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Summary of	VWL 75/6 A 230V	Reg. No.	40050985
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 75/6 A 230V		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R290		
Mass of Refrigerant	0.9 kg		
Certification Date	22.11.2021		
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 85/6 A 230V S3

Configure model	
Model name	VWL 85/6 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 14511-4	
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	7.37 kW	7.58 kW
El input	1.66 kW	2.65 kW
COP	4.42	2.85

Average Climate

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EN 14825

	Low temperature	Medium temperature
η_s	187 %	135 %
Prated	7.21 kW	6.39 kW
SCOP	4.75	3.44
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.38 kW	5.66 kW
COP Tj = -7°C	2.93	2.17
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.83 kW	3.49 kW
COP Tj = +2°C	4.73	3.32
Cdh Tj = +2 °C	0.970	0.970
Pdh Tj = +7°C	3.21 kW	3.06 kW
COP Tj = +7°C	6.33	4.67
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.72 kW	3.62 kW
COP Tj = 12°C	7.79	6.23
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	6.38 kW	5.66 kW
COP Tj = Tbiv	2.93	2.17

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$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	6.00 kW	5.09 kW
$COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$	2.66	1.92
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$		
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.21 kW	1.30 kW
Annual energy consumption Q_{he}	3139 kWh	3837 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	57 dB(A)

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	228 %	162 %
Prated	6.87 kW	7.06 kW

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SCOP	5.78	4.13
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.87 kW	7.06 kW
COP Tj = +2°C	3.18	2.31
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.38 kW	4.71 kW
COP Tj = +7°C	5.29	3.44
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.68 kW	3.56 kW
COP Tj = 12°C	7.37	5.62
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	6.87 kW	7.06 kW
COP Tj = Tbiv	3.18	2.31
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.87 kW	7.06 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.18	2.31
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W
PCK	0 W	0 W

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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	1586 kWh	2284 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	57 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	159 %	119 %
Prated	6.03 kW	5.59 kW
SCOP	4.05	3.06
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	3.71 kW	3.77 kW
COP T _j = -7°C	3.42	2.54
C _{dh} T _j = -7 °C	0.970	0.980
P _{dh} T _j = +2°C	2.80 kW	2.59 kW
COP T _j = +2°C	5.04	3.70

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Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = +7°C	3.25 kW	3.12 kW
COP Tj = +7°C	6.63	5.08
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.73 kW	3.67 kW
COP Tj = 12°C	7.71	6.80
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.92 kW	4.56 kW
COP Tj = Tbiv	2.57	1.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.66 kW	3.29 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.19	1.56
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.03 kW	5.59 kW
Annual energy consumption Qhe	3665 kWh	4506 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.92	4.56

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COP T _j = -15°C (if TOL<-20°C)	2.57	1.92
Cdh T _j = -15 °C	0.980	0.990

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	57 dB(A)

Model: VWL 65/6 A 230V S3

Configure model	
Model name	VWL 65/6 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	5.12 kW	5.80 kW
El input	1.10 kW	2.00 kW
COP	4.66	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

Average Climate

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EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	50 dB(A)	57 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	186 %	136 %
Prated	6.73 kW	6.26 kW
SCOP	4.71	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.96 kW	5.54 kW
COP Tj = -7°C	3.01	2.14
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.67 kW	3.63 kW
COP Tj = +2°C	4.62	3.39
Cdh Tj = +2 °C	0.970	0.970
Pdh Tj = +7°C	3.12 kW	3.01 kW
COP Tj = +7°C	6.36	4.67
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.69 kW	3.57 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = 12°C	7.82	6.19
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	5.96 kW	5.54 kW
COP Tj = Tbiv	3.01	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.52 kW	5.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.21 kW	1.21 kW
Annual energy consumption Qhe	2951 kWh	3731 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	50 dB(A)	57 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 18 Mar 2022

	Low temperature	Medium temperature
η_s	229 %	162 %
Prated	5.31 kW	5.98 kW
SCOP	5.81	4.12
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.31 kW	5.98 kW
COP Tj = +2°C	3.46	2.33
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	4.12 kW	3.72 kW
COP Tj = +7°C	5.49	3.50
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.67 kW	3.52 kW
COP Tj = 12°C	7.40	5.58
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	5.31 kW	5.98 kW
COP Tj = Tbiv	3.46	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.31 kW	5.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.46	2.33
WTOL	55 °C	55 °C

This information was generated by the HP KEYMARK database on 18 Mar 2022

Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 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	1222 kWh	1938 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	50 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	162 %	121 %
Prated	5.97 kW	5.51 kW
SCOP	4.13	3.10
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.58 kW	3.27 kW

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COP Tj = -7°C	3.45	2.55
Cdh Tj = -7 °C	0.970	0.980
Pdh Tj = +2°C	2.75 kW	2.58 kW
COP Tj = +2°C	5.17	3.80
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = +7°C	3.16 kW	3.07 kW
COP Tj = +7°C	6.64	5.07
Cdh Tj = +7 °C	0.940	0.960
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	7.77	6.57
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.87 kW	4.50 kW
COP Tj = Tbiv	2.57	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.10 kW	3.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.23	1.58
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W
PCK	0 W	0 W

This information was generated by the HP KEYMARK database on 18 Mar 2022

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.97 kW	5.51 kW
Annual energy consumption Q _{he}	3560 kWh	4385 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)		
COP T _j = -15°C (if TOL<-20°C)		
C _{dh} T _j = -15 °C		

Model: VWL 75/6 A 230V

Configure model	
Model name	VWL 75/6 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	4.57 kW	4.95 kW
El input	0.95 kW	1.68 kW
COP	4.79	2.93

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	185 %	134 %
Prated	6.60 kW	6.13 kW
SCOP	4.64	3.43
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.84 kW	5.42 kW
COP Tj = -7°C	2.72	2.13
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.72 kW	3.46 kW
COP Tj = +2°C	4.68	3.36
Cdh Tj = +2 °C	0.960	0.970
Pdh Tj = +7°C	3.18 kW	3.00 kW
COP Tj = +7°C	6.38	4.60
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.74 kW	3.59 kW

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COP Tj = 12°C	7.88	6.18
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	6.27 kW	5.42 kW
COP Tj = Tbiv	2.64	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.27 kW	4.88 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.25 kW
Annual energy consumption Qhe	2907 kWh	3688 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 18 Mar 2022

	Low temperature	Medium temperature
η_s	237 %	163 %
Prated	6.77 kW	6.60 kW
SCOP	5.99	4.14
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.77 kW	6.60 kW
COP Tj = +2°C	3.23	2.23
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.14 kW	4.52 kW
COP Tj = +7°C	5.52	3.47
Cdh Tj = +7 °C	0.96	0.98
Pdh Tj = 12°C	3.75 kW	3.56 kW
COP Tj = 12°C	7.65	5.68
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	6.77 kW	6.60 kW
COP Tj = Tbiv	3.23	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.77 kW	6.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.23
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99

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WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 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	1510 kWh	2128 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	160 %	118 %
Prated	5.85 kW	5.39 kW
SCOP	4.07	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = -7°C	3.51 kW	3.69 kW
COP Tj = -7°C	3.31	2.53
Cdh Tj = -7 °C	0.970	0.980
Pdh Tj = +2°C	2.73 kW	2.55 kW
COP Tj = +2°C	5.01	3.62
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = +7°C	3.19 kW	3.08 kW
COP Tj = +7°C	6.82	5.05
Cdh Tj = +7 °C	0.940	0.950
Pdh Tj = 12°C	3.78 kW	3.64 kW
COP Tj = 12°C	8.52	6.54
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.77 kW	4.40 kW
COP Tj = Tbiv	2.60	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.94 kW	4.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W

This information was generated by the HP KEYMARK database on 18 Mar 2022

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.85 kW	5.39 kW
Annual energy consumption Q _{he}	3546 kWh	4380 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	4.77	4.40
COP T _j = -15°C (if TOL<-20°C)	2.60	1.90
C _{dh} T _j = -15 °C	0.980	0.990

Model: VWL 75/6 A 230V S2

Configure model	
Model name	VWL 75/6 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	4.57 kW	4.95 kW
El input	0.95 kW	1.68 kW
COP	4.79	2.93

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	183 %	133 %
Prated	6.60 kW	6.13 kW
SCOP	4.64	3.41
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.84 kW	5.42 kW
COP Tj = -7°C	2.72	2.13
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.72 kW	3.46 kW
COP Tj = +2°C	4.68	3.36
Cdh Tj = +2 °C	0.960	0.970
Pdh Tj = +7°C	3.18 kW	3.00 kW
COP Tj = +7°C	6.38	4.60
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.74 kW	3.59 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = 12°C	7.88	6.18
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	6.27 kW	5.42 kW
COP Tj = Tbiv	2.64	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.27 kW	4.88 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.25 kW
Annual energy consumption Qhe	2937 kWh	3718 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 18 Mar 2022

	Low temperature	Medium temperature
η_s	231 %	160 %
Prated	6.77 kW	6.60 kW
SCOP	5.85	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.77 kW	6.60 kW
COP Tj = +2°C	3.23	2.23
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.14 kW	4.52 kW
COP Tj = +7°C	5.52	3.47
Cdh Tj = +7 °C	0.96	0.98
Pdh Tj = 12°C	3.75 kW	3.56 kW
COP Tj = 12°C	7.65	5.68
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	6.77 kW	6.60 kW
COP Tj = Tbiv	3.23	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.77 kW	6.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.23
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99

This information was generated by the HP KEYMARK database on 18 Mar 2022

WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 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	1546 kWh	2164 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	159 %	118 %
Prated	5.85 kW	5.39 kW
SCOP	4.05	3.02
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = -7°C	3.51 kW	3.69 kW
COP Tj = -7°C	3.31	2.53
Cdh Tj = -7 °C	0.970	0.980
Pdh Tj = +2°C	2.73 kW	2.55 kW
COP Tj = +2°C	5.01	3.62
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = +7°C	3.19 kW	3.08 kW
COP Tj = +7°C	6.82	5.05
Cdh Tj = +7 °C	0.940	0.950
Pdh Tj = 12°C	3.78 kW	3.64 kW
COP Tj = 12°C	8.52	6.54
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.77 kW	4.40 kW
COP Tj = Tbiv	2.60	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.94 kW	4.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W

This information was generated by the HP KEYMARK database on 18 Mar 2022

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.85 kW	5.39 kW
Annual energy consumption Q _{he}	3565 kWh	4398 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)	4.77	4.40
COP T _j = -15°C (if TOL<-20°C)	2.60	1.90
C _{dh} T _j = -15 °C	0.980	0.990

Model: VWL 65/6 A 230V

Configure model	
Model name	VWL 65/6 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	4.48 kW	4.94 kW
El input	0.94 kW	1.69 kW
COP	4.78	2.93

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	188 %	131 %
Prated	5.87 kW	4.40 kW
SCOP	4.77	3.36
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.19 kW	3.89 kW
COP Tj = -7°C	3.10	2.19
Cdh Tj = -7 °C	0.980	0.980
Pdh Tj = +2°C	3.01 kW	2.57 kW
COP Tj = +2°C	4.73	3.25
Cdh Tj = +2 °C	0.960	0.960
Pdh Tj = +7°C	3.09 kW	2.95 kW
COP Tj = +7°C	6.17	4.48
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.66 kW	3.56 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = 12°C	7.60	6.06
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	5.37 kW	4.84 kW
COP Tj = Tbiv	2.78	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.37 kW	4.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.78	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 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	2544 kWh	2712 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 18 Mar 2022

	Low temperature	Medium temperature
η_s	232 %	164 %
Prated	5.71 kW	6.10 kW
SCOP	5.87	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.71 kW	6.10 kW
COP Tj = +2°C	3.29	2.29
Cdh Tj = +2 °C	0.980	0.990
Pdh Tj = +7°C	3.73 kW	4.28 kW
COP Tj = +7°C	5.59	3.58
Cdh Tj = +7 °C	0.960	0.980
Pdh Tj = 12°C	3.64 kW	3.51 kW
COP Tj = 12°C	7.36	5.59
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	5.71 kW	6.10 kW
COP Tj = Tbiv	3.29	2.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.71 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.29	2.29
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990

This information was generated by the HP KEYMARK database on 18 Mar 2022

WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 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	1299 kWh	1956 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	162 %	117 %
Prated	4.25 kW	3.92 kW
SCOP	4.11	3.00
Tbiv	-20 °C	-20 °C
TOL	-20 °C	-20 °C

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = -7°C	2.81 kW	2.28 kW
COP Tj = -7°C	3.51	2.43
Cdh Tj = -7 °C	0.970	0.970
Pdh Tj = +2°C	2.71 kW	2.53 kW
COP Tj = +2°C	5.06	3.72
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = +7°C	3.10 kW	3.01 kW
COP Tj = +7°C	6.39	4.89
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.69 kW	3.58 kW
COP Tj = 12°C	7.84	6.44
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.03 kW	3.71 kW
COP Tj = Tbiv	2.20	1.59
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.03 kW	3.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.20	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.990
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W

This information was generated by the HP KEYMARK database on 18 Mar 2022

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.25 kW	3.92 kW
Annual energy consumption Q _{he}	2549 kWh	3219 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)		
COP T _j = -15°C (if TOL<-20°C)		
C _{dh} T _j = -15 °C		

Model: VWL 65/6 A 230V S2

Configure model	
Model name	VWL 65/6 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	4.48 kW	4.94 kW
El input	0.94 kW	1.69 kW
COP	4.78	2.93

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	53 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	185 %	130 %
Prated	5.87 kW	4.40 kW
SCOP	4.71	3.31
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.19 kW	3.89 kW
COP Tj = -7°C	3.10	2.19
Cdh Tj = -7 °C	0.980	0.980
Pdh Tj = +2°C	3.01 kW	2.57 kW
COP Tj = +2°C	4.73	3.25
Cdh Tj = +2 °C	0.960	0.960
Pdh Tj = +7°C	3.09 kW	2.95 kW
COP Tj = +7°C	6.17	4.48
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.66 kW	3.56 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = 12°C	7.60	6.06
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	5.37 kW	4.84 kW
COP Tj = Tbiv	2.78	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.37 kW	4.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.78	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 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	2574 kWh	2742 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 18 Mar 2022

	Low temperature	Medium temperature
η_s	226 %	161 %
Prated	5.71 kW	6.10 kW
SCOP	5.71	4.09
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.71 kW	6.10 kW
COP Tj = +2°C	3.29	2.29
Cdh Tj = +2 °C	0.980	0.990
Pdh Tj = +7°C	3.73 kW	4.28 kW
COP Tj = +7°C	5.59	3.58
Cdh Tj = +7 °C	0.960	0.980
Pdh Tj = 12°C	3.64 kW	3.51 kW
COP Tj = 12°C	7.36	5.59
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	5.71 kW	6.10 kW
COP Tj = Tbiv	3.29	2.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.71 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.29	2.29
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990

This information was generated by the HP KEYMARK database on 18 Mar 2022

WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 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	1335 kWh	1993 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	160 %	116 %
Prated	4.25 kW	3.92 kW
SCOP	4.08	2.98
Tbiv	-20 °C	-20 °C
TOL	-20 °C	-20 °C

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = -7°C	2.81 kW	2.28 kW
COP Tj = -7°C	3.51	2.43
Cdh Tj = -7 °C	0.970	0.970
Pdh Tj = +2°C	2.71 kW	2.53 kW
COP Tj = +2°C	5.06	3.72
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = +7°C	3.10 kW	3.01 kW
COP Tj = +7°C	6.39	4.89
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.69 kW	3.58 kW
COP Tj = 12°C	7.84	6.44
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.03 kW	3.71 kW
COP Tj = Tbiv	2.20	1.59
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.03 kW	3.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.20	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.990
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 W

This information was generated by the HP KEYMARK database on 18 Mar 2022

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.25 kW	3.92 kW
Annual energy consumption Q _{he}	2567 kWh	3237 kWh
P _{dh} T _j = -15°C (if TOL<-20°C)		
COP T _j = -15°C (if TOL<-20°C)		
C _{dh} T _j = -15 °C		