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

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

General Data	
Power supply	1x230V 50Hz

Heating

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

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825

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

Pdh Tj = 12°C	2.74 kW	2.44 kW
COP Tj = 12°C	8.42	5.86
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.54 kW	3.10 kW
COP Tj = Tbiv	3.19	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.24 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.80
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1758 kWh	2177 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	253 %	156 %
Prated	3.76 kW	3.31 kW
SCOP	6.41	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.76 kW	3.31 kW
COP Tj = +2°C	3.69	2.24
Cdh	0.99	0.99
Pdh Tj = +7°C	2.25 kW	2.06 kW
COP Tj = +7°C	5.81	3.36
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.41 kW
COP Tj = 12°C	8.08	5.31
Cdh	0.97	0.98

Pdh Tj = Tbiv	3.76 kW	3.31 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	783 kWh	1111 kWh

Colder Climate

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

EN 14825		
	Low temperature	**Medium temperature**

η_s	155 %	107 %
Prated	3.91 kW	2.82 kW
SCOP	3.96	2.76
Tbiv	-13 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.36 kW	1.78 kW
COP Tj = -7°C	3.44	2.32
Cdh	0.99	0.99
Pdh Tj = +2°C	1.96 kW	1.70 kW
COP Tj = +2°C	4.80	3.54
Cdh	0.98	0.98
Pdh Tj = +7°C	2.34 kW	2.09 kW
COP Tj = +7°C	6.54	4.79
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.43 kW
COP Tj = 12°C	8.00	6.07
Cdh	0.97	0.97
Pdh Tj = Tbiv	2.99 kW	2.30 kW
COP Tj = Tbiv	2.80	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.30 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.72
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2439 kWh	2517 kWh
Pdh Tj = -15°C (if TOL<-20°C)	2.22	2.30
COP Tj = -15°C (if TOL<-20°C)	2.17	1.72
Cdh	0.99	0.99

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

General Data	
Power supply	1x230V 50Hz

Heating

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

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825

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

Pdh Tj = 12°C	2.74 kW	2.44 kW
COP Tj = 12°C	8.42	5.86
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.54 kW	3.10 kW
COP Tj = Tbiv	3.19	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.24 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.80
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1758 kWh	2177 kWh

Warmer Climate

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

EN 14825		
	Low temperature	**Medium temperature**
η_s	253 %	156 %
Prated	3.76 kW	3.31 kW
SCOP	6.41	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.76 kW	3.31 kW
COP Tj = +2°C	3.69	2.24
Cdh	0.99	0.99
Pdh Tj = +7°C	2.25 kW	2.06 kW
COP Tj = +7°C	5.81	3.36
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.41 kW
COP Tj = 12°C	8.08	5.31
Cdh	0.97	0.98

Pdh Tj = Tbiv	3.76 kW	3.31 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	783 kWh	1111 kWh

Colder Climate

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

EN 14825		
	Low temperature	**Medium temperature**

η_s	155 %	107 %
Prated	3.91 kW	2.82 kW
SCOP	3.96	2.76
Tbiv	-13 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.36 kW	1.78 kW
COP Tj = -7°C	3.44	2.32
Cdh	0.99	0.99
Pdh Tj = +2°C	1.96 kW	1.70 kW
COP Tj = +2°C	4.80	3.54
Cdh	0.98	0.98
Pdh Tj = +7°C	2.34 kW	2.09 kW
COP Tj = +7°C	6.54	4.79
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.43 kW
COP Tj = 12°C	8.00	6.07
Cdh	0.97	0.97
Pdh Tj = Tbiv	2.99 kW	2.30 kW
COP Tj = Tbiv	2.80	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.30 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.72
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2439 kWh	2517 kWh
Pdh Tj = -15°C (if TOL<-20°C)	2.22	2.30
COP Tj = -15°C (if TOL<-20°C)	2.17	1.72
Cdh	0.99	0.99

Domestic Hot Water (DHW)

Average Climate

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

Warmer Climate

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

Colder Climate

EN 16147

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

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

General Data	
Power supply	1x230V 50Hz

Heating

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

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	51 dB(A)	53 dB(A)

EN 14825

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

Pdh Tj = 12°C	2.74 kW	2.44 kW
COP Tj = 12°C	8.42	5.86
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.54 kW	3.10 kW
COP Tj = Tbiv	3.19	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.24 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.80
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1798 kWh	2217 kWh

Warmer Climate

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

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

Pdh Tj = Tbiv	3.76 kW	3.31 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	831 kWh	1159 kWh

Colder Climate

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

EN 14825		
	Low temperature	**Medium temperature**

η_s	154 %	106 %
Prated	3.91 kW	2.82 kW
SCOP	3.92	2.73
Tbiv	-13 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.36 kW	1.78 kW
COP Tj = -7°C	3.44	2.32
Cdh	0.99	0.99
Pdh Tj = +2°C	1.96 kW	1.70 kW
COP Tj = +2°C	4.80	3.54
Cdh	0.98	0.98
Pdh Tj = +7°C	2.34 kW	2.09 kW
COP Tj = +7°C	6.54	4.79
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.43 kW
COP Tj = 12°C	8.00	6.07
Cdh	0.97	0.97
Pdh Tj = Tbiv	2.99 kW	2.30 kW
COP Tj = Tbiv	2.80	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.30 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.72
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2463 kWh	2541 kWh
Pdh Tj = -15°C (if TOL<-20°C)	2.22	2.30
COP Tj = -15°C (if TOL<-20°C)	2.17	1.72
Cdh	0.99	0.99

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

General Data	
Power supply	1x230V 50Hz

Heating

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

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

Average Climate

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

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

Pdh Tj = 12°C	2.74 kW	2.44 kW
COP Tj = 12°C	8.42	5.86
Cdh	0.97	0.98
Pdh Tj = Tbiv	3.54 kW	3.10 kW
COP Tj = Tbiv	3.19	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.24 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.80
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1798 kWh	2217 kWh

Warmer Climate

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

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

Pdh Tj = Tbiv	3.76 kW	3.31 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	831 kWh	1159 kWh

Colder Climate

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

EN 14825		
	Low temperature	**Medium temperature**

η_s	154 %	106 %
Prated	3.91 kW	2.82 kW
SCOP	3.92	2.73
Tbiv	-13 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.36 kW	1.78 kW
COP Tj = -7°C	3.44	2.32
Cdh	0.99	0.99
Pdh Tj = +2°C	1.96 kW	1.70 kW
COP Tj = +2°C	4.80	3.54
Cdh	0.98	0.98
Pdh Tj = +7°C	2.34 kW	2.09 kW
COP Tj = +7°C	6.54	4.79
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.43 kW
COP Tj = 12°C	8.00	6.07
Cdh	0.97	0.97
Pdh Tj = Tbiv	2.99 kW	2.30 kW
COP Tj = Tbiv	2.80	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.30 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.17	1.72
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2463 kWh	2541 kWh
Pdh Tj = -15°C (if TOL<-20°C)	2.22	2.30
COP Tj = -15°C (if TOL<-20°C)	2.17	1.72
Cdh	0.99	0.99

Domestic Hot Water (DHW)

Average Climate

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

Warmer Climate

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

Colder Climate

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

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

General Data	
Power supply	1x230V 50Hz

Heating

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

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825

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

Pdh Tj = 12°C	2.71 kW	2.52 kW
COP Tj = 12°C	8.39	6.41
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.61 kW	4.63 kW
COP Tj = Tbiv	2.64	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.90 kW	3.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.81
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2427 kWh	3129 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	253 %	156 %
Prated	3.76 kW	3.30 kW
SCOP	6.41	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.76 kW	3.30 kW
COP Tj = +2°C	3.69	2.24
Cdh	0.99	0.99
Pdh Tj = +7°C	2.25 kW	2.06 kW
COP Tj = +7°C	5.81	3.36
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.41 kW
COP Tj = 12°C	8.08	5.31
Cdh	0.97	0.98

Pdh Tj = Tbiv	3.76 kW	3.30 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	783 kWh	1108 kWh

Colder Climate

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

EN 14825		
	Low temperature	**Medium temperature**

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

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.68
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3182 kWh	3485 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.30	3.26
COP Tj = -15°C (if TOL<-20°C)	2.11	1.68
Cdh	0.99	0.99

Domestic Hot Water (DHW)

Average Climate

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

Warmer Climate

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

Colder Climate

EN 16147

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

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

General Data	
Power supply	1x230V 50Hz

Heating

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

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825

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

Pdh Tj = 12°C	2.71 kW	2.52 kW
COP Tj = 12°C	8.39	6.41
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.61 kW	4.63 kW
COP Tj = Tbiv	2.64	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.90 kW	3.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.81
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2427 kWh	3129 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	253 %	156 %
Prated	3.76 kW	3.30 kW
SCOP	6.41	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.76 kW	3.30 kW
COP Tj = +2°C	3.69	2.24
Cdh	0.99	0.99
Pdh Tj = +7°C	2.25 kW	2.06 kW
COP Tj = +7°C	5.81	3.36
Cdh	0.97	0.98
Pdh Tj = 12°C	2.70 kW	2.41 kW
COP Tj = 12°C	8.08	5.31
Cdh	0.97	0.98

Pdh Tj = Tbiv	3.76 kW	3.30 kW
COP Tj = Tbiv	3.69	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.76 kW	3.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.69	2.24
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	783 kWh	1108 kWh

Colder Climate

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

EN 14825		
	Low temperature	**Medium temperature**

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

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.68
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3182 kWh	3485 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.30	3.26
COP Tj = -15°C (if TOL<-20°C)	2.11	1.68
Cdh	0.99	0.99

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

General Data	
Power supply	1x230V 50Hz

Heating

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

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825

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

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

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	150 %	238 %
Prated	3.30 kW	3.76 kW
SCOP	3.81	6.04
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.30 kW	3.76 kW
COP Tj = +2°C	2.24	3.69
Cdh	0.99	0.99
Pdh Tj = +7°C	2.06 kW	2.25 kW
COP Tj = +7°C	3.36	5.81
Cdh	0.98	0.97
Pdh Tj = 12°C	2.41 kW	2.70 kW
COP Tj = 12°C	5.31	8.08
Cdh	0.98	0.97

Pdh Tj = Tbiv	3.30 kW	3.76 kW
COP Tj = Tbiv	2.24	3.69
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	3.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.24	3.69
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1156 kWh	831 kWh

Colder Climate

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

EN 14825		
	Low temperature	**Medium temperature**

η_s	157 %	109 %
Prated	5.19 kW	4.00 kW
SCOP	3.99	2.81
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.96 kW	2.44 kW
COP Tj = -7°C	3.41	2.42
Cdh	0.99	0.99
Pdh Tj = +2°C	1.97 kW	1.72 kW
COP Tj = +2°C	4.87	3.56
Cdh	0.98	0.98
Pdh Tj = +7°C	2.36 kW	2.11 kW
COP Tj = +7°C	6.57	4.89
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.52 kW
COP Tj = 12°C	8.00	6.71
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.24 kW	3.26 kW
COP Tj = Tbiv	2.42	1.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	3.26 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.68
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3206 kWh	3509 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.30	3.26
COP Tj = -15°C (if TOL<-20°C)	2.11	1.68
Cdh	0.99	0.99

Domestic Hot Water (DHW)

Average Climate

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

Warmer Climate

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

Colder Climate

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

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

General Data	
Power supply	1x230V 50Hz

Heating

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

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825

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

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

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	53 dB(A)	54 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	150 %	238 %
Prated	3.30 kW	3.76 kW
SCOP	3.81	6.04
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.30 kW	3.76 kW
COP Tj = +2°C	2.24	3.69
Cdh	0.99	0.99
Pdh Tj = +7°C	2.06 kW	2.25 kW
COP Tj = +7°C	3.36	5.81
Cdh	0.98	0.97
Pdh Tj = 12°C	2.41 kW	2.70 kW
COP Tj = 12°C	5.31	8.08
Cdh	0.98	0.97

Pdh Tj = Tbiv	3.30 kW	3.76 kW
COP Tj = Tbiv	2.24	3.69
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	3.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.24	3.69
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1156 kWh	831 kWh

Colder Climate

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

EN 14825		
	Low temperature	**Medium temperature**

η_s	157 %	109 %
Prated	5.19 kW	4.00 kW
SCOP	3.99	2.81
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.96 kW	2.44 kW
COP Tj = -7°C	3.41	2.42
Cdh	0.99	0.99
Pdh Tj = +2°C	1.97 kW	1.72 kW
COP Tj = +2°C	4.87	3.56
Cdh	0.98	0.98
Pdh Tj = +7°C	2.36 kW	2.11 kW
COP Tj = +7°C	6.57	4.89
Cdh	0.97	0.98
Pdh Tj = 12°C	2.68 kW	2.52 kW
COP Tj = 12°C	8.00	6.71
Cdh	0.97	0.97
Pdh Tj = Tbiv	4.24 kW	3.26 kW
COP Tj = Tbiv	2.42	1.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	3.26 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.68
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3206 kWh	3509 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.30	3.26
COP Tj = -15°C (if TOL<-20°C)	2.11	1.68
Cdh	0.99	0.99