Login

Summary of	VWL 85/7.2 AS 230V S3 / VWL 105/7.2 AS 230V S3	Reg. No.	011-1W0554
Certificate Holder			
Name	Vaillant Deutschland GmbH & Co KG		
Address	Berghauser Straße 40	Zip	42859
City	Remscheid	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Subtype title	VWL 85/7.2 AS 230V S3 / VWL 105/7.2 AS 230V S3		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass of Refrigerant	1.6 kg		
Certification Date	26.09.2022		
Testing basis	European KEYMARK Scheme for Heat Pumps Rev. 10 (as of 2022-06)		

Model: VWL 85/7.2 AS 230V S3 + VWL 108/7.2 IS

Configure model	
Model name	VWL 85/7.2 AS 230V S3 + VWL 108/7.2 IS
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C and +18°C/+23°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	7.88 kW	6.71 kW
El input	1.70 kW	2.14 kW
COP	4.65	3.14

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

Cooling

EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	2.27 kW	1.78 kW
Cooling capacity	6.37	7.04
EER	2.81	3.96

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	+7°C/+12°C	**+18°C/+23°C**
Pdesignc	7.41 kW	7.04 kW
SEER	4.04	6.00
Pdc Tj = 35°C	7.41 kW	7.04 kW
EER Tj = 35°C	2.54	3.96
Cdc Tj = 35 °C	0.994	1.000
Pdc Tj = 30°C	5.40 kW	5.15 kW
EER Tj = 30°C	3.43	5.24
Cdc Tj = 30 °C	0.988	1.000
Pdc Tj = 25°C	3.45 kW	4.60 kW
EER Tj = 25°C	4.35	6.81
Cdc Tj = 25 °C	0.977	0.973
Pdc Tj = 20°C	4.00 kW	5.00 kW
EER Tj = 20°C	6.05	8.80
Cdc Tj = 20 °C	0.972	0.968
Poff	15 W	15 W
PTO	18 W	18 W
PSB	15 W	15 W
PCK	0 W	0 W
Annual energy consumption Qce	1100 kWh	704 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	225 %	156 %
Prated	8.03 kW	7.02 kW
SCOP	5.71	3.96
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.03 kW	7.02 kW
COP Tj = +2°C	3.35	2.16
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.51 kW	4.73 kW
COP Tj = +7°C	5.21	3.40
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	5.41 kW	5.27 kW
COP Tj = 12°C	7.05	5.22
Cdh Tj = +12 °C	0.97	0.98

Pdh Tj = Tbiv	8.03 kW	7.02 kW
COP Tj = Tbiv	3.35	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.03 kW	7.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.35	2.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	20 W	20 W
PSB	15 W	15 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	1878 kWh	2367 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825

	Low temperature	**Medium temperature**
η_s	145 %	109 %
Prated	7.74 kW	8.13 kW
SCOP	3.71	2.81
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.97 kW	4.50 kW
COP Tj = -7°C	3.05	2.31
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	3.38 kW	3.71 kW
COP Tj = +2°C	4.40	3.65
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	4.57 kW	4.37 kW
COP Tj = +7°C	6.37	4.73
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	5.06 kW	5.02 kW
COP Tj = 12°C	7.71	6.07
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	6.31 kW	6.63 kW
COP Tj = Tbiv	2.50	1.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.25 kW	6.63 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.94	1.73
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	20 W	20 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.74 kW	8.13 kW
Annual energy consumption Qhe	5141 kWh	7129 kWh
Pdh Tj = -15°C (if TOL<-20°C)	6.31	6.63
COP Tj = -15°C (if TOL<-20°C)	2.50	1.73
Cdh Tj = -15 °C	1.00	1.00

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825

	Low temperature	**Medium temperature**
η_s	175 %	131 %
Prated	7.46 kW	7.68 kW
SCOP	4.46	3.34
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.60 kW	6.80 kW
COP Tj = -7°C	2.84	2.16
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.89 kW	4.12 kW
COP Tj = +2°C	4.46	3.26
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.40 kW	4.31 kW
COP Tj = +7°C	5.72	4.29
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	5.08 kW	5.16 kW
COP Tj = 12°C	7.39	5.81
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	6.60 kW	6.80 kW
COP Tj = Tbiv	2.84	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	6.51 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.45	1.72
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	20 W	20 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.71 kW	1.18 kW
Annual energy consumption Qhe	3457 kWh	4755 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	113.9 %
COP	2.72
Heating up time	00:51 h:min
Standby power input	34.9 W
Reference hot water temperature	51.68 °C
Mixed water at 40°C	236.73 l

Colder Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	83 %
COP	2.00
Heating up time	00:57 h:min
Standby power input	40.9 W
Reference hot water temperature	51.45 °C
Mixed water at 40°C	235.28 l

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	98.5 %
COP	2.36
Heating up time	00:54 h:min
Standby power input	39.0 W
Reference hot water temperature	51.53 °C
Mixed water at 40°C	236.2 l

Model: VWL 85/7.2 AS 230V S3 + VWL 108/7.2 IS C2

Configure model	
Model name	VWL 85/7.2 AS 230V S3 + VWL 108/7.2 IS C2
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C and +18°C/+23°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	7.88 kW	6.71 kW
El input	1.75 kW	2.19 kW
COP	4.51	3.07

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

Cooling

EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	2.32 kW	1.83 kW
Cooling capacity	6.37	7.04
EER	2.75	3.85

EN 14825

	+7°C/+12°C	**+18°C/+23°C**
Pdesignc	7.41 kW	7.04 kW
SEER	3.85	5.66
Pdc Tj = 35°C	7.41 kW	7.04 kW
EER Tj = 35°C	2.49	3.85
Cdc Tj = 35 °C	0.994	1.000
Pdc Tj = 30°C	5.40 kW	5.15 kW
EER Tj = 30°C	3.33	4.98
Cdc Tj = 30 °C	0.989	1.000
Pdc Tj = 25°C	3.45 kW	4.60 kW
EER Tj = 25°C	4.09	6.34
Cdc Tj = 25 °C	0.978	0.975
Pdc Tj = 20°C	4.00 kW	5.00 kW
EER Tj = 20°C	5.63	8.09
Cdc Tj = 20 °C	0.974	0.970
Poff	15 W	15 W
PTO	18 W	18 W
PSB	15 W	15 W
PCK	0 W	0 W
Annual energy consumption Qce	1155 kWh	747 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	214 %	149 %
Prated	8.03 kW	7.02 kW
SCOP	5.43	3.81
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.03 kW	7.02 kW
COP Tj = +2°C	3.28	2.13
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.51 kW	4.73 kW
COP Tj = +7°C	4.97	3.28
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	5.41 kW	5.27 kW
COP Tj = 12°C	6.62	4.97
Cdh Tj = +12 °C	0.98	0.98

Pdh Tj = Tbiv	8.03 kW	7.02 kW
COP Tj = Tbiv	3.28	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.03 kW	7.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.28	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	20 W	20 W
PSB	15 W	15 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	1976 kWh	2460 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825

	Low temperature	**Medium temperature**
η_s	139 %	106 %
Prated	7.74 kW	8.13 kW
SCOP	3.55	2.72
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.97 kW	4.50 kW
COP Tj = -7°C	2.96	2.26
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	3.38 kW	3.71 kW
COP Tj = +2°C	4.13	3.48
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	4.57 kW	4.37 kW
COP Tj = +7°C	5.96	4.49
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	5.06 kW	5.02 kW
COP Tj = 12°C	7.16	5.72
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	6.31 kW	6.63 kW
COP Tj = Tbiv	2.45	1.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.25 kW	6.63 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.70
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	20 W	20 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.74 kW	8.13 kW
Annual energy consumption Qhe	5375 kWh	7367 kWh
Pdh Tj = -15°C (if TOL<-20°C)	6.31	6.63
COP Tj = -15°C (if TOL<-20°C)	2.45	1.70
Cdh Tj = -15 °C	1.00	1.00

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825

	Low temperature	**Medium temperature**
η_s	166 %	126 %
Prated	7.46 kW	7.68 kW
SCOP	4.24	3.22
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.60 kW	6.80 kW
COP Tj = -7°C	2.78	2.13
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.89 kW	4.12 kW
COP Tj = +2°C	4.22	3.13
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.40 kW	4.31 kW
COP Tj = +7°C	5.37	4.09
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	5.08 kW	5.16 kW
COP Tj = 12°C	6.89	5.50
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	6.60 kW	6.80 kW
COP Tj = Tbiv	2.78	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	6.51 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.39	1.70
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	20 W	20 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.71 kW	1.18 kW
Annual energy consumption Qhe	3636 kWh	4934 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	113.9 %
COP	2.72
Heating up time	00:51 h:min
Standby power input	34.9 W
Reference hot water temperature	51.68 °C
Mixed water at 40°C	236.73 l

Colder Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	83 %
COP	2.00
Heating up time	00:57 h:min
Standby power input	40.9 W
Reference hot water temperature	51.45 °C
Mixed water at 40°C	235.28 l

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	98.5 %
COP	2.36
Heating up time	00:54 h:min
Standby power input	39.0 W
Reference hot water temperature	51.53 °C
Mixed water at 40°C	236.2 l