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<u>Login</u>			
Summary of	VWL 45/7.2 AS 230V S3 / VWL 65/7.2 AS230V S3	Reg. No.	011-1W0553
Certificate Holder		1	
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 45/7.2 AS 230V S3 / VWL 65/7.2 AS230V S3		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass of Refrigerant	1 kg		
Certification Date	26.09.2022		
Testing basisEuropean KEYMARK Scheme for Heat Pumps Rev. 10 (as of 2022-06))

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Model: VWL 65/7.2 AS 230V S3 + VWL 108/7.2 IS

Configure model		
Model name	VWL 65/7.2 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	6.07 kW	6.09 kW	
El input	1.20 kW	1.85 kW	
СОР	5.05	3.28	

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

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EN 14511-2		
	+7°C/+12°C	+18°C/+23°C
El input	1.79 kW	1.39 kW
Cooling capacity	5.14	5.90
EER	2.87	4.25

EN 14825

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	+7°C/+12°C	+18°C/+23°C
Pdesignc	5.22 kW	5.71 kW
SEER	4.68	7.24
Pdc Tj = 35°C	5.22 kW	5.71 kW
EER Tj = 35°C	2.81	4.30
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	3.99 kW	4.07 kW
EER Tj = 30°C	3.58	5.93
Cdc Tj = 30 °C	0.987	1.000
Pdc Tj = 25°C	2.35 kW	3.31 kW
EER Tj = 25°C	5.42	8.58
Cdc Tj = 25 °C	0.967	0.963
Pdc Tj = 20°C	2.71 kW	3.58 kW
EER Tj = 20°C	7.71	11.87
Cdc Tj = 20 °C	0.959	0.953
Poff	12 W	12 W
РТО	6 W	6 W
PSB	12 W	12 W
РСК	0 W	0 W
Annual energy consumption Qce	669 kWh	473 kWh

Warmer Climate

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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	230 %	156 %
Prated	4.81 kW	4.57 kW
SCOP	5.83	3.97
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.81 kW	4.57 kW
COP Tj = +2°C	3.30	2.20
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.10 kW	2.75 kW
COP Tj = +7°C	5.63	3.54
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.82 kW	2.61 kW
COP Tj = 12°C	6.65	4.89
Cdh Tj = +12 °C	0.99	0.99

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Pdh Tj = Tbiv	4.81 kW	4.57 kW
COP Tj = Tbiv	3.30	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.81 kW	4.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.30	2.20
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	12 W	12 W
РТО	6 W	6 W
PSB	12 W	12 W
РСК	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1102 kWh	1536 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

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	Low temperature	Medium temperature
η _s	147 %	101 %
Prated	4.48 kW	3.95 kW
SCOP	3.75	2.61
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.74 kW	2.51 kW
COP Tj = -7°C	2.86	1.97
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = $+2^{\circ}C$	2.26 kW	2.00 kW
COP Tj = +2°C	5.04	3.50
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	2.68 kW	2.68 kW
COP Tj = +7°C	6.36	4.82
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.83 kW	2.73 kW
COP Tj = 12°C	6.79	5.79
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.66 kW	3.22 kW
COP Tj = Tbiv	2.09	1.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.99 kW	3.22 kW

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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 1.70 1.51 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 1.00 1.00 60 °C WTOL 60 °C Poff 12 W 12 W PTO 6 W 6 W PSB 12 W 12 W PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 4.48 kW 3.95 kW Annual energy consumption Qhe 2949 kWh 3733 kWh Pdh Tj = -15° C (if TOL< -20° C) 3.66 3.22 COP Tj = -15° C (if TOL< -20° C) 2.09 1.51 Cdh Tj = -15 °C 1.00 1.00

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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

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The authoritative source of this information is the heat pump certificate as executed by the certification body and the related technical data.



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	Low temperature	Medium temperature
η _s	181 %	136 %
Prated	5.01 kW	5.21 kW
SCOP	4.61	3.46
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.43 kW	4.61 kW
COP Tj = -7°C	3.06	2.20
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = $+2^{\circ}$ C	2.81 kW	2.81 kW
COP Tj = +2°C	4.46	3.43
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = $+7^{\circ}$ C	2.74 kW	2.42 kW
COP Tj = +7°C	6.25	4.45
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.01 kW	2.68 kW
COP Tj = 12°C	6.44	5.53
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.43 kW	4.61 kW
COP Tj = Tbiv	3.06	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.04 kW	3.99 kW

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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 2.69 1.58 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 1.00 1.00 60 °C WTOL 60 °C Poff 12 W 12 W PTO 6 W 6 W PSB 12 W 12 W PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.97 kW 1.22 kW 2246 kWh Annual energy consumption Qhe 3109 kWh

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Domestic Hot Water (DHW)

Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	131.3 %	
СОР	3.14	
Heating up time	01:00 h:min	
Standby power input	29.1 W	
Reference hot water temperature	51.6 °C	
Mixed water at 40°C	237.7 l	

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Colder Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	89.3 %	
СОР	2.16	
Heating up time	01:10 h:min	
Standby power input	33.7 W	
Reference hot water temperature	51.06 °C	
Mixed water at 40°C	233.99	

Average Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	110.1 %	
СОР	2.65	
Heating up time	01:05 h:min	
Standby power input	31.0 W	
Reference hot water temperature	51.3 °C	
Mixed water at 40°C	235.37	

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Model: VWL 65/7.2 AS 230V S3 + VWL 108/7.2 IS C2

Configure model		
Model name	VWL 65/7.2 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	6.07 kW	6.09 kW	
El input	1.25 kW	1.90 kW	
СОР	4.85	3.20	

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

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EN 14511-2			
	+7°C/+12°C	+18°C/+23°C	
El input	1.84 kW	1.44 kW	
Cooling capacity	5.14	5.90	
EER	2.79	4.10	

EN 14825

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	+7°C/+12°C	+18°C/+23°C
Pdesignc	5.22 kW	5.71 kW
SEER	4.32	6.57
Pdc Tj = 35°C	5.22 kW	5.71 kW
EER Tj = 35°C	2.74	4.14
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	3.99 kW	4.07 kW
EER Tj = 30°C	3.42	5.53
Cdc Tj = 30 °C	0.988	1.000
Pdc Tj = 25°C	2.35 kW	3.31 kW
EER Tj = 25°C	4.86	7.59
Cdc Tj = 25 °C	0.971	0.967
Pdc Tj = 20°C	2.71 kW	3.58 kW
EER Tj = 20°C	6.75	10.18
Cdc Tj = 20 °C	0.964	0.959
Poff	12 W	12 W
РТО	6 W	6 W
PSB	12 W	12 W
РСК	0 W	0 W
Annual energy consumption Qce	726 kWh	521 kWh

Warmer Climate

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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	209 %	145 %
Prated	4.81 kW	4.57 kW
SCOP	5.30	3.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.81 kW	4.57 kW
COP Tj = +2°C	3.19	2.15
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.10 kW	2.75 kW
COP Tj = +7°C	5.16	3.33
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.82 kW	2.61 kW
COP Tj = 12°C	5.95	4.47
Cdh Tj = +12 °C	0.99	0.99

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Pdh Tj = Tbiv	4.81 kW	4.57 kW
COP Tj = Tbiv	3.19	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.81 kW	4.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.19	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	12 W	12 W
РТО	6 W	6 W
PSB	12 W	12 W
РСК	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1211 kWh	1649 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

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	Low temperature	Medium temperature
η _s	136 %	96 %
Prated	4.48 kW	3.95 kW
SCOP	3.48	2.47
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.74 kW	2.51 kW
COP Tj = -7°C	2.72	1.89
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = $+2^{\circ}$ C	2.26 kW	2.00 kW
$COP Tj = +2^{\circ}C$	4.54	3.22
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	2.68 kW	2.68 kW
COP Tj = +7°C	5.68	4.42
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.83 kW	2.73 kW
COP Tj = 12°C	6.06	5.23
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.66 kW	3.22 kW
COP Tj = Tbiv	2.03	1.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.99 kW	3.22 kW

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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 1.65 1.48 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 1.00 1.00 60 °C WTOL 60 °C Poff 12 W 12 W PTO 6 W 6 W PSB 12 W 12 W PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 4.48 kW 3.95 kW Annual energy consumption Qhe 3174 kWh 3946 kWh Pdh Tj = -15° C (if TOL< -20° C) 3.66 3.22 COP Tj = -15° C (if TOL< -20° C) 2.03 1.48 Cdh Tj = -15 °C 1.00 1.00

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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)

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	Low temperature	Medium temperature
η _s	168 %	127 %
Prated	5.01 kW	5.21 kW
SCOP	4.27	3.26
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.43 kW	4.61 kW
COP Tj = -7°C	2.96	2.15
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = $+2^{\circ}$ C	2.81 kW	2.81 kW
COP Tj = +2°C	4.13	3.24
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	2.74 kW	2.42 kW
COP Tj = +7°C	5.61	4.07
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.01 kW	2.68 kW
COP Tj = 12°C	5.82	5.01
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.43 kW	4.61 kW
COP Tj = Tbiv	2.96	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.04 kW	3.99 kW

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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 2.61 1.55 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 1.00 1.00 60 °C WTOL 60 °C Poff 12 W 12 W PTO 6 W 6 W PSB 12 W 12 W PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.97 kW 1.22 kW Annual energy consumption Qhe 2424 kWh 3304 kWh

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Domestic Hot Water (DHW)

Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	131.3 %	
СОР	3.14	
Heating up time	01:00 h:min	
Standby power input	29.1 W	
Reference hot water temperature	51.6 °C	
Mixed water at 40°C	237.7	

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Colder Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	89.3 %	
СОР	2.16	
Heating up time	01:10 h:min	
Standby power input	33.7 W	
Reference hot water temperature	51.06 °C	
Mixed water at 40°C	233.99	

Average Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	110.1 %	
СОР	2.65	
Heating up time	01:05 h:min	
Standby power input	31.0 W	
Reference hot water temperature	51.3 °C	
Mixed water at 40°C	235.37	

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