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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 H	older		
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 EN 14511-3:2019-07; EN 14511-3:2019-07; EN 14511-3:2018 DIN EN 14511-4:2019-07; EN 14514825:2019-07; EN 14825:2018 DIN EN 16147:2017-08; EN 16147:2017-	11-4:2018	DIN EN



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

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



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

EN 14825		
	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 = $+2^{\circ}$ 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





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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
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
РТО	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

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 = $+7^{\circ}$ C	5.40 kW	5.73 kW
$COP Tj = +7^{\circ}C$	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



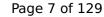


Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	55 °C	55 °C
Poff	11 W	11 W
РТО	11 W	11 W
PSB	11 W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





	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
$COPTj = +2^{\circ}C$	4.53	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.53 kW	5.31 kW
$COPTj = +7^{\circ}C$	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
Pan IJ = IOL or Pan IJ = Idesignn if IOL < Idesignn	7.41 KW	7.68 KW



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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	o 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



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

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate

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

CEN heat pump KEYMARK

EN 14825		
	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
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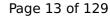
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o 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

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 = $+7^{\circ}$ C	5.40 kW	5.73 kW
$COP Tj = +7^{\circ}C$	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





Pdh Tj = Tbiv	8.23 kW	9.29 kW
	0.23 KVV	3.23 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



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9.49 kW 3.87 15 °C 20 °C 5.32 kW	111 % 9.42 kW 2.85 -15 °C -15 °C 6.14 kW 2.56
3.87 15 °C 20 °C 5.32 kW	2.85 -15 °C -15 °C 6.14 kW
15 °C 20 °C 5.32 kW	-15 °C -15 °C 6.14 kW
20 °C 5.32 kW 3.41	-15 °C 6.14 kW
5.32 kW 3.41	6.14 kW
3.41	
	2.56
0.990	0.990
1.94 kW	4.48 kW
1.53	3.45
).990	0.990
5.53 kW	5.31 kW
5.86	4.59
).980	0.990
5.44 kW	6.21 kW
7.27	5.99
0.980	0.980
7.74 kW	7.68 kW
2.34	1.89
7.41 kW	7.68 kW
14.5.5.5.5.5.5.5.6.4 14.5.5.5.5.6.4 14.5.5.6.6.4 14.5.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6.	53 990 53 kW 86 980 44 kW 27 980 74 kW



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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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o 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



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	
limate Zone Colder Climate + Warmer Climate		
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply 1x230V 50Hz		

Heating

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

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



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

EN 14825		
	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



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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
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
РТО	11 W	11 W
PSB	11 W	11 W
РСК	o 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

Warmer Climate

CEN heat pump KEYMARK



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 = $+7^{\circ}$ C	5.40 kW	5.73 kW
$COP Tj = +7^{\circ}C$	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





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
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o 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



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This information was generated by the HP KEYMARK database on 18 Mar 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 = $+7^{\circ}$ C	5.53 kW	5.31 kW
$COPTj = +7^{\circ}C$	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



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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	o 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



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

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate

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

CEN heat pump KEYMARK

EN 14825		
	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
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	o 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

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
	·	





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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o 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





	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
$COP Tj = +7^{\circ}C$	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



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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	o 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



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

COP

4.57

EI4 14311-2		
	Low temperature	Medium temperature
Heat output	9.70 kW	10.35 kW
El input	2.12 kW	3.74 kW

2.77

FN 14511-2

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate

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

EN 14825		
	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



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This information was generated by the HP KEYMARK database on 18 Mar 2022

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
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	o 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

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 = $+7^{\circ}$ C	5.40 kW	5.73 kW
$COP Tj = +7^{\circ}C$	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





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
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o 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



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	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
$COP Tj = +7^{\circ}C$	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

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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
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o w	o 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

Domestic Hot Water (DHW)

Average Climate

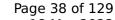


EN 16147		
Declared load profile	XL	
Efficiency ηDHW	97 %	
СОР	2.36	
Heating up time	01:04 h:min	
Standby power input	44.6 W	
Reference hot water temperature	53.7 °C	
Mixed water at 40°C	244	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	108 %	
СОР	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 I	

Colder Climate





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	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 I	



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

COP

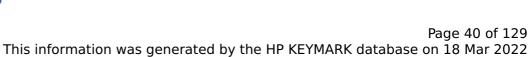
4.57

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

2.77

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



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

CEN heat pump KEYMARK

EN 14825		
	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



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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
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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o 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

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 = $+7^{\circ}$ C	5.40 kW	5.73 kW
$COP Tj = +7^{\circ}C$	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
	,	·





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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o 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





	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
$COP Tj = -7^{\circ}C$	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
$COPTj = +7^{\circ}C$	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



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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	o w	o 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

Domestic Hot Water (DHW)

Average Climate

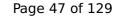


EN 16147	
Declared load profile	XL
Efficiency ηDHW	97 %
СОР	2.36
Heating up time	01:04 h:min
Standby power input	44.6 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	244

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	108 %	
СОР	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 I	

Colder Climate





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	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	



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

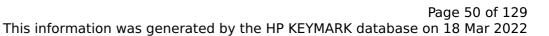
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



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

EN 14825		
	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





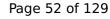
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh 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	5229 kWh	6069 kWh

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}	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 = $+7^{\circ}$ C	5.40 kW	5.73 kW
$COP Tj = +7^{\circ}C$	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





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
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o 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



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This information was generated by the HP KEYMARK database on 18 Mar 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
$COP Tj = +2^{\circ}C$	4.53	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.53 kW	5.31 kW
$COP Tj = +7^{\circ}C$	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



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This information was generated by the HP KEYMARK database on 18 Mar 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	o w	o 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

Domestic Hot Water (DHW)

Average Climate

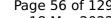


EN 16147	
Declared load profile	XL
Efficiency ηDHW	97 %
СОР	2.36
Heating up time	01:04 h:min
Standby power input	44.6 W
Reference hot water temperature	53.7 °C
Mixed water at 40°C	244

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	108 %
СОР	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 I

Colder Climate





$$\operatorname{\textit{Page}}\xspace$ 56 of 129 This information was generated by the HP KEYMARK database on 18 Mar 2022

EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	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



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

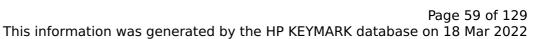
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



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

EN 14825		
	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





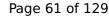
Pdh Tj = 12°C	6.52 kW	6.11 kW
COP Tj = 12°C	7.35	5.79
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.18 kW	8.46 kW
COP Tj = Tbiv	2.83	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.05 kW	7.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o w	o 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

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





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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o 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



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This information was generated by the HP KEYMARK database on 18 Mar 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
$COPTj = +7^{\circ}C$	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

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This information was generated by the HP KEYMARK database on 18 Mar 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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o 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

Domestic Hot Water (DHW)

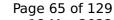
Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	97 %	
СОР	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	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	108 %	
СОР	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 I	

Colder Climate





EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	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 I



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

COP

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

2.77

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

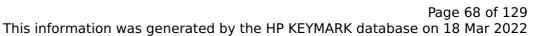
Average Climate

4.54



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}	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





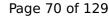
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.47	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh 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	o w	o 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

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
$COP Tj = +7^{\circ}C$	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





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
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o 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



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This information was generated by the HP KEYMARK database on 18 Mar 2022

This information was general	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
$COP Tj = +2^{\circ}C$	4.68	3.45
Cdh Tj = $+2$ °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.74 kW	5.33 kW
$COP Tj = +7^{\circ}C$	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



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This information was generated by the HP KEYMARK database on 18 Mar 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
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o 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



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

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



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

EN 14825		
	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 = $+7^{\circ}$ C	5.68 kW	5.22 kW
$COP Tj = +7^{\circ}C$	5.83	4.47
Cdh Tj = +7 °C	0.980	0.990



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This information was generated by the HP KEYMARK database on 18 Mar 2022

	-	
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
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.47	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
РТО	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

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 te				
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		



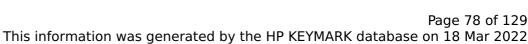


Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	55 °C	55 °C
Poff	17 W	17 W
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o w	o 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





	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
$COP Tj = +2^{\circ}C$	4.68	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.74 kW	5.33 kW
$COP Tj = +7^{\circ}C$	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



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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	o 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



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

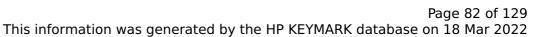
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



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

EN 14825		
	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
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.47	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o w	o 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

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 = $+7^{\circ}$ C	5.40 kW	5.73 kW
$COP Tj = +7^{\circ}C$	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





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
РТО	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



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<u> </u>	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 = $+7^{\circ}$ C	5.74 kW	5.33 kW
$COP Tj = +7^{\circ}C$	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



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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	o 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



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

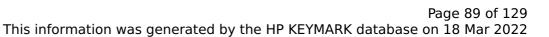
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



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

EN 14825		
	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





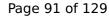
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.47	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh 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	o 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

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





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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o 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





	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
$COP Tj = -7^{\circ}C$	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



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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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o 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

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

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



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

EN 14825		
	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





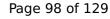
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.47	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	11 W	11 W
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o 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

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}	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





	•	
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
РТО	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





	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
$COP Tj = +2^{\circ}C$	4.68	3.45
Cdh Tj = $+2$ °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.74 kW	5.33 kW
$COP Tj = +7^{\circ}C$	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





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
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o 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

Domestic Hot Water (DHW)

Average Climate

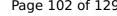


EN 16147		
Declared load profile	XL	
Efficiency ηDHW	97 %	
СОР	2.36	
Heating up time	01:04 h:min	
Standby power input	44.6 W	
Reference hot water temperature	53.7 °C	
Mixed water at 40°C	244	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	108 %	
СОР	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 I	

Colder Climate





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EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	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	



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

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



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

EN 14825		
Low temperature	Medium temperature	
175 %	132 %	
13.57 kW	10.97 kW	
4.44	3.38	
-7 °C	-7 °C	
-10 °C	-10 °C	
12.01 kW	9.71 kW	
2.51	2.16	
1.000	1.000	
7.21 kW	5.81 kW	
4.47	3.25	
0.990	0.990	
5.68 kW	5.22 kW	
5.83	4.47	
0.980	0.990	
	Low temperature 175 % 13.57 kW 4.44 -7 °C -10 °C 12.01 kW 2.51 1.000 7.21 kW 4.47 0.990 5.68 kW 5.83	



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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
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.47	1.85
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	1.13 kW	2.01 kW
Annual energy consumption Qhe	6311 kWh	6700 kWh

Warmer Climate

CEN heat pump KEYMARK



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 = $+7^{\circ}$ C	5.40 kW	5.73 kW
$COP Tj = +7^{\circ}C$	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



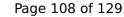


Pdh Tj = Tbiv	8.23 kW	9.29 kW
COP Tj = Tbiv	3.64	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.23 kW	9.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.64	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	55 °C	55 °C
Poff	17 W	17 W
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o 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





	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
$COP Tj = +7^{\circ}C$	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

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	<u> </u>	
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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	o w	o 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

Domestic Hot Water (DHW)

Average Climate

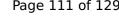


EN 16147		
Declared load profile	XL	
Efficiency ηDHW	97 %	
СОР	2.36	
Heating up time	01:04 h:min	
Standby power input	44.6 W	
Reference hot water temperature	53.7 °C	
Mixed water at 40°C	244	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	108 %	
СОР	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 I	

Colder Climate





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EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	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	



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

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



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

EN 14825		
	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
$COP Tj = +2^{\circ}C$	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



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This information was generated by the HP KEYMARK database on 18 Mar 2022

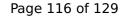
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.47	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh 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	o 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

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}	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 = $+7^{\circ}$ C	5.40 kW	5.73 kW
$COP Tj = +7^{\circ}C$	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





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
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o 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





	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
$COP Tj = +7^{\circ}C$	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

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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
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o 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

Domestic Hot Water (DHW)

Average Climate

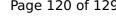


EN 16147		
Declared load profile	XL	
Efficiency ηDHW	97 %	
СОР	2.36	
Heating up time	01:04 h:min	
Standby power input	44.6 W	
Reference hot water temperature	53.7 °C	
Mixed water at 40°C	244	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	108 %	
СОР	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 I	

Colder Climate





$$\operatorname{\textit{Page}}\ 120$$ of 129 This information was generated by the HP KEYMARK database on 18 Mar 2022

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	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	



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

COP

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

2.77

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate

4.54



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}	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
$COP Tj = +2^{\circ}C$	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



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This information was generated by the HP KEYMARK database on 18 Mar 2022

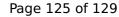
Pdh Tj = 12°C	6.44 kW	6.06 kW
COP Tj = 12°C	7.38	5.85
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.01 kW	9.71 kW
COP Tj = Tbiv	2.51	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.44 kW	8.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.47	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	17 W	17 W
РТО	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

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 = $+7^{\circ}$ C	5.40 kW	5.73 kW
$COP Tj = +7^{\circ}C$	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





D. H. T T	0.22.1.11	0.201111
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
РТО	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 general	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
$COP Tj = +2^{\circ}C$	4.68	3.45
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.74 kW	5.33 kW
$COP Tj = +7^{\circ}C$	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



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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	o w	o 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

Domestic Hot Water (DHW)

Average Climate



EN 16147		
Declared load profile	XL	
Efficiency ηDHW	97 %	
СОР	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	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	108 %	
СОР	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 I	

Colder Climate





EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	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 I