244 l

Model: VWL 125/5 AS 230V S2 + VWL 128/5 IS

Configure model	
Model name	VWL 125/5 AS 230V S2 + VWL 128/5 IS
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.25 kW	10.90 kW
El input	2.26 kW	3.94 kW
COP	4.54	2.77

Warmer Climate

This information was generated by the HP KEYMARK database on 7 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	207 %	156 %
Prated	8.23 kW	9.29 kW
SCOP	5.25	3.97
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.99	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 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	2094 kWh	3125 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	153 %	111 %
Prated	12.31 kW	10.28 kW
SCOP	3.90	2.85
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	8.06 kW	6.50 kW
COP Tj = -7°C	3.40	2.57
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	4.95 kW	4.47 kW
COP Tj = +2°C	4.68	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.74 kW	5.33 kW
COP Tj = +7°C	5.94	4.61
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.48 kW	6.10 kW
COP Tj = 12°C	7.01	6.08
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	10.04 kW	8.38 kW
COP Tj = Tbiv	2.27	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.63 kW	8.38 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.31 kW	10.28 kW
Annual energy consumption Qhe	7781 kWh	8887 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.04	8.38
COP Tj = -15°C (if TOL<-20°C)	2.27	1.84
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	174 %	132 %
Prated	13.57 kW	10.97 kW
SCOP	4.42	3.37
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.01 kW	9.71 kW
COP Tj = -7°C	2.51	2.16
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.21 kW	5.81 kW
COP Tj = +2°C	4.47	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.68 kW	5.22 kW
COP Tj = +7°C	5.83	4.47
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.47	1.85
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.13 kW	2.01 kW
Annual energy consumption Qhe	6344 kWh	6731 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	108 %
COP	2.62
Heating up time	01:01 h:min
Standby power input	41.3 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	243 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	89 %
COP	2.14
Heating up time	01:13 h:min
Standby power input	51.6 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	246 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	97 %
COP	2.36
Heating up time	01:04 h:min
Standby power input	44.6 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	244 l

Model: VWL 125/5 AS S2 + VWL 128/5 IS

Configure model	
Model name	VWL 125/5 AS S2 + VWL 128/5 IS
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.25 kW	10.90 kW
El input	2.26 kW	3.94 kW
COP	4.54	2.77

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	203 %	154 %
Prated	8.23 kW	9.29 kW
SCOP	5.15	3.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.23 kW	9.30 kW
COP Tj = +2°C	3.64	2.42
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	5.40 kW	5.73 kW
COP Tj = +7°C	4.92	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	5.99 kW	6.15 kW
COP Tj = 12°C	6.28	5.20
Cdh Tj = +12 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 7 Jul 2022

Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 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	2133 kWh	3164 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	152 %	111 %
Prated	12.31 kW	10.28 kW
SCOP	3.89	2.84
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	8.06 kW	6.50 kW
COP Tj = -7°C	3.40	2.57
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.95 kW	4.47 kW
COP Tj = +2°C	4.68	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.74 kW	5.33 kW
COP Tj = +7°C	5.94	4.61
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.48 kW	6.10 kW
COP Tj = 12°C	7.01	6.08
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	10.04 kW	8.38 kW
COP Tj = Tbiv	2.27	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.63 kW	8.38 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.31 kW	10.28 kW
Annual energy consumption Qhe	7803 kWh	8912 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.04	8.38
COP Tj = -15°C (if TOL<-20°C)	2.27	1.84
Cdh Tj = -15 °C	1.000	1.000

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	44 dB(A)
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 7 Jul 2022

	Low temperature	Medium temperature
η_s	173 %	131 %
Prated	13.57 kW	10.97 kW
SCOP	4.40	3.35
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.01 kW	9.71 kW
COP Tj = -7°C	2.51	2.16
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.21 kW	5.81 kW
COP Tj = +2°C	4.47	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.68 kW	5.22 kW
COP Tj = +7°C	5.83	4.47
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW

This information was generated by the HP KEYMARK database on 7 Jul 2022

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.47	1.85
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.13 kW	2.01 kW
Annual energy consumption Qhe	6373 kWh	6762 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	108 %
COP	2.62
Heating up time	01:01 h:min
Standby power input	41.3 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	243 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	89 %
COP	2.14
Heating up time	01:13 h:min
Standby power input	51.6 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	246 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	97 %
COP	2.36
Heating up time	01:04 h:min
Standby power input	44.6 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	244 l