

Subtype VWL 75/8.2 AS 230V with Tower

Certificate Holder	Vaillant GmbH
Address	Berghauser Str. 40
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City	Remscheid
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	VWL 75/8.2 AS 230V with Tower
Registration number	011-1W0949
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.5 kg
Certification Date	11.12.2024
Testing basis	HP KEYMARK certification scheme rules rev. 14

Model VWL 75/8.2 AS 230V + VWL 78/8.2 IS

Model name	VWL 75/8.2 AS 230V + VWL 78/8.2 IS
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency ηDHW	148 %
COP	3.69
Heating up time	01:05 h:min
Standby power input	44.7 W
Reference hot water temperature	53 °C
Mixed water at 40°C	249 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency ηDHW	128 %
COP	3.19
Heating up time	01:11 h:min
Standby power input	53.4 W
Reference hot water temperature	53 °C
Mixed water at 40°C	248 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency ηDHW	172 %
COP	4.31
Heating up time	00:57 h:min
Standby power input	38.4 W
Reference hot water temperature	52 °C
Mixed water at 40°C	249 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	5.07 kW	6.45 kW
El input	1.01 kW	2.16 kW
COP	5.00	2.98

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	1.40 kW	1.87 kW
Cooling capacity	4.26	7.29
EER	3.04	3.90

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	203 %	142 %
P _{rated}	6.61 kW	5.67 kW
SCOP	5.15	3.63
T _{biv}	-7 °C	-7 °C
T _{OL}	-10 °C	-10 °C
P _{dh} T _j = -7 °C	5.85 kW	5.01 kW
COP T _j = -7 °C	3.20	2.27
Cd _h T _j = -7 °C	1.00	1.00
P _{dh} T _j = +2 °C	3.34 kW	2.91 kW
COP T _j = +2 °C	5.22	3.52
Cd _h T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7 °C	3.14 kW	2.97 kW
COP T _j = +7 °C	6.31	4.68
Cd _h T _j = +7 °C	0.99	0.99
P _{dh} T _j = 12 °C	3.71 kW	3.57 kW
COP T _j = 12 °C	8.36	6.42
Cd _h T _j = +12 °C	0.99	0.99
P _{dh} T _j = T _{biv}	5.85 kW	5.01 kW
COP T _j = T _{biv}	3.20	2.27
P _{dh} T _j = T _{OL} or P _{dh} T _j = T _{designh} if T _{OL} < T _{designh}	5.78 kW	4.72 kW
COP T _j = T _{OL} or COP T _j = T _{designh} if T _{OL} < T _{designh}	2.86	1.90

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.83 kW	0.94 kW
Annual energy consumption Qhe	2649 kWh	3230 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	175 %	122 %
Prated	6.88 kW	5.69 kW
SCOP	4.44	3.12
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.51 kW	3.69 kW
COP Tj = -7°C	3.76	2.66
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.82 kW	2.58 kW
COP Tj = +2°C	5.57	3.97
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.24 kW	3.06 kW
COP Tj = +7°C	6.78	5.32
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	8.06	6.73
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.61 kW	4.64 kW
COP Tj = Tbiv	2.61	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.12 kW	4.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.40	2.02
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W

PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.88 kW	5.69 kW
Annual energy consumption Qhe	3816 kWh	4499 kWh
Pdh Tj = -15°C (if TOL)	5.61	4.64
COP Tj = -15°C (if TOL)	2.61	2.02
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	257 %	176 %
Prated	6.80 kW	6.79 kW
SCOP	6.51	4.47
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.80 kW	6.79 kW
COP Tj = +2°C	3.42	2.37
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.68 kW	4.82 kW
COP Tj = +7°C	5.94	3.84
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.66 kW	3.49 kW
COP Tj = 12°C	7.87	5.72
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.79 kW
COP Tj = Tbiv	3.42	2.37
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	6.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.37
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 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	1397 kWh	2028 kWh
EN 14825 Cooling		
Pdesignc	+7°C/+12°C	+18°C/+23°C
SEER	6.09 kW	6.63 kW
Pdc Tj = 35°C	5.05	7.02
EER Tj = 35°C	6.09 kW	6.63 kW
Cdc Tj = 35 °C	2.96	4.05
Pdc Tj = 30°C	1.000	1.000
EER Tj = 30°C	4.52 kW	4.93 kW
Cdc Tj = 30 °C	4.17	6.00
Pdc Tj = 25°C	1.000	1.000
EER Tj = 25°C	2.98 kW	3.95 kW
Cdc Tj = 25 °C	5.72	8.20
Pdc Tj = 20°C	0.991	0.990
EER Tj = 20°C	3.27 kW	4.03 kW
Cdc Tj = 20 °C	7.26	9.64
Poff	0.990	0.989
PTO	0 W	13 W
PSB	0 W	5 W
PCK	13 W	13 W
Annual energy consumption Qce	723 kWh	567 kWh

Model VWL 75/8.2 AS 230V + VWL 78/8.2 IS C2

Model name	VWL 75/8.2 AS 230V + VWL 78/8.2 IS C2
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.69
Heating up time	01:05 h:min
Standby power input	44.7 W
Reference hot water temperature	53 °C
Mixed water at 40°C	249 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	128 %
COP	3.19
Heating up time	01:11 h:min
Standby power input	53.4 W
Reference hot water temperature	53 °C
Mixed water at 40°C	248 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	172 %
COP	4.31
Heating up time	00:57 h:min
Standby power input	38.4 W
Reference hot water temperature	52 °C
Mixed water at 40°C	249 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed	
Starting and operating test	passed	
EN 14511-2 Heating		
	Low temperature	Medium temperature
Heat output	5.07 kW	6.45 kW
El input	1.01 kW	2.16 kW
COP	5.00	2.98
EN 14511-2 Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.40 kW	1.87 kW
Cooling capacity	4.26	7.29
EER	3.04	3.90
EN 12102-1 Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)
EN 14825 Average Climate		
	Low temperature	Medium temperature
ηs	190 %	135 %
Prated	6.61 kW	5.67 kW
SCOP	4.83	3.44
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.85 kW	5.01 kW
COP Tj = -7°C	3.12	2.23
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.34 kW	2.91 kW
COP Tj = +2°C	4.88	3.34
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.14 kW	2.97 kW
COP Tj = +7°C	5.79	4.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.71 kW	3.57 kW
COP Tj = 12°C	7.59	5.94
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.85 kW	5.01 kW
COP Tj = Tbiv	3.12	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.78 kW	4.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.86

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.83 kW	0.94 kW
Annual energy consumption Qhe	2829 kWh	3400 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	116 %
Prated	6.88 kW	5.69 kW
SCOP	4.19	2.98
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.51 kW	3.69 kW
COP Tj = -7°C	3.62	2.58
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.82 kW	2.58 kW
COP Tj = +2°C	5.11	3.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.24 kW	3.06 kW
COP Tj = +7°C	6.20	4.93
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	7.34	6.21
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.61 kW	4.64 kW
COP Tj = Tbiv	2.56	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.12 kW	4.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.34	1.98
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W

PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.88 kW	5.69 kW
Annual energy consumption Qhe	4044 kWh	4704 kWh
Pdh Tj = -15°C (if TOL)	5.61	4.64
COP Tj = -15°C (if TOL)	2.56	1.98
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	240 %	167 %
Prated	6.80 kW	6.79 kW
SCOP	6.06	4.25
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.80 kW	6.79 kW
COP Tj = +2°C	3.35	2.33
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.68 kW	4.82 kW
COP Tj = +7°C	5.62	3.70
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.66 kW	3.49 kW
COP Tj = 12°C	7.17	5.32
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.79 kW
COP Tj = Tbiv	3.35	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	6.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.35	2.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 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	1499 kWh	2132 kWh
EN 14825 Cooling		
Pdesignc	+7°C/+12°C	+18°C/+23°C
SEER	6.09 kW	6.63 kW
Pdc Tj = 35°C	4.74	6.53
EER Tj = 35°C	6.09 kW	6.63 kW
Cdc Tj = 35 °C	2.90	3.94
Pdc Tj = 30°C	1.000	1.000
EER Tj = 30°C	4.52 kW	4.93 kW
Cdc Tj = 30 °C	4.00	5.69
Pdc Tj = 25°C	1.000	1.000
EER Tj = 25°C	2.98 kW	3.95 kW
Cdc Tj = 25 °C	5.26	7.50
Pdc Tj = 20°C	0.991	0.990
EER Tj = 20°C	3.27 kW	4.03 kW
Cdc Tj = 20 °C	6.60	8.70
Poff	0.990	0.989
PTO	13 W	13 W
PSB	5 W	5 W
PCK	13 W	13 W
Annual energy consumption Qce	0 W	0 W
	772 kWh	609 kWh

Model VWL 75/8.2 AS 230V + VWL 78/8.2 IS S5

Model name	VWL 75/8.2 AS 230V + VWL 78/8.2 IS S5
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.69
Heating up time	01:05 h:min
Standby power input	44.7 W
Reference hot water temperature	53 °C
Mixed water at 40°C	249 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	128 %
COP	3.19
Heating up time	01:11 h:min
Standby power input	53.4 W
Reference hot water temperature	53 °C
Mixed water at 40°C	248 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	172 %
COP	4.31
Heating up time	00:57 h:min
Standby power input	38.4 W
Reference hot water temperature	52 °C
Mixed water at 40°C	249 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	5.07 kW	6.45 kW
El input	1.01 kW	2.16 kW
COP	5.00	2.98

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	1.40 kW	1.87 kW
Cooling capacity	4.26	7.29
EER	3.04	3.90

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	203 %	142 %
P _{rated}	6.61 kW	5.67 kW
SCOP	5.15	3.63
T _{biv}	-7 °C	-7 °C
T _{OL}	-10 °C	-10 °C
P _{dh} T _j = -7 °C	5.85 kW	5.01 kW
COP T _j = -7 °C	3.20	2.27
Cd _h T _j = -7 °C	1.00	1.00
P _{dh} T _j = +2 °C	3.34 kW	2.91 kW
COP T _j = +2 °C	5.22	3.52
Cd _h T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7 °C	3.14 kW	2.97 kW
COP T _j = +7 °C	6.31	4.68
Cd _h T _j = +7 °C	0.99	0.99
P _{dh} T _j = 12 °C	3.71 kW	3.57 kW
COP T _j = 12 °C	8.36	6.42
Cd _h T _j = +12 °C	0.99	0.99
P _{dh} T _j = T _{biv}	5.85 kW	5.01 kW
COP T _j = T _{biv}	3.20	2.27
P _{dh} T _j = T _{OL} or P _{dh} T _j = T _{designh} if T _{OL} < T _{designh}	5.78 kW	4.72 kW
COP T _j = T _{OL} or COP T _j = T _{designh} if T _{OL} < T _{designh}	2.86	1.90

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.83 kW	0.94 kW
Annual energy consumption Qhe	2649 kWh	3230 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	175 %	122 %
Prated	6.88 kW	5.69 kW
SCOP	4.44	3.12
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.51 kW	3.69 kW
COP Tj = -7°C	3.76	2.66
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.82 kW	2.58 kW
COP Tj = +2°C	5.57	3.97
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.24 kW	3.06 kW
COP Tj = +7°C	6.78	5.32
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	8.06	6.73
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.61 kW	4.64 kW
COP Tj = Tbiv	2.61	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.12 kW	4.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.40	2.02
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W

PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.88 kW	5.69 kW
Annual energy consumption Qhe	3816 kWh	4499 kWh
Pdh Tj = -15°C (if TOL)	5.61	4.64
COP Tj = -15°C (if TOL)	2.61	2.02
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	257 %	176 %
Prated	6.80 kW	6.79 kW
SCOP	6.51	4.47
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.80 kW	6.79 kW
COP Tj = +2°C	3.42	2.37
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.68 kW	4.82 kW
COP Tj = +7°C	5.94	3.84
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.66 kW	3.49 kW
COP Tj = 12°C	7.87	5.72
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.79 kW
COP Tj = Tbiv	3.42	2.37
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	6.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.37
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 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	1397 kWh	2028 kWh
EN 14825 Cooling		
Pdesignc	+7°C/+12°C	+18°C/+23°C
SEER	6.09 kW	6.63 kW
Pdc Tj = 35°C	5.05	7.02
EER Tj = 35°C	6.09 kW	6.63 kW
Cdc Tj = 35 °C	2.96	4.05
Pdc Tj = 30°C	1.000	1.000
EER Tj = 30°C	4.52 kW	4.93 kW
Cdc Tj = 30 °C	4.17	6.00
Pdc Tj = 25°C	1.000	1.000
EER Tj = 25°C	2.98 kW	3.95 kW
Cdc Tj = 25 °C	5.72	8.20
Pdc Tj = 20°C	0.991	0.990
EER Tj = 20°C	3.27 kW	4.03 kW
Cdc Tj = 20 °C	7.26	9.64
Poff	0.990	0.989
PTO	0 W	13 W
PSB	0 W	5 W
PCK	13 W	13 W
Annual energy consumption Qce	723 kWh	567 kWh

Model VWL 75/8.2 AS 230V S2 + VWL 78/8.2 IS

Model name	VWL 75/8.2 AS 230V S2 + VWL 78/8.2 IS
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency ηDHW	148 %
COP	3.69
Heating up time	01:05 h:min
Standby power input	44.7 W
Reference hot water temperature	53 °C
Mixed water at 40°C	249 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency ηDHW	128 %
COP	3.19
Heating up time	01:11 h:min
Standby power input	53.4 W
Reference hot water temperature	53 °C
Mixed water at 40°C	248 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency ηDHW	172 %
COP	4.31
Heating up time	00:57 h:min
Standby power input	38.4 W
Reference hot water temperature	52 °C
Mixed water at 40°C	249 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Starting and operating test	passed	
EN 14511-2 Heating		
Heat output	Low temperature 5.07 kW	Medium temperature 6.45 kW
El input	1.01 kW	2.16 kW
COP	5.00	2.98
EN 12102-1 Average Climate		
Sound power level indoor	Low temperature 42 dB(A)	Medium temperature 42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)
EN 14825 Average Climate		
ηs	Low temperature 199 %	Medium temperature 140 %
Prated	6.61 kW	5.67 kW
SCOP	5.06	3.57
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.85 kW	5.01 kW
COP Tj = -7°C	3.20	2.27
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.34 kW	2.91 kW
COP Tj = +2°C	5.22	3.52
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.14 kW	2.97 kW
COP Tj = +7°C	6.31	4.68
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.71 kW	3.57 kW
COP Tj = 12°C	8.36	6.42
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.85 kW	5.01 kW
COP Tj = Tbiv	3.20	2.27
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.78 kW	4.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.83 kW	0.94 kW
Annual energy consumption Qhe	2698 kWh	3279 kWh
EN 12102-1 Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)
EN 14825 Colder Climate		
	Low temperature	Medium temperature
ηs	173 %	121 %
Prated	6.88 kW	5.69 kW
SCOP	4.41	3.10
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.51 kW	3.69 kW
COP Tj = -7°C	3.76	2.66
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.82 kW	2.58 kW
COP Tj = +2°C	5.57	3.97
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.24 kW	3.06 kW
COP Tj = +7°C	6.78	5.32
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	8.06	6.73
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.61 kW	4.64 kW
COP Tj = Tbiv	2.61	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.12 kW	4.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.40	2.02
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.88 kW	5.69 kW
Annual energy consumption Qhe	3845 kWh	4529 kWh
Pdh Tj = -15°C (if TOL)	5.61	4.64

COP Tj = -15°C (if TOL	2.61	2.02
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	247 %	171 %
Prated	6.80 kW	6.79 kW
SCOP	6.24	4.35
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.80 kW	6.79 kW
COP Tj = +2°C	3.42	2.37
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.68 kW	4.82 kW
COP Tj = +7°C	5.94	3.84
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.66 kW	3.49 kW
COP Tj = 12°C	7.87	5.72
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.79 kW
COP Tj = Tbiv	3.42	2.37
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	6.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.37
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 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	1456 kWh	2086 kWh

Model VWL 75/8.2 AS 230V S2 + VWL 78/8.2 IS C2

Model name	VWL 75/8.2 AS 230V S2 + VWL 78/8.2 IS C2
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency ηDHW	148 %
COP	3.69
Heating up time	01:05 h:min
Standby power input	44.7 W
Reference hot water temperature	53 °C
Mixed water at 40°C	249 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency ηDHW	128 %
COP	3.19
Heating up time	01:11 h:min
Standby power input	53.4 W
Reference hot water temperature	53 °C
Mixed water at 40°C	248 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency ηDHW	172 %
COP	4.31
Heating up time	00:57 h:min
Standby power input	38.4 W
Reference hot water temperature	52 °C
Mixed water at 40°C	249 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Starting and operating test passed

	Low temperature	Medium temperature
Heat output	5.07 kW	6.45 kW
El input	1.01 kW	2.16 kW
COP	5.00	2.98
EN 12102-1 Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)
EN 14825 Average Climate		
	Low temperature	Medium temperature
η_s	187 %	133 %
Prated	6.61 kW	5.67 kW
SCOP	4.75	3.40
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.85 kW	5.01 kW
COP Tj = -7°C	3.12	2.23
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.34 kW	2.91 kW
COP Tj = +2°C	4.88	3.34
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.14 kW	2.97 kW
COP Tj = +7°C	5.79	4.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.71 kW	3.57 kW
COP Tj = 12°C	7.59	5.94
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.85 kW	5.01 kW
COP Tj = Tbiv	3.12	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.78 kW	4.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.83 kW	0.94 kW
Annual energy consumption Qhe	2878 kWh	3449 kWh
EN 12102-1 Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)
EN 14825 Colder Climate		
	Low temperature	Medium temperature
ηs	163 %	115 %
Prated	6.88 kW	5.69 kW
SCOP	4.16	2.96
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.51 kW	3.69 kW
COP Tj = -7°C	3.62	2.58
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.82 kW	2.58 kW
COP Tj = +2°C	5.11	3.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.24 kW	3.06 kW
COP Tj = +7°C	6.20	4.93
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	7.34	6.21
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.61 kW	4.64 kW
COP Tj = Tbiv	2.56	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.12 kW	4.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.34	1.98
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.88 kW	5.69 kW
Annual energy consumption Qhe	4074 kWh	4734 kWh
Pdh Tj = -15°C (if TOL)	5.61	4.64

COP Tj = -15°C (if TOL	2.56	1.98
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	230 %	163 %
Prated	6.80 kW	6.79 kW
SCOP	5.84	4.14
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.80 kW	6.79 kW
COP Tj = +2°C	3.35	2.33
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.68 kW	4.82 kW
COP Tj = +7°C	5.62	3.70
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.66 kW	3.49 kW
COP Tj = 12°C	7.17	5.32
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.79 kW
COP Tj = Tbiv	3.35	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	6.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.35	2.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 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	1557 kWh	2191 kWh

Model VWL 85/8.2 AS 230V S3 + VWL 88/8.2 IS

Model name	VWL 85/8.2 AS 230V S3 + VWL 88/8.2 IS
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.69
Heating up time	01:05 h:min
Standby power input	44.7 W
Reference hot water temperature	53 °C
Mixed water at 40°C	249 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	128 %
COP	3.19
Heating up time	01:11 h:min
Standby power input	53.4 W
Reference hot water temperature	53 °C
Mixed water at 40°C	248 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	172 %
COP	4.31
Heating up time	00:57 h:min
Standby power input	38.4 W
Reference hot water temperature	52 °C
Mixed water at 40°C	249 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed	
Starting and operating test	passed	
EN 14511-2 Heating		
	Low temperature	Medium temperature
Heat output	5.07 kW	6.45 kW
El input	1.01 kW	2.16 kW
COP	5.00	2.98
EN 14511-2 Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.40 kW	1.87 kW
Cooling capacity	4.26	7.29
EER	3.04	3.90
EN 12102-1 Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)
EN 14825 Average Climate		
	Low temperature	Medium temperature
ηs	203 %	142 %
Prated	6.61 kW	5.67 kW
SCOP	5.15	3.63
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.85 kW	5.01 kW
COP Tj = -7°C	3.20	2.27
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.34 kW	2.91 kW
COP Tj = +2°C	5.22	3.52
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.14 kW	2.97 kW
COP Tj = +7°C	6.31	4.68
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.71 kW	3.57 kW
COP Tj = 12°C	8.36	6.42
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.85 kW	5.01 kW
COP Tj = Tbiv	3.20	2.27
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.78 kW	4.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.90

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.83 kW	0.94 kW
Annual energy consumption Qhe	2649 kWh	3230 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	175 %	122 %
Prated	6.88 kW	5.69 kW
SCOP	4.44	3.12
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.51 kW	3.69 kW
COP Tj = -7°C	3.76	2.66
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.82 kW	2.58 kW
COP Tj = +2°C	5.57	3.97
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.24 kW	3.06 kW
COP Tj = +7°C	6.78	5.32
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	8.06	6.73
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.61 kW	4.64 kW
COP Tj = Tbiv	2.61	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.12 kW	4.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.40	2.02
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W

PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.88 kW	5.69 kW
Annual energy consumption Qhe	3816 kWh	4499 kWh
Pdh Tj = -15°C (if TOL)	5.61	4.64
COP Tj = -15°C (if TOL)	2.61	2.02
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	257 %	176 %
Prated	6.80 kW	6.79 kW
SCOP	6.51	4.47
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.80 kW	6.79 kW
COP Tj = +2°C	3.42	2.37
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.68 kW	4.82 kW
COP Tj = +7°C	5.94	3.84
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.66 kW	3.49 kW
COP Tj = 12°C	7.87	5.72
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.79 kW
COP Tj = Tbiv	3.42	2.37
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	6.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.37
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 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	1397 kWh	2028 kWh
EN 14825 Cooling		
Pdesignc	+7°C/+12°C	+18°C/+23°C
SEER	6.09 kW	6.63 kW
Pdc Tj = 35°C	5.05	7.02
EER Tj = 35°C	6.09 kW	6.63 kW
Cdc Tj = 35 °C	2.96	4.05
Pdc Tj = 30°C	1.000	1.000
EER Tj = 30°C	4.52 kW	4.93 kW
Cdc Tj = 30 °C	4.17	6.00
Pdc Tj = 25°C	1.000	1.000
EER Tj = 25°C	2.98 kW	3.95 kW
Cdc Tj = 25 °C	5.72	8.20
Pdc Tj = 20°C	0.991	0.990
EER Tj = 20°C	3.27 kW	4.03 kW
Cdc Tj = 20 °C	7.26	9.64
Poff	0.990	0.989
PTO	0 W	13 W
PSB	0 W	5 W
PCK	13 W	13 W
Annual energy consumption Qce	723 kWh	567 kWh

Model VWL 85/8.2 AS 230V S3 + VWL 88/8.2 IS C2

Model name	VWL 85/8.2 AS 230V S3 + VWL 88/8.2 IS C2
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.69
Heating up time	01:05 h:min
Standby power input	44.7 W
Reference hot water temperature	53 °C
Mixed water at 40°C	249 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	128 %
COP	3.19
Heating up time	01:11 h:min
Standby power input	53.4 W
Reference hot water temperature	53 °C
Mixed water at 40°C	248 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	172 %
COP	4.31
Heating up time	00:57 h:min
Standby power input	38.4 W
Reference hot water temperature	52 °C
Mixed water at 40°C	249 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed	
Starting and operating test	passed	
EN 14511-2 Heating		
	Low temperature	Medium temperature
Heat output	5.07 kW	6.45 kW
El input	1.01 kW	2.16 kW
COP	5.00	2.98
EN 14511-2 Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.40 kW	1.87 kW
Cooling capacity	4.26	7.29
EER	3.04	3.90
EN 12102-1 Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)
EN 14825 Average Climate		
	Low temperature	Medium temperature
ηs	190 %	135 %
Prated	6.61 kW	5.67 kW
SCOP	4.83	3.44
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.85 kW	5.01 kW
COP Tj = -7°C	3.12	2.23
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.34 kW	2.91 kW
COP Tj = +2°C	4.88	3.34
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.14 kW	2.97 kW
COP Tj = +7°C	5.79	4.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.71 kW	3.57 kW
COP Tj = 12°C	7.59	5.94
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.85 kW	5.01 kW
COP Tj = Tbiv	3.12	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.78 kW	4.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.86

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.83 kW	0.94 kW
Annual energy consumption Qhe	2829 kWh	3400 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	116 %
Prated	6.88 kW	5.69 kW
SCOP	4.19	2.98
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.51 kW	3.69 kW
COP Tj = -7°C	3.62	2.58
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.82 kW	2.58 kW
COP Tj = +2°C	5.11	3.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.24 kW	3.06 kW
COP Tj = +7°C	6.20	4.93
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	7.34	6.21
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.61 kW	4.64 kW
COP Tj = Tbiv	2.56	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.12 kW	4.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.34	1.98
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W

PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.88 kW	5.69 kW
Annual energy consumption Qhe	4044 kWh	4704 kWh
Pdh Tj = -15°C (if TOL)	5.61	4.64
COP Tj = -15°C (if TOL)	2.56	1.98
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	240 %	167 %
Prated	6.80 kW	6.79 kW
SCOP	6.06	4.25
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.80 kW	6.79 kW
COP Tj = +2°C	3.35	2.33
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.68 kW	4.82 kW
COP Tj = +7°C	5.62	3.70
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.66 kW	3.49 kW
COP Tj = 12°C	7.17	5.32
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.79 kW
COP Tj = Tbiv	3.35	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	6.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.35	2.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 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	1499 kWh	2132 kWh
EN 14825 Cooling		
Pdesignc	+7°C/+12°C	+18°C/+23°C
SEER	6.09 kW	6.63 kW
Pdc Tj = 35°C	4.74	6.53
EER Tj = 35°C	6.09 kW	6.63 kW
Cdc Tj = 35 °C	2.90	3.94
Pdc Tj = 30°C	1.000	1.000
EER Tj = 30°C	4.52 kW	4.93 kW
Cdc Tj = 30 °C	4.00	5.69
Pdc Tj = 25°C	1.000	1.000
EER Tj = 25°C	2.98 kW	3.95 kW
Cdc Tj = 25 °C	5.26	7.50
Pdc Tj = 20°C	0.991	0.990
EER Tj = 20°C	3.27 kW	4.03 kW
Cdc Tj = 20 °C	6.60	8.70
Poff	0.990	0.989
PTO	13 W	13 W
PSB	5 W	5 W
PCK	13 W	13 W
Annual energy consumption Qce	0 W	0 W
	772 kWh	609 kWh

Model VWL 85/8.2 AS 230V S3 + VWL 88/8.2 IS S5

Model name	VWL 85/8.2 AS 230V S3 + VWL 88/8.2 IS S5
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.69
Heating up time	01:05 h:min
Standby power input	44.7 W
Reference hot water temperature	53 °C
Mixed water at 40°C	249 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	128 %
COP	3.19
Heating up time	01:11 h:min
Standby power input	53.4 W
Reference hot water temperature	53 °C
Mixed water at 40°C	248 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	172 %
COP	4.31
Heating up time	00:57 h:min
Standby power input	38.4 W
Reference hot water temperature	52 °C
Mixed water at 40°C	249 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	5.07 kW	6.45 kW
El input	1.01 kW	2.16 kW
COP	5.00	2.98

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	1.40 kW	1.87 kW
Cooling capacity	4.26	7.29
EER	3.04	3.90

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	203 %	142 %
P _{rated}	6.61 kW	5.67 kW
SCOP	5.15	3.63
T _{biv}	-7 °C	-7 °C
T _{OL}	-10 °C	-10 °C
P _{dh T_j} = -7 °C	5.85 kW	5.01 kW
COP T _j = -7 °C	3.20	2.27
C _{dh T_j} = -7 °C	1.00	1.00
P _{dh T_j} = +2 °C	3.34 kW	2.91 kW
COP T _j = +2 °C	5.22	3.52
C _{dh T_j} = +2 °C	1.00	1.00
P _{dh T_j} = +7 °C	3.14 kW	2.97 kW
COP T _j = +7 °C	6.31	4.68
C _{dh T_j} = +7 °C	0.99	0.99
P _{dh T_j} = 12 °C	3.71 kW	3.57 kW
COP T _j = 12 °C	8.36	6.42
C _{dh T_j} = +12 °C	0.99	0.99
P _{dh T_j} = T _{biv}	5.85 kW	5.01 kW
COP T _j = T _{biv}	3.20	2.27
P _{dh T_j} = T _{OL} or P _{dh T_j} = T _{designh} if T _{OL} < T _{designh}	5.78 kW	4.72 kW
COP T _j = T _{OL} or COP T _j = T _{designh} if T _{OL} < T _{designh}	2.86	1.90

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.83 kW	0.94 kW
Annual energy consumption Qhe	2649 kWh	3230 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	175 %	122 %
Prated	6.88 kW	5.69 kW
SCOP	4.44	3.12
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.51 kW	3.69 kW
COP Tj = -7°C	3.76	2.66
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.82 kW	2.58 kW
COP Tj = +2°C	5.57	3.97
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.24 kW	3.06 kW
COP Tj = +7°C	6.78	5.32
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	8.06	6.73
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.61 kW	4.64 kW
COP Tj = Tbiv	2.61	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.12 kW	4.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.40	2.02
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W

PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.88 kW	5.69 kW
Annual energy consumption Qhe	3816 kWh	4499 kWh
Pdh Tj = -15°C (if TOL)	5.61	4.64
COP Tj = -15°C (if TOL)	2.61	2.02
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	257 %	176 %
Prated	6.80 kW	6.79 kW
SCOP	6.51	4.47
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.80 kW	6.79 kW
COP Tj = +2°C	3.42	2.37
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.68 kW	4.82 kW
COP Tj = +7°C	5.94	3.84
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.66 kW	3.49 kW
COP Tj = 12°C	7.87	5.72
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.79 kW
COP Tj = Tbiv	3.42	2.37
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	6.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.37
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 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	1397 kWh	2028 kWh
EN 14825 Cooling		
Pdesignc	+7°C/+12°C	+18°C/+23°C
SEER	6.09 kW	6.63 kW
Pdc Tj = 35°C	5.05	7.02
EER Tj = 35°C	6.09 kW	6.63 kW
Cdc Tj = 35 °C	2.96	4.05
Pdc Tj = 30°C	1.000	1.000
EER Tj = 30°C	4.52 kW	4.93 kW
Cdc Tj = 30 °C	4.17	6.00
Pdc Tj = 25°C	1.000	1.000
EER Tj = 25°C	2.98 kW	3.95 kW
Cdc Tj = 25 °C	5.72	8.20
Pdc Tj = 20°C	0.991	0.990
EER Tj = 20°C	3.27 kW	4.03 kW
Cdc Tj = 20 °C	7.26	9.64
Poff	0.990	0.989
PTO	0 W	13 W
PSB	0 W	5 W
PCK	13 W	13 W
Annual energy consumption Qce	723 kWh	567 kWh

Model VWL 75/8.2 AS 230V S2 + VWL 78/8.2 IS S5

Model name	VWL 75/8.2 AS 230V S2 + VWL 78/8.2 IS S5
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency ηDHW	148 %
COP	3.69
Heating up time	01:05 h:min
Standby power input	44.7 W
Reference hot water temperature	53 °C
Mixed water at 40°C	249 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency ηDHW	128 %
COP	3.19
Heating up time	01:11 h:min
Standby power input	53.4 W
Reference hot water temperature	53 °C
Mixed water at 40°C	248 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency ηDHW	172 %
COP	4.31
Heating up time	00:57 h:min
Standby power input	38.4 W
Reference hot water temperature	52 °C
Mixed water at 40°C	249 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Starting and operating test	passed	
EN 14511-2 Heating		
Heat output	Low temperature 5.07 kW	Medium temperature 6.45 kW
El input	1.01 kW	2.16 kW
COP	5.00	2.98
EN 12102-1 Average Climate		
Sound power level indoor	Low temperature 42 dB(A)	Medium temperature 42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)
EN 14825 Average Climate		
η_s	Low temperature 199 %	Medium temperature 140 %
Prated	6.61 kW	5.67 kW
SCOP	5.06	3.57
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.85 kW	5.01 kW
COP Tj = -7°C	3.20	2.27
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	3.34 kW	2.91 kW
COP Tj = +2°C	5.22	3.52
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.14 kW	2.97 kW
COP Tj = +7°C	6.31	4.68
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.71 kW	3.57 kW
COP Tj = 12°C	8.36	6.42
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.85 kW	5.01 kW
COP Tj = Tbiv	3.20	2.27
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.78 kW	4.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.83 kW	0.94 kW
Annual energy consumption Qhe	2698 kWh	3279 kWh
EN 12102-1 Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)
EN 14825 Colder Climate		
	Low temperature	Medium temperature
ηs	173 %	121 %
Prated	6.88 kW	5.69 kW
SCOP	4.41	3.10
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	4.51 kW	3.69 kW
COP Tj = -7°C	3.76	2.66
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.82 kW	2.58 kW
COP Tj = +2°C	5.57	3.97
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.24 kW	3.06 kW
COP Tj = +7°C	6.78	5.32
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	8.06	6.73
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.61 kW	4.64 kW
COP Tj = Tbiv	2.61	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.12 kW	4.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.40	2.02
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.88 kW	5.69 kW
Annual energy consumption Qhe	3845 kWh	4529 kWh
Pdh Tj = -15°C (if TOL)	5.61	4.64

COP Tj = -15°C (if TOL	2.61	2.02
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	247 %	171 %
Prated	6.80 kW	6.79 kW
SCOP	6.24	4.35
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.80 kW	6.79 kW
COP Tj = +2°C	3.42	2.37
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	4.68 kW	4.82 kW
COP Tj = +7°C	5.94	3.84
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	3.66 kW	3.49 kW
COP Tj = 12°C	7.87	5.72
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.79 kW
COP Tj = Tbiv	3.42	2.37
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	6.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.37
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	5 W	5 W
PSB	13 W	13 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	1456 kWh	2086 kWh