

Summary of	VWL 37/5 230V / VWL 37/5 230V S2 / VWL 39/5 230V / VWL 39/5 230V S2 / VWL 57/5 230V, VWL 57/5 230V S2, VWL 59/5 230V / VWL 59/5 230V S2	Reg. No.	n/a
Certificate Hol	der		'
Name	Vaillant Deutschland GmbH & Co KG		
Address	Berghauser Straße 40 Zip 4285		42859
City	Remscheid Countr		Germany
Certification Body	VDE Prüf- und Zertifizierungsinstitut GmbH		
Name of testing laboratory			
Subtype title	tle VWL 37/5 230V / VWL 37/5 230V S2 / VWL 39/5 230V / VWL 39/5 230V S2 / VWL 57/5 230V, VWL 57/5 230V S2, VWL 59/5 230V / VWL 59/5 230V S2		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R410a		
Mass Of Refrigerant	1.4 kg		



Model: VWL 37/5 230V

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.84 kW	4.68 kW	
El input	1.06 kW	1.72 kW	
СОР	4.56	2.72	
Indoor water flow rate	0.86 m³/h	0.52 m³/h	

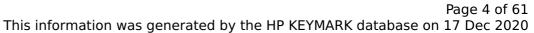
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)

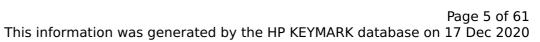
EN 14825		
	Low temperature	Medium temperature
η_{s}	191 %	132 %
Prated	4.84 kW	4.68 kW
SCOP	4.86	3.38
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.56 kW	3.21 kW
COP Tj = -7°C	3.20	2.12
Cdh	0.99	0.99
Pdh Tj = +2°C	2.26 kW	2.01 kW
COP Tj = +2°C	4.74	3.27
Cdh	0.98	0.98
Pdh Tj = +7°C	2.23 kW	2.03 kW
COP Tj = +7°C	6.25	4.45
Cdh	0.98	0.98
Pdh Tj = 12°C	2.70 kW	2.50 kW





COP Tj = 12°C	8.55	6.46
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.56 kW	3.21 kW
COP Tj = Tbiv	3.20	2.12
Pdh Tj = TOL	3.28 kW	2.83 kW
COP Tj = TOL	2.90	1.83
Cdh	0.99	0.99
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	1700 kWh	2199 kWh

EN 14825		
	Low temperature	Medium temperature
η _s	221 %	141 %
Prated	4.84 kW	4.68 kW



2	CEN heat pump
5	KEYMARK

SCOP	5.61	3.61
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.89 kW	3.80 kW
COP Tj = +2°C	3.75	2.46
Cdh	0.99	0.99
Pdh Tj = +7°C	2.16 kW	1.85 kW
COP Tj = +7°C	5.61	3.39
Cdh	0.98	0.98
Pdh Tj = 12°C	2.66 kW	2.43 kW
COP Tj = 12°C	8.03	5.70
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.89 kW	3.80 kW
COP Tj = Tbiv	3.75	2.46
Pdh Tj = TOL	3.89 kW	3.80 kW
COP Tj = TOL	3.75	2.46
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
РТО	11 W	11 W
PSB	11 W	11 W
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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	929 kWh	1408 kWh

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	49 dB(A)	49 dB(A)	

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	162 %	111 %
Prated	4.84 kW	4.68 kW
SCOP	4.12	2.84
Tbiv	-13 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.39 kW	1.85 kW
COP Tj = -7°C	3.58	2.45
Cdh	0.99	0.99
Pdh Tj = +2°C	1.93 kW	1.72 kW
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COP Tj = +2°C	5.07	3.56
Cdh	0.98	0.98
Pdh Tj = $+7$ °C	2.26 kW	2.09 kW
$COP Tj = +7^{\circ}C$	6.60	4.87
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.54 kW
COP Tj = 12°C	8.48	6.87
Cdh	0.97	0.97
Pdh Tj = Tbiv	2.94 kW	2.46 kW
COP Tj = Tbiv	2.81	1.81
Pdh Tj = TOL	2.31 kW	2.46 kW
COP Tj = TOL	2.26	1.81
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
РТО	11 W	11 W
PSB	11 W	11 W
РСК	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	2303 kWh	2609 kWh



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Pdh Tj = -15°C (if TOL<-20°C)	0.01	2.46
COP Tj = -15 °C (if TOL< -20 °C)	0.01	1.81
Cdh	0.01	0.99

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)



Model: VWL 39/5 230V

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.68 kW	
El input	1.72 kW	
СОР	2.72	
Indoor water flow rate	0.52 m³/h	

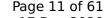
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1	
Medium temperature	
Sound power level indoor	49 dB(A)

EN 14825	
	Medium temperature
η_{s}	132 %
Prated	4.68 kW
SCOP	3.38
Tbiv	-7 °C
TOL	-10 °C
Pdh Tj = -7°C	3.21 kW
COP Tj = -7°C	2.12
Cdh	0.99
Pdh Tj = +2°C	2.01 kW
$COP Tj = +2^{\circ}C$	3.27
Cdh	0.98
Pdh Tj = +7°C	2.03 kW
COP Tj = +7°C	4.45
Cdh	0.98
Pdh Tj = 12°C	2.50 kW





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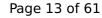
COP Tj = 12°C 6.46 Cdh 0.98 Pdh Tj = Tbiv 3.21 kW COP Tj = Tbiv 2.12 Pdh Tj = TOL 2.83 kW COP Tj = TOL 1.83 Cdh 0.99 WTOL 55 °C Poff 11 W PTO 11 W PSB 11 W PCK 0 W Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW Annual energy consumption Qhe 2199 kWh		
Pdh Tj = Tbiv 3.21 kW COP Tj = Tbiv 2.12 Pdh Tj = TOL 2.83 kW COP Tj = TOL 1.83 Cdh 0.99 WTOL 55 °C Poff 11 W PTO 11 W PSB 11 W PCK 0 W Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW	COP Tj = 12°C	6.46
COP Tj = Tbiv 2.12 Pdh Tj = TOL 2.83 kW COP Tj = TOL 1.83 Cdh 0.99 WTOL 55 °C Poff 11 W PTO 11 W PSB 11 W PCK 0 W Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW	Cdh	0.98
Pdh Tj = TOL 2.83 kW COP Tj = TOL 1.83 Cdh 0.99 WTOL 55 °C Poff 11 W PTO 11 W PSB 11 W PCK 0 W Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW	Pdh Tj = Tbiv	3.21 kW
COP Tj = TOL 1.83 Cdh 0.99 WTOL 55 °C Poff 11 W PTO 11 W PSB 11 W PCK 0 W Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW	COP Tj = Tbiv	2.12
Cdh 0.99 WTOL 55 °C Poff 11 W PTO 11 W PSB 11 W PCK 0 W Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW	Pdh Tj = TOL	2.83 kW
WTOL Poff Poff 11 W PTO 11 W PSB 11 W PCK O W Supplementary Heater: Type of energy input Supplementary Heater: PSUP O.00 kW	COP Tj = TOL	1.83
Poff 11 W PTO 11 W PSB 11 W PCK 0 W Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW	Cdh	0.99
PTO 11 W PSB 11 W PCK 0 W Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW	WTOL	55 °C
PSB 11 W PCK 0 W Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW	Poff	11 W
PCK 0 W Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW	PTO	11 W
Supplementary Heater: Type of energy input electricity Supplementary Heater: PSUP 0.00 kW	PSB	11 W
Supplementary Heater: PSUP 0.00 kW	PCK	0 W
	Supplementary Heater: Type of energy input	electricity
Annual energy consumption Qhe 2199 kWh	Supplementary Heater: PSUP	0.00 kW
	Annual energy consumption Qhe	2199 kWh

EN 14825	
	Medium temperature
η_{s}	141 %
Prated	4.68 kW
	'





This information was generated by the HP KEYMARK database on 17 Dec 2020		
SCOP	3.61	
Tbiv	2 °C	
TOL	2 °C	
Pdh Tj = +2°C	3.80 kW	
COP Tj = +2°C	2.46	
Cdh	0.99	
Pdh Tj = +7°C	1.85 kW	
$COPTj = +7^{\circ}C$	3.39	
Cdh	0.98	
Pdh Tj = 12°C	2.43 kW	
COP Tj = 12°C	5.70	
Cdh	0.98	
Pdh Tj = Tbiv	3.80 kW	
COP Tj = Tbiv	2.46	
Pdh Tj = TOL	3.80 kW	
COP Tj = TOL	2.46	
Cdh	0.99	
WTOL	55 °C	
Poff	11 W	
РТО	11 W	
PSB	11 W	



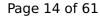


PCK	o w
Supplementary Heater: Type of energy input	electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	1408 kWh

EN 12102-1	
	Medium temperature
Sound power level indoor	49 dB(A)

Colder Climate

EN 14825	
	Medium temperature
η_{s}	111 %
Prated	4.68 kW
SCOP	2.84
Tbiv	-15 °C
TOL	-15 °C
Pdh Tj = -7°C	1.85 kW
COP Tj = -7°C	2.45
Cdh	0.99
Pdh Tj = +2°C	1.72 kW
	'





This information was generated by the	TIL KETMANK database on 17 Dec 2020
COP Tj = +2°C	3.56
Cdh	0.98
Pdh Tj = $+7^{\circ}$ C	2.09 kW
$COP Tj = +7^{\circ}C$	4.87
Cdh	0.98
Pdh Tj = 12°C	2.54 kW
COP Tj = 12°C	6.87
Cdh	0.97
Pdh Tj = Tbiv	2.46 kW
COP Tj = Tbiv	1.81
Pdh Tj = TOL	2.46 kW
COP Tj = TOL	1.81
Cdh	0.99
WTOL	55 °C
Poff	11 W
РТО	11 W
PSB	11 W
PCK	o w
Supplementary Heater: Type of energy input	electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	2609 kWh



Pdh Tj = -15°C (if TOL<-20°C)	2.46
COP Tj = -15°C (if TOL $<$ -20°C)	1.81
Cdh	0.99

EN 12102-1	
	Medium temperature
Sound power level indoor	49 dB(A)

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	102 %
СОР	2.51
Heating up time	3:49 h:min
Standby power input	20.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	276



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EN 16147	
Declared load profile	XL
Efficiency ηDHW	125 %
СОР	3.06
Heating up time	2:42 h:min
Standby power input	19.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	275 I

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	90 %
СОР	2.22
Heating up time	4:39 h:min
Standby power input	21.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	265 I

Model: VWL 37/5 230V S2

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.84 kW	4.68 kW
El input	1.06 kW	1.72 kW
СОР	4.56	2.72
Indoor water flow rate	0.86 m³/h	0.52 m³/h

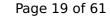
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	187 %	130 %
Prated	4.84 kW	4.68 kW
SCOP	4.75	3.32
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.56 kW	3.21 kW
COP Tj = -7°C	3.20	2.12
Cdh	0.99	0.99
Pdh Tj = +2°C	2.26 kW	2.01 kW
COP Tj = +2°C	4.74	3.27
Cdh	0.98	0.98
Pdh Tj = +7°C	2.23 kW	2.03 kW
COP Tj = +7°C	6.25	4.45
Cdh	0.98	0.98
Pdh Tj = 12°C	2.70 kW	2.50 kW





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8.55	6.46
0.97	0.98
3.56 kW	3.21 kW
3.20	2.12
3.28 kW	2.83 kW
2.90	1.83
0.99	0.99
55 °C	55 °C
11 W	11 W
11 W	11 W
11 W	11 W
o w	o w
electricity	electricity
0.00 kW	0.00 kW
1741 kWh	2240 kWh
	0.97 3.56 kW 3.20 3.28 kW 2.90 0.99 55 °C 11 W 11 W 11 W 0 W electricity 0.00 kW

EN 14825	
Low temperature	Medium temperature
210 %	136 %
4.84 kW	4.68 kW
	Low temperature





	Terated by the HF KLTM	ARK database on 17 Dec 2020
SCOP	5.33	3.49
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.89 kW	3.80 kW
COP Tj = +2°C	3.75	2.46
Cdh	0.99	0.99
Pdh Tj = $+7$ °C	2.16 kW	1.85 kW
$COPTj = +7^{\circ}C$	5.61	3.39
Cdh	0.98	0.98
Pdh Tj = 12°C	2.66 kW	2.43 kW
COP Tj = 12°C	8.03	5.70
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.89 kW	3.80 kW
COP Tj = Tbiv	3.75	2.46
Pdh Tj = TOL	3.89 kW	3.80 kW
COP Tj = TOL	3.75	2.46
Cdh	0.99	0.99
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	976 kWh	1456 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_{s}	160 %	110 %
Prated	4.84 kW	4.68 kW
SCOP	4.08	2.82
Tbiv	-13 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.39 kW	1.85 kW
COP Tj = -7°C	3.58	2.45
Cdh	0.99	0.99
Pdh Tj = +2°C	1.93 kW	1.72 kW





	•	MARK database on 17 Dec 202
COP Tj = +2°C	5.07	3.56
Cdh	0.98	0.98
Pdh Tj = +7°C	2.26 kW	2.09 kW
$COP Tj = +7^{\circ}C$	6.60	4.87
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.54 kW
COP Tj = 12°C	8.48	6.87
Cdh	0.97	0.97
Pdh Tj = Tbiv	2.94 kW	2.46 kW
COP Tj = Tbiv	2.81	1.81
Pdh Tj = TOL	2.31 kW	2.46 kW
COP Tj = TOL	2.26	1.81
Cdh	0.99	0.99
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	2327 kWh	2634 kWh
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Pdh Tj = -15°C (if TOL<-20°C)	0.01	2.46
COP Tj = -15°C (if TOL $<$ -20°C)	0.01	1.81
Cdh	0.01	0.99

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)



Model: VWL 39/5 230V S2

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.68 kW	
El input	1.72 kW	
СОР	2.72	
Indoor water flow rate	0.52 m³/h	

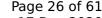
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1	
	Medium temperature
Sound power level indoor	49 dB(A)

EN 14825	
	Medium temperature
η_{s}	130 %
Prated	4.68 kW
SCOP	3.32
Tbiv	-7 °C
TOL	-10 °C
Pdh Tj = -7°C	3.21 kW
COP Tj = -7°C	2.12
Cdh	0.99
Pdh Tj = +2°C	2.01 kW
COP Tj = +2°C	3.27
Cdh	0.98
Pdh Tj = +7°C	2.03 kW
COP Tj = +7°C	4.45
Cdh	0.98
Pdh Tj = 12°C	2.50 kW





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COP Tj = 12°C	6.46
Cdh	0.98
Pdh Tj = Tbiv	3.21 kW
COP Tj = Tbiv	2.12
Pdh Tj = TOL	2.83 kW
COP Tj = TOL	1.83
Cdh	0.99
WTOL	55 °C
Poff	11 W
PTO	11 W
PSB	11 W
PCK	0 W
Supplementary Heater: Type of energy input	electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	2240 kWh

EN 14825	
	Medium temperature
η_{s}	136 %
Prated	4.68 kW
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This information was generated by the HP KEYMARK database on 17 Dec 2020		
SCOP	3.49	
Tbiv	2 °C	
TOL	2 °C	
Pdh Tj = +2°C	3.80 kW	
COP Tj = +2°C	2.46	
Cdh	0.99	
Pdh Tj = +7°C	1.85 kW	
$COPTj = +7^{\circ}C$	3.39	
Cdh	0.98	
Pdh Tj = 12°C	2.43 kW	
COP Tj = 12°C	5.70	
Cdh	0.98	
Pdh Tj = Tbiv	3.80 kW	
COP Tj = Tbiv	2.46	
Pdh Tj = TOL	3.80 kW	
COP Tj = TOL	2.46	
Cdh	0.99	
WTOL	55 °C	
Poff	11 W	
РТО	11 W	
PSB	11 W	





PCK	o w
Supplementary Heater: Type of energy input	electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	1456 kWh

EN 12102-1	
	Medium temperature
Sound power level indoor	49 dB(A)

Colder Climate

EN 14825	
	Medium temperature
η_{S}	110 %
Prated	4.68 kW
SCOP	2.82
Tbiv	-15 °C
TOL	-15 °C
Pdh Tj = -7 °C	1.85 kW
COP Tj = -7° C	2.45
Cdh	0.99
Pdh Tj = $+2^{\circ}$ C	1.72 kW





This information was generated by the HP KEYMARK database on 17 Dec 2020		
COP Tj = +2°C	3.56	
Cdh	0.98	
Pdh Tj = $+7^{\circ}$ C	2.09 kW	
$COPTj = +7^{\circ}C$	4.87	
Cdh	0.98	
Pdh Tj = 12°C	2.54 kW	
COP Tj = 12°C	6.87	
Cdh	0.97	
Pdh Tj = Tbiv	2.46 kW	
COP Tj = Tbiv	1.81	
Pdh Tj = TOL	2.46 kW	
COP Tj = TOL	1.81	
Cdh	0.99	
WTOL	55 °C	
Poff	11 W	
РТО	11 W	
PSB	11 W	
PCK	0 W	
Supplementary Heater: Type of energy input	electricity	
Supplementary Heater: PSUP	0.00 kW	
Annual energy consumption Qhe	2634 kWh	



Pdh Tj = -15°C (if TOL<-20°C)	2.46
COP Tj = -15°C (if TOL $<$ -20°C)	1.81
Cdh	0.99

EN 12102-1	
Medium temperature	
Sound power level indoor	49 dB(A)

Domestic Hot Water (DHW)

Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	102 %	
СОР	2.51	
Heating up time	3:49 h:min	
Standby power input	20.0 W	
Reference hot water temperature	55.0 °C	
Mixed water at 40°C	276	



 $$\operatorname{\textit{Page}}\ 31$$ of 61 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	125 %	
СОР	3.06	
Heating up time	2:42 h:min	
Standby power input	19.0 W	
Reference hot water temperature	55.0 °C	
Mixed water at 40°C	275 l	

Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	90 %	
СОР	2.22	
Heating up time	4:39 h:min	
Standby power input	21.0 W	
Reference hot water temperature	55.0 °C	
Mixed water at 40°C	265 I	

Model: VWL 57/5 230V

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.84 kW	4.68 kW	
El input	1.06 kW	1.72 kW	
СОР	4.56	2.72	
Indoor water flow rate	0.86 m³/h	0.52 m³/h	

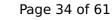
EN 14511-4			
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed		
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit			
	passed		
Shutting off the heat transfer medium flow	passed		
Complete power supply failure	passed		
Defrost test	passed		

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	193 %	138 %
Prated	4.84 kW	4.68 kW
SCOP	4.90	3.52
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.69 kW	4.36 kW
COP Tj = -7°C	2.96	2.13
Cdh	0.99	0.99
Pdh Tj = +2°C	3.51 kW	2.71 kW
COP Tj = +2°C	4.79	3.46
Cdh	0.99	0.99
Pdh Tj = +7°C	2.27 kW	2.05 kW
COP Tj = +7°C	6.53	4.56
Cdh	0.97	0.98
Pdh Tj = 12°C	2.73 kW	2.51 kW





COP Tj = 12°C	8.87	6.53
Cdh	0.97	0.98
Pdh Tj = Tbiv	5.69 kW	4.36 kW
COP Tj = Tbiv	2.96	2.13
Pdh Tj = TOL	4.95 kW	3.89 kW
COP Tj = TOL	2.64	1.86
Cdh	0.99	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	2701 kWh	2876 kWh
•		

EN 14825		
Low temperature	Medium temperature	
250 %	166 %	
4.84 kW	4.68 kW	
	Low temperature 250 %	



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This information was generated by the HP KEYMARK database on 17 Dec 2020			
SCOP	6.32	4.21	
Tbiv	2 °C	2 °C	
TOL	2 °C	2 °C	
Pdh Tj = +2°C	3.89 kW	3.80 kW	
COP Tj = +2°C	3.76	2.47	
Cdh	0.99	0.99	
Pdh Tj = $+7^{\circ}$ C	2.44 kW	2.30 kW	
$COPTj = +7^{\circ}C$	5.61	3.45	
Cdh	0.98	0.99	
Pdh Tj = 12°C	2.66 kW	2.43 kW	
COP Tj = 12°C	8.03	5.70	
Cdh	0.97	0.98	
Pdh Tj = Tbiv	3.89 kW	3.80 kW	
COP Tj = Tbiv	3.76	2.47	
Pdh Tj = TOL	3.89 kW	3.80 kW	
COP Tj = TOL	3.76	2.47	
Cdh	0.99	0.99	
WTOL	55 °C	55 °C	
Poff	11 W	11 W	
РТО	11 W	11 W	
PSB	11 W	11 W	





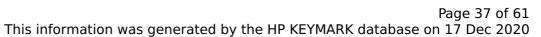
This information was	generated by	the HP KEYMARK	database on 17 Dec 2020

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	824 kWh	1237 kWh

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	49 dB(A)	49 dB(A)		

Colder Climate

EN 14825				
	Low temperature	Medium temperature		
η_s	148 %	115 %		
Prated	4.68 kW	4.68 kW		
SCOP	3.76	2.84		
Tbiv	-15 °C	-15 °C		
TOL	-15 °C	-15 °C		
Pdh Tj = -7°C	3.21 kW	2.70 kW		
COP Tj = -7°C	3.58	2.58		
Cdh	0.99	0.99		
Pdh Tj = +2°C	1.96 kW	1.74 kW		





	•	MARK database on 17 Dec 202
COP Tj = +2°C	5.23	3.68
Cdh	0.98	0.98
Pdh Tj = +7°C	2.30 kW	2.10 kW
COP Tj = +7°C	6.81	4.94
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.54 kW
COP Tj = 12°C	8.55	6.87
Cdh	0.97	0.97
Pdh Tj = Tbiv	3.52 kW	3.83 kW
COP Tj = Tbiv	2.28	1.85
Pdh Tj = TOL	3.52 kW	3.83 kW
COP Tj = TOL	2.28	1.85
Cdh	0.99	0.99
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	3642 kWh	3911 kWh
	·	



$$\operatorname{\textit{Page}}\xspace$ 38 of 61 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = -15°C (if TOL $<$ -20°C)	3.52	3.83
COP Tj = -15 °C (if TOL< -20 °C)	2.28	1.85
Cdh	0.99	0.99

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)

Model: VWL 59/5 230V

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.68 kW	
El input	1.72 kW	
СОР	2.72	
Indoor water flow rate	0.52 m³/h	

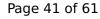
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1	
	Medium temperature
Sound power level indoor	49 dB(A)

EN 14825		
	Medium temperature	
η_{s}	138 %	
Prated	4.68 kW	
SCOP	3.52	
Tbiv	-7 °C	
TOL	-10 °C	
Pdh Tj = -7°C	4.36 kW	
COP Tj = -7°C	2.13	
Cdh	0.99	
Pdh Tj = +2°C	2.71 kW	
$COPTj = +2^{\circ}C$	3.46	
Cdh	0.99	
Pdh Tj = +7°C	2.05 kW	
COP Tj = +7°C	4.56	
Cdh	0.98	
Pdh Tj = 12°C	2.51 kW	





COP Tj = 12°C	6.53
Cdh	0.98
Pdh Tj = Tbiv	4.36 kW
COP Tj = Tbiv	2.13
Pdh Tj = TOL	3.89 kW
COP Tj = TOL	1.86
Cdh	1.00
WTOL	55 °C
Poff	11 W
PTO	11 W
PSB	11 W
PCK	0 W
Supplementary Heater: Type of energy input	electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	2876 kWh

EN 14825	
	Medium temperature
η_{s}	166 %
Prated	4.68 kW
	'





Inis information was generated by the HP KEYMARK database on 17 Dec 2020		
SCOP	4.21	
Tbiv	2 °C	
TOL	2 °C	
Pdh Tj = +2°C	3.80 kW	
COP Tj = +2°C	2.47	
Cdh	0.99	
Pdh Tj = +7°C	2.30 kW	
$COPTj = +7^{\circ}C$	3.45	
Cdh	0.99	
Pdh Tj = 12°C	2.43 kW	
COP Tj = 12°C	5.70	
Cdh	0.98	
Pdh Tj = Tbiv	3.80 kW	
COP Tj = Tbiv	2.47	
Pdh Tj = TOL	3.80 kW	
COP Tj = TOL	2.47	
Cdh	0.99	
WTOL	55 °C	
Poff	11 W	
РТО	11 W	
PSB	11 W	





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PCK	0 W
Supplementary Heater: Type of energy input	electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	1237 kWh

EN 12102-1	
	Medium temperature
Sound power level indoor	49 dB(A)

Colder Climate

EN 14825	
	Medium temperature
η_s	115 %
Prated	4.68 kW
SCOP	2.84
Tbiv	-15 °C
TOL	-15 °C
Pdh Tj = -7°C	2.70 kW
COP Tj = -7°C	2.58
Cdh	0.99
Pdh Tj = +2°C	1.74 kW





This information was generated by the	II KETMANK database on 17 Dec 2020
COP Tj = +2°C	3.68
Cdh	0.98
Pdh Tj = $+7^{\circ}$ C	2.10 kW
$COP Tj = +7^{\circ}C$	4.94
Cdh	0.98
Pdh Tj = 12°C	2.54 kW
COP Tj = 12°C	6.87
Cdh	0.97
Pdh Tj = Tbiv	3.83 kW
COP Tj = Tbiv	1.85
Pdh Tj = TOL	3.83 kW
COP Tj = TOL	1.85
Cdh	0.99
WTOL	55 °C
Poff	11 W
РТО	11 W
PSB	11 W
PCK	o w
Supplementary Heater: Type of energy input	electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	3911 kWh



Pdh Tj = -15°C (if TOL<-20°C)	3.83
COP Tj = -15°C (if TOL $<$ -20°C)	1.85
Cdh	0.99

EN 12102-1	
	Medium temperature
Sound power level indoor	49 dB(A)

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	102 %
СОР	2.51
Heating up time	3:49 h:min
Standby power input	20.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	276 I



 $$\operatorname{\textit{Page}}$$ 46 of 61 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency ηDHW	125 %
СОР	3.06
Heating up time	2:42 h:min
Standby power input	19.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	275 I

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	90 %
СОР	2.22
Heating up time	4:39 h:min
Standby power input	21.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	265 I



Model: VWL 57/5 230V S2

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.84 kW	4.68 kW
El input	1.06 kW	1.72 kW
СОР	4.56	2.72
Indoor water flow rate	0.86 m³/h	0.52 m³/h

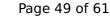
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)

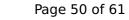
EN 14825		
	Low temperature	Medium temperature
η_{s}	190 %	136 %
Prated	4.84 kW	4.68 kW
SCOP	4.84	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.69 kW	4.36 kW
COP Tj = -7°C	2.96	2.13
Cdh	0.99	0.99
Pdh Tj = +2°C	3.51 kW	2.71 kW
COP Tj = +2°C	4.79	3.46
Cdh	0.99	0.99
Pdh Tj = +7°C	2.27 kW	2.05 kW
COP Tj = +7°C	6.53	4.56
Cdh	0.97	0.98
Pdh Tj = 12°C	2.73 kW	2.51 kW





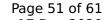
COP Tj = 12°C	8.87	6.53
Cdh	0.97	0.98
Pdh Tj = Tbiv	5.69 kW	4.36 kW
COP Tj = Tbiv	2.96	2.13
Pdh Tj = TOL	4.95 kW	3.89 kW
COP Tj = TOL	2.64	1.86
Cdh	0.99	1.00
WTOL	55 °C	55 °C
Poff	11 W	11 W
РТО	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2741 kWh	2916 kWh

EN 14825	
Low temperature	Medium temperature
236 %	159 %
4.84 kW	4.68 kW
	Low temperature 236 %





This information was get	lerated by the Hi KETM	ARK database on 17 Dec 2020
SCOP	5.97	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	3.89 kW	3.80 kW
COP Tj = +2°C	3.76	2.47
Cdh	0.99	0.99
Pdh Tj = +7°C	2.44 kW	2.30 kW
COP Tj = +7°C	5.61	3.45
Cdh	0.98	0.99
Pdh Tj = 12°C	2.66 kW	2.43 kW
COP Tj = 12°C	8.03	5.70
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.89 kW	3.80 kW
COP Tj = Tbiv	3.76	2.47
Pdh Tj = TOL	3.89 kW	3.80 kW
COP Tj = TOL	3.76	2.47
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
РТО	11 W	11 W
PSB	11 W	11 W





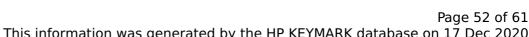
This information was gen	erated by the HP KEYM	ARK database on 17	Dec 2020

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	873 kWh	1286 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_{s}	147 %	115 %
Prated	4.68 kW	4.68 kW
SCOP	3.74	2.94
Tbiv	-15 °C	-15 °C
TOL	-15 °C	-15 °C
Pdh Tj = -7°C	3.21 kW	2.70 kW
COP Tj = -7°C	3.58	2.58
Cdh	0.99	0.99
Pdh Tj = +2°C	1.96 kW	1.74 kW



This information was	generated by the HP	KEYMARK database on 17 Dec 202
$COP Tj = +2^{\circ}C$	5.23	3.68
Cdh	0.98	0.98
Pdh Tj = +7°C	2.30 kW	2.10 kW
$COP Tj = +7^{\circ}C$	6.81	4.94
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.54 kW
COP Tj = 12°C	8.55	6.87
Cdh	0.97	0.97
Pdh Tj = Tbiv	3.52 kW	3.83 kW
COP Tj = Tbiv	2.28	1.85
Pdh Tj = TOL	3.52 kW	3.83 kW
COP Tj = TOL	2.28	1.85
Cdh	0.99	0.99
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	3666 kWh	3935 kWh
		I

CEN heat pump KEYMARK



$$\operatorname{\textit{Page}}\xspace$ 53 of 61 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = -15°C (if TOL $<$ -20°C)	3.52	3.83
COP Tj = -15 °C (if TOL< -20 °C)	2.28	1.85
Cdh	0.99	0.99

	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)



Model: VWL 59/5 230V S2

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.68 kW	
El input	1.72 kW	
СОР	2.72	
Indoor water flow rate	0.52 m³/h	

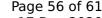
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1	
	Medium temperature
Sound power level indoor	49 dB(A)

EN 14825	
	Medium temperature
η_{s}	136 %
Prated	4.68 kW
SCOP	3.47
Tbiv	-7 °C
TOL	-10 °C
Pdh Tj = -7°C	4.36 kW
COP Tj = -7°C	2.13
Cdh	0.99
Pdh Tj = +2°C	2.71 kW
COP Tj = +2°C	3.46
Cdh	0.99
Pdh Tj = $+7^{\circ}$ C	2.05 kW
COP Tj = +7°C	4.56
Cdh	0.98
Pdh Tj = 12°C	2.51 kW





 $$\operatorname{\textit{Page}}\xspace$ 56 of 61 This information was generated by the HP KEYMARK database on 17 Dec 2020

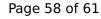
COP Tj = 12°C	6.53
Cdh	0.98
Pdh Tj = Tbiv	4.36 kW
COP Tj = Tbiv	2.13
Pdh Tj = TOL	3.89 kW
COP Tj = TOL	1.86
Cdh	1.00
WTOL	55 °C
Poff	11 W
РТО	11 W
PSB	11 W
PCK	0 W
Supplementary Heater: Type of energy input	electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	2916 kWh

EN 14825	
	Medium temperature
η_{s}	159 %
Prated	4.68 kW
	·





This information was generated by the HP KEYMARK database on 17 Dec 2020	
SCOP	4.05
Tbiv	2 °C
TOL	2 °C
Pdh Tj = +2°C	3.80 kW
COP Tj = +2°C	2.47
Cdh	0.99
Pdh Tj = +7°C	2.30 kW
$COPTj = +7^{\circ}C$	3.45
Cdh	0.99
Pdh Tj = 12°C	2.43 kW
COP Tj = 12°C	5.70
Cdh	0.98
Pdh Tj = Tbiv	3.80 kW
COP Tj = Tbiv	2.47
Pdh Tj = TOL	3.80 kW
COP Tj = TOL	2.47
Cdh	0.99
WTOL	55 °C
Poff	11 W
РТО	11 W
PSB	11 W



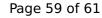


PCK	o w
Supplementary Heater: Type of energy input	electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	1286 kWh

EN 12102-1	
	Medium temperature
Sound power level indoor	49 dB(A)

Colder Climate

EN 14825	
	Medium temperature
η_s	115 %
Prated	4.68 kW
SCOP	2.94
Tbiv	-15 °C
TOL	-15 °C
Pdh Tj = -7°C	2.70 kW
COP Tj = -7°C	2.58
Cdh	0.99
Pdh Tj = $+2$ °C	1.74 kW





This information was generated by the i	IF KLIMANK database on 17 Dec 2020
COP Tj = +2°C	3.68
Cdh	0.98
Pdh Tj = $+7^{\circ}$ C	2.10 kW
$COPTj = +7^{\circ}C$	4.94
Cdh	0.98
Pdh Tj = 12°C	2.54 kW
COP Tj = 12°C	6.87
Cdh	0.97
Pdh Tj = Tbiv	3.83 kW
COP Tj = Tbiv	1.85
Pdh Tj = TOL	3.83 kW
COP Tj = TOL	1.85
Cdh	0.99
WTOL	55 °C
Poff	11 W
РТО	11 W
PSB	11 W
PCK	o w
Supplementary Heater: Type of energy input	electricity
Supplementary Heater: PSUP	0.00 kW
Annual energy consumption Qhe	3935 kWh



Pdh Tj = -15°C (if TOL<-20°C)	3.83
COP Tj = -15 °C (if TOL< -20 °C)	1.85
Cdh	0.99

EN 12102-1	
	Medium temperature
Sound power level indoor	49 dB(A)

Domestic Hot Water (DHW)

Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	102 %	
СОР	2.51	
Heating up time	3:49 h:min	
Standby power input	20.0 W	
Reference hot water temperature	55.0 °C	
Mixed water at 40°C	276	



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EN 16147		
Declared load profile	XL	
Efficiency ηDHW	125 %	
СОР	3.06	
Heating up time	2:42 h:min	
Standby power input	19.0 W	
Reference hot water temperature	55.0 °C	
Mixed water at 40°C	275 I	

Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	90 %	
СОР	2.22	
Heating up time	4:39 h:min	
Standby power input	21.0 W	
Reference hot water temperature	55.0 °C	
Mixed water at 40°C	265 I	