

Subtype Aquarea Hydro Split 9 kW STD (L Series)

Certificate Holder	Panasonic Marketing Europe GmbH
Address	Hagenauer Strasse 43, Wiesbaden
ZIP	65203
City	Wiesbaden
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Aquarea Hydro Split 9 kW STD (L Series)
Registration number	011-1W0632
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1 kg
Certification Date	22.05.2023
Testing basis	European KEYMARK Scheme for Heat Pumps Rev. 11 (as of 2022-09)

Model WH-ADC0509L3E5 / WH-WDG09LE5

Model name	WH-ADC0509L3E5 / WH-WDG09LE5
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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	3.61
Heating up time	1:04 h:min
Standby power input	33.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	112 %
COP	2.80
Heating up time	1:04 h:min
Standby power input	36.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	160 %
COP	4.00
Heating up time	1:04 h:min
Standby power input	28.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 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	9.00 kW	8.90 kW
El input	1.98 kW	2.94 kW
COP	4.55	3.03

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.91 kW	2.15 kW
Cooling capacity	8.20	9.00
EER	2.82	4.19

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	144 %
Prated	8.00 kW	8.00 kW
SCOP	4.84	3.67
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.10 kW	7.10 kW
COP Tj = -7°C	2.83	2.28
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.30 kW	4.30 kW
COP Tj = +2°C	4.89	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	2.80 kW	2.80 kW
COP Tj = +7°C	6.21	4.72
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.20 kW
COP Tj = 12°C	7.45	6.17
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	8.00 kW	7.10 kW
COP Tj = Tbiv	2.57	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.00 kW	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.57	1.98

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	3417 kWh	4499 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	130 %
Prated	9.00 kW	8.00 kW
SCOP	4.31	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.50 kW	4.80 kW
COP Tj = -7°C	3.61	2.80
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.30 kW	3.10 kW
COP Tj = +2°C	5.44	4.00
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	2.90 kW	2.80 kW
COP Tj = +7°C	6.49	5.14
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.30 kW
COP Tj = 12°C	7.49	6.79
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	7.30 kW	6.50 kW
COP Tj = Tbiv	2.39	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	5.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W

PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.20 kW	2.60 kW
Annual energy consumption Q _{he}	5142 kWh	5915 kWh
P _{dh} T _j = -15 °C (if TOL	7.30	6.50
COP T _j = -15 °C (if TOL	2.39	1.96
C _{dh} T _j = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	255 %	177 %
Prated	7.00 kW	7.00 kW
SCOP	6.44	4.50
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2 °C	7.00 kW	7.00 kW
COP T _j = +2 °C	3.46	2.43
C _{dh} T _j = +2 °C	0.990	1.000
P _{dh} T _j = +7 °C	4.50 kW	4.50 kW
COP T _j = +7 °C	6.07	4.01
C _{dh} T _j = +7 °C	0.980	0.990
P _{dh} T _j = 12 °C	3.30 kW	3.10 kW
COP T _j = 12 °C	7.67	5.58
C _{dh} T _j = +12 °C	0.970	0.980
P _{dh} T _j = T _{biv}	7.00 kW	7.00 kW
COP T _j = T _{biv}	3.46	2.43
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	7.00 kW	7.00 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.46	2.43
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.990	1.000
WTOL	55 °C	55 °C
P _{off}	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 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 Q _{he}	1453 kWh	2080 kWh
EN 14825 Cooling		
	+7°C/+12°C	+18°C/+23°C
P _{designc}	8.20 kW	9.00 kW
SEER	4.99	7.14
P _{dc Tj = 35°C}	8.20 kW	9.00 kW
EER T _j = 35°C	2.82	4.19
C _{dc Tj = 35 °C}	1.000	1.000
P _{dc Tj = 30°C}	6.04 kW	6.63 kW
EER T _j = 30°C	4.35	6.46
C _{dc Tj = 30 °C}	1.000	1.000
P _{dc Tj = 25°C}	3.88 kW	4.26 kW
EER T _j = 25°C	5.86	8.27
C _{dc Tj = 25 °C}	1.000	1.000
P _{dc Tj = 20°C}	2.78 kW	3.62 kW
EER T _j = 20°C	6.41	9.28
C _{dc Tj = 20 °C}	1.000	0.990
P _{off}	9 W	9 W
PTO	2 W	2 W
PSB	9 W	9 W
PCK	0 W	0 W
Annual energy consumption Q _{ce}	575 kWh	441 kWh

Model WH-ADC0509L3E5UK / WH-WDG09LE5

Model name	WH-ADC0509L3E5UK / WH-WDG09LE5
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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	3.61
Heating up time	1:04 h:min
Standby power input	33.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	112 %
COP	2.80
Heating up time	1:04 h:min
Standby power input	36.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	160 %
COP	4.00
Heating up time	1:04 h:min
Standby power input	28.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 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	9.00 kW	8.90 kW
El input	1.98 kW	2.94 kW
COP	4.55	3.03

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.91 kW	2.15 kW
Cooling capacity	8.20	9.00
EER	2.82	4.19

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	144 %
Prated	8.00 kW	8.00 kW
SCOP	4.84	3.67
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.10 kW	7.10 kW
COP Tj = -7°C	2.83	2.28
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.30 kW	4.30 kW
COP Tj = +2°C	4.89	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	2.80 kW	2.80 kW
COP Tj = +7°C	6.21	4.72
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.20 kW
COP Tj = 12°C	7.45	6.17
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	8.00 kW	7.10 kW
COP Tj = Tbiv	2.57	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.00 kW	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.57	1.98

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	3417 kWh	4499 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	130 %
Prated	9.00 kW	8.00 kW
SCOP	4.31	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.50 kW	4.80 kW
COP Tj = -7°C	3.61	2.80
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.30 kW	3.10 kW
COP Tj = +2°C	5.44	4.00
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	2.90 kW	2.80 kW
COP Tj = +7°C	6.49	5.14
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.30 kW
COP Tj = 12°C	7.49	6.79
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	7.30 kW	6.50 kW
COP Tj = Tbiv	2.39	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	5.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W

PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.20 kW	2.60 kW
Annual energy consumption Q _{he}	5142 kWh	5915 kWh
P _{dh} T _j = -15°C (if TOL	7.30	6.50
COP T _j = -15°C (if TOL	2.39	1.96
C _{dh} T _j = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	255 %	177 %
Prated	7.00 kW	7.00 kW
SCOP	6.44	4.50
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	7.00 kW	7.00 kW
COP T _j = +2°C	3.46	2.43
C _{dh} T _j = +2 °C	0.990	1.000
P _{dh} T _j = +7°C	4.50 kW	4.50 kW
COP T _j = +7°C	6.07	4.01
C _{dh} T _j = +7 °C	0.980	0.990
P _{dh} T _j = 12°C	3.30 kW	3.10 kW
COP T _j = 12°C	7.67	5.58
C _{dh} T _j = +12 °C	0.970	0.980
P _{dh} T _j = T _{biv}	7.00 kW	7.00 kW
COP T _j = T _{biv}	3.46	2.43
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	7.00 kW	7.00 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.46	2.43
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.990	1.000
WTOL	55 °C	55 °C
P _{off}	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 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 Q _{he}	1453 kWh	2080 kWh
EN 14825 Cooling		
	+7°C/+12°C	+18°C/+23°C
P _{designc}	8.20 kW	9.00 kW
SEER	4.99	7.14
P _{dc} T _j = 35°C	8.20 kW	9.00 kW
EER T _j = 35°C	2.82	4.19
C _{dc} T _j = 35 °C	1.000	1.000
P _{dc} T _j = 30°C	6.04 kW	6.63 kW
EER T _j = 30°C	4.35	6.46
C _{dc} T _j = 30 °C	1.000	1.000
P _{dc} T _j = 25°C	3.88 kW	4.26 kW
EER T _j = 25°C	5.86	8.27
C _{dc} T _j = 25 °C	1.000	1.000
P _{dc} T _j = 20°C	2.78 kW	3.62 kW
EER T _j = 20°C	6.41	9.28
C _{dc} T _j = 20 °C	1.000	0.990
P _{off}	9 W	9 W
PTO	2 W	2 W
PSB	9 W	9 W
PCK	0 W	0 W
Annual energy consumption Q _{ce}	575 kWh	441 kWh

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Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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	3.61
Heating up time	1:04 h:min
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Mixed water at 40°C	251 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	112 %
COP	2.80
Heating up time	1:04 h:min
Standby power input	36.0 W
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EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	160 %
COP	4.00
Heating up time	1:04 h:min
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Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 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	9.00 kW	8.90 kW
El input	1.98 kW	2.94 kW
COP	4.55	3.03

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.91 kW	2.15 kW
Cooling capacity	8.20	9.00
EER	2.82	4.19

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	144 %
Prated	8.00 kW	8.00 kW
SCOP	4.84	3.67
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.10 kW	7.10 kW
COP Tj = -7°C	2.83	2.28
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.30 kW	4.30 kW
COP Tj = +2°C	4.89	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	2.80 kW	2.80 kW
COP Tj = +7°C	6.21	4.72
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.20 kW
COP Tj = 12°C	7.45	6.17
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	8.00 kW	7.10 kW
COP Tj = Tbiv	2.57	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.00 kW	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.57	1.98

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	3417 kWh	4499 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	130 %
Prated	9.00 kW	8.00 kW
SCOP	4.31	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.50 kW	4.80 kW
COP Tj = -7°C	3.61	2.80
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.30 kW	3.10 kW
COP Tj = +2°C	5.44	4.00
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	2.90 kW	2.80 kW
COP Tj = +7°C	6.49	5.14
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.30 kW
COP Tj = 12°C	7.49	6.79
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	7.30 kW	6.50 kW
COP Tj = Tbiv	2.39	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	5.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W

PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.20 kW	2.60 kW
Annual energy consumption Q _{he}	5142 kWh	5915 kWh
P _{dh} T _j = -15°C (if TOL	7.30	6.50
COP T _j = -15°C (if TOL	2.39	1.96
C _{dh} T _j = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	255 %	177 %
Prated	7.00 kW	7.00 kW
SCOP	6.44	4.50
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	7.00 kW	7.00 kW
COP T _j = +2°C	3.46	2.43
C _{dh} T _j = +2 °C	0.990	1.000
P _{dh} T _j = +7°C	4.50 kW	4.50 kW
COP T _j = +7°C	6.07	4.01
C _{dh} T _j = +7 °C	0.980	0.990
P _{dh} T _j = 12°C	3.30 kW	3.10 kW
COP T _j = 12°C	7.67	5.58
C _{dh} T _j = +12 °C	0.970	0.980
P _{dh} T _j = T _{biv}	7.00 kW	7.00 kW
COP T _j = T _{biv}	3.46	2.43
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	7.00 kW	7.00 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.46	2.43
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.990	1.000
WTOL	55 °C	55 °C
P _{off}	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 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 Q _{he}	1453 kWh	2080 kWh
EN 14825 Cooling		
	+7°C/+12°C	+18°C/+23°C
P _{designc}	8.20 kW	9.00 kW
SEER	4.99	7.14
P _{dc Tj = 35°C}	8.20 kW	9.00 kW
EER Tj = 35°C	2.82	4.19
C _{dc Tj = 35 °C}	1.000	1.000
P _{dc Tj = 30°C}	6.04 kW	6.63 kW
EER Tj = 30°C	4.35	6.46
C _{dc Tj = 30 °C}	1.000	1.000
P _{dc Tj = 25°C}	3.88 kW	4.26 kW
EER Tj = 25°C	5.86	8.27
C _{dc Tj = 25 °C}	1.000	1.000
P _{dc Tj = 20°C}	2.78 kW	3.62 kW
EER Tj = 20°C	6.41	9.28
C _{dc Tj = 20 °C}	1.000	0.990
P _{off}	9 W	9 W
PTO	2 W	2 W
PSB	9 W	9 W
PCK	0 W	0 W
Annual energy consumption Q _{ce}	575 kWh	441 kWh

Model WH-ADC0509L3E5B / WH-WDG09LE5

Model name	WH-ADC0509L3E5B / WH-WDG09LE5
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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	3.61
Heating up time	1:04 h:min
Standby power input	33.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	112 %
COP	2.80
Heating up time	1:04 h:min
Standby power input	36.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	160 %
COP	4.00
Heating up time	1:04 h:min
Standby power input	28.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 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	9.00 kW	8.90 kW
El input	1.98 kW	2.94 kW
COP	4.55	3.03

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.91 kW	2.15 kW
Cooling capacity	8.20	9.00
EER	2.82	4.19

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	144 %
Prated	8.00 kW	8.00 kW
SCOP	4.84	3.67
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.10 kW	7.10 kW
COP Tj = -7°C	2.83	2.28
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.30 kW	4.30 kW
COP Tj = +2°C	4.89	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	2.80 kW	2.80 kW
COP Tj = +7°C	6.21	4.72
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.20 kW
COP Tj = 12°C	7.45	6.17
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	8.00 kW	7.10 kW
COP Tj = Tbiv	2.57	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.00 kW	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.57	1.98

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	3417 kWh	4499 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	130 %
Prated	9.00 kW	8.00 kW
SCOP	4.31	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.50 kW	4.80 kW
COP Tj = -7°C	3.61	2.80
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.30 kW	3.10 kW
COP Tj = +2°C	5.44	4.00
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	2.90 kW	2.80 kW
COP Tj = +7°C	6.49	5.14
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.30 kW
COP Tj = 12°C	7.49	6.79
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	7.30 kW	6.50 kW
COP Tj = Tbiv	2.39	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	5.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W

PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.20 kW	2.60 kW
Annual energy consumption Q _{he}	5142 kWh	5915 kWh
P _{dh} T _j = -15 °C (if TOL	7.30	6.50
COP T _j = -15 °C (if TOL	2.39	1.96
C _{dh} T _j = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	255 %	177 %
Prated	7.00 kW	7.00 kW
SCOP	6.44	4.50
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2 °C	7.00 kW	7.00 kW
COP T _j = +2 °C	3.46	2.43
C _{dh} T _j = +2 °C	0.990	1.000
P _{dh} T _j = +7 °C	4.50 kW	4.50 kW
COP T _j = +7 °C	6.07	4.01
C _{dh} T _j = +7 °C	0.980	0.990
P _{dh} T _j = 12 °C	3.30 kW	3.10 kW
COP T _j = 12 °C	7.67	5.58
C _{dh} T _j = +12 °C	0.970	0.980
P _{dh} T _j = T _{biv}	7.00 kW	7.00 kW
COP T _j = T _{biv}	3.46	2.43
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	7.00 kW	7.00 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.46	2.43
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.990	1.000
WTOL	55 °C	55 °C
P _{off}	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 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 Q _{he}	1453 kWh	2080 kWh
EN 14825 Cooling		
	+7°C/+12°C	+18°C/+23°C
P _{designc}	8.20 kW	9.00 kW
SEER	4.99	7.14
P _{dc Tj = 35°C}	8.20 kW	9.00 kW
EER T _j = 35°C	2.82	4.19
C _{dc Tj = 35 °C}	1.000	1.000
P _{dc Tj = 30°C}	6.04 kW	6.63 kW
EER T _j = 30°C	4.35	6.46
C _{dc Tj = 30 °C}	1.000	1.000
P _{dc Tj = 25°C}	3.88 kW	4.26 kW
EER T _j = 25°C	5.86	8.27
C _{dc Tj = 25 °C}	1.000	1.000
P _{dc Tj = 20°C}	2.78 kW	3.62 kW
EER T _j = 20°C	6.41	9.28
C _{dc Tj = 20 °C}	1.000	0.990
P _{off}	9 W	9 W
PTO	2 W	2 W
PSB	9 W	9 W
PCK	0 W	0 W
Annual energy consumption Q _{ce}	575 kWh	441 kWh

Model WH-ADC0509L6E5 / WH-WDG09LE5

Model name	WH-ADC0509L6E5 / WH-WDG09LE5
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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	3.61
Heating up time	1:04 h:min
Standby power input	33.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	112 %
COP	2.80
Heating up time	1:04 h:min
Standby power input	36.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	160 %
COP	4.00
Heating up time	1:04 h:min
Standby power input	28.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 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	9.00 kW	8.90 kW
El input	1.98 kW	2.94 kW
COP	4.55	3.03

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.91 kW	2.15 kW
Cooling capacity	8.20	9.00
EER	2.82	4.19

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	144 %
Prated	8.00 kW	8.00 kW
SCOP	4.84	3.67
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.10 kW	7.10 kW
COP Tj = -7°C	2.83	2.28
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.30 kW	4.30 kW
COP Tj = +2°C	4.89	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	2.80 kW	2.80 kW
COP Tj = +7°C	6.21	4.72
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.20 kW
COP Tj = 12°C	7.45	6.17
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	8.00 kW	7.10 kW
COP Tj = Tbiv	2.57	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.00 kW	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.57	1.98

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	3417 kWh	4499 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	170 %	130 %
Prated	9.00 kW	8.00 kW
SCOP	4.31	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.50 kW	4.80 kW
COP Tj = -7°C	3.61	2.80
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.30 kW	3.10 kW
COP Tj = +2°C	5.44	4.00
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	2.90 kW	2.80 kW
COP Tj = +7°C	6.49	5.14
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.30 kW
COP Tj = 12°C	7.49	6.79
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	7.30 kW	6.50 kW
COP Tj = Tbiv	2.39	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	5.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W

PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.20 kW	2.60 kW
Annual energy consumption Q _{he}	5142 kWh	5915 kWh
P _{dh} T _j = -15°C (if TOL	7.30	6.50
COP T _j = -15°C (if TOL	2.39	1.96
C _{dh} T _j = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	255 %	177 %
Prated	7.00 kW	7.00 kW
SCOP	6.44	4.50
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	7.00 kW	7.00 kW
COP T _j = +2°C	3.46	2.43
C _{dh} T _j = +2 °C	0.990	1.000
P _{dh} T _j = +7°C	4.50 kW	4.50 kW
COP T _j = +7°C	6.07	4.01
C _{dh} T _j = +7 °C	0.980	0.990
P _{dh} T _j = 12°C	3.30 kW	3.10 kW
COP T _j = 12°C	7.67	5.58
C _{dh} T _j = +12 °C	0.970	0.980
P _{dh} T _j = T _{biv}	7.00 kW	7.00 kW
COP T _j = T _{biv}	3.46	2.43
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	7.00 kW	7.00 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.46	2.43
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.990	1.000
WTOL	55 °C	55 °C
P _{off}	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 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 Q _{he}	1453 kWh	2080 kWh
EN 14825 Cooling		
	+7°C/+12°C	+18°C/+23°C
P _{designc}	8.20 kW	9.00 kW
SEER	4.99	7.14
P _{dc} T _j = 35°C	8.20 kW	9.00 kW
EER T _j = 35°C	2.82	4.19
C _{dc} T _j = 35 °C	1.000	1.000
P _{dc} T _j = 30°C	6.04 kW	6.63 kW
EER T _j = 30°C	4.35	6.46
C _{dc} T _j = 30 °C	1.000	1.000
P _{dc} T _j = 25°C	3.88 kW	4.26 kW
EER T _j = 25°C	5.86	8.27
C _{dc} T _j = 25 °C	1.000	1.000
P _{dc} T _j = 20°C	2.78 kW	3.62 kW
EER T _j = 20°C	6.41	9.28
C _{dc} T _j = 20 °C	1.000	0.990
P _{off}	9 W	9 W
PTO	2 W	2 W
PSB	9 W	9 W
PCK	0 W	0 W
Annual energy consumption Q _{ce}	575 kWh	441 kWh

Model WH-ADC0509L6E5AN / WH-WDG09LE5

Model name	WH-ADC0509L6E5AN / WH-WDG09LE5
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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	3.61
Heating up time	1:04 h:min
Standby power input	33.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	112 %
COP	2.80
Heating up time	1:04 h:min
Standby power input	36.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	160 %
COP	4.00
Heating up time	1:04 h:min
Standby power input	28.0 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	251 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	9.00 kW	8.90 kW
El input	1.98 kW	2.94 kW
COP	4.55	3.03

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.91 kW	2.15 kW
Cooling capacity	8.20	9.00
EER	2.82	4.19

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	144 %
Prated	8.00 kW	8.00 kW
SCOP	4.84	3.67
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.10 kW	7.10 kW
COP Tj = -7°C	2.83	2.28
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.30 kW	4.30 kW
COP Tj = +2°C	4.89	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	2.80 kW	2.80 kW
COP Tj = +7°C	6.21	4.72
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.20 kW
COP Tj = 12°C	7.45	6.17
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	8.00 kW	7.10 kW
COP Tj = Tbiv	2.57	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.00 kW	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.57	1.98

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	3417 kWh	4499 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	130 %
Prated	9.00 kW	8.00 kW
SCOP	4.31	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.50 kW	4.80 kW
COP Tj = -7°C	3.61	2.80
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.30 kW	3.10 kW
COP Tj = +2°C	5.44	4.00
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	2.90 kW	2.80 kW
COP Tj = +7°C	6.49	5.14
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.30 kW
COP Tj = 12°C	7.49	6.79
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	7.30 kW	6.50 kW
COP Tj = Tbiv	2.39	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	5.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W

PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.20 kW	2.60 kW
Annual energy consumption Q _{he}	5142 kWh	5915 kWh
P _{dh} T _j = -15°C (if TOL	7.30	6.50
COP T _j = -15°C (if TOL	2.39	1.96
C _{dh} T _j = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	255 %	177 %
Prated	7.00 kW	7.00 kW
SCOP	6.44	4.50
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	7.00 kW	7.00 kW
COP T _j = +2°C	3.46	2.43
C _{dh} T _j = +2 °C	0.990	1.000
P _{dh} T _j = +7°C	4.50 kW	4.50 kW
COP T _j = +7°C	6.07	4.01
C _{dh} T _j = +7 °C	0.980	0.990
P _{dh} T _j = 12°C	3.30 kW	3.10 kW
COP T _j = 12°C	7.67	5.58
C _{dh} T _j = +12 °C	0.970	0.980
P _{dh} T _j = T _{biv}	7.00 kW	7.00 kW
COP T _j = T _{biv}	3.46	2.43
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	7.00 kW	7.00 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.46	2.43
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.990	1.000
WTOL	55 °C	55 °C
P _{off}	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 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 Q _{he}	1453 kWh	2080 kWh
EN 14825 Cooling		
	+7°C/+12°C	+18°C/+23°C
P _{designc}	8.20 kW	9.00 kW
SEER	4.99	7.14
P _{dc Tj = 35°C}	8.20 kW	9.00 kW
EER T _j = 35°C	2.82	4.19
C _{dc Tj = 35 °C}	1.000	1.000
P _{dc Tj = 30°C}	6.04 kW	6.63 kW
EER T _j = 30°C	4.35	6.46
C _{dc Tj = 30 °C}	1.000	1.000
P _{dc Tj = 25°C}	3.88 kW	4.26 kW
EER T _j = 25°C	5.86	8.27
C _{dc Tj = 25 °C}	1.000	1.000
P _{dc Tj = 20°C}	2.78 kW	3.62 kW
EER T _j = 20°C	6.41	9.28
C _{dc Tj = 20 °C}	1.000	0.990
P _{off}	9 W	9 W
PTO	2 W	2 W
PSB	9 W	9 W
PCK	0 W	0 W
Annual energy consumption Q _{ce}	575 kWh	441 kWh

Model WH-SDC0509L3E5 / WH-WDG09LE5

Model name	WH-SDC0509L3E5 / WH-WDG09LE5
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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 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	9.00 kW	8.90 kW
El input	1.98 kW	2.94 kW
COP	4.55	3.03

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.91 kW	2.15 kW
Cooling capacity	8.20	9.00
EER	2.82	4.19

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	144 %
Prated	8.00 kW	8.00 kW
SCOP	4.84	3.67
Tbiv	-10 °C	-7 °C

TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.10 kW	7.10 kW
COP Tj = -7°C	2.83	2.28
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.30 kW	4.30 kW
COP Tj = +2°C	4.89	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	2.80 kW	2.80 kW
COP Tj = +7°C	6.21	4.72
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.20 kW
COP Tj = 12°C	7.45	6.17
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	8.00 kW	7.10 kW
COP Tj = Tbiv	2.57	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.00 kW	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.57	1.98
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	3417 kWh	4499 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	130 %
Prated	9.00 kW	8.00 kW
SCOP	4.31	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.50 kW	4.80 kW
COP Tj = -7°C	3.61	2.80
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.30 kW	3.10 kW

COP Tj = +2°C	5.44	4.00
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	2.90 kW	2.80 kW
COP Tj = +7°C	6.49	5.14
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.30 kW
COP Tj = 12°C	7.49	6.79
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	7.30 kW	6.50 kW
COP Tj = Tbiv	2.39	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	5.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.20 kW	2.60 kW
Annual energy consumption Qhe	5142 kWh	5915 kWh
Pdh Tj = -15°C (if TOL	7.30	6.50
COP Tj = -15°C (if TOL	2.39	1.96
Cdh Tj = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	255 %	177 %
Prated	7.00 kW	7.00 kW
SCOP	6.44	4.50
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.00 kW	7.00 kW
COP Tj = +2°C	3.46	2.43
Cdh Tj = +2 °C	0.990	1.000
Pdh Tj = +7°C	4.50 kW	4.50 kW
COP Tj = +7°C	6.07	4.01
Cdh Tj = +7 °C	0.980	0.990

Pdh Tj = 12°C	3.30 kW	3.10 kW
COP Tj = 12°C	7.67	5.58
Cdh Tj = +12 °C	0.970	0.980
Pdh Tj = Tbiv	7.00 kW	7.00 kW
COP Tj = Tbiv	3.46	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	7.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.46	2.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 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	1453 kWh	2080 kWh

EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	8.20 kW	9.00 kW
SEER	4.99	7.14
Pdc Tj = 35°C	8.20 kW	9.00 kW
EER Tj = 35°C	2.82	4.19
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	6.04 kW	6.63 kW
EER Tj = 30°C	4.35	6.46
Cdc Tj = 30 °C	1.000	1.000
Pdc Tj = 25°C	3.88 kW	4.26 kW
EER Tj = 25°C	5.86	8.27
Cdc Tj = 25 °C	1.000	1.000
Pdc Tj = 20°C	2.78 kW	3.62 kW
EER Tj = 20°C	6.41	9.28
Cdc Tj = 20 °C	1.000	0.990
Poff	9 W	9 W
PTO	2 W	2 W
PSB	9 W	9 W
PCK	0 W	0 W
Annual energy consumption Qce	575 kWh	441 kWh

Model WH-SDC0509L6E5 / WH-WDG09LE5

Model name	WH-SDC0509L6E5 / WH-WDG09LE5
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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 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	9.00 kW	8.90 kW
El input	1.98 kW	2.94 kW
COP	4.55	3.03

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.91 kW	2.15 kW
Cooling capacity	8.20	9.00
EER	2.82	4.19

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	144 %
Prated	8.00 kW	8.00 kW
SCOP	4.84	3.67
Tbiv	-10 °C	-7 °C

TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.10 kW	7.10 kW
COP Tj = -7°C	2.83	2.28
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.30 kW	4.30 kW
COP Tj = +2°C	4.89	3.60
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	2.80 kW	2.80 kW
COP Tj = +7°C	6.21	4.72
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.20 kW
COP Tj = 12°C	7.45	6.17
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	8.00 kW	7.10 kW
COP Tj = Tbiv	2.57	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.00 kW	7.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.57	1.98
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	3417 kWh	4499 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	130 %
Prated	9.00 kW	8.00 kW
SCOP	4.31	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.50 kW	4.80 kW
COP Tj = -7°C	3.61	2.80
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.30 kW	3.10 kW

COP Tj = +2°C	5.44	4.00
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	2.90 kW	2.80 kW
COP Tj = +7°C	6.49	5.14
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	3.30 kW	3.30 kW
COP Tj = 12°C	7.49	6.79
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	7.30 kW	6.50 kW
COP Tj = Tbiv	2.39	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.80 kW	5.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.60
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.20 kW	2.60 kW
Annual energy consumption Qhe	5142 kWh	5915 kWh
Pdh Tj = -15°C (if TOL	7.30	6.50
COP Tj = -15°C (if TOL	2.39	1.96
Cdh Tj = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	255 %	177 %
Prated	7.00 kW	7.00 kW
SCOP	6.44	4.50
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.00 kW	7.00 kW
COP Tj = +2°C	3.46	2.43
Cdh Tj = +2 °C	0.990	1.000
Pdh Tj = +7°C	4.50 kW	4.50 kW
COP Tj = +7°C	6.07	4.01
Cdh Tj = +7 °C	0.980	0.990

Pdh Tj = 12°C	3.30 kW	3.10 kW
COP Tj = 12°C	7.67	5.58
Cdh Tj = +12 °C	0.970	0.980
Pdh Tj = Tbiv	7.00 kW	7.00 kW
COP Tj = Tbiv	3.46	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	7.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.46	2.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	1.000
WTOL	55 °C	55 °C
Poff	9 W	9 W
PTO	13 W	13 W
PSB	9 W	9 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	1453 kWh	2080 kWh

EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	8.20 kW	9.00 kW
SEER	4.99	7.14
Pdc Tj = 35°C	8.20 kW	9.00 kW
EER Tj = 35°C	2.82	4.19
Cdc Tj = 35 °C	1.000	1.000
Pdc Tj = 30°C	6.04 kW	6.63 kW
EER Tj = 30°C	4.35	6.46
Cdc Tj = 30 °C	1.000	1.000
Pdc Tj = 25°C	3.88 kW	4.26 kW
EER Tj = 25°C	5.86	8.27
Cdc Tj = 25 °C	1.000	1.000
Pdc Tj = 20°C	2.78 kW	3.62 kW
EER Tj = 20°C	6.41	9.28
Cdc Tj = 20 °C	1.000	0.990
Poff	9 W	9 W
PTO	2 W	2 W
PSB	9 W	9 W
PCK	0 W	0 W
Annual energy consumption Qce	575 kWh	441 kWh