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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	11.11.2022			
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	
η_{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	
$COP Tj = +2^{\circ}C$	3.23	2.21	
Cdh Tj = +2 °C	0.99	0.99	
Pdh Tj = $+7^{\circ}$ C	7.41 kW	7.19 kW	
$COPTj = +7^{\circ}C$	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)	

EN 14825		
	Low temperature	Medium temperature
η_{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	0.980	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°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	0 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	
	Low temperature 195 % 12.73 kW	





Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.27 kW	10.45 kW
COP Tj = -7°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



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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	

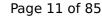
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate

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

EN 14825			
Low temperature Medium temperature			
η_{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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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	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	2399 kWh	3378 kWh

Colder Climate

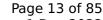
EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	58 dB(A)	60 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{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
$COP Tj = -7^{\circ}C$	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



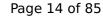


Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.16 kW	11.09 kW
Annual energy consumption Qhe	6954 kWh	8339 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.92	9.04
COP Tj = -15°C (if TOL $<$ -20°C)	2.26	1.81
Cdh 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	





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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
	-	



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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	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	

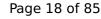
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

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
η_{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	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	3354 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	0.970	0.980
Pdh Tj = +2°C	5.11 kW	4.83 kW
COP Tj = +2°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	0.940	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



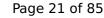


Poff	14 W	14 W
РТО	51 W	51 W
PSB	51 W	51 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12.16 kW	11.09 kW
Annual energy consumption Qhe	6936 kWh	8334 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.92	9.04
COP Tj = -15°C (if TOL<-20°C)	2.26	1.81
Cdh Tj = -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		
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°C	2.58	2.10
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2^{\circ}$ 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
$COP Tj = +7^{\circ}C$	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



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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	2.89 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	naccod	
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
η_{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°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	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 %	





		2.27
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°C	5.51	4.20
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ 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	0.950	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
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	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	
193 %	146 %	
12.73 kW	11.81 kW	
4.90	3.72	
	Low temperature 193 % 12.73 kW	





Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.27 kW	10.45 kW
COP Tj = -7°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
$COP Tj = +7^{\circ}C$	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



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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	2.89 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

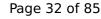
Warmer Climate



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

EN 14825		
	Low temperature	Medium temperature
η_{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 = $+7^{\circ}$ C	7.55 kW	7.46 kW
$COPTj = +7^{\circ}C$	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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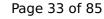


COP Tj = Tbiv	3.19	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.02 kW	12.69 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.19	2.05
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2595 kWh	3867 kWh

Colder Climate

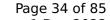
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	61 dB(A)

Low temperature	Medium temperature
168 %	125 %
12.73 kW	12.17 kW
_	168 %





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
$COP Tj = -7^{\circ}C$	3.64	2.56
Cdh Tj = -7 °C	0.980	0.980
Pdh Tj = $+2$ °C	5.16 kW	4.80 kW
COP Tj = +2°C	5.33	4.08
Cdh Tj = +2 °C	0.960	0.960
Pdh Tj = $+7^{\circ}$ 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
PTO	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	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			





This information was gener	dted by the Hi KEIMA	ink database on 1 Dec 2022
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
$COP Tj = +2^{\circ}C$	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
	-	



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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	2.87 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

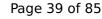
Warmer Climate



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

EN 14825		
	Low temperature	Medium temperature
η_{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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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	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	2606 kWh	3878 kWh

Colder Climate

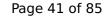
EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	61 dB(A)	61 dB(A)	

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
$COPTj = +7^{\circ}C$	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
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	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
η_{S}	186 %	143 %
Prated	12.69 kW	12.00 kW
SCOP	4.73	3.65





Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°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	0.970
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



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РТО	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	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
η_{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	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	2303 kWh	3295 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	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 gene	ated by the Hr KLIMA	THE UNITED TO SECURE OF THE COLOR
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.09 kW	8.64 kW
$COP Tj = -7^{\circ}C$	3.11	2.12
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2^{\circ}$ 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
$COP Tj = +7^{\circ}C$	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
	-	



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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

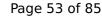
Warmer Climate



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

EN 14825		
	Low temperature	Medium temperature
η_{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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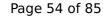


COP Tj = Tbiv	3.26	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.16 kW	11.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.26	2.23
WTOL	75 °C	75 °C
Poff	14 W	14 W
РТО	51 W	51 W
PSB	51 W	51 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	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 = $+7$ °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	





This information was gene	rated by the HP KETM	ARK database on 1 Dec 202.
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.09 kW	8.64 kW
COP Tj = -7°C	3.11	2.12
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.90 kW	5.30 kW
COP Tj = +2°C	4.98	3.62
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.75 kW	5.47 kW
$COP Tj = +7^{\circ}C$	6.73	4.94
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.67 kW	6.35 kW
COP Tj = 12°C	8.74	6.50
Cdh Tj = +12 °C	0.97	0.98
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
WTOL	75 °C	75 °C
Poff	14 W	14 W
РТО	51 W	51 W



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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	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

COP

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

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

5.27



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

EN 14825		
	Low temperature	Medium temperature
η_{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 = $+7^{\circ}$ 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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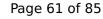


COP Tj = Tbiv	2.42	
COF 1J = 1biv	3.42	2.32
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.42 kW	10.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.32
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2167 kWh	3104 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
η_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
$COPTj = -7^{\circ}C$	3.79	2.65
Cdh Tj = -7 °C	0.970	0.970
Pdh Tj = $+2$ °C	5.00 kW	4.62 kW
$COPTj = +2^{\circ}C$	5.34	3.96
Cdh Tj = $+2$ °C	0.960	0.960
Pdh Tj = $+7^{\circ}$ 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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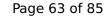


WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	45 W	45 W
PSB	45 W	45 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.61 kW	7.38 kW
Annual energy consumption Qhe	4296 kWh	5673 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL<-20°C)		
Cdh Tj =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

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°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



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Poff	8 W	8 W
PTO	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	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
η_{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 PTO 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 2204 kWh 3141 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 8 W 8 W PTO 45 W 45 W PSB 45 W 0 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 8 W 8 W PTO 45 W 45 W PSB 45 W 0 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	0.99	0.99
PTO 45 W 45 W PSB 45 W 0 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 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	Poff	8 W	8 W
PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW	РТО	45 W	45 W
Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW	PSB	45 W	45 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 2204 kWh 3141 kWh	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
η_{S}	171 %	125 %





This information was gener	,	
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

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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	0 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		
	Low temperature	Medium temperature
η_{S}	197 %	142 %
Prated	8.86 kW	9.09 kW





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°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



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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	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

COP

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

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

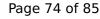
Warmer Climate

5.27



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

EN 14825		
	Low temperature	Medium temperature
η_{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	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	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
η_{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	0.960	0.970
Pdh Tj = $+2$ °C	5.00 kW	4.62 kW
$COPTj = +2^{\circ}C$	5.34	3.96
Cdh Tj = $+2$ °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	5.67 kW	5.47 kW
$COP Tj = +7^{\circ}C$	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



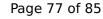


WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.61 kW	7.38 kW
Annual energy consumption Qhe	4314 kWh	5692 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL $<$ -20°C)		
Cdh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

Average Climate

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

EN 14825		
	Low temperature	Medium temperature
η_{S}	198 %	143 %
Prated	8.86 kW	9.09 kW





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 = $+7$ °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



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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	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
COP	5 27	3.08

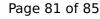
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

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
η_{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	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	2243 kWh	3180 kWh

Colder Climate

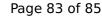
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	170 %	124 %





<u> </u>	,	NK database on 1 Dec 202
Prated	7.61 kW	7.38 kW
SCOP	4.32	3.18
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	0.960	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
$COP Tj = +7^{\circ}C$	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



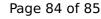


WTOL	55 °C	55 °C
Poff	14 W	14 W
РТО	51 W	51 W
PSB	51 W	51 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.61 kW	7.38 kW
Annual energy consumption Qhe	4345 kWh	5723 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL $<$ -20°C)		
Cdh 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		
-	196 %		





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
COP Tj = +2°C	5.06	3.63
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = +7°C	5.65 kW	5.37 kW
COP Tj = +7°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



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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	3686 kWh	5199 kWh