

Summary of	VWL 35/5 AS 230V / VWL 55/5 AS 230V	Reg. No.	40049302
Certificate Holder		+	
Name	Vaillant Deutschland GmbH & Co KG		
Address	Berghauser Straße 40	Zip	42859
City	Remscheid	Country	Germany
Certification Body	VDE Prüf- und Zertifizierungsinstitut GmbH		
Subtype title	VWL 35/5 AS 230V / VWL 55/5 AS 230V		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R410a		
Mass Of Refrigerant	1.5 kg		
Certification Date	10.03.2021		



Model: VWL 35/5 AS 230V + VWL 57/5 IS

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	3.13 kW	2.73 kW	
El input	0.64 kW	1.05 kW	
СОР	4.89	2.62	

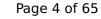
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	51 dB(A)	53 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	185 %	130 %
Prated	4.00 kW	3.51 kW
SCOP	4.70	3.33
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.54 kW	3.10 kW
COP Tj = -7°C	3.19	2.08
Cdh	0.99	0.99
Pdh Tj = +2°C	2.18 kW	2.04 kW
COP Tj = +2°C	4.50	3.26
Cdh	0.98	0.98
Pdh Tj = +7°C	2.32 kW	2.02 kW
COP Tj = +7°C	6.15	4.36
Cdh	0.97	0.98





	-	
Pdh Tj = 12°C	2.74 kW	2.44 kW
COP Tj = 12°C	8.42	5.86
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.54 kW	3.10 kW
COP Tj = Tbiv	3.19	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.24 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.80
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	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	1758 kWh	2177 kWh

Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	51 dB(A)	53 dB(A)	

EN 14825		
Low temperature	Medium temperature	
253 %	156 %	
3.76 kW	3.31 kW	
6.41	3.98	
2 °C	2 °C	
2 °C	2 °C	
3.76 kW	3.31 kW	
3.69	2.24	
0.99	0.99	
2.25 kW	2.06 kW	
5.81	3.36	
0.97	0.98	
2.70 kW	2.41 kW	
8.08	5.31	
0.97	0.98	
	Low temperature 253 % 3.76 kW 6.41 2 °C 2 °C 3.76 kW 3.69 0.99 2.25 kW 5.81 0.97 2.70 kW 8.08	





Pdh Tj = Tbiv	3.76 kW	3.31 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
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	783 kWh	1111 kWh

Colder Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	41 dB(A)	41 dB(A)		
Sound power level outdoor	51 dB(A)	53 dB(A)		

EN 14825		
	Low temperature	Medium temperature





	-	We dutubuse on 15 Mar 202
η_{s}	155 %	107 %
Prated	3.91 kW	2.82 kW
SCOP	3.96	2.76
Tbiv	-13 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7 °C	2.36 kW	1.78 kW
$COP Tj = -7^{\circ}C$	3.44	2.32
Cdh	0.99	0.99
Pdh Tj = $+2$ °C	1.96 kW	1.70 kW
$COP Tj = +2^{\circ}C$	4.80	3.54
Cdh	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	2.34 kW	2.09 kW
$COP Tj = +7^{\circ}C$	6.54	4.79
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.43 kW
COP Tj = 12°C	8.00	6.07
Cdh	0.97	0.97
Pdh Tj = Tbiv	2.99 kW	2.30 kW
COP Tj = Tbiv	2.80	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.30 kW



This information was generated by the Hir RETMARK database on 15 Mar 202.			
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.72	
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	2439 kWh	2517 kWh	
Pdh Tj = -15°C (if TOL<-20°C)	2.22	2.30	
COP Tj = -15°C (if TOL $<$ -20°C)	2.17	1.72	
Cdh	0.99	0.99	



Model: VWL 35/5 AS 230V + VWL 58/5 IS

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.13 kW	2.73 kW
El input	0.64 kW	1.05 kW
СОР	4.89	2.62

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	44 dB(A)	44 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	185 %	130 %
Prated	4.00 kW	3.51 kW
SCOP	4.70	3.33
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.54 kW	3.10 kW
COP Tj = -7°C	3.19	2.08
Cdh	0.99	0.99
Pdh Tj = +2°C	2.18 kW	2.04 kW
COP Tj = +2°C	4.50	3.26
Cdh	0.98	0.98
Pdh Tj = +7°C	2.32 kW	2.02 kW
COP Tj = +7°C	6.15	4.36
Cdh	0.97	0.98



 $$\operatorname{\textit{Page}}\ 11$$ of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

	-	
Pdh Tj = 12°C	2.74 kW	2.44 kW
COP Tj = 12°C	8.42	5.86
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.54 kW	3.10 kW
COP Tj = Tbiv	3.19	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.24 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.80
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	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	1758 kWh	2177 kWh

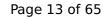
Warmer Climate



 $$\operatorname{\textit{Page}}\ 12$$ of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	253 %	156 %
Prated	3.76 kW	3.31 kW
SCOP	6.41	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.76 kW	3.31 kW
COP Tj = +2°C	3.69	2.24
Cdh	0.99	0.99
Pdh Tj = +7°C	2.25 kW	2.06 kW
$COPTj = +7^{\circ}C$	5.81	3.36
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.41 kW
COP Tj = 12°C	8.08	5.31
Cdh	0.97	0.98





Pdh Tj = Tbiv	3.76 kW	3.31 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
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	783 kWh	1111 kWh

Colder Climate

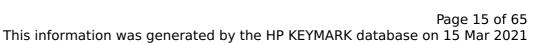
EN 12102-1 Low temperature Medium temperature Sound power level indoor 44 dB(A) 44 dB(A) Sound power level outdoor 51 dB(A) 53 dB(A)

EN 14825		
	Low temperature	Medium temperature





	· · · · · · · · · · · · · · · · · · ·	TIMANN database on 13 Mai 2
η_{s}	155 %	107 %
Prated	3.91 kW	2.82 kW
SCOP	3.96	2.76
Tbiv	-13 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.36 kW	1.78 kW
$COP Tj = -7^{\circ}C$	3.44	2.32
Cdh	0.99	0.99
Pdh Tj = +2°C	1.96 kW	1.70 kW
COP Tj = +2°C	4.80	3.54
Cdh	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	2.34 kW	2.09 kW
$COPTj = +7^{\circ}C$	6.54	4.79
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.43 kW
COP Tj = 12°C	8.00	6.07
Cdh	0.97	0.97
Pdh Tj = Tbiv	2.99 kW	2.30 kW
COP Tj = Tbiv	2.80	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.30 kW



COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.72
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	2439 kWh	2517 kWh
Pdh Tj = -15°C (if TOL<-20°C)	2.22	2.30
COP Tj = -15°C (if TOL $<$ -20°C)	2.17	1.72
Cdh	0.99	0.99

Domestic Hot Water (DHW)

CEN heat pump KEYMARK

Average Climate

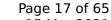


EN 16147		
Declared load profile	L	
Efficiency ηDHW	102 %	
СОР	2.45	
Heating up time	02:32 h:min	
Standby power input	80.0 W	
Reference hot water temperature	50.7 °C	
Mixed water at 40°C	246	

Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	120 %	
СОР	2.88	
Heating up time	02:06 h:min	
Standby power input	80.0 W	
Reference hot water temperature	50.5 °C	
Mixed water at 40°C	242 I	

Colder Climate





EN 16147		
Declared load profile	L	
Efficiency ηDHW	106 %	
СОР	2.55	
Heating up time	03:00 h:min	
Standby power input	80.0 W	
Reference hot water temperature	46.9 °C	
Mixed water at 40°C	246	



Model: VWL 35/5 AS 230V S2 + VWL 57/5 IS

General Data	
Power supply 1x230V 50Hz	

Heating

EN 14511-2		
Low temperature Medium temperature		
Heat output	3.13 kW	2.73 kW
El input	0.64 kW	1.05 kW
СОР	4.89	2.62

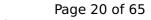
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	181 %	128 %
Prated	4.00 kW	3.51 kW
SCOP	4.60	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.54 kW	3.10 kW
COP Tj = -7°C	3.19	2.08
Cdh	0.99	0.99
Pdh Tj = $+2$ °C	2.18 kW	2.04 kW
COP Tj = +2°C	4.50	3.26
Cdh	0.98	0.98
Pdh Tj = +7°C	2.32 kW	2.02 kW
COP Tj = +7°C	6.15	4.36
Cdh	0.97	0.98





$$\operatorname{\textit{Page}}\xspace$ 20 of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

Pdh Tj = 12°C	2.74 kW	2.44 kW
COP Tj = 12°C	8.42	5.86
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.54 kW	3.10 kW
COP Tj = Tbiv	3.19	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.24 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.80
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	1798 kWh	2217 kWh

Warmer Climate



 $$\operatorname{\textit{Page}}\xspace$ 21 of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	238 %	150 %
Prated	3.76 kW	3.31 kW
SCOP	6.04	3.81
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.76 kW	3.31 kW
COP Tj = +2°C	3.69	2.24
Cdh	0.99	0.99
Pdh Tj = +7°C	2.25 kW	2.06 kW
COP Tj = +7°C	5.81	3.36
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.41 kW
COP Tj = 12°C	8.08	5.31
Cdh	0.97	0.98



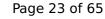


Pdh Tj = Tbiv	3.76 kW	3.31 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o w	o w
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	831 kWh	1159 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825		
	Low temperature	Medium temperature





		TIMANK database on 13 Mai 2
η_{s}	154 %	106 %
Prated	3.91 kW	2.82 kW
SCOP	3.92	2.73
Tbiv	-13 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.36 kW	1.78 kW
COP Tj = -7°C	3.44	2.32
Cdh	0.99	0.99
Pdh Tj = +2°C	1.96 kW	1.70 kW
COP Tj = +2°C	4.80	3.54
Cdh	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	2.34 kW	2.09 kW
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Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.43 kW
COP Tj = 12°C	8.00	6.07
Cdh	0.97	0.97
Pdh Tj = Tbiv	2.99 kW	2.30 kW
COP Tj = Tbiv	2.80	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.30 kW



Pdh Tj = -15°C (if TOL<-20°C)

COP Tj = -15°C (if TOL<-20°C)

Cdh

Page 24 of 65

2.30

1.72

0.99

This information was generated by the HP KEYMARK database on 15 Mar 2021 COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 2.17 1.72 Cdh 0.99 0.99 55 °C WTOL 55 °C Poff 11 W 11 W PTO 11 W 11 W **PSB** 11 W 11 W **PCK** 0 W 0 W Supplementary Heater: Type of energy input electricity electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW Annual energy consumption Qhe 2463 kWh 2541 kWh

2.22

2.17

0.99

Model: VWL 35/5 AS 230V S2 + VWL 58/5 IS

General Data	
Power supply 1x230V 50Hz	

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	3.13 kW	2.73 kW	
El input	0.64 kW	1.05 kW	
СОР	4.89	2.62	

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	

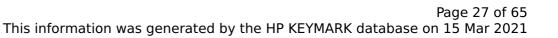
Average Climate



 $$\operatorname{\textit{Page}}\xspace$ 26 of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	181 %	128 %
Prated	4.00 kW	3.51 kW
SCOP	4.60	3.27
Tbiv	-7 °C	-7 °C
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Pdh Tj = -7°C	3.54 kW	3.10 kW
COP Tj = -7°C	3.19	2.08
Cdh	0.99	0.99
Pdh Tj = $+2$ °C	2.18 kW	2.04 kW
COP Tj = +2°C	4.50	3.26
Cdh	0.98	0.98
Pdh Tj = +7°C	2.32 kW	2.02 kW
COP Tj = +7°C	6.15	4.36
Cdh	0.97	0.98





-	
2.74 kW	2.44 kW
8.42	5.86
0.97	0.98
3.54 kW	3.10 kW
3.19	2.08
3.24 kW	2.75 kW
2.86	1.80
0.99	0.99
55 °C	55 °C
11 W	11 W
11 W	11 W
11 W	11 W
0 W	0 W
electricity	electricity
0.00 kW	0.00 kW
1798 kWh	2217 kWh
	8.42 0.97 3.54 kW 3.19 3.24 kW 2.86 0.99 55 °C 11 W 11 W 11 W 0 W electricity 0.00 kW

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	238 %	150 %
Prated	3.76 kW	3.31 kW
SCOP	6.04	3.81
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.76 kW	3.31 kW
COP Tj = +2°C	3.69	2.24
Cdh	0.99	0.99
Pdh Tj = +7°C	2.25 kW	2.06 kW
COP Tj = +7°C	5.81	3.36
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.41 kW
COP Tj = 12°C	8.08	5.31
Cdh	0.97	0.98





Pdh Tj = Tbiv	3.76 kW	3.31 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
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	831 kWh	1159 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825		
	Low temperature	Medium temperature





		TIMANK database on 13 Mai 2
η_{s}	154 %	106 %
Prated	3.91 kW	2.82 kW
SCOP	3.92	2.73
Tbiv	-13 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.36 kW	1.78 kW
COP Tj = -7°C	3.44	2.32
Cdh	0.99	0.99
Pdh Tj = +2°C	1.96 kW	1.70 kW
COP Tj = +2°C	4.80	3.54
Cdh	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	2.34 kW	2.09 kW
$COPTj = +7^{\circ}C$	6.54	4.79
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.43 kW
COP Tj = 12°C	8.00	6.07
Cdh	0.97	0.97
Pdh Tj = Tbiv	2.99 kW	2.30 kW
COP Tj = Tbiv	2.80	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.30 kW



This information was generated by the Till RETMAKK database on 15 Mai 20				
2.17	1.72			
0.99	0.99			
55 °C	55 °C			
11 W	11 W			
11 W	11 W			
11 W	11 W			
0 W	0 W			
electricity	electricity			
0.00 kW	0.00 kW			
2463 kWh	2541 kWh			
2.22	2.30			
2.17	1.72			
0.99	0.99			
	2.17 0.99 55 °C 11 W 11 W 11 W 0 W electricity 0.00 kW 2463 kWh 2.22 2.17			

Domestic Hot Water (DHW)

Average Climate

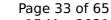


EN 16147		
Declared load profile	L	
Efficiency ηDHW	1.02 %	
СОР	2.45	
Heating up time	02:32 h:min	
Standby power input	80.0 W	
Reference hot water temperature	50.7 °C	
Mixed water at 40°C	246 I	

Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	120 %	
СОР	2.88	
Heating up time	02:06 h:min	
Standby power input	80.0 W	
Reference hot water temperature	50.5 °C	
Mixed water at 40°C	242 I	

Colder Climate





EN 16147		
Declared load profile	L	
Efficiency ηDHW	106 %	
СОР	2.55	
Heating up time	03:00 h:min	
Standby power input	80.0 W	
Reference hot water temperature	46.9 °C	
Mixed water at 40°C	246	



Model: VWL 55/5 AS 230V + VWL 58/5 IS

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.42 kW	3.69 kW
El input	0.95 kW	1.38 kW
СОР	4.68	2.67

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)	43 dB(A)		
Sound power level outdoor	53 dB(A)	54 dB(A)		

EN 14825			
	Low temperature	Medium temperature	
η_{s}	175 %	135 %	
Prated	5.22 kW	5.24 kW	
SCOP	4.44	3.46	
Tbiv	-7 °C	-7 °C	
TOL	-10 °C	-10 °C	
Pdh Tj = -7°C	4.83 kW	4.33 kW	
COP Tj = -7°C	2.71	2.00	
Cdh	0.99	1.00	
Pdh Tj = +2°C	2.67 kW	2.57 kW	
COP Tj = +2°C	4.26	3.36	
Cdh	0.98	0.99	
Pdh Tj = +7°C	2.30 kW	2.09 kW	
COP Tj = +7°C	6.06	4.67	
Cdh	0.97	0.98	



Page 36 of 65

This information was generated by the HP KEYMARK database on 15 Mar 2021

Pdh Tj = 12°C	2.71 kW	2.52 kW
COP Tj = 12°C	8.39	6.41
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.61 kW	4.63 kW
COP Tj = Tbiv	2.64	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.90 kW	3.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	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
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	2427 kWh	3129 kWh

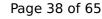
Warmer Climate



 $$\operatorname{\textit{Page}}\xspace$ 37 of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	253 %	156 %
Prated	3.76 kW	3.30 kW
SCOP	6.41	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.76 kW	3.30 kW
COP Tj = +2°C	3.69	2.24
Cdh	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	2.25 kW	2.06 kW
$COP Tj = +7^{\circ}C$	5.81	3.36
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.41 kW
COP Tj = 12°C	8.08	5.31
Cdh	0.97	0.98





Pdh Tj = Tbiv	3.76 kW	3.30 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
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	783 kWh	1108 kWh

Colder Climate

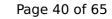
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 1482	25	
	Low temperature	Medium temperature





I his information was gener	•	
η_{s}	158 %	110 %
Prated	5.19 kW	4.00 kW
SCOP	4.02	2.83
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.96 kW	2.44 kW
$COP Tj = -7^{\circ}C$	3.41	2.42
Cdh	0.99	0.99
Pdh Tj = +2°C	1.97 kW	1.72 kW
COP Tj = +2°C	4.87	3.56
Cdh	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	2.36 kW	2.11 kW
COP Tj = +7°C	6.57	4.89
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.52 kW
COP Tj = 12°C	8.00	6.71
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.24 kW	3.26 kW
COP Tj = Tbiv	2.42	1.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	3.26 kW





This information was genera	ted by the HP KEYMAF	RK database on 15 Mar 2021
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.68
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
РСК	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	3182 kWh	3485 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.30	3.26
COP Tj = -15 °C (if TOL< -20 °C)	2.11	1.68

0.99

0.99

Domestic Hot Water (DHW)

Average Climate

Cdh

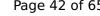


EN 16147	
Declared load profile	L
Efficiency ηDHW	1.02 %
СОР	2.45
Heating up time	02:32 h:min
Standby power input	80.0 W
Reference hot water temperature	50.7 °C
Mixed water at 40°C	246

Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	120 %	
СОР	2.88	
Heating up time	02:06 h:min	
Standby power input	80.0 W	
Reference hot water temperature	50.5 °C	
Mixed water at 40°C	242 I	

Colder Climate





 $$\operatorname{\textit{Page}}$$ 42 of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

EN 16147	
Declared load profile	L
Efficiency ηDHW	106 %
СОР	2.55
Heating up time	03:00 h:min
Standby power input	80.0 W
Reference hot water temperature	46.9 °C
Mixed water at 40°C	246

Model: VWL 55/5 AS 230V + VWL 57/5 IS

General Data	
Power supply 1x230V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.42 kW	3.69 kW
El input	0.95 kW	1.38 kW
СОР	4.68	2.67

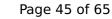
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	135 %
Prated	5.22 kW	5.24 kW
SCOP	4.44	3.46
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.83 kW	4.33 kW
COP Tj = -7°C	2.71	2.00
Cdh	0.99	1.00
Pdh Tj = +2°C	2.67 kW	2.57 kW
COP Tj = +2°C	4.26	3.36
Cdh	0.98	0.99
Pdh Tj = +7°C	2.30 kW	2.09 kW
COP Tj = +7°C	6.06	4.67
Cdh	0.97	0.98





Pdh Tj = 12°C	2.71 kW	2.52 kW
COP Tj = 12°C	8.39	6.41
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.61 kW	4.63 kW
COP Tj = Tbiv	2.64	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.90 kW	3.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	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
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	2427 kWh	3129 kWh

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	253 %	156 %
Prated	3.76 kW	3.30 kW
SCOP	6.41	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.76 kW	3.30 kW
COP Tj = +2°C	3.69	2.24
Cdh	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	2.25 kW	2.06 kW
$COP Tj = +7^{\circ}C$	5.81	3.36
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.41 kW
COP Tj = 12°C	8.08	5.31
Cdh	0.97	0.98





Pdh Tj = Tbiv	3.76 kW	3.30 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
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	783 kWh	1108 kWh

Colder Climate

EN 12102-1 Low temperature Medium temperature Sound power level indoor 41 dB(A) 41 dB(A) Sound power level outdoor 53 dB(A) 54 dB(A)

EN 1482	25	
	Low temperature	Medium temperature





n_s	158 %	110 %
Prated	5.19 kW	4.00 kW
SCOP	4.02	2.83
Tbiv	-15 °C	-15 °C
ΓOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.96 kW	2.44 kW
COP Tj = -7°C	3.41	2.42
Cdh	0.99	0.99
Pdh Tj = +2°C	1.97 kW	1.72 kW
COP Tj = +2°C	4.87	3.56
Cdh	0.98	0.98
Pdh Tj = +7°C	2.36 kW	2.11 kW
$COP Tj = +7^{\circ}C$	6.57	4.89
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.52 kW
COP Tj = 12°C	8.00	6.71
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.24 kW	3.26 kW
COP Tj = Tbiv	2.42	1.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	3.26 kW



COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.68
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	3182 kWh	3485 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.30	3.26
COP Tj = -15°C (if TOL $<$ -20°C)	2.11	1.68
Cdh	0.99	0.99

Model: VWL 55/5 AS 230V S2 + VWL 58/5 IS

General Data	
Power supply 1x230V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.42 kW	3.69 kW
El input	0.95 kW	1.38 kW
СОР	4.68	2.67

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

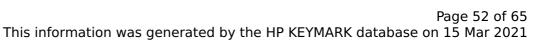
Average Climate



 $$\operatorname{\textit{Page}}\xspace$ 51 of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	172 %	134 %
Prated	5.22 kW	5.24 kW
SCOP	4.37	3.41
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.83 kW	4.33 kW
COP Tj = -7°C	2.71	2.00
Cdh	0.99	1.00
Pdh Tj = +2°C	2.67 kW	2.57 kW
COP Tj = +2°C	4.26	3.36
Cdh	0.98	0.99
Pdh Tj = +7°C	2.30 kW	2.09 kW
COP Tj = +7°C	6.06	4.67
Cdh	0.97	0.98





	-	
Pdh Tj = 12°C	2.71 kW	2.52 kW
COP Tj = 12°C	8.39	6.41
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.61 kW	4.63 kW
COP Tj = Tbiv	2.64	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.90 kW	3.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	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
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	2467 kWh	3169 kWh

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	150 %	238 %
Prated	3.30 kW	3.76 kW
SCOP	3.81	6.04
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.30 kW	3.76 kW
COP Tj = +2°C	2.24	3.69
Cdh	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	2.06 kW	2.25 kW
COP Tj = +7°C	3.36	5.81
Cdh	0.98	0.97
Pdh Tj = 12°C	2.41 kW	2.70 kW
COP Tj = 12°C	5.31	8.08
Cdh	0.98	0.97



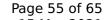


Pdh Tj = Tbiv	3.30 kW	3.76 kW
COP Tj = Tbiv	2.24	3.69
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	3.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.24	3.69
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
РТО	11 W	11 W
PSB	11 W	11 W
PCK	o w	o w
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1156 kWh	831 kWh

Colder Climate

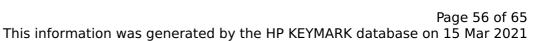
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825		
	Low temperature	Medium temperature





		TIMARK database on 13 Mai 2
η_{s}	157 %	109 %
Prated	5.19 kW	4.00 kW
SCOP	3.99	2.81
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.96 kW	2.44 kW
COP Tj = -7°C	3.41	2.42
Cdh	0.99	0.99
Pdh Tj = +2°C	1.97 kW	1.72 kW
$COP Tj = +2^{\circ}C$	4.87	3.56
Cdh	0.98	0.98
Pdh Tj = +7°C	2.36 kW	2.11 kW
$COP Tj = +7^{\circ}C$	6.57	4.89
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.52 kW
COP Tj = 12°C	8.00	6.71
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.24 kW	3.26 kW
COP Tj = Tbiv	2.42	1.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	3.26 kW





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.68
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	3206 kWh	3509 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.30	3.26
COP Tj = -15°C (if TOL $<$ -20°C)	2.11	1.68
Cdh	0.99	0.99

Domestic Hot Water (DHW)

Average Climate

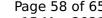


EN 16147		
Declared load profile	L	
Efficiency ηDHW	1.02 %	
СОР	2.45	
Heating up time	02:32 h:min	
Standby power input	80.0 W	
Reference hot water temperature	50.7 °C	
Mixed water at 40°C	246 I	

Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	120 %	
СОР	2.88	
Heating up time	02:06 h:min	
Standby power input	80.0 W	
Reference hot water temperature	50.5 °C	
Mixed water at 40°C	242 I	

Colder Climate





$$\operatorname{\textit{Page}}\xspace$ 58 of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

EN 16147	
Declared load profile	L
Efficiency ηDHW	106 %
СОР	2.55
Heating up time	03:00 h:min
Standby power input	80.0 W
Reference hot water temperature	46.9 °C
Mixed water at 40°C	246



Model: VWL 55/5 AS 230V S2 + VWL 57/5 IS

General Data	
Power supply 1x230V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.42 kW	3.69 kW
El input	0.95 kW	1.38 kW
СОР	4.68	2.67

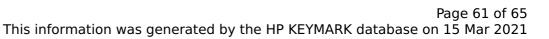
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	172 %	134 %
Prated	5.22 kW	5.24 kW
SCOP	4.37	3.41
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.83 kW	4.33 kW
COP Tj = -7°C	2.71	2.00
Cdh	0.99	1.00
Pdh Tj = +2°C	2.67 kW	2.57 kW
COP Tj = +2°C	4.26	3.36
Cdh	0.98	0.99
Pdh Tj = +7°C	2.30 kW	2.09 kW
COP Tj = +7°C	6.06	4.67
Cdh	0.97	0.98





Pdh Tj = 12°C	2.71 kW	2.52 kW
COP Tj = 12°C	8.39	6.41
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.61 kW	4.63 kW
COP Tj = Tbiv	2.64	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.90 kW	3.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.81
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2467 kWh	3169 kWh

Warmer Climate



 $$\operatorname{\textit{Page}}\xspace$ 62 of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	150 %	238 %
Prated	3.30 kW	3.76 kW
SCOP	3.81	6.04
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.30 kW	3.76 kW
COP Tj = +2°C	2.24	3.69
Cdh	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	2.06 kW	2.25 kW
COP Tj = +7°C	3.36	5.81
Cdh	0.98	0.97
Pdh Tj = 12°C	2.41 kW	2.70 kW
COP Tj = 12°C	5.31	8.08
Cdh	0.98	0.97





Pdh Tj = Tbiv	3.30 kW	3.76 kW
COP Tj = Tbiv	2.24	3.69
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	3.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.24	3.69
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	1156 kWh	831 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825		
	Low temperature	Medium temperature





		TIMANN database on 13 Mai 2
η_{s}	157 %	109 %
Prated	5.19 kW	4.00 kW
SCOP	3.99	2.81
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.96 kW	2.44 kW
COP Tj = -7°C	3.41	2.42
Cdh	0.99	0.99
Pdh Tj = +2°C	1.97 kW	1.72 kW
COP Tj = +2°C	4.87	3.56
Cdh	0.98	0.98
Pdh Tj = +7°C	2.36 kW	2.11 kW
$COP Tj = +7^{\circ}C$	6.57	4.89
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.52 kW
COP Tj = 12°C	8.00	6.71
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.24 kW	3.26 kW
COP Tj = Tbiv	2.42	1.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	3.26 kW



$$\operatorname{\textit{Page}}\xspace$ 65 of 65 This information was generated by the HP KEYMARK database on 15 Mar 2021

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.68
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	3206 kWh	3509 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.30	3.26
COP Tj = -15°C (if TOL $<$ -20°C)	2.11	1.68
Cdh	0.99	0.99