

Page 1 of 85

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#### **Login**

Summary of	VWL 125/6 A 230V, VWL 125/6 A	Reg. No.	40050986	
Certificate H	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 125/6 A 230V, VWL 125/6 A			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R290			
Mass of Refrigerant	1.3 kg			
Certification Date	22.11.2021			
Testing basis	DIN EN 14511-1:2019-07; EN 14511-1:2018, DIN EN 14511-2:2019-07; EN 14511-2:2018, DIN EN 14511-3:2019-07; EN 14511-3:2018, DIN EN 14511-4:2019-07; EN 14511-4:2018, DIN EN 14825:2019-07; EN 14825:2018, DIN EN 12102-1:2018-02; EN 12102-1:2017			

# Model: VWL 125/6 A 230V

Configure model		
Model name	VWL 125/6 A 230V	
Application	Heating (medium temp)	
Units	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	8.54 kW	9.13 kW	
El input	1.58 kW	2.92 kW	
СОР	5.38	3.11	

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

## Warmer Climate



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	254 %	174 %
Prated	11.35 kW	11.06 kW
SCOP	6.41	4.42
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.35 kW	11.06 kW
COP Tj = +2°C	3.23	2.21
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.41 kW	7.19 kW
COP Tj = +7°C	5.97	3.82
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	6.63 kW	6.33 kW
COP Tj = 12°C	8.20	5.97
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	11.35 kW	11.06 kW

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COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.35 kW	11.06 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.21
WTOL	70 °C	70 °C
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 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	2363 kWh	3342 kWh

### Colder Climate

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

Low temperature	Medium temperature
170 %	128 %
12.16 kW	11.09 kW
_	170 %





SCOP	4.32	3.28
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.93 kW	7.06 kW
COP Tj = -7°C	3.72	2.65
Cdh Tj = -7 °C	0.980	0.960
Pdh Tj = +2°C	5.11 kW	4.83 kW
COP Tj = +2°C	5.51	4.20
Cdh Tj = +2 °C	0.960	0.960
Pdh Tj = $+7^{\circ}$ C	5.82 kW	5.62 kW
$COPTj = +7^{\circ}C$	7.14	5.61
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.71 kW	7.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C





		<del>-</del>
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.16 kW	11.09 kW
Annual energy consumption Qhe	6936 kWh	8321 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.92	9.04
COP Tj = -15°C (if TOL $<$ -20°C)	2.26	1.81
Cdh Tj = -15 °C	0.990	0.990

# Average Climate

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

EN 14825		
Low temperature Medium temperature		
195 % 147 %		
12.73 kW 11.81 kW		
4.96 3.75		
4.96		





Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.27 kW	10.45 kW
$COP Tj = -7^{\circ}C$	2.58	2.10
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	6.99 kW	6.43 kW
$COPTj = +2^{\circ}C$	5.17	3.73
Cdh Tj = +2 °C	0.970	0.970
Pdh Tj = $+7$ °C	5.81 kW	5.65 kW
$COPTj = +7^{\circ}C$	6.87	5.27
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.77 kW	6.58 kW
COP Tj = 12°C	8.66	6.64
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.85 kW	9.83 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.29	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	8 W	8 W
	-	



### Page 8 of 85

РТО	45 W	45 W
PSB	45 W	45 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.89 kW	1.98 kW
Annual energy consumption Qhe	5305 kWh	6501 kWh



# Model: VWL 125/6 A 230V S2

Configure model		
Model name	VWL 125/6 A 230V S2	
Application	Heating (medium temp)	
Units	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	8.54 kW	9.13 kW
El input	1.58 kW	2.92 kW
СОР	5.38	3.11

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

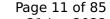
## Warmer Climate



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

EN 14825				
Low temperature Medium temperatur				
$\eta_{s}$	250 %	172 %		
Prated	11.35 kW	11.06 kW		
SCOP	6.32	4.38		
Tbiv	2 °C	2 °C		
TOL	2 °C	2 °C		
Pdh Tj = +2°C	11.35 kW	11.06 kW		
COP Tj = +2°C	3.23	2.21		
Cdh Tj = +2 °C	0.99	0.99		
Pdh Tj = +7°C	7.41 kW	7.19 kW		
COP Tj = +7°C	5.97	3.82		
Cdh Tj = +7 °C	0.97	0.98		
Pdh Tj = 12°C	6.63 kW	6.33 kW		
COP Tj = 12°C	8.20	5.97		
Cdh Tj = +12 °C	0.95	0.96		
Pdh Tj = Tbiv	11.35 kW	11.06 kW		

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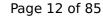


This information was generated by the HP KEYMARK database on 21 Jun 202		
COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.35 kW	11.06 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.21
WTOL	70 °C	70 °C
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
РСК	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2399 kWh	3378 kWh

### Colder Climate

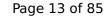
EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	58 dB(A)	60 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	169 %	128 %
Prated	12.16 kW	11.09 kW





SCOP	4.31	3.28
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.93 kW	7.06 kW
COP Tj = -7°C	3.72	2.65
Cdh Tj = -7 °C	0.980	0.960
Pdh Tj = +2°C	5.11 kW	4.83 kW
COP Tj = +2°C	5.51	4.20
Cdh Tj = +2 °C	0.960	0.960
Pdh Tj = +7°C	5.82 kW	5.62 kW
$COP Tj = +7^{\circ}C$	7.14	5.61
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.71 kW	7.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C



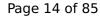


Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.16 kW	11.09 kW
Annual energy consumption Qhe	6954 kWh	8339 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.92	9.04
COP Tj = -15°C (if TOL $<$ -20°C)	2.26	1.81
Cdh Tj = -15 °C	0.990	0.990

# Average Climate

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

EN 14825		
Low temperature	Medium temperature	
194 %	146 %	
12.73 kW	11.81 kW	
4.93	3.74	
	Low temperature  194 %  12.73 kW	





This information was gener	ated by the Hi KETMA	NK database on 21 Juli 2022
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = $-7$ °C	11.27 kW	10.45 kW
$COP Tj = -7^{\circ}C$	2.58	2.10
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	6.99 kW	6.43 kW
COP Tj = +2°C	5.17	3.73
Cdh Tj = +2 °C	0.970	0.970
Pdh Tj = $+7^{\circ}$ C	5.81 kW	5.65 kW
$COP Tj = +7^{\circ}C$	6.87	5.27
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.77 kW	6.58 kW
COP Tj = 12°C	8.66	6.64
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.85 kW	9.83 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.29	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	8 W	8 W
	-	



#### Page 15 of 85

РТО	45 W	45 W
PSB	45 W	45 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.89 kW	1.98 kW
Annual energy consumption Qhe	5335 kWh	6532 kWh

# Model: VWL 125/6 A

Configure model		
Model name VWL 125/6 A		
Application	Heating (medium temp)	
Units 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	8.54 kW	9.13 kW	
El input	1.58 kW	2.92 kW	
СОР	5.38	3.11	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

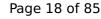
## Warmer Climate



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	254 %	173 %
Prated	11.35 kW	11.06 kW
SCOP	6.41	4.42
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.35 kW	11.06 kW
COP Tj = +2°C	3.23	2.21
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.41 kW	7.19 kW
COP Tj = +7°C	5.97	3.82
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	6.63 kW	6.33 kW
COP Tj = 12°C	8.20	5.97
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	11.35 kW	11.06 kW

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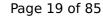


COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.35 kW	11.06 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.21
WTOL	70 °C	70 °C
Poff	14 W	14 W
РТО	51 W	51 W
PSB	51 W	51 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2363 kWh	3354 kWh

### Colder Climate

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

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	170 %	128 %
Prated	12.16 kW	11.09 kW





SCOP	4.32	3.28
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.93 kW	7.06 kW
COP Tj = -7°C	3.72	2.65
Cdh Tj = -7 °C	0.970	0.980
Pdh Tj = $+2$ °C	5.11 kW	4.83 kW
$COPTj = +2^{\circ}C$	5.51	4.20
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7$ °C	5.82 kW	5.62 kW
$COP Tj = +7^{\circ}C$	7.14	5.61
Cdh Tj = +7 °C	0.940	0.950
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.71 kW	7.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh		
WTOL	70 °C	70 °C



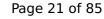


Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.16 kW	11.09 kW
Annual energy consumption Qhe	6936 kWh	8334 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.92	9.04
COP Tj = -15°C (if TOL $<$ -20°C)	2.26	1.81
Cdh Tj = -15 °C	0.990	0.990

# Average Climate

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

EN 14825		
Low temperature	Medium temperature	
195 %	147 %	
12.73 kW	11.81 kW	
4.96	3.75	
	Low temperature  195 %  12.73 kW	





This information was gener	ated by the HI KETMA	NK database on 21 Juli 2022
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.27 kW	10.45 kW
$COP Tj = -7^{\circ}C$	2.58	2.10
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	6.99 kW	6.43 kW
COP Tj = +2°C	5.17	3.73
Cdh Tj = +2 °C	0.960	0.970
Pdh Tj = $+7^{\circ}$ C	5.81 kW	5.65 kW
$COPTj = +7^{\circ}C$	6.87	5.27
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.77 kW	6.58 kW
COP Tj = 12°C	8.66	6.64
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.85 kW	9.83 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.29	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	14 W	14 W
	-	-



#### Page 22 of 85

РТО	51 W	51 W
PSB	51 W	51 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.89 kW	1.98 kW
Annual energy consumption Qhe	5313 kWh	6511 kWh



# **Model: VWL 125/6 A S2**

Configure model		
Model name	VWL 125/6 A S2	
Application	Heating (medium temp)	
Units	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	8.44 kW	8.93 kW	
El input	1.60 kW	2.93 kW	
СОР	5.24	3.04	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Warmer Climate

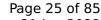




EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	59 dB(A)	59 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	250 %	170 %	
Prated	11.35 kW	11.06 kW	
SCOP	6.32	4.33	
Tbiv	2 °C	2 °C	
TOL	2 °C	2 °C	
Pdh Tj = +2°C	11.35 kW	11.06 kW	
COP Tj = +2°C	3.23	2.21	
Cdh Tj = +2 °C	0.99	0.99	
Pdh Tj = $+7^{\circ}$ C	7.41 kW	7.19 kW	
$COP Tj = +7^{\circ}C$	5.97	3.82	
Cdh Tj = +7 °C	0.96	0.97	
Pdh Tj = 12°C	6.63 kW	6.33 kW	
COP Tj = 12°C	8.20	5.97	
Cdh Tj = +12 °C	0.94	0.95	
Pdh Tj = Tbiv	11.35 kW	11.06 kW	

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COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.35 kW	11.06 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.21
WTOL	70 °C	70 °C
Poff	14 W	14 W
РТО	51 W	51 W
PSB	51 W	51 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	2399 kWh	3417 kWh

### Colder Climate

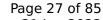
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	59 dB(A)	59 dB(A)	

	EN 14825			
Low temperature	Medium temperature			
169 %	128 %			
12.16 kW	11.09 kW			
	169 %			





SCOP	4.31	3.27
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.93 kW	7.06 kW
$COP Tj = -7^{\circ}C$	3.72	2.65
Cdh Tj = -7 °C	0.970	0.980
Pdh Tj = +2°C	5.11 kW	4.83 kW
$COP Tj = +2^{\circ}C$	5.51	4.20
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7$ °C	5.82 kW	5.62 kW
$COPTj = +7^{\circ}C$	7.14	5.61
Cdh Tj = +7 °C	0.940	0.950
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.71 kW	7.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C





Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.16 kW	11.09 kW
Annual energy consumption Qhe	6954 kWh	8365 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.92	9.04
COP Tj = -15°C (if TOL $<$ -20°C)	2.26	1.81
Cdh Tj = -15 °C	0.990	0.990

# Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	59 dB(A)	59 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	193 %	146 %
Prated	12.73 kW	11.81 kW
SCOP	4.90	3.72





This information was gener	ated by the HE KLIMA	NK database on 21 Juli 2022
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = $-7^{\circ}$ C	11.27 kW	10.45 kW
$COPTj = -7^{\circ}C$	2.58	2.10
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	6.99 kW	6.43 kW
$COPTj = +2^{\circ}C$	5.17	3.73
Cdh Tj = $+2$ °C	0.960	0.970
Pdh Tj = $+7^{\circ}$ C	5.81 kW	5.65 kW
$COP Tj = +7^{\circ}C$	6.87	5.27
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.77 kW	6.58 kW
COP Tj = 12°C	8.66	6.64
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.85 kW	9.83 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.29	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	14 W	14 W
	•	



#### Page 29 of 85

РТО	51 W	51 W
PSB	51 W	51 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.89 kW	1.98 kW
Annual energy consumption Qhe	5366 kWh	6563 kWh



# Model: VWL 155/6 A 230V S3

Configure model		
Model name	VWL 155/6 A 230V S3	
Application	Heating (medium temp)	
Units	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	14.29 kW	14.16 kW	
El input	3.29 kW	5.06 kW	
СОР	4.33	2.79	

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

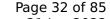
## Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	245 %	172 %
Prated	12.02 kW	12.69 kW
SCOP	6.19	4.38
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.02 kW	12.69 kW
COP Tj = +2°C	3.19	2.05
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.55 kW	7.46 kW
COP Tj = +7°C	5.70	3.87
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	6.64 kW	6.19 kW
COP Tj = 12°C	7.90	5.77
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	12.02 kW	12.69 kW

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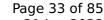


This information was generated by the HP KEYMARK database on 21 Jun 202		
COP Tj = Tbiv	3.19	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.02 kW	12.69 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.19	2.05
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
РСК	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2595 kWh	3867 kWh

### Colder Climate

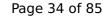
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	168 %	125 %
Prated	12.73 kW	12.17 kW





SCOP	4.28	3.20
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.04 kW	7.02 kW
COP Tj = -7°C	3.64	2.56
Cdh Tj = -7 °C	0.980	0.980
Pdh Tj = +2°C	5.16 kW	4.80 kW
$COPTj = +2^{\circ}C$	5.33	4.08
Cdh Tj = +2 °C	0.960	0.960
Pdh Tj = +7°C	5.81 kW	5.55 kW
$COPTj = +7^{\circ}C$	7.45	5.43
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.66 kW	6.42 kW
COP Tj = 12°C	9.04	6.82
Cdh Tj = +12 °C	0.940	0.960
Pdh Tj = Tbiv	10.38 kW	9.93 kW
COP Tj = Tbiv	2.37	1.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.93 kW	8.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.00	1.46
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
	+	



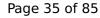


Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.73 kW	12.17 kW
Annual energy consumption Qhe	7330 kWh	9377 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.38	9.93
COP Tj = -15°C (if TOL $<$ -20°C)	2.37	1.76
Cdh Tj = -15 °C	0.990	0.990

# Average Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level outdoor	61 dB(A)	61 dB(A)		

EN 14825			
Low temperature	Medium temperature		
187 %	143 %		
12.69 kW	12.00 kW		
4.74	3.66		
	Low temperature  187 %  12.69 kW		





Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = $-7^{\circ}$ C	11.23 kW	10.62 kW
$COP Tj = -7^{\circ}C$	2.46	2.08
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	6.98 kW	6.54 kW
COP Tj = +2°C	4.88	3.68
Cdh Tj = +2 °C	0.970	0.980
Pdh Tj = $+7^{\circ}$ C	5.79 kW	5.43 kW
$COP Tj = +7^{\circ}C$	6.54	4.91
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.65 kW	6.31 kW
COP Tj = 12°C	9.06	6.32
Cdh Tj = +12 °C	0.940	0.960
Pdh Tj = Tbiv	11.23 kW	10.62 kW
COP Tj = Tbiv	2.46	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.82 kW	11.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.23	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
	-	



### Page 36 of 85

РТО	45 W	45 W
PSB	45 W	45 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.87 kW	0.96 kW
Annual energy consumption Qhe	5532 kWh	6780 kWh



# **Model: VWL 155/6 A S3**

Configure model		
Model name   VWL 155/6 A S3		
Application	Heating (medium temp)	
Units	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	14.29 kW	14.16 kW	
El input	3.29 kW	5.06 kW	
СОР	4.33	2.79	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	244 %	172 %
Prated	12.02 kW	12.69 kW
SCOP	6.16	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.02 kW	12.69 kW
COP Tj = +2°C	3.19	2.05
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.55 kW	7.46 kW
COP Tj = +7°C	5.70	3.87
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	6.64 kW	6.19 kW
COP Tj = 12°C	7.90	5.77
Cdh Tj = +12 °C	0.94	0.96
Pdh Tj = Tbiv	12.02 kW	12.69 kW
	'	

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0.00 kW

3878 kWh



COP Tj = Tbiv3.19 2.05 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 12.02 kW 12.69 kW COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 3.19 2.05 WTOL 55 °C 55 °C Poff 14 W 14 W PTO 51 W 51 W **PSB** 51 W 51 W **PCK** 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity

0.00 kW

2606 kWh

### Colder Climate

Supplementary Heater: PSUP

Annual energy consumption Qhe

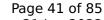
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	61 dB(A)

EN 14825		
Low temperature	Medium temperature	
168 %	125 %	
12.73 kW	12.17 kW	
	168 %	





SCOP	4.27	3.20
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.04 kW	7.02 kW
COP Tj = -7°C	3.64	2.56
Cdh Tj = -7 °C	0.970	0.980
Pdh Tj = +2°C	5.16 kW	4.80 kW
COP Tj = +2°C	5.33	4.08
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = +7°C	5.81 kW	5.55 kW
$COP Tj = +7^{\circ}C$	7.45	5.43
Cdh Tj = +7 °C	0.940	0.950
Pdh Tj = 12°C	6.66 kW	6.42 kW
COP Tj = 12°C	9.04	6.82
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	10.38 kW	9.93 kW
COP Tj = Tbiv	2.37	1.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.93 kW	8.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.00	1.46
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C





Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.73 kW	12.17 kW
Annual energy consumption Qhe	7341 kWh	9386 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.38	9.93
COP Tj = -15°C (if TOL $<$ -20°C)	2.37	1.76
Cdh Tj = -15 °C	0.990	0.990

## Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	61 dB(A)

EN 14825		
Low temperature	Medium temperature	
186 %	143 %	
12.69 kW	12.00 kW	
4.73	3.65	
	Low temperature  186 %  12.69 kW	





Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.23 kW	10.62 kW
COP Tj = -7°C	2.46	2.08
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	6.98 kW	6.54 kW
COP Tj = +2°C	4.88	3.68
Cdh Tj = +2 °C	0.970	0.970
Pdh Tj = $+7^{\circ}$ C	5.79 kW	5.43 kW
$COP Tj = +7^{\circ}C$	6.54	4.91
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.65 kW	6.31 kW
COP Tj = 12°C	9.06	6.32
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	11.23 kW	10.62 kW
COP Tj = Tbiv	2.46	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.82 kW	11.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.23	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	14 W	14 W
	-	



Page 43 of 85

РТО	51 W	51 W
PSB	51 W	51 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.87 kW	0.96 kW
Annual energy consumption Qhe	5542 kWh	6789 kWh



# Model: VWL 125/6 A 230V S3

Configure model		
Model name VWL 125/6 A 230V S3		
Application	Heating (medium temp)	
Units	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	11.60 kW	13.15 kW	
El input	2.46 kW	4.55 kW	
СОР	4.71	2.89	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Warmer Climate



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	256 %	176 %
Prated	11.16 kW	11.02 kW
SCOP	6.48	4.47
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.16 kW	11.02 kW
COP Tj = +2°C	3.26	2.23
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	7.36 kW	7.20 kW
COP Tj = +7°C	5.90	3.84
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	6.53 kW	6.25 kW
COP Tj = 12°C	8.26	5.95
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	11.16 kW	11.02 kW

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COP Tj = Tbiv	3.26	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.16 kW	11.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.26	2.23
WTOL	75 °C	75 °C
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 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	2303 kWh	3295 kWh

### Colder Climate

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

EN 14825			
Low temperature Medium temperatur			
$\eta_{S}$	168 %	126 %	
Prated	10.24 kW	10.65 kW	





SCOP	4.27	3.24
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.34 kW	6.45 kW
$COP Tj = -7^{\circ}C$	3.58	2.58
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	5.00 kW	4.70 kW
$COPTj = +2^{\circ}C$	5.39	4.06
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = $+7^{\circ}$ C	5.79 kW	5.60 kW
$COPTj = +7^{\circ}C$	7.02	5.45
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	6.67 kW	6.47 kW
COP Tj = 12°C	8.74	7.14
Cdh Tj = +12 °C	0.970	0.980
Pdh Tj = Tbiv	8.35 kW	8.68 kW
COP Tj = Tbiv	2.41	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.20 kW	7.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.06	1.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh		
WTOL	75 °C	75 °C





Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.24 kW	10.65 kW
Annual energy consumption Qhe	5906 kWh	8111 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL $<$ -20°C)		
Cdh Tj = -15 °C		

## Average Climate

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

EN 14825		
Low temperature	Medium temperature	
200 %	144 %	
9.35 kW	9.66 kW	
5.07	3.67	
	Low temperature 200 % 9.35 kW	





This information was general		
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.09 kW	8.64 kW
$COPTj = -7^{\circ}C$	3.11	2.12
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	4.90 kW	5.30 kW
COP Tj = +2°C	4.98	3.62
Cdh Tj = +2 °C	0.980	0.990
Pdh Tj = $+7^{\circ}$ C	5.75 kW	5.47 kW
COP Tj = +7°C	6.73	4.94
Cdh Tj = $+7$ °C	0.980	0.980
Pdh Tj = 12°C	6.67 kW	6.35 kW
COP Tj = 12°C	8.74	6.50
Cdh Tj = +12 °C	0.970	0.980
Pdh Tj = Tbiv	9.35 kW	9.66 kW
COP Tj = Tbiv	2.58	1.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.35 kW	9.66 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.92
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	75 °C	75 °C
Poff	8 W	8 W
	+	-



Page 50 of 85

РТО	45 W	45 W
PSB	45 W	45 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	3812 kWh	5437 kWh



# **Model: VWL 125/6 A S3**

Configure model		
Model name	VWL 125/6 A S3	
Application	Heating (medium temp)	
Units	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	11.60 kW	13.15 kW	
El input	2.46 kW	4.55 kW	
СОР	4.71	2.89	

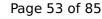
EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

## Warmer Climate

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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	255 %	175 %
Prated	11.16 kW	11.02 kW
SCOP	6.46	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.16 kW	11.02 kW
COP Tj = +2°C	3.26	2.23
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	7.36 kW	7.20 kW
COP Tj = +7°C	5.90	3.84
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	6.53 kW	6.25 kW
COP Tj = 12°C	8.26	5.95
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	11.16 kW	11.02 kW

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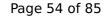


COP Tj = Tbiv	3.26	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.16 kW	11.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.26	2.23
WTOL	75 °C	75 °C
Poff	14 W	14 W
РТО	51 W	51 W
PSB	51 W	51 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2307 kWh	3299 kWh

### Colder Climate

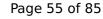
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	58 dB(A)	60 dB(A)	

Low temperature	Medium temperature
168 %	126 %
10.24 kW	10.65 kW
_	168 %





SCOP	4.27	3.24
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = $-7$ °C	6.34 kW	6.45 kW
COP Tj = -7°C	3.58	2.58
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2$ °C	5.00 kW	4.70 kW
COP Tj = +2°C	5.39	4.06
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = $+7^{\circ}$ C	5.79 kW	5.60 kW
$COP Tj = +7^{\circ}C$	7.02	5.45
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	6.67 kW	6.47 kW
COP Tj = 12°C	8.74	7.14
Cdh Tj = +12 °C	0.970	0.980
Pdh Tj = Tbiv	8.35 kW	8.68 kW
COP Tj = Tbiv	2.41	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.20 kW	7.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.06	1.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh		
WTOL	75 °C	75 °C





Poff	14 W	14 W
РТО	51 W	51 W
PSB	51 W	51 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.24 kW	10.65 kW
Annual energy consumption Qhe	5907 kWh	8112 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL $<$ -20°C)		
Cdh Tj = -15 °C		

## Average Climate

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

EN 14825		
Low temperature	Medium temperature	
200 %	144 %	
9.35 kW	9.66 kW	
5.06	3.67	
	Low temperature 200 % 9.35 kW	





-10 °C	
-10 C	-10 °C
-10 °C	-10 °C
8.09 kW	8.64 kW
3.11	2.12
0.99	0.99
4.90 kW	5.30 kW
4.98	3.62
0.98	0.99
5.75 kW	5.47 kW
6.73	4.94
0.98	0.98
6.67 kW	6.35 kW
8.74	6.50
0.97	0.98
9.35 kW	9.66 kW
2.58	1.92
9.35 kW	9.66 kW
2.58	1.92
75 °C	75 °C
14 W	14 W
51 W	51 W
	8.09 kW  3.11  0.99  4.90 kW  4.98  0.98  5.75 kW  6.73  0.98  6.67 kW  8.74  0.97  9.35 kW  2.58  9.35 kW  2.58



#### Page 57 of 85

PSB	51 W	51 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	3813 kWh	5438 kWh



# Model: VWL 105/6 A 230V

Configure model		
Model name	VWL 105/6 A 230V	
Application	Heating (medium temp)	
Units	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	8.13 kW	9.08 kW	
El input	1.54 kW	2.95 kW	
СОР	5.27	3.08	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Warmer Climate



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	254 %	175 %
Prated	10.42 kW	10.36 kW
SCOP	6.42	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.42 kW	10.36 kW
COP Tj = +2°C	3.42	2.32
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW

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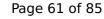


1	
3.42	2.32
10.42 kW	10.36 kW
3.42	2.32
0.99	0.99
55 °C	55 °C
8 W	8 W
45 W	45 W
45 W	45 W
0 W	0 W
Electricity	Electricity
0.00 kW	0.00 kW
2167 kWh	3104 kWh
	10.42 kW  3.42  0.99  55 °C  8 W  45 W  0 W  Electricity  0.00 kW

### Colder Climate

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

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	172 %	125 %





Prated	7.61 kW	7.38 kW
SCOP	4.37	3.21
Tbiv	-20 °C	-20 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	4.50 kW	4.50 kW
COP Tj = -7°C	3.79	2.65
Cdh Tj = -7 °C	0.970	0.970
Pdh Tj = +2°C	5.00 kW	4.62 kW
COP Tj = +2°C	5.34	3.96
Cdh Tj = +2 °C	0.960	0.960
Pdh Tj = $+7$ °C	5.67 kW	5.47 kW
$COP Tj = +7^{\circ}C$	6.89	5.34
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.21 kW	6.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.14	1.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
	+	!

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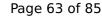


WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.61 kW	7.38 kW
Annual energy consumption Qhe	4296 kWh	5673 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL $<$ -20°C)		
Cdh Tj = -15 °C		

# **Average Climate**

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

	EN 14825	
Low temperature	Medium temperature	
199 %	143 %	
8.86 kW	9.09 kW	
	199 %	





SCOP	5.05	3.66
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.84 kW	8.04 kW
COP Tj = -7°C	3.21	2.20
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh Tj = +2 °C	0.960	0.970
Pdh Tj = +7°C	5.65 kW	5.37 kW
$COP Tj = +7^{\circ}C$	6.65	4.92
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.62 kW	6.30 kW
COP Tj = 12°C	8.41	6.34
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	8.93 kW	9.03 kW
COP Tj = Tbiv	2.58	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.93 kW	9.03 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	55 °C	55 °C



#### Page 64 of 85

Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.06 kW
Annual energy consumption Qhe	3623 kWh	5135 kWh



# Model: VWL 105/6 A 230V S2

Configure model	
Model name	VWL 105/6 A 230V S2
Application	Heating (medium temp)
Units	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	8.13 kW	9.08 kW	
El input	1.54 kW	2.95 kW	
СОР	5.27	3.08	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Warmer Climate





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

EN 14825				
Low temperature   Medium temperature				
$\eta_{s}$	250 %	173 %		
Prated	10.42 kW	10.36 kW		
SCOP	6.32	4.41		
Tbiv	2 °C	2 °C		
TOL	2 °C	2 °C		
Pdh Tj = +2°C	10.42 kW	10.36 kW		
COP Tj = +2°C	3.42	2.32		
Cdh Tj = +2 °C	0.99	0.99		
Pdh Tj = +7°C	6.71 kW	6.37 kW		
COP Tj = +7°C	6.07	3.95		
Cdh Tj = +7 °C	0.96	0.97		
Pdh Tj = 12°C	6.58 kW	6.20 kW		
COP Tj = 12°C	8.09	5.85		
Cdh Tj = +12 °C	0.95	0.96		
Pdh Tj = Tbiv	10.42 kW	10.36 kW		

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COP Tj = Tbiv	3.42	2.32
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	10.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.32
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 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	2204 kWh	3141 kWh

### Colder Climate

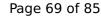
EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	58 dB(A)	60 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	171 %	125 %





Prated	7.61 kW	7.38 kW
SCOP	4.35	3.20
Tbiv	-20 °C	-20 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	4.50 kW	4.50 kW
$COP Tj = -7^{\circ}C$	3.79	2.65
Cdh Tj = -7 °C	0.970	0.970
Pdh Tj = $+2$ °C	5.00 kW	4.62 kW
COP Tj = +2°C	5.34	3.96
Cdh Tj = +2 °C	0.960	0.960
Pdh Tj = $+7^{\circ}$ C	5.67 kW	5.47 kW
$COPTj = +7^{\circ}C$	6.89	5.34
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.21 kW	6.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.14	1.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990





WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.61 kW	7.38 kW
Annual energy consumption Qhe	4314 kWh	5691 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL $<$ -20°C)		
Cdh Tj = -15 °C		

# Average Climate

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

EN 14825		
dium temperature		
2 %		
9 kW		
9 k —		





SCOP	5.01	3.64
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.84 kW	8.04 kW
COP Tj = -7°C	3.21	2.20
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh Tj = +2 °C	0.960	0.970
Pdh Tj = $+7^{\circ}$ C	5.65 kW	5.37 kW
$COPTj = +7^{\circ}C$	6.65	4.92
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.62 kW	6.30 kW
COP Tj = 12°C	8.41	6.34
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	8.93 kW	9.03 kW
COP Tj = Tbiv	2.58	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.93 kW	9.03 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	0.990	0.990
WTOL	55 °C	55 °C



#### Page 71 of 85

Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.06 kW
Annual energy consumption Qhe	3653 kWh	5165 kWh



# Model: VWL 105/6 A

Configure model			
Model name	VWL 105/6 A		
Application	Heating (medium temp)		
Units	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	8.13 kW	9.08 kW	
El input	1.54 kW	2.95 kW	
СОР	5.27	3.08	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Warmer Climate



EN 12102-1		
Low temperature Medium temperature		Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	252 %	175 %
Prated	10.42 kW	10.36 kW
SCOP	6.39	4.44
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.42 kW	10.36 kW
COP Tj = +2°C	3.42	2.32
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh Tj = +12 °C	0.94	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW





COP Tj = Tbiv       3.42       2.32         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       10.42 kW       10.36 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       3.42       2.32         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       0.98       0.99         WTOL       55 °C       55 °C         Poff       14 W       14 W         PTO       51 W       51 W         PSB       51 W       51 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       2180 kWh       3117 kWh			
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	COP Tj = Tbiv	3.42	2.32
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	10.36 kW
WTOL 55 °C 55 °C  Poff 14 W 14 W  PTO 51 W 51 W  PSB 51 W 51 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.32
Poff 14 W 14 W  PTO 51 W 51 W  PSB 51 W 51 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
PTO 51 W 51 W  PSB 51 W 51 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	WTOL	55 °C	55 °C
PSB 51 W 51 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	Poff	14 W	14 W
PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	РТО	51 W	51 W
Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	PSB	51 W	51 W
Supplementary Heater: PSUP 0.00 kW 0.00 kW	PCK	o w	0 W
	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 2180 kWh 3117 kWh	Supplementary Heater: PSUP	0.00 kW	0.00 kW
	Annual energy consumption Qhe	2180 kWh	3117 kWh

## Colder Climate

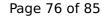
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	171 %	125 %





3	<u>,                                      </u>	nk database on 21 jun 202.
Prated	7.61 kW	7.38 kW
SCOP	4.35	3.20
Tbiv	-20 °C	-20 °C
TOL	-20 °C	-20 °C
Pdh Tj = $-7^{\circ}$ C	4.50 kW	4.50 kW
$COP Tj = -7^{\circ}C$	3.79	2.65
Cdh Tj = -7 °C	0.960	0.970
Pdh Tj = $+2$ °C	5.00 kW	4.62 kW
COP Tj = +2°C	5.34	3.96
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	5.67 kW	5.47 kW
$COPTj = +7^{\circ}C$	6.89	5.34
Cdh Tj = +7 °C	0.940	0.950
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.21 kW	6.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.14	1.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990



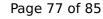


	•	
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.61 kW	7.38 kW
Annual energy consumption Qhe	4314 kWh	5692 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL $<$ -20°C)		
Cdh Tj = -15 °C		
•		

# **Average Climate**

EN 12102-1		
Low temperature Medium temperature		Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825		
Low temperature	Medium temperature	
198 %	143 %	
8.86 kW	9.09 kW	
	Low temperature 198 %	





SCOP	5.04	3.65
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.84 kW	8.04 kW
COP Tj = -7°C	3.21	2.20
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = $+2$ °C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	5.65 kW	5.37 kW
$COP Tj = +7^{\circ}C$	6.65	4.92
Cdh Tj = $+7$ °C	0.950	0.960
Pdh Tj = 12°C	6.62 kW	6.30 kW
COP Tj = 12°C	8.41	6.34
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	8.93 kW	9.03 kW
COP Tj = Tbiv	2.58	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.93 kW	9.03 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	0.990	0.990
WTOL	55 °C	55 °C



### Page 78 of 85

Poff	14 W	14 W
РТО	51 W	51 W
PSB	51 W	51 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.06 kW
Annual energy consumption Qhe	3634 kWh	5146 kWh



# **Model: VWL 105/6 A S2**

Configure model	
Model name	VWL 105/6 A S2
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

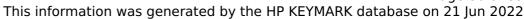
	General Data	
Power supply	3x400V 50Hz	

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.13 kW	9.08 kW
El input	1.54 kW	2.95 kW
СОР	5.27	3.08

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

# Warmer Climate





	EN 12102-1	
	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	245 %	171 %
Prated	10.42 kW	10.36 kW
SCOP	6.21	4.35
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.42 kW	10.36 kW
COP Tj = +2°C	3.42	2.32
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh Tj = +12 °C	0.94	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW



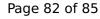


COP Tj = Tbiv	3.42	2.32
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	10.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.32
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	55 °C	55 °C
Poff	14 W	14 W
РТО	51 W	51 W
PSB	51 W	51 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2243 kWh	3180 kWh

## Colder Climate

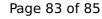
	EN 12102-1	
	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

$\begin{array}{ c c c c c c }\hline & & Low temperature & Medium temperatur \\ \hline \\ \eta_s & & 170 \% & 124 \% \\ \hline \end{array}$	EN 14825		
η <sub>s</sub> 170 % 124 %		Low temperature	Medium temperature
	$\eta_s$	170 %	124 %





Prated	7.61 kW	7.38 kW
Truccu	7.OI NVV	7.50 KW
SCOP	4.32	3.18
Tbiv	-20 °C	-20 °C
TOL	-20 °C	-20 °C
Pdh Tj = $-7^{\circ}$ C	4.50 kW	4.50 kW
$COPTj = -7^{\circ}C$	3.79	2.65
Cdh Tj = -7 °C	0.960	0.970
Pdh Tj = +2°C	5.00 kW	4.62 kW
COP Tj = +2°C	5.34	3.96
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	5.67 kW	5.47 kW
$COPTj = +7^{\circ}C$	6.89	5.34
Cdh Tj = +7 °C	0.940	0.950
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.21 kW	6.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.14	1.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
	•	•



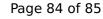


	•	
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.61 kW	7.38 kW
Annual energy consumption Qhe	4345 kWh	5723 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL $<$ -20°C)		
Cdh Tj = -15 °C		

# **Average Climate**

	EN 12102-1	
	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825		
Low temperature	Medium temperature	
196 %	142 %	
8.86 kW	9.09 kW	
	Low temperature	





SCOP	4.97	3.61
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.84 kW	8.04 kW
COP Tj = -7°C	3.21	2.20
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	4.92 kW	4.77 kW
$COPTj = +2^{\circ}C$	5.06	3.63
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	5.65 kW	5.37 kW
$COP Tj = +7^{\circ}C$	6.65	4.92
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	6.62 kW	6.30 kW
COP Tj = 12°C	8.41	6.34
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	8.93 kW	9.03 kW
COP Tj = Tbiv	2.58	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.93 kW	9.03 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	0.990	0.990
WTOL	55 °C	55 °C



### Page 85 of 85

Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.06 kW
Annual energy consumption Qhe	3686 kWh	5199 kWh