Summary of	VWL 125/6 A 230V, VWL 125/6 A	Reg. No.	40050986
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		
Name of testing laboratory	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	12.04.2020		
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 14825:2016-10; EN 14825:2016 DIN EN 12102-1:2018-02; EN 12102-1:2017		

Model: VWL 125/6 A 230V

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	8.54 kW	9.13 kW
El input	1.58 kW	2.92 kW
COP	5.38	3.11
Indoor water flow rate	1.48 m³/h	1.00 m³/h

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	195 %	147 %
Prated	12.73 kW	11.81 kW
SCOP	4.96	3.75
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	0.99	0.99
Pdh Tj = +2°C	6.99 kW	6.43 kW
COP Tj = +2°C	5.17	3.73
Cdh	0.97	0.97
Pdh Tj = +7°C	5.81 kW	5.65 kW
COP Tj = +7°C	6.87	5.27
Cdh	0.95	0.96
Pdh Tj = 12°C	6.77 kW	6.58 kW

COP Tj = 12°C	8.66	6.64
Cdh	0.95	0.96
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL	9.85 kW	9.83 kW
COP Tj = TOL	2.29	1.87
WTOL	70 °C	70 °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	5305 kWh	6501 kWh

Warmer Climate

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°C	3.23	2.21
Cdh	0.99	0.99
Pdh Tj = +7°C	7.41 kW	7.19 kW
COP Tj = +7°C	5.97	3.82
Cdh	0.97	0.98
Pdh Tj = 12°C	6.63 kW	6.33 kW
COP Tj = 12°C	8.20	5.97
Cdh	0.95	0.96
Pdh Tj = Tbiv	11.35 kW	11.06 kW
COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL	11.35 kW	11.06 kW
COP Tj = TOL	3.23	2.21
WTOL	70 °C	70 °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	2363 kWh	3342 kWh

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

Colder Climate

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	0.98	0.96
Pdh Tj = +2°C	5.11 kW	4.83 kW
COP Tj = +2°C	5.51	4.20
Cdh	0.96	0.96

Pdh Tj = +7°C	5.82 kW	5.62 kW
COP Tj = +7°C	7.14	5.61
Cdh	0.95	0.96
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh	0.95	0.96
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL	8.71 kW	7.73 kW
COP Tj = TOL	2.03	1.50
WTOL	70 °C	70 °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	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	0.99	0.99

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

Model: VWL 125/6 A 230V S2

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	8.54 kW	9.13 kW
El input	1.58 kW	2.92 kW
COP	5.38	3.11
Indoor water flow rate	1.48 m³/h	1.00 m³/h

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	194 %	146 %
Prated	12.73 kW	11.81 kW
SCOP	4.93	3.74
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	0.99	0.99
Pdh Tj = +2°C	6.99 kW	6.43 kW
COP Tj = +2°C	5.17	3.73
Cdh	0.97	0.97
Pdh Tj = +7°C	5.81 kW	5.65 kW
COP Tj = +7°C	6.87	5.27
Cdh	0.95	0.96
Pdh Tj = 12°C	6.77 kW	6.58 kW

COP Tj = 12°C	8.66	6.64
Cdh	0.95	0.96
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL	9.85 kW	9.83 kW
COP Tj = TOL	2.29	1.87
WTOL	70 °C	70 °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	5335 kWh	6532 kWh

Warmer Climate

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	0.99	0.99
Pdh Tj = +7°C	7.41 kW	7.19 kW
COP Tj = +7°C	5.97	3.82
Cdh	0.97	0.98
Pdh Tj = 12°C	6.63 kW	6.33 kW
COP Tj = 12°C	8.20	5.97
Cdh	0.95	0.96
Pdh Tj = Tbiv	11.35 kW	11.06 kW
COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL	11.35 kW	11.06 kW
COP Tj = TOL	3.23	2.21
WTOL	70 °C	70 °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	2399 kWh	3378 kWh

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

Colder Climate

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°C	3.72	2.65
Cdh	0.98	0.96
Pdh Tj = +2°C	5.11 kW	4.83 kW
COP Tj = +2°C	5.51	4.20
Cdh	0.96	0.96

Pdh Tj = +7°C	5.82 kW	5.62 kW
COP Tj = +7°C	7.14	5.61
Cdh	0.95	0.96
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh	0.95	0.96
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL	8.71 kW	7.73 kW
COP Tj = TOL	2.03	1.50
WTOL	70 °C	70 °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	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	0.99	0.99

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

Model: VWL 125/6 A

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	8.54 kW	9.13 kW
El input	1.58 kW	2.92 kW
COP	5.38	3.11
Indoor water flow rate	1.48 m³/h	1.00 m³/h

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	195 %	147 %
Prated	12.73 kW	11.81 kW
SCOP	4.96	3.75
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	0.99	0.99
Pdh Tj = +2°C	6.99 kW	6.43 kW
COP Tj = +2°C	5.17	3.73
Cdh	0.96	0.97
Pdh Tj = +7°C	5.81 kW	5.65 kW
COP Tj = +7°C	6.87	5.27
Cdh	0.95	0.96
Pdh Tj = 12°C	6.77 kW	6.58 kW

COP Tj = 12°C	8.66	6.64
Cdh	0.94	0.95
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL	9.85 kW	9.83 kW
COP Tj = TOL	2.29	1.87
WTOL	70 °C	70 °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	5313 kWh	6511 kWh

Warmer Climate

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	0.99	0.99
Pdh Tj = +7°C	7.41 kW	7.19 kW
COP Tj = +7°C	5.97	3.82
Cdh	0.96	0.97
Pdh Tj = 12°C	6.63 kW	6.33 kW
COP Tj = 12°C	8.20	5.97
Cdh	0.94	0.95
Pdh Tj = Tbiv	11.35 kW	11.06 kW
COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL	11.35 kW	11.06 kW
COP Tj = TOL	3.23	2.21
WTOL	70 °C	70 °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	2363 kWh	3354 kWh

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

Colder Climate

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	0.97	0.98
Pdh Tj = +2°C	5.11 kW	4.83 kW
COP Tj = +2°C	5.51	4.20
Cdh	0.95	0.96

Pdh Tj = +7°C	5.82 kW	5.62 kW
COP Tj = +7°C	7.14	5.61
Cdh	0.94	0.95
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh	0.94	0.95
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL	8.71 kW	7.73 kW
COP Tj = TOL	2.03	1.50
WTOL	70 °C	70 °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	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	0.99	0.99

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

Model: VWL 125/6 A S2

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	8.44 kW	8.93 kW
El input	1.60 kW	2.93 kW
COP	5.24	3.04
Indoor water flow rate	1.48 m³/h	1.00 m³/h

Average Climate

EN 14825		
	Low temperature	**Medium temperature**

η_s	193 %	146 %
Prated	12.73 kW	11.81 kW
SCOP	4.90	3.72
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	0.99	0.99
Pdh Tj = +2°C	6.99 kW	6.43 kW
COP Tj = +2°C	5.17	3.73
Cdh	0.96	0.97
Pdh Tj = +7°C	5.81 kW	5.65 kW
COP Tj = +7°C	6.87	5.27
Cdh	0.95	0.96
Pdh Tj = 12°C	6.77 kW	6.58 kW
COP Tj = 12°C	8.66	6.64
Cdh	0.94	0.95
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL	9.85 kW	9.83 kW
COP Tj = TOL	2.29	1.87

WTOL	70 °C	70 °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	5366 kWh	6563 kWh

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

Warmer Climate

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	0.99	0.99
Pdh Tj = +7°C	7.41 kW	7.19 kW
COP Tj = +7°C	5.97	3.82
Cdh	0.96	0.97
Pdh Tj = 12°C	6.63 kW	6.33 kW
COP Tj = 12°C	8.20	5.97
Cdh	0.94	0.95
Pdh Tj = Tbiv	11.35 kW	11.06 kW
COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL	11.35 kW	11.06 kW
COP Tj = TOL	3.23	2.21
WTOL	70 °C	70 °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	2399 kWh	3417 kWh

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

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	169 %	128 %
Prated	12.16 kW	11.09 kW
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°C	3.72	2.65
Cdh	0.97	0.98
Pdh Tj = +2°C	5.11 kW	4.83 kW
COP Tj = +2°C	5.51	4.20
Cdh	0.95	0.96
Pdh Tj = +7°C	5.82 kW	5.62 kW
COP Tj = +7°C	7.14	5.61
Cdh	0.94	0.95

Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh	0.95	0.96
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL	8.71 kW	7.73 kW
COP Tj = TOL	2.03	1.50
WTOL	70 °C	70 °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	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	0.99	0.99

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

Model: VWL 155/6 A 230V S3

General Data	
Power supply	1x230V 50Hz

Heating

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

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	14.29 kW	14.16 kW
El input	3.29 kW	5.06 kW
COP	4.33	2.79
Indoor water flow rate	2.46 m³/h	1.54 m³/h

Average Climate

EN 14825		
	Low temperature	**Medium temperature**

η_s	187 %	143 %
Prated	12.69 kW	12.00 kW
SCOP	4.74	3.66
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	0.99	0.99
Pdh Tj = +2°C	6.98 kW	6.54 kW
COP Tj = +2°C	4.88	3.68
Cdh	0.97	0.98
Pdh Tj = +7°C	5.79 kW	5.43 kW
COP Tj = +7°C	6.54	4.91
Cdh	0.95	0.96
Pdh Tj = 12°C	6.65 kW	6.31 kW
COP Tj = 12°C	9.06	6.32
Cdh	0.94	0.96
Pdh Tj = Tbiv	11.23 kW	10.62 kW
COP Tj = Tbiv	2.46	2.08
Pdh Tj = TOL	9.82 kW	11.05 kW
COP Tj = TOL	2.23	1.75

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	5532 kWh	6780 kWh

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

Warmer Climate

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	0.99	0.99
Pdh Tj = +7°C	7.55 kW	7.46 kW
COP Tj = +7°C	5.70	3.87
Cdh	0.97	0.98
Pdh Tj = 12°C	6.64 kW	6.19 kW
COP Tj = 12°C	7.90	5.77
Cdh	0.95	0.96
Pdh Tj = Tbiv	12.02 kW	12.69 kW
COP Tj = Tbiv	3.19	2.05
Pdh Tj = TOL	12.02 kW	12.69 kW
COP Tj = TOL	3.19	2.05
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	2595 kWh	3867 kWh

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

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_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	0.98	0.98
Pdh Tj = +2°C	5.16 kW	4.80 kW
COP Tj = +2°C	5.33	4.08
Cdh	0.96	0.96
Pdh Tj = +7°C	5.81 kW	5.55 kW
COP Tj = +7°C	7.45	5.43
Cdh	0.95	0.96

Pdh Tj = 12°C	6.66 kW	6.42 kW
COP Tj = 12°C	9.04	6.82
Cdh	0.94	0.96
Pdh Tj = Tbiv	10.38 kW	9.93 kW
COP Tj = Tbiv	2.37	1.76
Pdh Tj = TOL	8.93 kW	8.65 kW
COP Tj = TOL	2.00	1.46
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	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	0.99	0.99

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

Model: VWL 155/6 A S3

General Data	
Power supply	3x400V 50Hz

Heating

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

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	14.29 kW	14.16 kW
El input	3.29 kW	5.06 kW
COP	4.33	2.79
Indoor water flow rate	2.46 m³/h	1.54 m³/h

Average Climate

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°C	2.46	2.08
Cdh	0.99	0.99
Pdh Tj = +2°C	6.98 kW	6.54 kW
COP Tj = +2°C	4.88	3.68
Cdh	0.97	0.97
Pdh Tj = +7°C	5.79 kW	5.43 kW
COP Tj = +7°C	6.54	4.91
Cdh	0.95	0.96
Pdh Tj = 12°C	6.65 kW	6.31 kW
COP Tj = 12°C	9.06	6.32
Cdh	0.94	0.95
Pdh Tj = Tbiv	11.23 kW	10.62 kW
COP Tj = Tbiv	2.46	2.08
Pdh Tj = TOL	9.82 kW	11.05 kW
COP Tj = TOL	2.23	1.75

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	5542 kWh	6789 kWh

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

Warmer Climate

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	0.99	0.99
Pdh Tj = +7°C	7.55 kW	7.46 kW
COP Tj = +7°C	5.70	3.87
Cdh	0.96	0.97
Pdh Tj = 12°C	6.64 kW	6.19 kW
COP Tj = 12°C	7.90	5.77
Cdh	0.94	0.96
Pdh Tj = Tbiv	12.02 kW	12.69 kW
COP Tj = Tbiv	3.19	2.05
Pdh Tj = TOL	12.02 kW	12.69 kW
COP Tj = TOL	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
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2606 kWh	3878 kWh

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

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	168 %	125 %
Prated	12.73 kW	12.17 kW
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	0.97	0.98
Pdh Tj = +2°C	5.16 kW	4.80 kW
COP Tj = +2°C	5.33	4.08
Cdh	0.95	0.96
Pdh Tj = +7°C	5.81 kW	5.55 kW
COP Tj = +7°C	7.45	5.43
Cdh	0.94	0.95

Pdh Tj = 12°C	6.66 kW	6.42 kW
COP Tj = 12°C	9.04	6.82
Cdh	0.94	0.95
Pdh Tj = Tbiv	10.38 kW	9.93 kW
COP Tj = Tbiv	2.37	1.76
Pdh Tj = TOL	8.93 kW	8.65 kW
COP Tj = TOL	2.00	1.46
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	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	0.99	0.99

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

Model: VWL 125/6 A 230V S3

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
COP	4.71	2.89
Indoor water flow rate	1.98 m³/h	1.42 m³/h

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

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	200 %	144 %
Prated	9.35 kW	9.66 kW
SCOP	5.07	3.67
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	0.99	0.99
Pdh Tj = +2°C	4.90 kW	5.30 kW
COP Tj = +2°C	4.98	3.62
Cdh	0.98	0.99
Pdh Tj = +7°C	5.75 kW	5.47 kW
COP Tj = +7°C	6.73	4.94
Cdh	0.98	0.98
Pdh Tj = 12°C	6.67 kW	6.35 kW

COP Tj = 12°C	8.74	6.50
Cdh	0.97	0.98
Pdh Tj = Tbiv	9.35 kW	9.66 kW
COP Tj = Tbiv	2.58	1.92
Pdh Tj = TOL	9.35 kW	9.66 kW
COP Tj = TOL	2.58	1.92
WTOL	75 °C	75 °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	3812 kWh	5437 kWh

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	0.99	1.00
Pdh Tj = +7°C	7.36 kW	7.20 kW
COP Tj = +7°C	5.90	3.84
Cdh	0.98	0.99
Pdh Tj = 12°C	6.53 kW	6.25 kW
COP Tj = 12°C	8.26	5.95
Cdh	0.97	0.98
Pdh Tj = Tbiv	11.16 kW	11.02 kW
COP Tj = Tbiv	3.26	2.23
Pdh Tj = TOL	11.16 kW	11.02 kW
COP Tj = TOL	3.26	2.23
WTOL	75 °C	75 °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	electricty
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 temperature**
η_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°C	3.58	2.58
Cdh	0.99	0.99

Pdh Tj = +2°C	5.00 kW	4.70 kW
COP Tj = +2°C	5.39	4.06
Cdh	0.98	0.98
Pdh Tj = +7°C	5.79 kW	5.60 kW
COP Tj = +7°C	7.02	5.45
Cdh	0.97	0.98
Pdh Tj = 12°C	6.67 kW	6.47 kW
COP Tj = 12°C	8.74	7.14
Cdh	0.97	0.98
Pdh Tj = Tbiv	8.35 kW	8.68 kW
COP Tj = Tbiv	2.41	1.90
Pdh Tj = TOL	7.20 kW	7.10 kW
COP Tj = TOL	2.06	1.48
WTOL	75 °C	75 °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	5906 kWh	8111 kWh

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

Model: VWL 125/6 A S3

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
COP	4.71	2.89
Indoor water flow rate	1.98 m³/h	1.42 m³/h

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

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	200 %	144 %
Prated	9.35 kW	9.66 kW
SCOP	5.06	3.67
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	0.99	0.99
Pdh Tj = +2°C	4.90 kW	5.30 kW
COP Tj = +2°C	4.98	3.62
Cdh	0.98	0.99
Pdh Tj = +7°C	5.75 kW	5.47 kW
COP Tj = +7°C	6.73	4.94
Cdh	0.98	0.98
Pdh Tj = 12°C	6.67 kW	6.35 kW

COP Tj = 12°C	8.74	6.50
Cdh	0.97	0.98
Pdh Tj = Tbiv	9.35 kW	9.66 kW
COP Tj = Tbiv	2.58	1.92
Pdh Tj = TOL	9.35 kW	9.66 kW
COP Tj = TOL	2.58	1.92
WTOL	75 °C	75 °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	3813 kWh	5438 kWh

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	0.99	1.00
Pdh Tj = +7°C	7.36 kW	7.20 kW
COP Tj = +7°C	5.90	3.84
Cdh	0.98	0.99
Pdh Tj = 12°C	6.53 kW	6.25 kW
COP Tj = 12°C	8.26	5.95
Cdh	0.97	0.98
Pdh Tj = Tbiv	11.16 kW	11.02 kW
COP Tj = Tbiv	3.26	2.23
Pdh Tj = TOL	11.16 kW	11.02 kW
COP Tj = TOL	3.26	2.23
WTOL	75 °C	75 °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	electricty
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)

EN 14825		
	Low temperature	**Medium temperature**
η_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°C	3.58	2.58
Cdh	0.99	0.99

Pdh Tj = +2°C	5.00 kW	4.70 kW
COP Tj = +2°C	5.39	4.06
Cdh	0.98	0.98
Pdh Tj = +7°C	5.79 kW	5.60 kW
COP Tj = +7°C	7.02	5.45
Cdh	0.97	0.98
Pdh Tj = 12°C	6.67 kW	6.47 kW
COP Tj = 12°C	8.74	7.14
Cdh	0.97	0.98
Pdh Tj = Tbiv	8.35 kW	8.68 kW
COP Tj = Tbiv	2.41	1.90
Pdh Tj = TOL	7.20 kW	7.10 kW
COP Tj = TOL	2.06	1.48
WTOL	75 °C	75 °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	5907 kWh	8112 kWh

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

Model: VWL 105/6 A 230V

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
COP	5.27	3.08
Indoor water flow rate	1.42 m³/h	1.00 m³/h

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

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	199 %	143 %
Prated	8.86 kW	9.09 kW
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	0.98	0.99
Pdh Tj = +2°C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh	0.96	0.97
Pdh Tj = +7°C	5.65 kW	5.37 kW
COP Tj = +7°C	6.65	4.92
Cdh	0.95	0.96
Pdh Tj = 12°C	6.62 kW	6.30 kW

COP Tj = 12°C	8.41	6.34
Cdh	0.95	0.96
Pdh Tj = Tbiv	8.93 kW	9.03 kW
COP Tj = Tbiv	2.58	1.87
Pdh Tj = TOL	8.93 kW	9.03 kW
COP Tj = TOL	2.58	1.87
Cdh	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	3623 kWh	5135 kWh

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 %	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	0.99	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh	0.95	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW
COP Tj = Tbiv	3.42	2.32
Pdh Tj = TOL	10.42 kW	10.36 kW
COP Tj = TOL	3.42	2.32
Cdh	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	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

COP Tj = -7°C	3.79	2.65
Cdh	0.97	0.97
Pdh Tj = +2°C	5.00 kW	4.62 kW
COP Tj = +2°C	5.34	3.96
Cdh	0.96	0.96
Pdh Tj = +7°C	5.67 kW	5.47 kW
COP Tj = +7°C	6.89	5.34
Cdh	0.95	0.96
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh	0.95	0.96
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL	7.21 kW	6.99 kW
COP Tj = TOL	2.14	1.53
Cdh	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	4296 kWh	5673 kWh

Model: VWL 105/6 A 230V S2

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
COP	5.27	3.08
Indoor water flow rate	1.42 m³/h	1.00 m³/h

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

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	0.98	0.99
Pdh Tj = +2°C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh	0.96	0.97
Pdh Tj = +7°C	5.65 kW	5.37 kW
COP Tj = +7°C	6.65	4.92
Cdh	0.95	0.96
Pdh Tj = 12°C	6.62 kW	6.30 kW

COP Tj = 12°C	8.41	6.34
Cdh	0.95	0.96
Pdh Tj = Tbiv	8.93 kW	9.03 kW
COP Tj = Tbiv	2.58	1.87
Pdh Tj = TOL	8.93 kW	9.03 kW
COP Tj = TOL	2.58	1.87
Cdh	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	3653 kWh	5165 kWh

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	0.99	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh	0.95	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW
COP Tj = Tbiv	3.42	2.32
Pdh Tj = TOL	10.42 kW	10.36 kW
COP Tj = TOL	3.42	2.32
Cdh	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

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 %
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°C	3.79	2.65
Cdh	0.97	0.97
Pdh Tj = +2°C	5.00 kW	4.62 kW
COP Tj = +2°C	5.34	3.96
Cdh	0.96	0.96
Pdh Tj = +7°C	5.67 kW	5.47 kW
COP Tj = +7°C	6.89	5.34
Cdh	0.95	0.96
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh	0.95	0.96
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL	7.21 kW	6.99 kW
COP Tj = TOL	2.14	1.53
Cdh	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	4314 kWh	5691 kWh

Model: VWL 105/6 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
Indoor water flow rate	1.42 m³/h	1.00 m³/h

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

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	0.98	0.99
Pdh Tj = +2°C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh	0.95	0.96
Pdh Tj = +7°C	5.65 kW	5.37 kW
COP Tj = +7°C	6.65	4.92
Cdh	0.95	0.96
Pdh Tj = 12°C	6.62 kW	6.30 kW

COP Tj = 12°C	8.41	6.34
Cdh	0.94	0.95
Pdh Tj = Tbiv	8.93 kW	9.03 kW
COP Tj = Tbiv	2.58	1.87
Pdh Tj = TOL	8.93 kW	9.03 kW
COP Tj = TOL	2.58	1.87
Cdh	0.99	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	3634 kWh	5146 kWh

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	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	0.98	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh	0.94	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW
COP Tj = Tbiv	3.42	2.32
Pdh Tj = TOL	10.42 kW	10.36 kW
COP Tj = TOL	3.42	2.32
Cdh	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

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°C	3.79	2.65
Cdh	0.96	0.97
Pdh Tj = +2°C	5.00 kW	4.62 kW
COP Tj = +2°C	5.34	3.96
Cdh	0.95	0.96
Pdh Tj = +7°C	5.67 kW	5.47 kW
COP Tj = +7°C	6.89	5.34
Cdh	0.94	0.95
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh	0.94	0.95
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL	7.21 kW	6.99 kW
COP Tj = TOL	2.14	1.53
Cdh	0.99	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	4314 kWh	5692 kWh

Model: VWL 105/6 A S2

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
Indoor water flow rate	1.42 m³/h	1.00 m³/h

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

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	196 %	142 %
Prated	8.86 kW	9.09 kW
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	0.98	0.99
Pdh Tj = +2°C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh	0.95	0.96
Pdh Tj = +7°C	5.65 kW	5.37 kW
COP Tj = +7°C	6.65	4.92
Cdh	0.95	0.96
Pdh Tj = 12°C	6.62 kW	6.30 kW

COP Tj = 12°C	8.41	6.34
Cdh	0.94	0.95
Pdh Tj = Tbiv	8.93 kW	9.03 kW
COP Tj = Tbiv	2.58	1.87
Pdh Tj = TOL	8.93 kW	9.03 kW
COP Tj = TOL	2.58	1.87
Cdh	0.99	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	3686 kWh	5199 kWh

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	0.98	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh	0.94	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW
COP Tj = Tbiv	3.42	2.32
Pdh Tj = TOL	10.42 kW	10.36 kW
COP Tj = TOL	3.42	2.32
Cdh	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	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 %
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	0.96	0.97
Pdh Tj = +2°C	5.00 kW	4.62 kW
COP Tj = +2°C	5.34	3.96
Cdh	0.95	0.96
Pdh Tj = +7°C	5.67 kW	5.47 kW
COP Tj = +7°C	6.89	5.34
Cdh	0.94	0.95
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh	0.94	0.95
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL	7.21 kW	6.99 kW
COP Tj = TOL	2.14	1.53
Cdh	0.99	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	4345 kWh	5723 kWh