Subtype VWL 35/8.2 AS 230V, VWL 55/8.2 AS 230V with Hydraulic Station and 250l cylinder

Certificate Holder	Vaillant GmbH
Address	Berghauser Str. 40
ZIP	42859
City	Remscheid
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	VWL 35/8.2 AS 230V, VWL 55/8.2 AS 230V with Hydraulic Station and 250l cylinder
Registration number	011-1W0969
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.3 kg
Certification Date	11.02.2025
Testing basis	HP KEYMARK certification scheme rules rev. 14

Model VWL 35/8.2 AS 230V + VWL 57/8.2 IS + VIH RW 250/2 B	
Model name	VWL 35/8.2 AS 230V + VWL 57/8.2 IS + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l
EN 16147 | Colder Climate	
Declared load profile	L
Efficiency ηDHW	121.4 %
COP	3.03
Heating up time	01:23 h:min
Standby power input	55.2 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	243 l
EN 16147 | Warmer Climate	
Declared load profile	L
Efficiency ηDHW	165 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	367 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	3.54 kW	5.00 kW
El input	0.71 kW	1.73 kW
COP	5.01	2.89

EN 14511-2 | Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.73 kW	1.26 kW
Cooling capacity	5.22	5.31
EER	3.03	4.22

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	188 %	129 %
Prated	3.44 kW	3.65 kW
SCOP	4.79	3.31
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.05 kW	3.23 kW
COP Tj = -7°C	3.25	2.15
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	2.09 kW
COP Tj = +2°C	4.71	3.21
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.41 kW	2.14 kW
COP Tj = +7°C	6.10	4.32
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.76 kW	2.71 kW
COP Tj = 12°C	8.20	6.20
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.05 kW	3.23 kW
COP Tj = Tbiv	3.25	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.93	1.81

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.42 kW	0.90 kW
Annual energy consumption Qhe	1487 kWh	2277 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	158 %	109 %
Prated	3.41 kW	2.98 kW
SCOP	4.04	2.80
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.26 kW	1.95 kW
COP Tj = -7°C	3.54	2.43
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.04 kW	1.86 kW
COP Tj = +2°C	4.82	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.34 kW	2.22 kW
COP Tj = +7°C	6.31	4.77
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.78 kW	2.65 kW
COP Tj = 12°C	8.02	6.43
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	2.78 kW	2.43 kW
COP Tj = Tbiv	2.64	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.33 kW	2.43 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.41 kW	2.98 kW
Annual energy consumption Qhe	2080 kWh	2629 kWh
Pdh Tj = -15°C (if TOL	2.78	2.43
COP Tj = -15°C (if TOL	2.64	1.75
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	245 %	165 %
Prated	3.22 kW	4.02 kW
SCOP	6.20	4.20
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.22 kW	4.02 kW
COP Tj = +2°C	4.15	2.50
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.35 kW	2.66 kW
COP Tj = +7°C	5.66	3.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.82 kW	2.58 kW
COP Tj = 12°C	7.90	5.50
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.22 kW	4.02 kW
COP Tj = Tbiv	4.15	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.22 kW	4.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.15	2.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	694 kWh	1278 kWh
EN 14825 | Cooling		
	+7°C/+12°C	+18°C/+23°C
Pdesignc	3.88 kW	5.19 kW
SEER	4.69	6.94
Pdc Tj = 35°C	3.88 kW	5.19 kW
EER Tj = 35°C	3.25	4.13
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	2.64 kW	3.81 kW
EER Tj = 30°C	4.01	5.98
Cdc Tj = 30 °C	1.000	1.000
Pdc Tj = 25°C	2.28 kW	3.11 kW
EER Tj = 25°C	5.41	8.34
Cdc Tj = 25 °C	0.969	0.965
Pdc Tj = 20°C	2.50 kW	3.27 kW
EER Tj = 20°C	6.97	10.65
Cdc Tj = 20 °C	0.963	0.957
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	496 kWh	449 kWh

Model VWL 35/8.2 AS 230V + VWL 57/8.2 IS S1 + VIH RW 250/2 B

Model name	VWL 35/8.2 AS 230V + VWL 57/8.2 IS S1 + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency ηDHW	121.4 %
COP	3.03
Heating up time	01:23 h:min
Standby power input	55.2 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	243 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency ηDHW	165 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	367 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	3.54 kW	5.00 kW
El input	0.71 kW	1.73 kW
COP	5.01	2.89

EN 14511-2 | Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.73 kW	1.26 kW
Cooling capacity	5.22	5.31
EER	3.03	4.22

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	188 %	129 %
Prated	3.44 kW	3.65 kW
SCOP	4.79	3.31
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.05 kW	3.23 kW
COP Tj = -7°C	3.25	2.15
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	2.09 kW
COP Tj = +2°C	4.71	3.21
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.41 kW	2.14 kW
COP Tj = +7°C	6.10	4.32
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.76 kW	2.71 kW
COP Tj = 12°C	8.20	6.20
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.05 kW	3.23 kW
COP Tj = Tbiv	3.25	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.93	1.81

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.42 kW	0.90 kW
Annual energy consumption Qhe	1487 kWh	2277 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	158 %	109 %
Prated	3.41 kW	2.98 kW
SCOP	4.04	2.80
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.26 kW	1.95 kW
COP Tj = -7°C	3.54	2.43
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.04 kW	1.86 kW
COP Tj = +2°C	4.82	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.34 kW	2.22 kW
COP Tj = +7°C	6.31	4.77
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.78 kW	2.65 kW
COP Tj = 12°C	8.02	6.43
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	2.78 kW	2.43 kW
COP Tj = Tbiv	2.64	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.33 kW	2.43 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.41 kW	2.98 kW
Annual energy consumption Qhe	2080 kWh	2629 kWh
Pdh Tj = -15°C (if TOL	2.78	2.43
COP Tj = -15°C (if TOL	2.64	1.75
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	245 %	165 %
Prated	3.22 kW	4.02 kW
SCOP	6.20	4.20
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.22 kW	4.02 kW
COP Tj = +2°C	4.15	2.50
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.35 kW	2.66 kW
COP Tj = +7°C	5.66	3.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.82 kW	2.58 kW
COP Tj = 12°C	7.90	5.50
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.22 kW	4.02 kW
COP Tj = Tbiv	4.15	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.22 kW	4.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.15	2.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	694 kWh	1278 kWh

EN 14825 | Cooling		
	+7°C/+12°C	+18°C/+23°C
Pdesignc	3.88 kW	5.19 kW
SEER	4.69	6.94
Pdc Tj = 35°C	3.88 kW	5.19 kW
EER Tj = 35°C	3.25	4.13
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	2.64 kW	3.81 kW
EER Tj = 30°C	4.01	5.98
Cdc Tj = 30 °C	1.000	1.000
Pdc Tj = 25°C	2.28 kW	3.11 kW
EER Tj = 25°C	5.41	8.34
Cdc Tj = 25 °C	0.969	0.965
Pdc Tj = 20°C	2.50 kW	3.27 kW
EER Tj = 20°C	6.97	10.65
Cdc Tj = 20 °C	0.963	0.957
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	496 kWh	449 kWh

Model VWL 35/8.2 AS 230V S2 + VWL 57/8.2 IS + VIH RW 250/2 B

Model name	VWL 35/8.2 AS 230V S2 + VWL 57/8.2 IS + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l

EN 16147 | Colder Climate

Declared load profile	0
Efficiency ηDHW	0 %
COP	0.00
Heating up time	00:00 h:min
Standby power input	0.0 W
Reference hot water temperature	0 °C
Mixed water at 40°C	0 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency ηDHW	165.4 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	367 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	3.54 kW	5.00 kW
El input	0.71 kW	1.73 kW
COP	5.01	2.89

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	182 %	127 %
Prated	3.44 kW	3.65 kW
SCOP	4.63	3.24
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.05 kW	3.23 kW
COP Tj = -7°C	3.25	2.15
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	2.09 kW
COP Tj = +2°C	4.71	3.21
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.41 kW	2.14 kW
COP Tj = +7°C	6.10	4.32
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.76 kW	2.71 kW
COP Tj = 12°C	8.20	6.20
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.05 kW	3.23 kW
COP Tj = Tbiv	3.25	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.93	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.42 kW	0.90 kW
Annual energy consumption Qhe	1538 kWh	2328 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	156 %	108 %
Prated	3.41 kW	2.98 kW
SCOP	3.98	2.76
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.26 kW	1.95 kW
COP Tj = -7°C	3.54	2.43
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.04 kW	1.86 kW
COP Tj = +2°C	4.82	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.34 kW	2.22 kW
COP Tj = +7°C	6.31	4.77
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.78 kW	2.65 kW
COP Tj = 12°C	8.02	6.43
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	2.78 kW	2.43 kW
COP Tj = Tbiv	2.64	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.33 kW	2.43 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.41 kW	2.98 kW
Annual energy consumption Qhe	2111 kWh	2660 kWh
Pdh Tj = -15°C (if TOL	2.78	2.43

COP Tj = -15°C (if TOL	2.64	1.75
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	225 %	157 %
Prated	3.22 kW	4.02 kW
SCOP	5.69	4.00
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.22 kW	4.02 kW
COP Tj = +2°C	4.15	2.50
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.35 kW	2.66 kW
COP Tj = +7°C	5.66	3.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.82 kW	2.58 kW
COP Tj = 12°C	7.90	5.50
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.22 kW	4.02 kW
COP Tj = Tbiv	4.15	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.22 kW	4.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.15	2.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	756 kWh	1340 kWh

Model VWL 35/8.2 AS 230V S2 + VWL 57/8.2 IS S1 + VIH RW 250/2 B	
Model name	VWL 35/8.2 AS 230V S2 + VWL 57/8.2 IS S1 + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l

EN 16147 | Colder Climate	
Declared load profile	0
Efficiency ηDHW	0 %
COP	0.00
Heating up time	00:00 h:min
Standby power input	0.0 W
Reference hot water temperature	0 °C
Mixed water at 40°C	0 l

EN 16147 | Warmer Climate	
Declared load profile	L
Efficiency ηDHW	165.4 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	367 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	3.54 kW	5.00 kW
El input	0.71 kW	1.73 kW
COP	5.01	2.89

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	182 %	127 %
Prated	3.44 kW	3.65 kW
SCOP	4.63	3.24
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.05 kW	3.23 kW
COP Tj = -7°C	3.25	2.15
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	2.09 kW
COP Tj = +2°C	4.71	3.21
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.41 kW	2.14 kW
COP Tj = +7°C	6.10	4.32
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.76 kW	2.71 kW
COP Tj = 12°C	8.20	6.20
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.05 kW	3.23 kW
COP Tj = Tbiv	3.25	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.93	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.42 kW	0.90 kW
Annual energy consumption Qhe	1538 kWh	2328 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	156 %	108 %
Prated	3.41 kW	2.98 kW
SCOP	3.98	2.76
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.26 kW	1.95 kW
COP Tj = -7°C	3.54	2.43
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.04 kW	1.86 kW
COP Tj = +2°C	4.82	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.34 kW	2.22 kW
COP Tj = +7°C	6.31	4.77
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.78 kW	2.65 kW
COP Tj = 12°C	8.02	6.43
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	2.78 kW	2.43 kW
COP Tj = Tbiv	2.64	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.33 kW	2.43 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.41 kW	2.98 kW
Annual energy consumption Qhe	2111 kWh	2660 kWh
Pdh Tj = -15°C (if TOL	2.78	2.43

COP Tj = -15°C (if TOL	2.64	1.75
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	225 %	157 %
Prated	3.22 kW	4.02 kW
SCOP	5.69	4.00
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.22 kW	4.02 kW
COP Tj = +2°C	4.15	2.50
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.35 kW	2.66 kW
COP Tj = +7°C	5.66	3.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.82 kW	2.58 kW
COP Tj = 12°C	7.90	5.50
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.22 kW	4.02 kW
COP Tj = Tbiv	4.15	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.22 kW	4.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.15	2.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	756 kWh	1340 kWh

Model VWL 45/8.2 AS 230V S3 + VWL 67/8.2 IS + VIH RW 250/2 B

Model name	VWL 45/8.2 AS 230V S3 + VWL 67/8.2 IS + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency ηDHW	121.4 %
COP	3.03
Heating up time	01:23 h:min
Standby power input	55.2 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	243 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency ηDHW	165 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	367 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	3.54 kW	5.00 kW
El input	0.71 kW	1.73 kW
COP	5.01	2.89

EN 14511-2 | Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.73 kW	1.26 kW
Cooling capacity	5.22	5.31
EER	3.03	4.22

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	188 %	129 %
Prated	3.44 kW	3.65 kW
SCOP	4.79	3.31
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.05 kW	3.23 kW
COP Tj = -7°C	3.25	2.15
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	2.09 kW
COP Tj = +2°C	4.71	3.21
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.41 kW	2.14 kW
COP Tj = +7°C	6.10	4.32
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.76 kW	2.71 kW
COP Tj = 12°C	8.20	6.20
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.05 kW	3.23 kW
COP Tj = Tbiv	3.25	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.93	1.81

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.42 kW	0.90 kW
Annual energy consumption Qhe	1487 kWh	2277 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	158 %	109 %
Prated	3.41 kW	2.98 kW
SCOP	4.04	2.80
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.26 kW	1.95 kW
COP Tj = -7°C	3.54	2.43
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.04 kW	1.86 kW
COP Tj = +2°C	4.82	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.34 kW	2.22 kW
COP Tj = +7°C	6.31	4.77
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.78 kW	2.65 kW
COP Tj = 12°C	8.02	6.43
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	2.78 kW	2.43 kW
COP Tj = Tbiv	2.64	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.33 kW	2.43 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.41 kW	2.98 kW
Annual energy consumption Qhe	2080 kWh	2629 kWh
Pdh Tj = -15°C (if TOL	2.78	2.43
COP Tj = -15°C (if TOL	2.64	1.75
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	245 %	165 %
Prated	3.22 kW	4.02 kW
SCOP	6.20	4.20
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.22 kW	4.02 kW
COP Tj = +2°C	4.15	2.50
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.35 kW	2.66 kW
COP Tj = +7°C	5.66	3.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.82 kW	2.58 kW
COP Tj = 12°C	7.90	5.50
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.22 kW	4.02 kW
COP Tj = Tbiv	4.15	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.22 kW	4.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.15	2.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	694 kWh	1278 kWh
EN 14825 | Cooling		
	+7°C/+12°C	+18°C/+23°C
Pdesignc	3.88 kW	5.19 kW
SEER	4.69	6.94
Pdc Tj = 35°C	3.88 kW	5.19 kW
EER Tj = 35°C	3.25	4.13
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	2.64 kW	3.81 kW
EER Tj = 30°C	4.01	5.98
Cdc Tj = 30 °C	1.000	1.000
Pdc Tj = 25°C	2.28 kW	3.11 kW
EER Tj = 25°C	5.41	8.34
Cdc Tj = 25 °C	0.969	0.965
Pdc Tj = 20°C	2.50 kW	3.27 kW
EER Tj = 20°C	6.97	10.65
Cdc Tj = 20 °C	0.963	0.957
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	496 kWh	449 kWh

Model VWL 45/8.2 AS 230V S3 + VWL 67/8.2 IS S1 + VIH RW 250/2 B	
Model name	VWL 45/8.2 AS 230V S3 + VWL 67/8.2 IS S1 + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l
EN 16147 | Colder Climate	
Declared load profile	L
Efficiency ηDHW	121.4 %
COP	3.03
Heating up time	01:23 h:min
Standby power input	55.2 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	243 l
EN 16147 | Warmer Climate	
Declared load profile	L
Efficiency ηDHW	165 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	367 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	3.54 kW	5.00 kW
El input	0.71 kW	1.73 kW
COP	5.01	2.89

EN 14511-2 | Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.73 kW	1.26 kW
Cooling capacity	5.22	5.31
EER	3.03	4.22

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	188 %	129 %
Prated	3.44 kW	3.65 kW
SCOP	4.79	3.31
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.05 kW	3.23 kW
COP Tj = -7°C	3.25	2.15
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	2.09 kW
COP Tj = +2°C	4.71	3.21
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.41 kW	2.14 kW
COP Tj = +7°C	6.10	4.32
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.76 kW	2.71 kW
COP Tj = 12°C	8.20	6.20
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.05 kW	3.23 kW
COP Tj = Tbiv	3.25	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.75 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.93	1.81

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.42 kW	0.90 kW
Annual energy consumption Qhe	1487 kWh	2277 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	158 %	109 %
Prated	3.41 kW	2.98 kW
SCOP	4.04	2.80
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	2.26 kW	1.95 kW
COP Tj = -7°C	3.54	2.43
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.04 kW	1.86 kW
COP Tj = +2°C	4.82	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.34 kW	2.22 kW
COP Tj = +7°C	6.31	4.77
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.78 kW	2.65 kW
COP Tj = 12°C	8.02	6.43
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	2.78 kW	2.43 kW
COP Tj = Tbiv	2.64	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.33 kW	2.43 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.41 kW	2.98 kW
Annual energy consumption Qhe	2080 kWh	2629 kWh
Pdh Tj = -15°C (if TOL	2.78	2.43
COP Tj = -15°C (if TOL	2.64	1.75
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	245 %	165 %
Prated	3.22 kW	4.02 kW
SCOP	6.20	4.20
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.22 kW	4.02 kW
COP Tj = +2°C	4.15	2.50
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.35 kW	2.66 kW
COP Tj = +7°C	5.66	3.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.82 kW	2.58 kW
COP Tj = 12°C	7.90	5.50
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	3.22 kW	4.02 kW
COP Tj = Tbiv	4.15	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.22 kW	4.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.15	2.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	694 kWh	1278 kWh
EN 14825 | Cooling		
	+7°C/+12°C	+18°C/+23°C
Pdesignc	3.88 kW	5.19 kW
SEER	4.69	6.94
Pdc Tj = 35°C	3.88 kW	5.19 kW
EER Tj = 35°C	3.25	4.13
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	2.64 kW	3.81 kW
EER Tj = 30°C	4.01	5.98
Cdc Tj = 30 °C	1.000	1.000
Pdc Tj = 25°C	2.28 kW	3.11 kW
EER Tj = 25°C	5.41	8.34
Cdc Tj = 25 °C	0.969	0.965
Pdc Tj = 20°C	2.50 kW	3.27 kW
EER Tj = 20°C	6.97	10.65
Cdc Tj = 20 °C	0.963	0.957
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	496 kWh	449 kWh

Model VWL 55/8.2 AS 230V + VWL 57/8.2 IS + VIH RW 250/2 B	
Model name	VWL 55/8.2 AS 230V + VWL 57/8.2 IS + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l
EN 16147 | Colder Climate	
Declared load profile	L
Efficiency ηDHW	121.4 %
COP	3.03
Heating up time	01:23 h:min
Standby power input	55.2 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	243 l
EN 16147 | Warmer Climate	
Declared load profile	L
Efficiency ηDHW	165 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	367 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	4.51 kW	5.36 kW
El input	0.92 kW	1.89 kW
COP	4.89	2.83

EN 14511-2 | Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.73 kW	1.26 kW
Cooling capacity	5.22	5.31
EER	3.03	4.22

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	192 %	129 %
Prated	4.72 kW	4.35 kW
SCOP	4.87	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.18 kW	3.85 kW
COP Tj = -7°C	3.13	2.10
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.67 kW	2.13 kW
COP Tj = +2°C	4.84	3.18
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.43 kW	2.21 kW
COP Tj = +7°C	6.24	4.39
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.84 kW	2.72 kW
COP Tj = 12°C	8.04	6.03
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.18 kW	3.85 kW
COP Tj = Tbiv	3.13	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	3.33 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	1.66

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.66 kW	1.02 kW
Annual energy consumption Qhe	2003 kWh	2727 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	162 %	111 %
Prated	5.44 kW	3.97 kW
SCOP	4.13	2.86
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	3.46 kW	2.27 kW
COP Tj = -7°C	3.54	2.51
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	1.86 kW
COP Tj = +2°C	5.02	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.42 kW	2.28 kW
COP Tj = +7°C	6.67	4.84
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.83 kW	2.73 kW
COP Tj = 12°C	7.95	6.34
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.43 kW	3.23 kW
COP Tj = Tbiv	2.57	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.99 kW	3.23 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.19	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.44 kW	3.97 kW
Annual energy consumption Qhe	3244 kWh	3423 kWh
Pdh Tj = -15°C (if TOL	4.43	3.23
COP Tj = -15°C (if TOL	2.57	1.84
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	252 %	170 %
Prated	5.01 kW	4.68 kW
SCOP	6.37	4.32
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.01 kW	4.68 kW
COP Tj = +2°C	3.54	2.26
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.00 kW	2.95 kW
COP Tj = +7°C	5.84	3.59
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.81 kW	2.67 kW
COP Tj = 12°C	7.91	5.92
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	5.01 kW	4.68 kW
COP Tj = Tbiv	3.54	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.01 kW	4.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.54	2.26
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	1050 kWh	1447 kWh
EN 14825 | Cooling		
	+7°C/+12°C	+18°C/+23°C
Pdesignc	3.88 kW	5.19 kW
SEER	4.69	6.94
Pdc Tj = 35°C	3.88 kW	5.19 kW
EER Tj = 35°C	3.25	4.13
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	2.64 kW	3.81 kW
EER Tj = 30°C	4.01	5.98
Cdc Tj = 30 °C	1.000	1.000
Pdc Tj = 25°C	2.28 kW	3.11 kW
EER Tj = 25°C	5.41	8.34
Cdc Tj = 25 °C	0.969	0.965
Pdc Tj = 20°C	2.50 kW	3.27 kW
EER Tj = 20°C	6.97	10.65
Cdc Tj = 20 °C	0.963	0.957
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	496 kWh	449 kWh

Model VWL 55/8.2 AS 230V + VWL 57/8.2 IS S1 + VIH RW 250/2 B

Model name	VWL 55/8.2 AS 230V + VWL 57/8.2 IS S1 + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency ηDHW	121.4 %
COP	3.03
Heating up time	01:23 h:min
Standby power input	55.2 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	243 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency ηDHW	165 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	367 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	4.51 kW	5.36 kW
El input	0.92 kW	1.89 kW
COP	4.89	2.83

EN 14511-2 | Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.73 kW	1.26 kW
Cooling capacity	5.22	5.31
EER	3.03	4.22

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	192 %	129 %
Prated	4.72 kW	4.35 kW
SCOP	4.87	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.18 kW	3.85 kW
COP Tj = -7°C	3.13	2.10
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.67 kW	2.13 kW
COP Tj = +2°C	4.84	3.18
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.43 kW	2.21 kW
COP Tj = +7°C	6.24	4.39
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.84 kW	2.72 kW
COP Tj = 12°C	8.04	6.03
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.18 kW	3.85 kW
COP Tj = Tbiv	3.13	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	3.33 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	1.66

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.66 kW	1.02 kW
Annual energy consumption Qhe	2003 kWh	2727 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	162 %	111 %
Prated	5.44 kW	3.97 kW
SCOP	4.13	2.86
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	3.46 kW	2.27 kW
COP Tj = -7°C	3.54	2.51
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	1.86 kW
COP Tj = +2°C	5.02	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.42 kW	2.28 kW
COP Tj = +7°C	6.67	4.84
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.83 kW	2.73 kW
COP Tj = 12°C	7.95	6.34
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.43 kW	3.23 kW
COP Tj = Tbiv	2.57	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.99 kW	3.23 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.19	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.44 kW	3.97 kW
Annual energy consumption Qhe	3244 kWh	3423 kWh
Pdh Tj = -15°C (if TOL	4.43	3.23
COP Tj = -15°C (if TOL	2.57	1.84
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	252 %	170 %
Prated	5.01 kW	4.68 kW
SCOP	6.37	4.32
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.01 kW	4.68 kW
COP Tj = +2°C	3.54	2.26
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.00 kW	2.95 kW
COP Tj = +7°C	5.84	3.59
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.81 kW	2.67 kW
COP Tj = 12°C	7.91	5.92
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	5.01 kW	4.68 kW
COP Tj = Tbiv	3.54	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.01 kW	4.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.54	2.26
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	1050 kWh	1447 kWh
EN 14825 | Cooling		
	+7°C/+12°C	+18°C/+23°C
Pdesignc	3.88 kW	5.19 kW
SEER	4.69	6.94
Pdc Tj = 35°C	3.88 kW	5.19 kW
EER Tj = 35°C	3.25	4.13
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	2.64 kW	3.81 kW
EER Tj = 30°C	4.01	5.98
Cdc Tj = 30 °C	1.000	1.000
Pdc Tj = 25°C	2.28 kW	3.11 kW
EER Tj = 25°C	5.41	8.34
Cdc Tj = 25 °C	0.969	0.965
Pdc Tj = 20°C	2.50 kW	3.27 kW
EER Tj = 20°C	6.97	10.65
Cdc Tj = 20 °C	0.963	0.957
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	496 kWh	449 kWh

Model VWL 55/8.2 AS 230V S2 + VWL 57/8.2 IS + VIH RW 250/2 B

Model name	VWL 55/8.2 AS 230V S2 + VWL 57/8.2 IS + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency ηDHW	121.4 %
COP	3.03
Heating up time	01:23 h:min
Standby power input	55.2 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	243 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency ηDHW	165 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	367 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	4.51 kW	5.36 kW
El input	0.92 kW	1.89 kW
COP	4.89	2.83

EN 14511-2 | Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.73 kW	1.26 kW
Cooling capacity	5.22	5.31
EER	3.03	4.22

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	187 %	126 %
Prated	4.72 kW	4.35 kW
SCOP	4.75	3.24
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.18 kW	3.85 kW
COP Tj = -7°C	3.13	2.10
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.67 kW	2.13 kW
COP Tj = +2°C	4.84	3.18
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.43 kW	2.21 kW
COP Tj = +7°C	6.24	4.39
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.84 kW	2.72 kW
COP Tj = 12°C	8.04	6.03
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.18 kW	3.85 kW
COP Tj = Tbiv	3.13	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	3.33 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	1.66

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.66 kW	1.02 kW
Annual energy consumption Qhe	2055 kWh	2778 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	161 %	110 %
Prated	5.44 kW	3.97 kW
SCOP	4.09	2.83
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	3.46 kW	2.27 kW
COP Tj = -7°C	3.54	2.51
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	1.86 kW
COP Tj = +2°C	5.02	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.42 kW	2.28 kW
COP Tj = +7°C	6.67	4.84
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.83 kW	2.73 kW
COP Tj = 12°C	7.95	6.34
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.43 kW	3.23 kW
COP Tj = Tbiv	2.57	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.99 kW	3.23 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.19	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.44 kW	3.97 kW
Annual energy consumption Qhe	3275 kWh	3454 kWh
Pdh Tj = -15°C (if TOL	4.43	3.23
COP Tj = -15°C (if TOL	2.57	1.84
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	238 %	163 %
Prated	5.01 kW	4.68 kW
SCOP	6.01	4.15
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.01 kW	4.68 kW
COP Tj = +2°C	3.54	2.26
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.00 kW	2.95 kW
COP Tj = +7°C	5.84	3.59
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.81 kW	2.67 kW
COP Tj = 12°C	7.91	5.92
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	5.01 kW	4.68 kW
COP Tj = Tbiv	3.54	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.01 kW	4.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.54	2.26
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	1112 kWh	1509 kWh

Model VWL 55/8.2 AS 230V S2 + VWL 57/8.2 IS S1 + VIH RW 250/2 B	
Model name	VWL 55/8.2 AS 230V S2 + VWL 57/8.2 IS S1 + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l

EN 16147 | Colder Climate	
Declared load profile	L
Efficiency ηDHW	121.4 %
COP	3.03
Heating up time	01:23 h:min
Standby power input	55.2 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	243 l

EN 16147 | Warmer Climate	
Declared load profile	L
Efficiency ηDHW	165 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	367 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	4.51 kW	5.36 kW
El input	0.92 kW	1.89 kW
COP	4.89	2.83

EN 14511-2 | Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.73 kW	1.26 kW
Cooling capacity	5.22	5.31
EER	3.03	4.22

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	187 %	126 %
Prated	4.72 kW	4.35 kW
SCOP	4.75	3.24
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.18 kW	3.85 kW
COP Tj = -7°C	3.13	2.10
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.67 kW	2.13 kW
COP Tj = +2°C	4.84	3.18
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.43 kW	2.21 kW
COP Tj = +7°C	6.24	4.39
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.84 kW	2.72 kW
COP Tj = 12°C	8.04	6.03
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.18 kW	3.85 kW
COP Tj = Tbiv	3.13	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	3.33 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	1.66

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.66 kW	1.02 kW
Annual energy consumption Qhe	2055 kWh	2778 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	161 %	110 %
Prated	5.44 kW	3.97 kW
SCOP	4.09	2.83
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	3.46 kW	2.27 kW
COP Tj = -7°C	3.54	2.51
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	1.86 kW
COP Tj = +2°C	5.02	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.42 kW	2.28 kW
COP Tj = +7°C	6.67	4.84
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.83 kW	2.73 kW
COP Tj = 12°C	7.95	6.34
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.43 kW	3.23 kW
COP Tj = Tbiv	2.57	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.99 kW	3.23 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.19	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.44 kW	3.97 kW
Annual energy consumption Qhe	3275 kWh	3454 kWh
Pdh Tj = -15°C (if TOL	4.43	3.23
COP Tj = -15°C (if TOL	2.57	1.84
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	238 %	163 %
Prated	5.01 kW	4.68 kW
SCOP	6.01	4.15
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.01 kW	4.68 kW
COP Tj = +2°C	3.54	2.26
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.00 kW	2.95 kW
COP Tj = +7°C	5.84	3.59
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.81 kW	2.67 kW
COP Tj = 12°C	7.91	5.92
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	5.01 kW	4.68 kW
COP Tj = Tbiv	3.54	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.01 kW	4.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.54	2.26
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	1112 kWh	1509 kWh

Model VWL 65/8.2 AS 230V S3 + VWL 67/8.2 IS + VIH RW 250/2 B

Model name	VWL 65/8.2 AS 230V S3 + VWL 67/8.2 IS + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency ηDHW	121.4 %
COP	3.03
Heating up time	01:23 h:min
Standby power input	55.2 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	243 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency ηDHW	165 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	367 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	4.51 kW	5.36 kW
El input	0.92 kW	1.89 kW
COP	4.89	2.83

EN 14511-2 | Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.73 kW	1.26 kW
Cooling capacity	5.22	5.31
EER	3.03	4.22

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	192 %	129 %
Prated	4.72 kW	4.35 kW
SCOP	4.87	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.18 kW	3.85 kW
COP Tj = -7°C	3.13	2.10
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.67 kW	2.13 kW
COP Tj = +2°C	4.84	3.18
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.43 kW	2.21 kW
COP Tj = +7°C	6.24	4.39
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.84 kW	2.72 kW
COP Tj = 12°C	8.04	6.03
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.18 kW	3.85 kW
COP Tj = Tbiv	3.13	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	3.33 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	1.66

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.66 kW	1.02 kW
Annual energy consumption Qhe	2003 kWh	2727 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	162 %	111 %
Prated	5.44 kW	3.97 kW
SCOP	4.13	2.86
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	3.46 kW	2.27 kW
COP Tj = -7°C	3.54	2.51
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	1.86 kW
COP Tj = +2°C	5.02	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.42 kW	2.28 kW
COP Tj = +7°C	6.67	4.84
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.83 kW	2.73 kW
COP Tj = 12°C	7.95	6.34
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.43 kW	3.23 kW
COP Tj = Tbiv	2.57	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.99 kW	3.23 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.19	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.44 kW	3.97 kW
Annual energy consumption Qhe	3244 kWh	3423 kWh
Pdh Tj = -15°C (if TOL	4.43	3.23
COP Tj = -15°C (if TOL	2.57	1.84
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	252 %	170 %
Prated	5.01 kW	4.68 kW
SCOP	6.37	4.32
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.01 kW	4.68 kW
COP Tj = +2°C	3.54	2.26
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.00 kW	2.95 kW
COP Tj = +7°C	5.84	3.59
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.81 kW	2.67 kW
COP Tj = 12°C	7.91	5.92
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	5.01 kW	4.68 kW
COP Tj = Tbiv	3.54	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.01 kW	4.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.54	2.26
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	1050 kWh	1447 kWh

EN 14825 | Cooling		
	+7°C/+12°C	+18°C/+23°C
Pdesignc	3.88 kW	5.19 kW
SEER	4.69	6.94
Pdc Tj = 35°C	3.88 kW	5.19 kW
EER Tj = 35°C	3.25	4.13
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	2.64 kW	3.81 kW
EER Tj = 30°C	4.01	5.98
Cdc Tj = 30 °C	1.000	1.000
Pdc Tj = 25°C	2.28 kW	3.11 kW
EER Tj = 25°C	5.41	8.34
Cdc Tj = 25 °C	0.969	0.965
Pdc Tj = 20°C	2.50 kW	3.27 kW
EER Tj = 20°C	6.97	10.65
Cdc Tj = 20 °C	0.963	0.957
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	496 kWh	449 kWh

Model VWL 65/8.2 AS 230V S3 + VWL 67/8.2 IS S1 + VIH RW 250/2 B	
Model name	VWL 65/8.2 AS 230V S3 + VWL 67/8.2 IS S1 + VIH RW 250/2 B
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	XL
Efficiency ηDHW	131 %
COP	3.18
Heating up time	01:04 h:min
Standby power input	33.3 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	334 l
EN 16147 | Colder Climate	
Declared load profile	L
Efficiency ηDHW	121.4 %
COP	3.03
Heating up time	01:23 h:min
Standby power input	55.2 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	243 l
EN 16147 | Warmer Climate	
Declared load profile	L
Efficiency ηDHW	165 %
COP	4.31
Heating up time	03:45 h:min
Standby power input	30.4 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	367 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	4.51 kW	5.36 kW
El input	0.92 kW	1.89 kW
COP	4.89	2.83

EN 14511-2 | Cooling		
	+7°C/+12°C	+18°C/+23°C
El input	1.73 kW	1.26 kW
Cooling capacity	5.22	5.31
EER	3.03	4.22

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	192 %	129 %
Prated	4.72 kW	4.35 kW
SCOP	4.87	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.18 kW	3.85 kW
COP Tj = -7°C	3.13	2.10
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.67 kW	2.13 kW
COP Tj = +2°C	4.84	3.18
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	2.43 kW	2.21 kW
COP Tj = +7°C	6.24	4.39
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	2.84 kW	2.72 kW
COP Tj = 12°C	8.04	6.03
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.18 kW	3.85 kW
COP Tj = Tbiv	3.13	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	3.33 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	1.66

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.66 kW	1.02 kW
Annual energy consumption Qhe	2003 kWh	2727 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	162 %	111 %
Prated	5.44 kW	3.97 kW
SCOP	4.13	2.86
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	3.46 kW	2.27 kW
COP Tj = -7°C	3.54	2.51
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	2.02 kW	1.86 kW
COP Tj = +2°C	5.02	3.53
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.42 kW	2.28 kW
COP Tj = +7°C	6.67	4.84
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	2.83 kW	2.73 kW
COP Tj = 12°C	7.95	6.34
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	4.43 kW	3.23 kW
COP Tj = Tbiv	2.57	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.99 kW	3.23 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.19	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.44 kW	3.97 kW
Annual energy consumption Qhe	3244 kWh	3423 kWh
Pdh Tj = -15°C (if TOL	4.43	3.23
COP Tj = -15°C (if TOL	2.57	1.84
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	252 %	170 %
Prated	5.01 kW	4.68 kW
SCOP	6.37	4.32
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.01 kW	4.68 kW
COP Tj = +2°C	3.54	2.26
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	3.00 kW	2.95 kW
COP Tj = +7°C	5.84	3.59
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	2.81 kW	2.67 kW
COP Tj = 12°C	7.91	5.92
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	5.01 kW	4.68 kW
COP Tj = Tbiv	3.54	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.01 kW	4.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.54	2.26
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 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	1050 kWh	1447 kWh
EN 14825 | Cooling		
	+7°C/+12°C	+18°C/+23°C
Pdesignc	3.88 kW	5.19 kW
SEER	4.69	6.94
Pdc Tj = 35°C	3.88 kW	5.19 kW
EER Tj = 35°C	3.25	4.13
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	2.64 kW	3.81 kW
EER Tj = 30°C	4.01	5.98
Cdc Tj = 30 °C	1.000	1.000
Pdc Tj = 25°C	2.28 kW	3.11 kW
EER Tj = 25°C	5.41	8.34
Cdc Tj = 25 °C	0.969	0.965
Pdc Tj = 20°C	2.50 kW	3.27 kW
EER Tj = 20°C	6.97	10.65
Cdc Tj = 20 °C	0.963	0.957
Poff	14 W	14 W
PTO	13 W	13 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	496 kWh	449 kWh